

The Great Divide Revisited: Ottoman and Habsburg Legacies on Transition^{*}

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Abstract

The former socialist countries of South East and Central Europe exhibit great variation in institutional performance. Unlike the sparse existing literature on the determinants of institutional variation in transition economies, I claim that the variation can be explained by the legacies of the Ottoman and Habsburg Empires. I, first, identify historical legacies of the Empires, which, through path dependency, have affected the current institutional performance of the successor states. Second, I show empirically that the institutions of the countries of South East and Central Europe have been significantly shaped by the Habsburg or Ottoman Empire. Moreover, I show that the Habsburg successor states have institutions that are more efficient in a market economy than the Ottoman successor states.

Keywords: Transition, Institutions, Path dependence, Ottoman Empire, Habsburg Empire
JEL Classifications: N00, O17, O57, P20

^{*} I would like to thank Peter Murrell for his invaluable advice and support. I am also grateful to Peter Grajzl and John Wallis for their guidance and many helpful suggestions. I benefited greatly from comments provided by Agnes Batory, Roger Betancourt, John Chao, George Guess, John Lampe, Uwe Puetter, Nela Richardson, Violetta Zentai.

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I. Introduction

Institutions comprise of informal constraints (norms and beliefs) and formal constraints (rules and organizations), which are exogenous to the individual and which “conjointly generate a regularity of behavior” (Greif 2006, Ch. 2, p. 1). Since institutions, and in particular informal institutions, develop slowly and incrementally (North 1990, Williamson 2000, Roland 2004), an analysis of current institutional performance necessitates a discussion of history. Accordingly, a growing body of literature has discussed the role of distant historical events or processes on current institutional or economic performance (e.g. Brown 1996, Shleifer & Glaeser 2002, Acemoglu et al. 2005, 2002, Djankov et al. 2003, Engerman & Sokoloff 2002). These studies have built upon the assertion of a broader branch of economics literature that institutions have a profound effect on economic development (e.g. Murrell 1991, North 1991, Olson 1993).

This paper adopts the historical institutional approach as its foundation and applies it to study the institutional determinants of one set of countries – the former socialist states of South East and Central Europe (SECE). It is motivated by the observation that fifteen years after the beginning of transition we see a clear difference in the performance of the transition countries. The Balkan (South East European states) have been consistently lagging behind the Central European states. Why is there such a substantial difference in the institutional quality in these two sets of former socialist countries?

There are, at the moment, two dominant explanations, both insufficient in explaining the divergence within SECE countries¹. Beck and Laeven (2005) claim that the reasons for divergence of

¹ These are theories put forth by economists. It should be mentioned that the subject has also been explored in other social science branches, such as political science and sociology. Examples of papers in other disciplines that discuss the issue of divergence of performance of the post-socialist world are: Zweynert & Godschmidt, “The Two Transitions in Central and Eastern Europe and the Relation between Path Dependent and Politically Implemented Institutional Change” (2005); King & Szelenyi “Varieties of Post-Communist Capitalism: Patrimonial and Liberal Regimes” (2005).

institutional performance within the transition countries are variations in natural resource endowment and degree of entrenchment of the socialist elite. The lack of a significant natural resource endowment in SECE countries, the ambiguity of the role of the socialist elite in transition, as well as the disregard for pre-socialist historical specifics, all weaken Beck & Laeven's argument with respect to the divergence within SECE countries. Berglof and Bolton (2003) argue that fiscal discipline at the beginning of transition explains the difference in performance. However, they do not explain the *origins* of the fiscal discipline. Moreover, if institutions take a long time to evolve, then focusing solely on the comparatively short socialist period as in Beck and Laeven (2005) and Berglof and Bolton (2003) cannot uncover the reason for variation in the current institutional performance. Rather, one should investigate distant historical specifics, which shaped the region for centuries, to find factors that affected the direction and level of institutional development.

The analysis in this paper focuses on the SECE countries partly to eliminate heterogeneity in terms of time spent under socialism (i.e. former USSR republics vs. SECE countries). Analysis of this sub-set of transition countries, therefore, necessarily precludes the possibility of variation in performance due to time spent under socialism. This approach is beneficial because it allows us to search for deeper causes of divergence. However, admittedly, it provides a limited view of the complexity of the post-socialist world.

Focusing on the above mentioned sub-set of former socialist countries, the paper proposes an alternative theory to the above-mentioned papers for the existence and persistence of the great divide. In the heart of the theory is the hypothesis that the roots of the great divide between the Balkan and Central East European states lie in the distant past of the Ottoman and Habsburg Empires.² Two fundamentally different empires contemporaneously ruled the set of countries under investigation. The countries of

² The view, expressed in this paper, implicitly states that the dichotomy of performance was driven by religious differences between the Empires since Ottoman State necessarily means a Muslim state and Habsburg State necessarily means a Christian state.

South East Europe were ruled by the Ottoman Empire. Contemporaneously, the countries of Central Europe were ruled by the Habsburg Empire.

Hence, the hypothesis put forth in this paper is first, that the institutional development of the countries of South East and Central Europe has been significantly shaped by the institutions of the Habsburg or Ottoman Empire that ruled them up to the 19th century, and second, that as a result the Habsburg successor states have institutions that are more efficient in a market economy than the Ottoman successor states. i.e. the Habsburg successor states have better protection of property rights, less corruption, more efficient courts, etc.³

By comparing the historical developments and legacies of the Ottoman Empire with those of the Habsburg Empire, the paper puts forth a number of hypotheses about the effect of these legacies on current institutional performance of the Empires' successor states and tests them empirically. The empirical approach follows closely papers on the determinants of economic development (e.g. Acemoglu et al. 2003, Rodrik et al. 2002, Easterly et al. 2003, Zak & Knack 2001). The empirical results show strong support in favor of the hypothesis that the Ottoman/Habsburg legacies have had a significant effect on the current institutional performance of the SECE countries.

Importantly, a key component of the reasoning is the view that twentieth century developments did not significantly alter the direction of institutional development, and in fact, in some cases clearly

³ I attribute this difference to this specific time period for several reasons. First, prior to the 13th century, the division in the region was between Byzantium (East) and the Roman Empire (West). I stipulate that even if a significant divergence in the two systems (in the direction that would explain the main issue raised in this paper) occurred in the period before the Ottoman conquest, it would not have happened prior to the 12th century. Moreover, if such a change happened after the 12th century, it would not have become sufficiently embedded in Byzantine culture, in particular, that to withstand the imposition of the foreign Ottoman system. Third, the transition of the West from feudal to modern relations did not happen until the 16th century. The institutions that played a crucial role for the sustained development of the West were not established until the end of the Middle Ages. The East had a discontinuous shift in institutional settings due to the change in power from Byzantium to the Ottomans.

reinforced it. More specifically, I stipulate that the informal institutions, formed during the Ottoman and Habsburg centuries, have remained the underlying framework for the following reasons. Even though it is generally true that a legacy of a more recent period has a stronger effect on the present, I argue that this is not the case with regards to mental models and culture, which take a long time to develop and equally long time to disappear (Brown 1996, North 1990, Roland 2004). Moreover, in the case of twentieth century Europe, the lack of stability and the constant warfare in the region during the first half of the twentieth century dictated a focus on survival and consequently an adherence to the old but familiar views rather than on cultural transformation.

Following the turmoil of the first fifty years was a period of “socialist construction,” which built an unsustainable anti-market environment and only accelerated its own fall. I conjecture that to a large extent the legacies of socialism incorporate its own repudiation and a reversal to pre-1945 mental models. This conjecture warrants a clarification. In the cases of countries, which prior to 1945, had little exposure to a market economy, to the concepts of private property and efficient rule of law, socialism reinforced the lack of these formal and informal institutions, and hence provided a continuation of pre-1945 norms and rules. In the case of countries that prior to socialism had been exposed to the above mentioned institutional elements, socialism was primarily imposed from above or from outside and was, therefore, unwillingly accepted by the society as a whole. Hence, the fall of socialism was accompanied with purposeful divergence from the socialist ideology and hence a reversal to historical traditions, norms and rules. (I test to some extent the validity of this conjecture.)

The paper proceeds in the following way. Section II motivates with examples the hypothesis that the Ottoman/Habsburg legacy has affected significantly the direction and level of institutional performance in the current successor states. Utilizing historical evidence and analysis, I derive a number of conjectures (sub-hypotheses) on the institutional development of the Ottoman and Habsburg successor states in Section III. Section IV discusses the empirical specification and data of the model. Section V presents the empirical strategy and results. Section VI discussed the role of natural resources and socialism as determinants of institutional performance. The last section concludes.

II. Motivation of the Hypothesis: Anecdotal Evidence

This section provides several examples that motivate the hypothesis. First, contrast two sets of countries: Serbia and Slovenia versus Bulgaria and the Czech Republic. Serbia and Slovenia had workers' management socialism (in fact, they existed as republics of the Yugoslav Federation for 45 years) while Bulgaria and the Czech Republic implemented a more classical socialist economic model. If the determinants of current performance lie solely within the socialist period, Serbia and Slovenia should be closer in their development and institutional performance to each other than to Bulgaria or the Czech Republic. Similarly, Bulgaria and the Czech Republic should be closer in their development and institutional performance to each other. However, currently⁴ Slovenia and the Czech Republic are much closer in their development both to each other and to Western European market economies than to Serbia and Bulgaria. The 1990's wars in Serbia can partially explain its lag in performance but not the similar pattern of performance of Serbia to that of Bulgaria, which was not involved in the war. Table 1 reports data on two institutional measures, rule of law and corruption, in 1997 for the four countries. It is evident that both in terms of rule of law and corruption, the Czech Republic and Slovenia fall in the category of transition countries with relatively good institutional performance while Bulgaria and Serbia are in the category of countries with significant institutional problems. What Serbia and Bulgaria have in common is their heritage of Ottoman institutions; the Czech Republic and Slovenia, on the other hand, are both Habsburg successor states. I claim that the common Ottoman heritage or common Habsburg heritage helps explain the variation in post-socialist performance of these countries.

Second, the former Yugoslav republics present an interesting example. Serbia, Bosnia, Montenegro, and Macedonia are Ottoman successor states while Slovenia and Croatia are Habsburg successor states. However, all of them existed as one country, Yugoslavia, during the socialist period. The

⁴ The measure of current performance is 2004 GDP per capita (in PPP): Slovenia - \$ 19,600; Czech Republic - \$ 16,800; Bulgaria - \$ 8,200; Serbia and Montenegro - \$ 2,400 (Source: *CIA World Factbook*).

disparities in income per capita of the republics during the socialist period⁵, presented in Table 2, suggest that the pattern of development of the former Yugoslav republics was affected by pre-socialist events. The common denominator for the first five republics (with lower income per capita indicators) is the Ottoman legacy, for the last two – the Habsburg legacy.

Third, Romanian voting preferences in 1996 also indicate a division between formerly Habsburg and Ottoman dominated regions. The map of Romanian presidential elections in 1996 (Map 1) shows a clear distinction in political and economic preferences of the Romanian population. A comparison between Map 1 (on Presidential Elections 1996) and Map 2 (on historical provinces of Romania) indicates that the light region in Map 1, which roughly corresponds to Transylvania (Habsburg region) voted predominantly for the democratic candidate, while the dark region in Map 1, which corresponds to the former provinces of Moldavia and Wallachia (Ottoman vassal states), voted predominantly for the representative of the socialist party. Since the socialist system was common for the three regions, I conjecture that this clear partition of voting preferences may be due to pre-socialist differences entrenched in mental models.⁶ I stipulate that mental models formed by the Habsburg and Ottoman legacies diverge and, hence, attribute to different voting choices.

III. Historical Evidence - Studies

This section provides a historical account of the development of institutions in the Ottoman and Habsburg Empires. Taking into consideration path dependency, I make a number of conjectures (sub-

⁵ The significance of the year 1980 is that it marks the end of Tito's rule, which can be argued to have put the beginning of the decline of the socialist regime. Post-1980 political events lead to significant changes in the economic and social systems of the Yugoslav republics.

⁶ The idea of mental models was developed by Douglass North, who claims that in a situation of uncertainty, people do not necessarily make choices based on self interest. Rather, people rely on ideologies and myths. Furthermore, "individuals with common cultural backgrounds and experiences will share reasonably convergent mental models, ideologies and institutions" (North & Denzau 1993, p. 1).

hypotheses) about the level and direction of development of these institutional features in the successor states of the Ottoman and Habsburg Empires.

The premise of the analysis in this section is that efficiency of institutions is linked to the length of existence and evolution of the particular institution. For example, a country, which has had a century long legacy of private ownership, is more likely to have an efficient system of protection and enforcement of property rights than a country, which has had only a decade of private ownership. In other words, the longer a feature exists, the more established it is in people's behavior; consequently, transaction costs associated with this feature are more likely to be lower.

3.1. Property rights

Secure property rights provide guarantee against expropriation, encourage production, saving and investment, and subsequently promote economic growth (Frye 2004).

Private ownership in the Habsburg Empire emerged much earlier than in the Ottoman Empire. In 1630 a formal Habsburg Statute made *zadruga*⁷ a legal entity (Okey 2001). Attempts to abolish serfdom were made in the Habsburg Empire in the late 18th century. Joseph's reforms of 1780s allowed peasants to leave the lord's estate. The Serfdom Patent of 1781 allowed peasants to marry and to start their own business. During subsequent reforms of 1785-1789, peasant labor dues were converted into fixed cash payments and uniform taxation on land was established (Cameron & Neal 2003, Good 1984). Joseph II ensured that freeing peasants from serfdom implied security of peasants land tenure, which ultimately preserved the peasantry (Taylor 1990, p. 21). An imperial patent in 1859 established freedom of enterprise, which by this point was deemed a necessary condition for successful development and competition (Landes 1999, p. 245).

In contrast, in the Ottoman Empire, private ownership did not emerge until mid-19th century. All land belonged to the Sultan and was granted as conditional tenure to peasants. Although the first few

⁷ *Zadruga* is "a patriarchal complex of property and working relations" (Lampe, *Yugoslavia As History: Twice There was a Country*, 2000, pp.31)

centuries of Ottoman dominance were characterized by an attempt to provide justice and security as well as a grant of hereditary use of land, the legacy of the Ottoman Empire was shaped by the post 16th century breakdown of the system (Stavrianos 2000). The consequences of this breakdown were arbitrary levies and service requirements by the local military lords, confiscation of land and exploitation of the peasants. Palairet (1997, p. 37) describes the period of the late 18th and early 19th century in the Ottoman Empire as time of “warlordism and banditry,” which led to significant depopulation of villages and a disastrous effect on agriculture. In contrast, the post-1830s period was one of reform and transition of the Ottoman system. There is some evidence that Bulgaria benefited from these reforms, while the Western Balkans continued to lag behind. Even in Bulgaria, however, the change was subtle and mostly concentrated around the capital. The rest of the country still suffered from extortion and oppression (Palairet 1997, p. 48)

The Ottoman system was dominated by the bureaucracy and its interests over merchants and landowners. The limited influence of merchants and landowners suggests that very few institutions were established to promote or protect land ownership or any other kind of private property during Ottoman rule (Ozbudun 1996).

Hence, the memory of property rights in the Habsburg successors allowed for a smoother transition from planned to market economy and higher indicators of performance. In particular, I stipulate that property rights in the Habsburg successor states are more secure than in the Ottoman ones (*Hypothesis 1*); there is higher risk of expropriation of private investors by the government in Ottoman successor states than in Habsburg successor states (*Hypothesis 2*).

3.2. Government

Government can promote human capital development, initiate reforms to reduce the risk of transactions and enforce laws. On the other hand, it can engage in corruption, which can have distortionary effects on the economy (Shleifer & Vishny 1993, Broadman & Recanatini 2000).

Corruption became prevalent with the decline of the Ottoman Empire. “From the seventeenth century onward the typical Ottoman official holding a position of any importance regarded it as a private

investment from which he was justified in deriving as large a return as possible”(Stavrianos 2000, p. 120). Corruption in the bureaucracy necessitated similar behavior in private citizens. Favor exchanges as well as evasive behavior became a political and a social legacy of the Ottoman Empire. Black market activity, which could have been a direct result of government intervention such as heavy taxation or prohibition, increased as well (Sugar 1977, Lewis 2002).

The Habsburg political system, like most contemporary systems, bordered despotism, experimented with more and less centralized structures, frequently lacked direction during the 19th century (Taylor 1990, p. 41). However, the combination of some internal balance between the social classes and the presence of leaders such as Joseph II, allowed the Empire to get some degree of adherence to the rule of law. There was an attempt to establish trust in the people by providing a consistent rule. Unexpected and radical shifts in the system were discouraged (Kann 1974).

Thus, the Ottoman successor states have higher levels of corruption (*Hypothesis 3*), lower trust/confidence in the government (*Hypothesis 4*) and more black market activity (*Hypothesis 5*).

Economists usually consider government involvement in the economy to be inimical to development. In pre-modern states, however, where markets are still fledgling and there exist many barriers to exchange (such as lack of infrastructure and lack of legal system to support commercial exchanges and to provide security of transactions), it seems that government involvement, through its centralized nature and access to finance, can provide an initial push, necessary to establish the foundation on which a market can develop. In other words, below a certain threshold value, government involvement can be highly beneficial. There is clear evidence that the Habsburgs benefited from active government participation - encouragement of migration of foreign workers to the Habsburg Empire, granting subsidies to machine builders, relaxing guild restrictions, improving transportation networks and support of regional specialization (Good 1984, Cameron & Neal 2003). Through the provision of public goods and finance for industry, the government facilitated a shift away from an agrarian-based economy toward urban industrial economy and thus provided incentives for technological improvement.

The movement of cameralism⁸ in the Habsburg Empire also contributed to the emergence of a more efficient state organization through state-sponsored economic development and separation of judicial and administrative roles of the government.

The Ottoman government, on the other hand, with a few notable exceptions (e.g. Midhat Pasha),⁹ did not take an active interest in the economy. In fact, after the 17th century, it lost control of its bureaucracy and of its ability to maintain the Empire's infrastructure. While Western European governments tried to strengthen their economies and promote industrial production, the Ottomans were simply concerned with ensuring, through imports, a surplus of goods in the domestic markets. The Ottoman lack of interest in economic affairs was partly due to the fact that the Ottoman administration was one and the same as the Ottoman military. Thus, there was a merging of administrative and military roles with more emphasis on military interests (Inalcik 1994, Stavrianos 2000).

Good government means efficient taxation, provision of public goods, high-quality bureaucracy and rule of law (La Porta et al. 1999). The historical evidence suggests that the Habsburg government was more successful in the provision of public goods (infrastructure building) and the establishment of a more efficient administrative structure in the government (cameralism) than the Ottoman government. The lack of ability of the Ottoman government to control extortions and double taxation suggest inefficient tax collection as well as higher levels of tax evasion due to the arbitrary nature of the tax system.

Thus, I stipulate that the Habsburg successor states have fewer bureaucratic delays (*Hypothesis 6*), higher level of tax compliance (*Hypothesis 7*), higher government effectiveness (*Hypothesis 8*) as well as more stability ensured by consistent government policies (*Hypothesis 9*).

⁸ The proponents of cameralism believed in strengthening the state, reducing its dependence on other states and making it more self-sufficient. The means to their goal were protectionist policies concerning local industries, education of civil servants, employment reforms, centralization of the administration and frugal expenditures.

⁹ Midhat Pasha was a governor of Bulgaria between 1864 and 1869. He tried to build schools and roads with local tax money. Moreover, he secured the promulgation of the Turkish constitution while a Grand Vizier in 1876 (Columbia Encyclopedia, Sixth Edition).

3.3. Civil Society

Civil society – such as nongovernmental organizations, business associations, trade unions, think tanks, media – can affect economic development through the pressure of public opinion (Ignatieff 1995). Civil society can lead to better governance due to its ability to constrain corruption and raise public awareness (World Bank).

The Habsburgs promoted the rise of royal free cities, which became centers for cultural, intellectual and political exchange. Moreover, the Habsburg Empire was directly influenced by the movement of Enlightenment in the 18th century. An additional institutional development, which could have affected the culture of organization, was the Habsburg Kremsier¹⁰ Constitution, which “served as the basis for precedent-creating judgments broadening individual freedom...in fact advancing the legal position of non-dominant groups” (Okey 2001, pp. 199-200). The benefits of the 1849 constitution could have been to some extent compromised by the decade of absolutism that followed – the rise of the Bach regime in 1850 stifled previous developments and established an absolutist state with a strict unified system, which lasted for ten years.

The Ottoman Empire lacked representative institutions up to the 19th century (Ozbudun 1996). This partially resulted from the lack of recognition of corporate entities in Muslim law, the egalitarian hereditary structure of the Empire, and the highly centralized nature of the state, which prevented the formation of truly autonomous communities that shared a common interest (Kuran 2004, 2005). The Ottoman legacy was one of a lack of historical tradition for the formation of autonomous organizations, for assembly and interest group rhetoric.

Hence, I stipulate that Habsburg successor states have stronger civil society with more established traditions than the Ottoman successor states (*Hypothesis 10*).

3.4. Miscellaneous Hypotheses

¹⁰ The Kremsier Constitution was promulgated in 1849. It was “unique among Austrian constitutional experiments in springing from free discussion among political leaders” (Encyclopedia Britannica).

Both Empires, as is the nature of all pre-modern political entities, were primarily agricultural. Taking that as given, however, they diverged significantly in their policy toward the development of cities. That divergence indirectly shaped both the urban and the rural landscape. The Habsburg Empire allowed the development of royal free cities, which became centers of trade. These cities persisted as centers of economic, political and social exchange into the 20th century. In contrast, the Ottomans encouraged the formation of small towns with relatively static and regulated markets in the Balkans. As a result, after independence the new Balkan states focused most political and economic activity in the capital cities. Thus, I conjecture that the Ottoman successor states have dominant capital cities, while Habsburg successor states have decentralization of power among several cities (*Hypothesis 11*).

The above-mentioned policies or attitudes toward the formation of cities spilled over to the rural sectors as well. The regulations of the centralist state steered the Ottoman rural economy to a standstill. The Ottoman successor states inherited a structure of small peasant holdings with few capital assets. Most people were indebted smallholders, who operated at subsistence rather than for a market (Todorova 1996). Despite the persistence of serfdom in the Habsburg Empire, there is no clear historical evidence that the Habsburg peasantry was in a similar situation at the beginning of the 20th century as was the Ottoman peasantry. In addition, the Habsburgs witnessed improvements in agricultural production as well as an increase in industrial production, both of which allowed for market-oriented production. Combining that with the general decentralization of decision making in the Habsburg Empire and the strict centralization in the Ottoman Empire, I conjecture that the rural holdings in the Ottoman successor states are smaller (taking population density into consideration) than in the Habsburg successor states (*Hypothesis 12*).

Finally, combining the historical evidence on different institutional elements, presented so far in section III, I infer that the extent of familiarity with market systems in the Habsburg successor states is larger than that of the Ottoman successor states (*Hypothesis 14*).

A summary of all conjectures (sub hypotheses) is presented in Table 3. Due to limitations in the availability of the data, I do not test all conjectures.

IV. Empirical Specification and Data

4.1. Institutions

Each sub-hypothesis, outlined in the previous section, refers to a specific aspect of an institutional feature. The criteria for selecting measures for the dependent variables are (1) the appropriateness of the measure in illustrating the hypotheses, (2) the reliability of the data and (3) the availability of data for all countries in the sample. A detailed list of measures of all dependent variables and sources of data is presented in Table 4. All data on institutional performance has been transformed so that to assign low values to good/efficient institutional performance and high values to bad/inefficient institutional performance.

4.2. Proxy for Ottoman/Habsburg Legacy

In order to measure the effect of being an Ottoman or Habsburg successor state on current institutional performance, I first discuss the criteria for classification of states as Habsburg or Ottoman successor states.

Table 5 presents the dates of Ottoman rule and the actual duration in years of Ottoman rule in South East and Central Europe. In the case of Romania¹¹ and Bosnia & Herzegovina, the duration of Ottoman rule is reported separately for each region within the country. Between 1500 and 1829, all countries included in Table 5 were either under Ottoman rule or under Habsburg rule. Therefore, if a country spent zero years under Ottoman rule, it necessarily was under Habsburg rule for the time period

¹¹ The Romanian provinces of Wallachia and Moldavia were not directly under Ottoman Rule. They were vassal states, which paid tribute to the Empire. Although they had significant independence in their internal affairs, they were directly affected by the Ottoman system due to the regular interference of the Ottomans in the principalities' political sphere. Officially, the Ottoman started appointing Romanian rulers during the Phanariot regime starting in the early 1700s, however they had influence prior to that. Furthermore, there was a transmittal of certain practices such as corruption (e.g. buying of office to gain access to monetary benefits) due to the influence of the Greek lords, who had an active presence in the Romanian principalities.

1500-1829.¹² All states that spent 250 years or more under Ottoman rule are considered to be Ottoman successor states. The rest are Habsburg successors.

To proxy for the Ottoman/Habsburg legacy, I use two measures. The first measure is a dummy variable, which equals 1 if the state is an Ottoman successor and 0 if the state is a Habsburg successor. The second measure is a variable that reflects the number of years a country spent under Ottoman rule. I assign a one point weight for every 25 years before 1700 that a country spent under Ottoman rule and a two point weight for every 25 years after (and including) 1700. The weight distribution reflects the view of most historians (e.g. Lampe & Jackson 1982, Stavrianos 2000) that the main legacies of the Ottoman Empire came from the latter period rather than from the initial years when the Ottomans were establishing power in Europe. An argument in favor of using a weigh variable as a proxy for the Ottoman/Habsburg legacy is that the more time a successor state spent under the Empire's rule, the more deeply it has been affected by the institutional structure of that Empire. Table 6 presents the two proxies for Ottoman/Habsburg legacy.

Two issues, regarding the classification of states, warrant a clarification. First, the border between the Ottoman and Habsburg Empires changed frequently until the end of the 17th century. Hence, it is difficult to incorporate in the analysis the process of border changes with respect to particular parts within states (as opposed to focusing on whole states). I discuss briefly one aspect of within country differences in the case of Romania in Section II, but do not present such discussion for Hungary and Croatia, which were both under Ottoman and Habsburg rule. To the best of my knowledge, contemporaneous rule by the Ottoman and Habsburg Empires over equivalently large enough regions within Hungary and Croatia did

¹² After 1830, the Ottomans did not acquire any new lands from the Habsburgs. Countries that were not under Ottoman rule post 1830 (with one exception) became independent states and hence are considered to be neither Ottoman nor Habsburg territories in this analysis. It should be noted that Bosnia and Herzegovina, which was under Ottoman rule up to 1878, was annexed to the Habsburgs between 1878 and 1914. Due to the unrest of the period and the short presence of the Habsburgs in Bosnian territories, I do not explicitly tackle this time period.

not occur. Therefore, my analysis should not be affected by border changes concerning small regions within states.

The case of Croatia raises the second issue. Croatia and Bosnia & Herzegovina served as military borders between the two Empires. Hence, their role as borderland in the Empires' dynamics could have affected the type of institutions that arose in the territories of modern Croatia and modern Bosnia & Herzegovina. Admittedly, the military border could have caused a unique set of legacies not captured by the Ottoman and Habsburg legacies discussed in Section III.

4.3. Basic Specification

In a cross country comparison of institutional development, following standard methodology in the institutional economics literature (e.g. Acemoglu & Johnson 2005, Beck & Laeven 2005, De Melo et al. 2001), I estimate a model of the form:

$$y_{ij} = c_{ij} + \alpha_i O_j + \beta_i g_j + \gamma_i x_{ij} + \varepsilon_{ij} \quad (1)$$

where $i = 1, \dots, M$ indicates institutional specific, $j = 1, \dots, T$ indicates country, O_j is a proxy for Ottoman/Habsburg legacy (either a dummy variable, d_i , or a weight variable, w_i , as specified in subsection 4.2), g_j is GDP per capita in 1991, and x_{ij} is a vector of other determinants of institutional development. I discuss the inclusion of GDP per capita (g_j) and other explanatory variables (x_{ij}) in sections 4.4 and 4.5. All dependent variables, y_{ij} , are defined so that a decrease in the value of the variable means an improvement of institutional performance, i.e. small values indicate good institutions, large values indicate inefficient institutions.

The main hypothesis, put forth in this paper and specified in Section II, suggest that $\alpha_i > 0$ for all $i = 1 \dots M$.¹³ In other words, variation in the institutional development of the transition countries of South East and Central Europe can be explained by the Ottoman/Habsburg legacy. Furthermore, an Ottoman

¹³ Recall that high values of w_j indicate longer presence of the Ottoman Empire in a particular country's history and high values of y_{ij} indicate inefficient institutions.

successor state is more likely to have lower level of institutional development than a Habsburg successor state.

4.4. Economic Performance Measure

Economists have put forth the idea that economic development creates a demand for efficient institutions (e.g. La Porta et al. 1998, Kaufmann & Kraay 2002). Hence, a higher measure of economic performance would have a positive effect on the quality of institutions. To control for the effect of economic development on institutions, I include an income per capita variable much like La Porta et al. (2004). The variable, g_j , is GDP per capita of country j in 1991. There is a distinct problem with the inclusion of an economic performance measure. GDP per capita is endogenous and hence our results might capture reverse causality.

To ameliorate the problem of endogeneity, I choose 1991 figures of GDP per capita. This choice is driven both by convenience and necessity for the following reasons. First, given that the time frame for the institutional variables is 1992-2003, it is more likely that the dependent variable (post-1992 institutions) would have a stronger effect on post-1992 GDP per capita than on pre-1992 GDP per capita.¹⁴ Second, pre-1990 measures are problematic due to issues of misreporting and due to the lack of consistent cross-country data (in terms of units and conversion techniques). The United Nations Statistical Division provides a consistent measure of GDP per capita in 1991 for all countries in the sample. Table 7 presents the data on GDP per capita.

Since the 1991 GDP per capita does not eliminate the problem of endogeneity, an alternative way to address this issue is to present regressions with and without an economic performance measure. This approach allows us to see the extent to which the results depend on the inclusion of GDP per capita. Note

¹⁴ Note that , in addition, figures in both income and institutions for the years 1992-1996 are problematic because of the war in Yugoslavia (i.e. the war could put a downward bias on the GDP numbers of the former Yugoslav republics).

that a standard approach to the endogeneity problem, namely the use of instrumental variables, is not possible in practice because of the difficulty in identifying factors that are correlated with income but orthogonal to any omitted characteristics of institutions (Kaufmann & Kraay 2002).

4.5. Other Determinants of Institutional Development

Most of the institutions literature has focused on the effect of institutions on growth. Much less work has been done to examine the determinants of institutions. So far, the literature has discussed two broad groups of determinants of institutions – endogenous factors (such as other institutions) and completely exogenous factors (such as geography, legal origins, settler mortality in Middle Ages).

The Role of Institutions on Other Institutions

Regarding the effect of institutions on other institutions, the existing literature takes two general approaches. The first approach assumes no direct relationship between the different institutional indicators. Hence, this approach focuses on the effect of exogenous factors and excludes any institutional features from the set of explanatory variables. This approach has been utilized in studies on the determinants of government quality (e.g. La Porta et al. 1999) and studies on property rights (e.g. Acemoglu & Johnson 2005).

The second approach assumes that some institutional variables affect directly other institutional variables, and hence should be included as explanatory variables in studies on institutional determinants. The second approach has been utilized primarily in studies of corruption, where government effectiveness or government structure, democratic process and civil society have been hypothesized to have a significant effect on corruption (e.g. Shleifer & Vishny 1993, Treisman 2000, Alesina & Angeletos 2005).

I follow the first approach for the following reason. The goal of this paper is to explore the *long-term* determinants of institutional development. While unlikely true in the short-run, I posit that in the *long run*, the determinants of any institutional variable are not other institutional variables but rather completely exogenous factors, with historical legacies being the most important one for our theory. In the long run, for example, I assume that the determinants of corruption are not other contemporary institutional variables, but completely exogenous factors (e.g. historical specifics). Note, though, that this

estimation strategy is appropriate even if the second approach is valid.¹⁵ Admittedly, the tests of the effect of Ottoman/Habsburg legacy on institutions are weaker when institutional features are used as determinants of other institutional features than otherwise.

Having excluded institutions as right-hand variables, I focus on several exogenous factors as right hand side variables.

Role of Geography

The view that geography can affect property rights has been widely discussed in the literature (e.g. Beck & Laeven 2005, Acemoglu et al. 2002, Rodrik et al. 2004, Easterly & Levine 2003). The natural resource endowment presents opportunities for the elite to extract rents and thus can influence the institutions set up by the elite to allow for more successful rent extraction. I use reserves of oil or natural gas as proxies for the availability of natural resources. A discussion of the effect of natural resources on institutions is presented in Section VI.

Government Wages

Some scholars have suggested that the relative public to private sector wage ratio belongs in the equation of the determinants of government quality and corruption (e.g. Panizza 2000). Given proper incentives, government employees could increase their efficiency. Higher benefits and wages could decrease corruption. While, there seems to be evidence in support of the theory that corruption can be reduced by increasing government wages (Van Rijckeghem & Weder 1997), the literature has not found a significant effect of public wages on the quality of the bureaucracy (Treisman 2000, Rauch & Evans 2000).

Due to the lack of a consistent cross-country measure of public to private wage differential, I use the ratio of government average wage to per capita GDP. One problem with this measure is the obvious disregard for non-wage related benefits, which could make government employment more attractive and

¹⁵ In that case I estimate reduced form equations of institutions on exogenous variables.

better rewarded (higher benefits, more vacation, etc.). Another problem is unavailability of data for some countries in my sample.

The inclusion of the wage ratio is problematic due to possible endogeneity. However, it is added in a separate robustness test in order to check whether its inclusion makes a difference.

Table 8 summarizes the data. The top panel reports the main dependent variables. All dependent variables are transformed so that to assign high scores to less efficient outcomes. The bottom panel gives descriptive statistics for all independent variables. Column 1 reports mean values and standard deviations of all variables for the whole sample. Column 2 shows data for Ottoman successor states only. Column 3 shows data for Habsburg successor states only. There is a clear partition in the values of institutions in Column 2 (Ottoman successors) and Column3 (Habsburg successors). In all cases, Habsburg successors have lower average values, which indicate higher efficiency of institutional performance.

V. Empirical Strategy and Results

I explore three estimation procedures that test the hypothesis to different extent – nonparametric statistics, OLS estimation, and Meta analysis.

5.1. Nonparametric Statistics

Nonparametric statistics provide a quick way to get general results. They are beneficial particularly when dealing with small samples since the assumption of normality is not critical in nonparametric tests (Hoel 1984).

Is it important to note that the model in the nonparametric test does not correspond to the one specified in Section 4.3. The conclusions are based on the Rank Sum Test, which utilizes the order in which the observations of each dependent variable fall. This test does not look at estimated coefficients of regressors.

For each institutional variable, the observations for each dependent variable are divided in two groups: Group A - Habsburg successors ($n_1 = 5$ observations) and Group B - Ottoman successors ($n_2 = 6$

observations). The goal is to test whether the distribution of values in Group A is the same as that in Group B. More specifically, the hypothesis can be expressed as follows:

H_0 : Distribution of Group A = Distribution of Group B; the distributions of the Ottoman and Habsburg groups are the same, i.e. there is no difference in the institutional performance of the two groups.

H_1 : Distribution of Group A < Distribution of Group B; the Habsburg group is situated to the left of the Ottoman group, i.e. the Habsburg successor states have higher institutional performance than the Habsburg successor states.¹⁶

Table 9 presents Rank Sum Test results for each institutional variable. All tests have p-values of 5% or lower, which suggests that I can reject the null hypothesis of no significant difference in the institutional performance of the Ottoman and Habsburg successor states.

The disadvantage of the Rank Sum Test is that it does not use all available information. It preserves the ranking but not the values of the variables. Thus, it yields weaker results than a parametric test. Hence, the paper proceeds with a discussion of parametric tests of the hypothesis.

5.2. OLS estimation

Estimation and Results

For each sub-hypothesis described in section III, I estimate the model in equation (1), specified in Section 4.3, using Ordinary Least Squares. This approach is common in the literature on the determinants of institutions and growth (e.g. Acemoglu et. al 2002, 2005, Beck & Laeven 2005, Rodrik et al. 2004).

¹⁶ The Rank Sum Test is based on the ranking of all observations in the combined sample of Habsburg and Ottoman successor states. Hence, I combine the two groups into a single ordered set (from smallest to largest in magnitude) and calculate the sum of ranks, T , of the Habsburg group.

$$T = \text{sum of the ranks for observations from A}$$

For small samples, without any assumptions on probability distribution, I look at the small-sample p-values rather than at the standard t-test. The p-values for the Rank Sum Test for small samples are provided in tables similar to the t-distribution tables. Seber and Wild (2000) provide the Rank Sum Test tables.

The theory, proposed in section II, suggests that α (the coefficient of Ottoman/Habsburg legacy) is positive. In the case when the weight variable (w) is used, this implies that the longer a country has spent under Ottoman Rule, the more inefficient its current institutions are. In the case when the dummy variable (d) is used, a positive α implies that if a country was under Ottoman Rule for more than 250 years, it has lower levels of institutional performance in the present than if it had spent less than 250 years under Ottoman rule.

Accordingly, the null and alternative hypotheses are specified as follows:

$H_0: \alpha = 0$; the Ottoman/Habsburg legacy does not have any effect on institutional performance

$H_1: \alpha > 0$; the Ottoman legacy has a negative effect on institutional performance

Tables 10 - 12 present OLS results, grouped in categories of institutional specifics. The reported t-statistics are calculated with robust standard errors to control for possible heteroskedasticity. The tables report significance level for one-tailed tests. Panel A of each table presents results of regressions using the Ottoman weight variable as proxy for the Ottoman/Habsburg legacy. Panel B presents results of regressions that use the Ottoman dummy variable as proxy. Panel A of each table presents results with and without GDP per capita. Overall, I find that the inclusion of GDP per capita does not lead to notable changes – the sign of the coefficients and their significance does not change - with the exception of the regressions on stock market integrity (Table 11, Panel A, Column 7)¹⁷ and NGO environment (Table 12, A:1). In these two cases the inclusion of GDP per capita makes the Ottoman legacy coefficient insignificant. I discuss this issue further later in this section.

In short, there is strong evidence in favor of the hypothesis. Unless otherwise indicated, the comments below are relevant for regressions with GDP per capita. Ten out of eleven coefficients are significant at the 5% level, when I use the dummy variable as proxy for Ottoman/Habsburg legacy; nine out of eleven coefficients are significant at the 5% level, when I use the weight variable as a proxy. The Ottoman variable (both d and w) has a positive sign in all cases as expected. Countries that spent longer

¹⁷ From this point on, for the sake of brevity I use notation A: 3, for example, to indicate Panel A, Column 3.

time under Ottoman rule have lower levels of institutional development. Panel B shows stronger results than Panel A in most cases. This could partially be attributed to the fact that the dummy variable captures primarily the effect of post-16th century Ottoman legacy, which I argue earlier in the paper has had the most profound effect on institutional features that have persisted to the present. Had there been countries in the sample that spent more than 250 years under Ottoman Rule, but primarily in its success stage prior to the 17th century, the results using a dummy variable might have differed significantly.

GDP per capita in 1991 does not have a significant effect on institutional development. This result, although surprising, is not novel in the economic literature. Kaufmann and Kraay (2002), for example, present empirical evidence that suggests a lack of positive feedback from income to governance and moreover, evidence that income does not help explain cross-country variations in quality of governance. Higher income per capita might not convey information about income distribution. Hence, it might conceal the possibility of a high concentration of wealth in the hands of the elite, which had strong incentives to maintain the status-quo and the existing inefficient institutions, so that to allow easier extraction of rents. This argument is partially embodied in Olson's (1982) view on interest groups.

To illustrate the power of the results on the Ottoman/Habsburg legacy, I give an example using the results in Table 11 (A: 3). If Slovenia spent 200 years before 1700 under Ottoman rule, its rule of law indicator would have increased by 0.56 (recall that an increase in the value of the variable means worsening of institutions). Furthermore, if Slovenia spent 200 years after 1700 under Ottoman rule, its rule of law indicator would have increased by 1.12. Slovenia's 2003 rule of law indicator is 1.88. To put this number in context, I provide the 2003 rule of law indicators for several other countries in our sample. Hungary and Slovakia, both Habsburg successor states, scored 2.25 and 2.62 respectively. Bulgaria, an Ottoman successor state, had an indicator of 3.87. According to the results, presented in this section, if Slovenia had spent 400 years under Ottoman Rule, its 2003 rule of law indicator would have been 3.56. The latter result shows a significant deterioration and converges to the 2003 rule of law indicator of Bulgaria and that of Serbia (which was under Ottoman Rule for 440 years). Similarly, the dummy

variable (Table 11, B:2) coefficient implies that had Slovenia spent at least 250 years under Ottoman Rule, its 2003 rule of law indicator would have been 3.69.

Challenges

There is one distinct and pervasive problem with OLS estimation. The number of countries in the cross section analysis is fixed (eleven countries). Consistent time-series data for institutional specifics of the countries of interest is available only since 1997. There is no significant variation across time in the post-1997 cross country data, which diminishes the value of panel data. Hence, OLS has low statistical power, resulting from the limited number of observations and consequently the higher variance of the estimates.

If all classical assumptions, with exception of normality, hold, then small sample estimators should be unbiased and efficient (Johnston & DiNardo 1997). The normality assumption of the error terms, in particular when dealing with small samples and cross-country data, is questionable (Dietz et al. 1987).¹⁸ If this assumption is violated and there is reason to believe that asymptotic theory is an inadequate guide, then the standard hypothesis tests and the t-values are irrelevant (Schmidt 1976). Efron (1979) proposed the use of the bootstrap method to overcome the possible non-normality of the error terms. The method, similar to Monte Carlo methods, generates a random sample with replacement from the original sample, computes the regression coefficient estimates and repeats the process a large number of times so that to provide an estimate of the standard error of the parameter of interest (Efron 1979, Dietz et al. 1987). According to Johnston & DiNardo (1997, p. 369), the bootstrap method is robust to heteroskedasticity and hence, is preferred in cross-section regressions. Hence, I use the bootstrap procedure on all regressions (I do not include GDP per capita in this procedure). Table 13 presents the relevant t-statistics from bootstrap OLS with 100 iterations. The results show six significant coefficients at the 5% level and additional three significant coefficients at the 10% level.

¹⁸ I plot residuals against the normal distribution and find no clear indication that the normality assumption is violated.

Two other challenges, not related to sample size, which this analysis faces, are omitted variable bias and attenuation bias. Attenuation bias arises when variables are measured with error or might not correspond well to the concept tested. It can lead to biased and inconsistent OLS estimators (Johnston & DiNardo 1997, p. 154). This type of specification problem seems intrinsic to most empirical studies and hence it is not explicitly tackled here. The second problem, of omitted variables, can also lead to biased estimators and hence might undermine our results. I present several robustness checks, which include explanatory variables, based on alternative theories. One major limitation of the analysis is the lack of reliable and consistent data on the variables of interest in the robustness checks. Another challenge is to find valid proxies. Robustness test results are presented in Tables 14, 17 and 21. The public wage to average GDP ratio is included as an independent variable in the regression on corruption in Table 14. Table 17 and 21 display results when natural resources and socialism proxies respectively are included as independent variables. The results in Table 14 suggest a significant positive effect of the Ottoman/Habsburg legacy and a significant positive effect of the public wage to average GDP ratio. The sign of the wage ratio is opposite to what economists have suggested. As mentioned earlier, the inclusion of the wage ratio leads to an endogeneity problem and hence makes the estimates unreliable, which could explain the unexpected sign on the wage ratio. The results of the robustness tests in Tables 17 and 21 are discussed in Section VI.¹⁹

Despite the above-mentioned remedial measures, the small sample remains an issue. I argue that the problem of low power (if normality of the error terms is assumed) can be mitigated with meta analysis, which is presented in the next sub-section.

5.3. Meta Analysis

¹⁹ I also test the hypothesis using SUR estimation to take into consideration possible simultaneity in the dependent variables. With the exception of Stock Market Integrity, I get significant positive effect of the Ottoman weight on institutional performance. The results do not change substantially from the reported OLS results, which is why I do not present them in the paper. They are available upon request.

“The problems created by low statistical power in individual studies are central to the need for meta analysis” (Hunter & Schmidt 1995, p. 75). Meta analysis is a technique that combines results across different regressions to infer on the overall relationship between variables. Regressions may differ in the way they measure variables and the methodology they use but not in the underlying question they explore (Hunter & Schmidt 1995, Wolf 1986).

The meta analysis in this paper takes a slightly different approach than the traditional meta analysis. Rather than combining regressions of different authors and different methodologies, I study the effect of the Ottoman/Habsburg legacy on different aspects of institutional development (e.g. judicial quality, property rights protection, corruption) and combine the results of the individual regressions to get an overall sense of the effect the Ottoman/Habsburg legacy on the level of institutional development.

Thus, I am concerned with the following questions. Is there a relationship between being an Ottoman/Habsburg successor state and the current level of institutional development of the countries in question? What is the magnitude of this relationship and is it statistically significant? If I find a positive and statistically significant relationship, I would have provided evidence that (1) the Ottoman and Habsburg Empires have had a long-lasting effect on the institutional performance of their successor states, and (2) that the Ottoman Empire has placed its successor states on a lower path of institutional development.

I am interested in the size and statistical significance of the estimate of α in equation (1). Due to the different measures of institutional performance (y) across regressions, estimated coefficients ($\hat{\alpha}$) of different regressions cannot be directly compared. Instead I use the unit-less t-statistics and p-values from the OLS estimation presented in section 4.2. The meta analysis results are based on the Fisher Combined Test, which is appropriate for small samples. The combined statistic of the Fisher test is:

$$P = -2 \sum \ln p_i \sim \chi^2_{(2M)} \quad (2)$$

where p_i is the one-tailed p-value associated with α_i in regression i , and M is the number of regressions combined. I obtain a value of $P = 77.87$, which at 22 degrees of freedom is associated with $p < 0.01$ (the

χ^2 critical value is 40.29). This indicates that the null hypothesis of no significant effect of the Ottoman/Habsburg legacy on current institutional performance can be rejected.

Two issues could arise from combining all regressions in one meta analysis. The first issue has to do with the homogeneity of the estimates. If the estimates combined are heterogeneous, then it is probable that combining the results in one meta analysis is not appropriate. The so-called Overall Diffuse Test, proposed by Rosenthal (1983), can be used to test for heterogeneity. The diffuse test statistic, $D = 9.61$ with 10 degrees of freedom, yields a probability value higher than 0.10 (χ^2 statistic is 15.99). Since the probability value is high, the null hypotheses of homogeneity cannot be rejected. Thus, I conclude that there is no significant heterogeneity among the regressions.

The second issue is the possibility that t-statistics and hence, the effect sizes, across different regression equations are correlated. This could lead to an erroneous rejection of the null hypothesis. In order to correct for possible correlation, I conduct a separate meta analysis on a sub-group of regressions. The rationale behind the selection of regressions is to find regressions that exhibit little correlation between residuals. Table 16 presents the matrix of correlation of residuals. The meta analysis results on the sub-group are summarized in Table 17. The Fischer Test shows a statistically significant relationship between the Ottoman legacy and institutional performance. The diffuse test indicates that there is no heterogeneity among the included studies.

So far, I have constructed an index summarizing the significance of the relationship. As mentioned earlier the meta analysis literature recommends complementing the combined test with an effect size test. The partial correlation coefficient is an effect size statistic, which indicates the strength rather than the significance of the relationship between two factors. To obtain the combined effect size indicator that synthesized the results from several regressions, I essentially take the average of the partial correlation coefficients:

$$E = \frac{\sum r_i}{M} \quad (3)$$

where r_i is the partial correlation coefficient associated with α_i and M is the number of regressions combined. The effect size indicator for the synthesis of the eleven regressions is $E = 0.53$. It suggests a large-size effect²⁰ for the relationship between Ottoman/Habsburg legacy and institutional performance. In other words, this result suggests that the observed effect of the Ottoman/Habsburg legacy on the average institutional quality of a country is substantial. Hence, this provides an additional confirmation of the hypothesis that the Ottoman/Habsburg legacy has strong influence on the current institutional performance.

In summary, I find sufficient evidence in all three estimation approaches that the Ottoman and Habsburg legacies have had a significant impact on the institutional performance of their successor states. I admit the limitations of the parametric tests and the remedial measures offered above. In the spirit of Green & Hall (1984, p. 52), if “data analysis is an aid to thought, not a substitute,” the lack of quality data should not preclude us from putting forth a valid argument and asserting, to the degree possible, the significance of the argument.

VI. The Role of Socialism and the Natural Resource Endowment

Discussion of Results in Light of Beck & Laeven's theory

As mentioned in the introduction, to the best of my knowledge, the leading alternative theory for the great divide in institutional performance of the former socialist bloc has been presented by Beck & Laeven (2005). Beck and Laeven claim that the variation in institutional performance can be explained by the initial political structure, measured by ‘executive constraints’ and the ‘share of seats in Parliament of

²⁰ This is based on a guideline provided by Cohen (1977) on the interpretation of effect sizes. According to Cohen, $r = 0.10$ is a small effect size, $r = 0.30$ is a medium effect size, and $r = 0.50$ is a large effect size (Wolf 1986). There is an additional test of the average effect size, which utilizes standard hypothesis testing techniques. The test is based on Hunter & Schmidt 1987. I do not present it explicitly in the text of this paper. The t-statistic that I obtain from the test is 2.294 which is significant at the 5% level.

the former ruling communist party in the first election after transition began'. This initial political structure reflects the differences in behavior and incentives of the elite at the beginning of transition, which according to the authors is affected by the countries' endowment of natural resources and the political elite entrenchment. In other words, an economy that has more natural resources presents more possibilities for the elite to extract rents and thus encourages policies that secure rights of the elite over these resources. Moreover, a country that spent more years under socialism is more likely to have a deeper entrenchment of the ruling elite. The entrenched elite is more inclined to adopt policies that ensure its preservation of political power to extract economic rents.

I find several parts of Beck and Laeven's argument insufficient, in particular with regard to the variation in performance within the countries in South East and Central Europe. First, the proxy for natural resources can be misleading. Beck & Laeven use exports of raw materials relative to GDP as the main measure of availability of natural resources. However, exports of raw materials could be directly related to the level of economic and institutional development. High exports of raw materials can be a consequence of lower level of development of a country. Grossman & Helpman (1990) find that initial conditions have a significant effect on trade patterns.²¹ Their reasoning suggests that a more developed country would have a higher initial stock of knowledge, which would establish its comparative advantage in a diversified list of export products; simultaneously, a less developed country would continue to produce traditional products, and more specifically raw materials. Moreover, a developed country with a rich natural resource endowment is more likely to have the technology and the trading ties (reputation and quality) to process its raw materials and export higher value-added products (as is evident in Cameron & Neal's (2003) discussion of 19th century European development). This would decrease the share of

²¹ Some other papers, which discuss trade patterns and have relevance to this claim, are: Keesing (1968), Balassa (1969), Feenstra & Rose (1997). The first two papers discuss the size of countries and its effect on manufacturing exports. The last paper ranks country's exports and discusses the rankings with respect to GDP per capita.

exports of raw materials and increase the share of exports of processed industrial goods in more developed countries.²²

Second, I find the use of years under socialism as proxy for entrenchment of the elite problematic for several reasons. If the former USSR republics are removed from the sample, there is extremely little variation in the variable. Furthermore, the intensity of the socialist regimes varied a lot, which would suggest that the same number of years of socialism in different countries could have had a completely different effect on the political structure (De Melo et al. 2001, p. 20). In light of the theory presented in this paper, I also argue that the incentives of the elite were significantly affected by the Ottoman and Habsburg legacies.

Third, I argue that the entrenchment of the elite is only secondary to the overall political, social and geographic structure of the country. The motivation behind this claim is twofold. First, I stipulate that the rise of corruption and an informal economy (mafia-type groups) could, through physical threats, steer the political agenda of the elite, and hence render previous political affiliation of the political elite irrelevant. Second, a careful evaluation of the socialist elite shows a crucial divergence of the meaning of political power during the socialist and post-socialist regimes. The socialist elite was primarily associated with bureaucratic power; bureaucratic power did not yield much higher incomes or other material luxuries but rather provided “preferential access to the use of public property” (Walder 2003, p. 10). Thus, as argued further by Walder (2003, pp. 14-15), entrenched socialist elite’s advantages and opportunities in rent-extraction during the transition period vary greatly, partly due to the diverse concentration of public

²² The authors use as a robustness check natural gas reserves, which admittedly is a better proxy for natural resources. Since the exact data on natural gas reserves (used by Beck and Laeven) is not available yet, I only stipulate about the assumptions the authors made regarding natural gas reserves given their original source of data, WRI. In the WRI dataset, the only country in Southeastern and Central Europe with natural gas proven reserves is Romania. Hence, the authors might have assumed zero endowment of natural resources for Albania, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Slovak Republic and Macedonia. According to EIA, however, most of these countries have natural gas reserves (the data is available only for most recent years, however).

property. This, although not invalidating the claim that entrenched elite has an effect on institutional quality, makes the argument much weaker.

The lack of consistent all-encompassing natural resource data (including natural gas, oil reserves, coal deposits, timber and cropland per person) for 1990 combined with the lack for a good proxy for the entrenchment of the elite, make it difficult to test formally how the initial political structure is affected by natural resources, entrenchment of the elite and the Ottoman/Habsburg legacy. I present several tests, which to a limited extent test this paper's theory against Beck and Laeven's theory. It should be emphasized that the critique of Beck and Laeven's arguments is only focused on a sub-set of transition countries and hence does not try to reproduce their results for their whole sample, which includes former USSR republics.

I test the effect of natural resources and the Ottoman legacy on several institutional variables – government effectiveness, rule of law, property rights and corruption. The results are presented in Table 17. I proxy for natural resource endowment in two ways – natural gas proven reserves per capita, and oil proven reserves per capita.²³ In all cases I find a significant effect of the Ottoman/Habsburg legacy on institutional performance. The natural resource endowment has a positive effect in all regressions, which is consistent with the literature. The natural gas reserves variable is significant at the 5% level for government effectiveness and rule of law, and at the 10% level for corruption. It has an insignificant effect on property rights. The oil reserves variable does not seem to have a significant effect on institutional performance. Overall, I find weaker evidence in support of the natural resource theory, when compared to the historic legacy theory.

²³ A more adequate measure of natural resource endowment would have been coal reserves per capita, which as argued in Acemoglu et al. (2001) is the most common resource in the world. However, I did not find a source of data on coal reserves that was consistent and reliable.

The Role of Socialism

The literature on post-1990 economic development has focused on the socialist legacy as the key historical determinant of institutional and economic performance (e.g. Beck & Laeven 2005, de Melo et al. 2001, Fischer & Gelb 1991). I view the socialist legacy primarily as a deterrent of market-oriented developments rather than the origin of the great divide and claim that it has two components to it. The first component is a transitory effect of the socialist legacy while the second component is the indirect effect of the Ottoman/Habsburg legacy.

Regarding the first component, it is worth noting that socialism benefited less developed countries and hence, allowed for some convergence in performance (especially with respect to industrialization, life expectancy, literacy rates and economic growth) of the socialist bloc countries (King & Szelenyi, 2005). However, with the breakup of the socialist system, there was an initial significant fall in performance in all countries, but a persistence of this fall only in some. If socialism allowed for convergence, then the divergence of institutional performance during the transition period cannot be attributed to socialism.

Regarding the second component, it is plausible that developments during the socialist period (reforms, role of elite, readiness to accept the socialist doctrine) were affected by the culture formed by the Ottoman/Habsburg legacies. I claim that submissive attitude toward authority and lack of trust in the market as two main cultural legacies of the Ottoman Empire. Both legacies can explain a resistance to individualism and support for collectivism, which political scientists have identified as key part of the political culture in the Balkans (Wildavsky 1986, Guess 2004) and which could explain the readiness of some countries to accept socialism and the resistance of others to it.

To measure the impact of socialism on institutional performance during the transition period, I create two variables. The first variable, Socialism & Reform, is a dummy variable that assigns value 1 to countries with relatively strict socialist regimes, and value 0 to countries that either had workers' management socialism (all republics of Yugoslavia) or had some major reforms geared toward competitiveness and openness to the West (as in the case of Hungary's NEM of 1968). The second

variable, Socialism, is a weight variable that assigns two points for each year a country spent under a strict socialist regime (Soviet or other) and one point for each year a country spent under a system that allowed some individual freedom and openness to the West. This approach takes into consideration the different policies adopted during socialism and distinguishes between countries that spent 45 years under a system that tolerated private property and exposure to western ideas and countries that spent 45 years in relative isolation (in domestic affairs) and of strict prohibition of private ownership. Table 19 presents the two proxies for the socialist legacy. A detailed presentation of historical facts that were utilized to create this variable is presented in Table 18.

To demonstrate the validity of the socialist proxies, I regress a proxy for initial conditions (at the end of the socialist period) on each of the socialist legacy variables presented above. I use black market exchange rate premium in 1990 (reported by De Melo et al. 2001) as a measure of economic distortion from the socialist period and an initial condition for transition. The results in Table 20 indicate that the proxies for the socialist period explain the objective differences at the end of the socialist regimes. The socialist proxy coefficients are significant at the 1% level with standard OLS estimation. The bootstrap method yields a significant effect (at 5% level) of the dummy variable and an insignificant effect of the weight variable.

Table 21 reports results of the effect of the socialist legacy and the Ottoman/Habsburg legacy on institutional performance. In all cases the socialist legacy is insignificant. Moreover, it does not change the statistical significance of the Ottoman/Habsburg variable. This provides strong evidence in favor of the claim that the Ottoman/Habsburg legacy, unlike the socialist legacy, has a significant effect on the institutional performance of the South East and Central European countries. I run but do not report tests regressing institutions on the Ottoman legacy, the socialist legacy and natural gas reserves and find that the results do not change. Despite the challenges in estimation, the results in Tables 18, 20 and 21 give adequate support for the theory that distant historical legacies have a profound effect on institutions. Furthermore, the results cast doubt on the view that the socialist legacy is the key determinant of institutional development in the transition countries.

VII. Conclusion

The paper offers a framework for the long-run determinants of institutional performance of the SECE countries and provides empirical evidence in favor of the theory. In particular, I conjecture that one of the most significant historical determinants of institutional development in the SECE countries has been the presence and duration of Ottoman or Habsburg rule. Tracing the historical origins of particular institutional features to the 17th and 18th century, I claim that through path dependency, the institutions of the Ottoman and Habsburg Empires persisted to the present and have had a profound effect on the success of the transition process from socialism to market economy. The findings in this paper confirm the significance of the Ottoman-Habsburg institutional legacies in explaining the divide of performance within the SECE countries. Furthermore, the findings show that, contrary to alternative, socialism does not have a significant effect on the institutional performance of the SECE. The role of natural resources, based on the results in this paper, is uncertain. Natural gas endowment per capita appears to have a significant effect. Oil per capita, on the other hand, does not have an effect on institutional performance measures.

The paper provides an initial step toward developing a comprehensive, historically justified, model on the determinants of institutions. In addition to formulating a theoretical model, possible ways to proceed include putting together a detailed dataset of panel data, that would circumvent the problem of low statistical power, as well as a thorough historical research on actual legal, judicial and political practices that have persisted from the Ottoman and/or Habsburg eras to the present.

Table 1: Rule of Law and Corruption (1997)

	Rule of Law	Corruption
Czech Republic	1.50	B
Slovenia	1.50	A
Serbia & Montenegro	5.00	D
Bulgaria	3.75	C

Source: 1998 Nations in Transit Report (Freedom House).

Scale for rule of law: 1 - the highest level of performance (efficiency), 7 - lowest level (inefficiency);

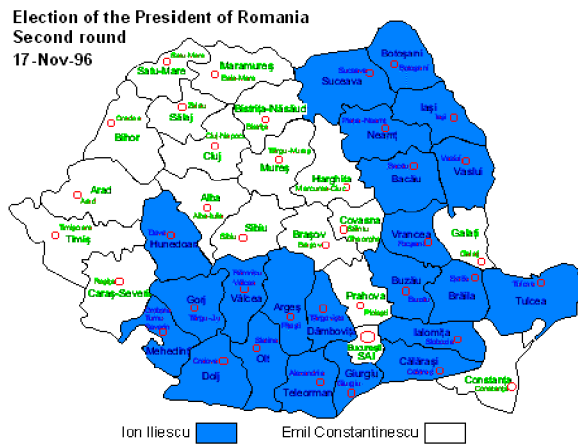
Scale for corruption: A - least corrupt, D-most corrupt.

Table 2: Income per Capita in former Yugoslavia in 1980

	Region	GNP per capita (in US dollars, exchange rate conversion)
Ottoman successors	Bosnia-Herzegovina	1737
	Montenegro	2086
	Macedonia	1721
	Kosovo	812
	Serbia Proper	2534
Habsburg successors	Croatia	3,314
	Slovenia	5193

Source: *A World Bank Country Study*, 1983, p. 237

Map 1: 1996 Romanian Elections



Map 2: Historic Provinces of Romania



Source: Official information provided by
Central Electoral Bureau, Romania
<http://www.kappa.ro/guv/bec/r-pr2.html>

Source: <http://www.horlacher.org/romania/RomReg.jpg>

Map 1 shows the outcome of Romanian elections in 1996. The two presidential candidates in the 1996 election were Ion Iliescu (socialist party) and Emil Constantinescu (democratic party). Map 2 shows the historical provinces of Romania: Wallachia and Moldavia were vassal states of the Ottoman Empire; Transylvania was conquered by the Habsburgs in 1690.

Table 3: List of Hypothesis (Defined in Section III)

Property Rights	<p>Property rights in the Habsburg successor states are more secure than in the Ottoman ones. *</p> <p>There is higher risk of expropriation of private investors by the government in Ottoman successor states than in Habsburg successor states.*</p>
Government	<p>Corruption is higher in the Ottoman successor states.*</p> <p>Trust/confidence in the government is lower in the Ottoman successor states.</p> <p>The size of unofficial economy is bigger in the Ottoman successor states.*</p> <p>There are fewer bureaucratic delays in the Habsburg successor states. *</p> <p>The level of tax compliance in the Habsburg successor states is higher than in the Ottoman successor states.</p> <p>There is higher government effectiveness in the Habsburg successor states.*</p> <p>Habsburg successor states have more stability ensured by consistent government policies.*</p>
Miscellaneous	<p>Dominant capital city in the Ottoman successor states vs. several powerful cities in the Habsburg successor states</p> <p>Extent of familiarity with market systems is larger in the Habsburg Successor states.</p> <p>Rural holdings in the Ottoman successor states are smaller than in the Habsburg successor states.</p>
Civil Society	<p>The Habsburg successor states developed a stronger civil society with more established traditions than the Ottoman successor states.*</p>

The hypotheses marked by an asterisk (*) are the ones tested in the empirical section. The lack of data for some countries or the lack of appropriate proxies did not allow us to test the rest of the hypotheses.

Table 4: Definitions of Variables and Sources of Data

Variable	Measure & Sources	Definition
Civil Society	NGO environment (USAID – 2001 NGO Sustainability Index)	“assesses the legal status of non-governmental organizations – ease of registration, legal rights and conditions regulating NGOs, and the degree to which laws and regulations regarding taxation, procurement, access to information and other issues benefit or deter NGO’s viability.” (2 = well developed, 7 = poorly developed)
	NGO financial viability (USAID – 2001 NGO Sustainability Index)	financial viability is influenced by the state of the economy, extent of philanthropy and volunteerism in the culture; “sophistication and prevalence of fund-raising” is also considered. (2 = well developed, 7 = poorly developed)
Corruption	Corruption Index (Nations in Transit 2001)	“looks at perceptions of corruption in the civil service, the business interests of top policy makers, laws on financial disclosure and conflict of interest, and anticorruption initiatives” (2 = no corruption, 7 = high levels of corruption)
GDP per capita in 1991	United Nations World Bank (1998 Transition Report)	Gross Domestic Product divided by total population in US dollars (in thousands of dollars – current dollars)
Natural Resources	2002 Oil Resources (Energy Information Administration)	Proven Crude Oil Reserves as of January 1, 2003 (in billions of barrels).
	2002 Natural Gas Reserves (Energy Information Administration)	Proven Natural Gas Reserves as of January 1, 2003 (in billions of cubic feet)
Population	2002 WRI (Earth Trends)	2002 total population (in thousands of people)
Property Rights	Property Rights Index (2003 Index of Economic Freedom)	“This factor scores the degree to which private property rights are protected and the degree to which the government enforces laws that protect private property. It also accounts for the possibility that private property will be expropriated. In addition, it analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts.” (1 = high level of protection, 5 = very low level of protection)
	Rule of Law (Nations in Transit 2001)	“average of ratings of constitutional, legislative, and judicial framework, and corruption,”, where “constitutional, legislative and judicial framework highlights constitutional reform, human rights protection, criminal code reform, judicial independence, the status of ethnic minority rights, and checks and balances among legislative, executive, and judicial authorities” (2 = very good, 7 = very bad)

	Rule of Law (Government Indicators)	“measures the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.” (0 = good, 5 = bad – author’s construct from original scale -2.5 to 2.5)
	Stock Market Integrity Index (Pistor et al.(2000)– average of 1992, 94, 96 and 98)	“Self-dealing, insider trading rules, provisions on the independence of a shareholder register and the existence and formal independence of an agency charged with supervising the stock market to capture this function;”
Public sector wages to average GDP	World Bank Group (Administrative and Civil Service Reform) - latest year available for timeframe 1996-2000	Public sector wages to average GDP “is calculated by dividing the <i>Average Government Wage</i> (defined above) by the <i>GDP per capita</i> figure” Average Government Wage “represents the ratio of the <i>Total Central Government Wage Bill</i> (the sum of wages and salaries paid to central government employees, including armed forces personnel) to the number of employees in <i>Total Central Government</i> . Non-monetary benefits (e.g., free meals, transportation) and expected future benefits (e.g., pensions) are not included in this wage measure.
	Government effectiveness (Governance Indicators – World Bank, average of 4 years – 1996,1998,2000, 2002)	“Government Effectiveness combines responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies.” (0 = good, 5 = bad – author’s construct from original scale -2.5 to 2.5)
Quality of Gov’t	Regulatory Quality (Governance Indicators – World Bank – average of 4 years)	“Regulatory Quality instead focuses more on the policies themselves, including measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development.” (0 = good, 5 = bad – author’s construct from original scale -2.5 to 2.5)
	Political Stability (Governance Indicators – World Bank – average of 4 years)	“Political Stability and Absence of Violence combines several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism.” (0 = good, 5 = bad – author’s construct from original scale -2.5 to 2.5)
Size of Informal Economy	Black Market Index (Index of Economic Freedom 2003)	black market index” measures black market activities in the production, distribution and consumption of good and services.” (1 = very low level of black market activity, 5 = very high level)
Black Market exchange rate premium in 1990	De Melo et al. (2001), World Bank	Initial condition – measure of economic distortion from the socialist period – “indicator of expectations of depreciation and/or foreign exchange rationing. A high differential between the official and the free exchange rate can also be interpreted as a distortionary tax on imports and subsidy on imports (Easterly, 1994). It stimulates diversion of resources from the official to the informal sector”

Table 5: Dates and Duration of Ottoman Rule

Country	Dates under Ottoman Rule	Duration of Ottoman Rule
Albania	1468-1912	444
Bosnia	1463-1878	314
Bulgaria	1396-1878	483
Croatia	1526-1699	173
Herzegovina	1482-1878	396
Hungary	1526-1699	173
Macedonia	1371-1913	542
Romania-Walachia	1476-1829	353
Romania-Moldavia	1504-1829	325
Romania-Transylvania	1541-1690	149
Serbia	1389-1829	440
Czech Republic	None	0
Slovakia	None	0
Slovenia	None	0

Source: L. Carl Brown, *Imperial Legacy: The Ottoman Imprint on the Balkans and the Middle East*, 1996 and author's calculations based on dates provided in the *Atlas of World History*, pp. 142, 152

Table 6: Weight Variable (w) and Dummy Variable (d)

Country	d_i	w_j
Albania	1	27
Bosnia & Herzegovina	1	23
Bulgaria	1	26
Macedonia	1	29
Romania	1	15
Serbia	1	22
Croatia	0	7
Hungary	0	7
Slovakia	0	0
Czech Republic	0	0
Slovenia	0	0

For Romania I take the average of Walachia, Moldavia and Transylvania. For Bosnia-Herzegovina I take the average of Bosnia and Herzegovina.

Table 7: GDP per capita in 1991

Country	GDP per capita in current prices in US dollars (1991)
Albania	503
Bosnia & Herzegovina	440
Bulgaria	883
Macedonia	2437
Romania	1245
Serbia & Montenegro	2456
Croatia	4939
Czech Republic	2634
Slovakia	2163
Slovenia	6549
Hungary	3261

Source: United Nations, Statistical Division – Data on National Accounts 1991

Table 8: Descriptive Statistics

	(1)		(2)		(3)	
	Mean Value	Std. Dev.	Mean Value	Std. Dev.	Mean Value	Std. Dev.
	Whole Sample		Ottoman Successors		Habsburg Successors	
<i>Dependent Variables</i>						
Rule of Law	4.01	1.29	4.94	0.69	2.902	0.87
Black market	3.91	0.97	4.58	0.66	3.10	0.55
Property Rights	3.45	0.93	4.00	0.63	2.80	0.84
NGO environment	3.37	1.48	4.08	1.49	2.30	0.57
NGO financial liability	4.25	1.29	4.95	0.77	3.20	1.28
Rule of Law - GI	2.56	0.63	3.02	0.35	2.01	0.39
Regulatory quality	2.44	0.72	2.90	0.61	1.88	0.33
Stock Market Integrity	1.66	1.23	2.29	1.27	0.90	0.68
Political Stability	2.30	0.75	2.83	0.59	1.66	0.23
Government effectiveness	1.57	0.57	2.04	0.16	1.02	0.29
Corruption	4.43	1.25	5.29	0.66	3.40	0.94
<i>Independent Variables</i>						
GDP per capita in 1991	2495	1640	1555	871	3622	1693
GDP per capita in '91 UN	2500	1883	1327	913	3909	1811
Oil Resources	128.63	279.61	202.25	374.68	40.3	45.59
Natural Gas Reserves	0.76	1.09	0.93	1.46	0.55	0.49
Public Wage ratio	1.02	0.39	1.08	0.51	0.98	0.31
Ottoman weight	14.18	11.70	23.67	4.97	2.80	3.83
Socialism	73.91	11.40	75.83	12.02	71.6	11.50
Black Market Premium	260.77	326.62	427.4	404.56	94.14	83.33

Definitions of all variables and units of measurement are summarized in Table 4.

Table 9: Nonparametric Results

Variable	n ₁	n ₂	T	p-value
Corruption	5	6	15	< 0.005
Black Market	5	6	15	< 0.005
Gov't effectiveness	5	6	15	< 0.005
Political Stability	5	6	15	< 0.005
Regulatory quality	5	6	16	0.005
Property rights	5	6	16.5	0.01
Rule of law	5	6	15	< 0.005
Rule of Law - GI	5	6	15	< 0.005
Stock Market Integrity	5	6	16	0.005
NGO environment	4	6	11	0.01
NGO financial viability	4	6	13	0.05

Table 10: Government

	Dependent Variable									
	Corruption		Black market		Government effectiveness		Political stability		Regulatory quality	
<i>Panel A (Using Weight Variable as proxy for Ottoman presence)</i>										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ottoman weight	0.06 (3.14)***	0.08 (3.82)***	0.05 (2.89)**	0.06 (3.77)***	0.036 (3.41)***	0.04 (5.81)***	0.055 (4.02)***	0.052 (5.07)***	0.037 (2.44)**	0.04 (3.00)***
GDP per capita 1991	-0.202 (1.24)		-0.121 (1.58)*		-0.056 (1.12)		0.029 (0.47)		-0.029 (0.33)	
Constant	4.04 (8.52)	3.23 (7.57)	3.478 (8.69)	2.99 (10.3)	1.203 (4.34)	0.978 (7.00)	1.437 (5.48)	1.55 (15.7)	1.979 (4.88)	1.863 (11.9)
Observations	11		11		11		11		11	
R-squared	0.68	0.63	0.64	0.60	0.75	0.73	0.68	0.68	0.44	0.44
<i>Panel B (Using Dummy Variable as proxy for Ottoman presence)</i>										
	(1)	(2)	(3)	(4)	(5)					
Dummy Variable	1.46 (2.59)**	1.297 (2.85)**	1.023 (4.45)***	1.37 (3.64)***	1.137 (2.95)***					
GDP Per capita 1991	-0.16 (0.77)	-0.071 (0.61)	-0.001 (0.02)	0.075 (0.71)	0.045 (0.46)					
Constant	4.04 (6.55)	3.38 (6.80)	1.013 (3.79)	1.37 (3.82)	1.707 (4.05)					
Observations	11		11		11					
R-squared	0.66		0.65		0.85		0.68		0.56	

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%

Table 11: Property Rights

	Dependent Variables							
	Property rights		Rule of Law		Rule of law – GI		Stock Market Integrity	
<i>Panel A (Using Weight Variable as proxy for Ottoman presence)</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ottoman weight	0.05 (2.7)**	0.05 (2.8)**	0.072 (3.5)***	0.089 (4.2)***	0.039 (3.2)***	0.043 (4.6)**	0.014 (0.46)	0.049 (1.88)**
GDP per capita 1991	0.056 (0.41)		-0.157 (1.00)		-0.049 (0.76)		-0.34 (1.61)*	
Constant	2.53 (2.85)	2.47 (7.99)	3.38 (7.19)	2.75 (7.57)	2.136 (7.7)	1.94 (11.77)	2.31 (2.38)	0.95 (2.38)
Observations	11		11		11		11	
R-squared	0.40	0.39	0.67	0.64	0.67	0.66	0.38	0.23
<i>Panel B (Using Dummy Variable as proxy for Ottoman presence)</i>								
	(1)	(2)	(3)	(4)				
Dummy Variable	1.57 (3.31)***		1.81 (3.47)***		0.989 (3.44)***		0.739 (0.89)	
GDP per capita 1991	0.145 (1.06)		-0.087 (0.41)		-0.009 (0.10)		-0.25 (1.10)	
Constant	2.23 (3.52)***		3.25 (5.43)***		2.047 (6.37)***		1.887 (1.89)**	
Observations	11		11		11		11	
R-squared	0.49		0.69		0.70		0.41	

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%

Table 12: Civil Society

	Dependent Variables			
	NGO environment		NGO financial viability	
<i>Panel A (Using Weight Variable as proxy for Ottoman presence)</i>				
	(1)	(2)	(3)	(4)
Ottoman weight	0.081 (1.56)*	0.07 (2.51)**	0.089 (2.10)**	0.078 (2.69)**
GDP per capita 1991	0.11 (0.34)		0.15 (0.43)	
Constant	1.873 (1.70)	2.23 (6.94)	2.538 (2.20)	2.024 (5.53)
Observations	10		10	
R-squared	0.32	0.31	0.49	0.47
<i>Panel B (Using Dummy Variable as proxy for Ottoman presence)</i>				
	(1)	(2)		
Dummy Variable	2.62 (2.31)**	2.57 (2.80)**		
GDP per capita 1991	0.433 (1.03)	0.425 (1.10)		
Constant	0.891 (0.60)	1.81 (1.52)		
Observations	10		10	
R-squared	0.47		0.59	

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%;

Table 13: Bootstrap Method

Institutional Feature	t-value	Number of Replications
Black Market	2.40**	100
Rule of Law (GI)	3.59***	100
Government Effectiveness	3.38***	100
Rule of Law (Nations in Transit)	2.06**	100
Regulatory Quality	1.37	100
Political Stability	4.55***	100
Corruption	1.70*	100
Property rights	1.24	100
NGO environment	2.95**	100
NGO financial viability	1.57*	100

* significant at 10%; ** significant at 5%, *** significant at 1%;

This table summarizes the result of estimating equation (1) with Ottoman weight as explanatory variable (excluding GDP per capita) by Bootstrapping. For brevity, only the t-statistics and the number of iterations are reported. The dependent variables are indicated in the first column, named 'institutional feature.'

Table 14: Robustness Check: Corruption

	Corruption
Ottoman Weight	0.065 (3.27)***
Public Wage to average GDP ratio	1.106 (2.93)***
Constant	2.206 (3.42)
Observations	9
R-squared	0.72

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%;

Table 15: Correlation of Residuals Matrix

	Black Market	NGO environment	Property Rights
Black Market	1.0000		
NGO environment	0.5179	1.0000	
Property Rights	0.6373	0.3492	1.0000

The table shows the matrix of residuals of regressions used for the meta analysis in Table 16.

Table 16: Meta Analysis Controlling for Correlation Issues

Regressions Included	Fischer Combined Test	Diffuse Test
Black Market NGO environment Property Rights	P = 20.16 (p-value < 0.005)	D = 0.13 (p-value > 0.90)

Table 17: Role of Natural Resource Endowment

<i>Panel A</i>				
	Rule of law (GI)	Property Rights	Corruption	Government Effectiveness
Ottoman weight	0.047 (5.81)***	0.053 (3.08)***	0.09 (4.14)***	0.045 (7.85)***
Natural Gas Reserves per Capita	2.41 (2.06)**	2.49 (0.85)	4.74 (1.49)*	2.20 (2.35)**
Constant	1.72 (11.60)	2.52 (6.41)	2.80 (4.80)	0.78 (6.81)***
Observations	11	11	11	11
R-squared	0.74	0.43	0.71	0.81

<i>Panel B</i>				
	Rule of law (GI)	Property Rights	Corruption	Government Effectiveness
Ottoman weight	0.043 (4.17)***	0.048 (2.34)**	0.083 (3.58)***	0.04 (5.34)***
Oil Reserves per Capita	5.65 (1.13)	10.39 (0.86)	5.47 (0.50)	7.36 (1.50)*
Constant	1.89 (10.89)	2.67 (7.42)	3.196 (6.66)***	0.92 (6.20)***
Observations	11	11	11	11
R-squared	0.68	0.41	0.63	0.77

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%;

Table 18: Socialism and Reforms (Events and Dates)

Country	Events	Number of Years under Socialism	Socialist Weight Variable
Albania	Communists seized power in November 1944. Diplomatic ties with the USSR broken off in 1961. The regime imposed a virtual isolation of the country from the outside world, as well as political oppression and censorship of all activity.	1944-1989	90
Bulgaria	King Simeon ousted in September 1946. Bulgaria becomes a Communist state. The regime was one of the most restrictive among countries that followed the Soviet Union.	1946 - 1989	86
Czechoslovakia	1945 – The Third Czechoslovak Republic was established. 1948-1953 – strict adherence to the Soviet model. 1953 – 1957 – mild liberalization as result of pressure from the people. 1957 – 1968 – re-imposition of Stalinist regime. 1968 - democratization and liberalization (Prague Spring). 1969 – 1989 – reversal of reforms (as result of Soviet intervention).	1945 - 1989	84
Yugoslavia	In 1945 the partisans established Communist rule. Between 1945 and 1949, the party followed the Soviet model closely. In 1948 Soviet Union denounces Yugoslavia at a Cominform meeting in Romania. After 1952, Yugoslavia moved toward market socialism and became one of the least repressive regimes in the region.	1945-1990	65
Romania	The monarchy was abolished in December 1947. Communist Party took control. After 1953, Romania distanced itself from the USSR. Regime severely restricted personal liberties, censored the press; followed a very closed off domestic policy despite maintaining diplomatic relationships with the West in foreign policy.	1947 - 1989	84
Hungary	August 1949 The Hungarian People's Republic was established. 1949-1953, the party pushed for transformation of the economy based on the Soviet model. From 1953 to 1955 the economic policies were softened somewhat (liberalization, etc.). 1956 – Hungarians revolted against the USSR (Soviets suppressed the revolts). 1956-1968 – Strict controls imposed. 1968 – the New Economic Mechanism (NEM) was introduced – helped Hungarian production and competitiveness on international markets, reduced government control over the economy and allowed for greater individual freedom.	1949 - 1989	60

Source: MSN Encarta Encyclopedia

Table 19: Measure of Socialism

Country	Socialism & Reform	Socialism
Albania	1	90
Bulgaria	1	86
Czech Republic	0	84
Slovakia	0	84
Slovenia	0	65
Croatia	0	65
Serbia & Montenegro	0	65
Macedonia	0	65
Bosnia & Herzegovina	0	65
Hungary	0	60
Romania	1	84

Table 20: Validity of socialist proxies

Dependent Variable: Black Market Premium in 1990 (%)				
	OLS	OLS	Bootstrap Method	Bootstrap Method
Socialist regime & Reform	510.39 (3.21)***		407.00 (2.00)**	
Socialist regime		20.81 (3.25)***		16.28 (1.39)*
Constant	56.62 (2.14)	-1296.37 (3.14)	27.00 (0.63)	-1031.2 (1.35)
Observations	10	10	10	10
R-squared	0.65	0.55	0.47	.41

Dependent variable is black market premium in 1990 (%) – Source: De Melo et al. 2001, The World Bank. A high black market exchange rate premium implies higher economic distortion.

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%;

Table 21: The Role of Socialism on Institutional Performance

	Government effectiveness		Rule of Law		Black Market	
	(1)	(2)	(3)	(4)	(5)	(6)
Ottoman weight	0.042 (5.23)***	0.042 (5.46)***	0.045 (4.45)***	0.044 (4.32)***	0.066 (3.81)***	0.064 (3.67)***
Socialism & Reform	-0.001 (0.01)		-0.148 (0.66)		-0.148 (0.34)	
Socialism		0.005 (0.59)		-0.001 (0.10)		0.005 (0.26)
Constant	0.979 (6.12)	0.583 (0.85)	1.977 (9.57)	1.859 (2.04)	3.032 (8.47)	2.619 (1.69)
Observations	11	11	11	11	11	11
R-squared	0.73	0.74	0.67	0.66	0.60	0.61

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%, *** significant at 1%;

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