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### Working Paper History matters, but how? An example of Ottoman and Habsburg legacies and judicial performance in Romania

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## History Matters, but How? An Example of Ottoman and Habsburg Legacies and Judicial Performance in Romania

by

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#### Abstract

The paper examines the interdependence of historical legacies and current contextual factors as determinants of economic and political performance. It shows that behavioral patterns based on identical legacies could lead to very different (if not the opposite) results in regions with different contextual socioeconomic characteristics. Specifically, the paper compares the demand for litigation as an important aspect of judicial performance in two different historical and cultural regions of Romania, which have been in the past under indirect Ottoman rule and part of the Habsburg Empire respectively. Although Romania is currently a centralized state with common judicial system, both parts of the country inherited substantially different legacies from the history. We find that while in rich regions Habsburg legacy leads to higher demand for litigation than the Ottoman, in poor regions the situation is reversed. The results remain robust for various specifications, controls and estimation techniques.

Key words: historical legacies, judicial performance, contextual factors, demand for litigation, Habsburg legacy, Ottoman legacy

JEL classification: K41; K42; N44; O17; P26

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#### 1. Introduction

The impact of historical legacies on political development and economic performance has been acknowledged in social sciences and in economics (e.g. North 1990). In many cases institutions have a long-term and lasting effect: examples include the influence of European colonization (Acemoglu et al. 2001; Olsson 2009) and pre-colonial states (Gennaioli and Rainer 2007) in developing world, political history of the European states (Tabellini 2010), legal traditions of the US states before entering into the Union (Berkowitz and Clay 2005), legacies of Communist rule (Alesina and Fuchs-Schundeln 2007) and Holocaust (Acemoglu et al. 2010). An interesting question, which arises in this respect, is whether there is any reinforcing or modifying impact of the *current* contextual factors on these historical legacies. Does a particular legacy always help (or harm) current development? Or it may be helpful in one circumstance and harmful in another one?

In fact, the very literature on the impact of informal institutions and legacies originates from huge variation of the performance of similar formal institutions in different environments. Political institutions, which seemed to function properly in the US, did not deliver the same outcome in Liberia (where the ruling elite was constituted by Afro-American emigrants) or in Latin America; the same is true for the otherwise identical political institutions in the Northern and in the Southern Italy. Similar institutional changes (like the "colored revolutions" in the former Soviet Union) deliver very different outcomes in Ukraine, in Georgia and in Kyrgyzstan. Historical legacies provide a tentative explanation for this variation – the same formal institutions encounter different informal behavioral patterns, causing contradictions and conflicts (Herrmann-Pillath 1993; Helmke/Levitsky 2004; Leipold 2006; Levit-sky/Murillo 2009), and had different histories of performance in the past shaping the "collective memories" of the society (Rothstein 2000). Even in this case the question remains which mechanism is particularly determining the effect of legacies. Yet in the next step one ought to ask, whether the impact of identical legacies as such can also be different, depending on the general environment.

Anecdotal studies of individual countries and impact of historical and cultural specifics on their development are often able to link similar institutions to entirely different out-

comes. "Confucian values" and "Asian specifics" were used to explain the weakness of the East Asian economies in the nineteenth century; the rise of Japan in the twentieth century; but also the "Asian crisis" and the deficit of structural reforms in Asia and Korea in the 1990s (and currently are used again to explain the "miracle of China"). Both current stable democracy and the Hitler totalitarian regime can be "explained" by the German historical tradition (Lukin/Lukin 2009). Partly the reasons for this variation come from the difficulty to identify the effects of the historical paths and the legacies, which are, in some sense, always unique for each country (and therefore one is likely to find an explanation for almost every outcome) and often considered in a too simplistic way (Herrmann-Pillath 2010); however, it may also be the case that the same legacies, which provide impetus for economic growth in one environment, turn into a problem in another one. The legacy remained the same, but the conditions changed, and so did the influence of the legacy on economic and political performance. Different sets of informal institutions and practices may be "complementary" to different economic and political conditions, thus causing different results.

Central and Eastern Europe has for the last two decades served as a playground for the analysis of historical legacies in numerous papers (e.g. Kopstein/Reilly 2000; Stark/Bruszt 1998). The region received particular attention because of the presence of multiple partially conflicting factors associated with pre-Communist and Communist periods of its past, which made the identification of the "relevant histories" particularly important (Cirtautas/Schimmelfenning 2010). The literature looked at both communist legacies (e.g. Jowitt 1992) and pre-communist historical development (Brown 1996; Panther 1997; Kitschelt 2003; Winiecki 2004; Dimitrova-Grajzl 2007; Jahn/Müller-Rommel 2010). Several studies explicitly consider the "overlap" of legacies and their variation across various areas of analysis (i.e. economic, cultural, institutional, political) and with time (Ekiert/Hanson 2003; Pop-Eleches 2007), as well as influence of more proximate factors (e.g. Mendelski 2009; Cameron 2007; Jahn/Müller-Rommel 2010; Vachudova 2005; Linden 2002; Orenstein et al. 2008). Most of the literature includes inter-country studies, which focus on economic variation (e.g. Fish 1998; De Melo et al. 2001; Katchanovski 2000), democracy variation (e.g Ekiert/Hanson 2003; Agh 1998) or politico-administrative variation (e.g. Grzymala-Busse 2002). Some intra-country studies examine inter-regional variation in those states which were under the domination of different empires before World War I (e.g. Ottoman, Habsburg, Russian Empires or Prussia), such as Ukraine (Katchanovski 2000; Darden forthcoming), Poland (Zarycki 2007) and Romania (Sum/Badescu 2005; Roper/Fesnic 2003).

This paper aims to explicitly look at the interaction of historical legacies and contextual factors (e.g. education, economic development), using a unique dataset on the variation of judicial performance across counties of Romania. To our knowledge, the interaction of historical legacies and the current contextual factors has never been explicitly examined in this literature before – a research gap we intend to fill in this paper. Our approach takes advantage of the intra-country variation of historical legacies. Examining differences between (historical) regions in one country has the clear benefit in terms of controlling for the unobserved heterogeneity (see Snyder 2001). Romania as a currently centralized unitary state is an interesting case from this point of view. Different parts of Romania have belonged to either Habsburg (Austria-Hungary) or Ottoman domains for a significant period of time; currently, however, Romania is a centralized unitary state. Thus, this paper makes a contribution to the analysis of historical legacies examining intra-country variation and placing the legacies in the current context. In this sense, it is complementary to several other recent econometric studies (Dimitrova-Grajzl 2007; Grosjean 2011; Becker et al. 2011) examining the impact of the Habsburg and Ottoman legacies on other institutional characteristics, as well as economic development in Central and Eastern Europe both within and across country borders.

Our main focus is on judicial performance – an area, which, on the one hand, is likely to exhibit strong impact of legacies (as it is associated with the issues like quality of bureaucracy and trust into the government and law), and, on the other hand, has rarely been investigated in the research on Central and Eastern Europe (as opposed to, say, economic growth or democratization). Specifically, we study the demand for litigation (at the level of appeal courts - tribunals) in various regions of Romania. Furthermore, we also look at various channels of transmission of legacies, particularly through the persistence of ethnic minorities from the imperial past; therefore, this paper also contributes to some recent research (Darden/Grzymala-Busse 2006; Wittenberg 2006; Peisakhin 2010; Darden forthcoming), which concentrates its attention on pinpointing the underlying causal mechanisms which link the past and the present in case of the legacies.

Our results are unequivocal. We show that different historical legacies account for differences in the demand for litigation/jurisprudence and reflect differences in court backlogs in tribunals. However, unlike the previous literature, we demonstrate that these differences in litigation behavior can be explained by the *interaction* of informal institutions (which survived as legacies from the past) and contextual factors (education, economic development). We do not find an unambiguous "Ottoman burden" and "Habsburg advantage" from the development viewpoint: while in rich regions Habsburg legacy generates higher demand for litigation than the Ottoman, in poor legacies the situation is reversed. Thus, the basic message of the paper is that the effect of institutional legacies is dependent on present contextual factors. Furthermore, we cannot confirm the hypothesis that the legacies are associated with the presence of ethnic minorities, remaining from the Habsburg or Ottoman past. There seem to be more subtle mechanisms of legacy transmission in place.

The paper is structured as follows. Section 2 elaborates on our main theoretical predictions. Section 3 introduces the background of the two historically diverse regions in Romania. Section 4 introduces the main conceptual framework and the key hypotheses which we test econometrically. Section 5 presents the results. Section 6 discusses the results and tries to provide causal mechanisms. The last section concludes.

#### 2. Expressive and instrumental demand for litigation

The discussion of determinants of demand for litigation has an old and wellestablished tradition in Law and Economics. The most obvious interpretation of a legal claim from this point of view is that of an investment opportunity pursued by the litigant based on the expected benefits and costs (Landes 1971; Posner 1973; Cornell 1990). The costs are determined by case-specific circumstances, but also by institutional arrangements, as it has been shown in numerous comparative studies of demand for litigation across different countries (Shavell 1982; Hughes/Snyder 1995; Chappe 2011). One of the prominent lines of argumentation suggests that litigation should increase as a result of economic growth (Jacobi 2009), because of larger resources at hand of the parties (which can be used for the litigation purposes) and of higher complexity of issues they encounter making informal mechanisms of dispute resolution insufficient. This approach to the demand for litigation does not exclude the probability of biases, caused, for example, by the information imperfections and incorrect assessments of the outcome of the trial (see Langlais 2011 and the literature cited in this paper).

An alternative approach links the demand for litigation to the cultural specifics of particular countries – and thus ultimately to historical legacies. One of the countries, which received particular attention from this point of view, is Japan: the low demand for litigation in Japan observed after World War II has been explained by the dominance of "harmonious values" in the society and preference for informal dispute resolution. This issue has been investigated in various empirical papers, often heavily criticizing the culturalist argument from both theoretical and empirical points of view (see the overview in Ginsburg/Hoetker 2006 and Feldman 2007). Yet the historical and cultural legacies do not necessarily reflect themselves in a straightforward way. It is possible to hypothesize two further channels of their effect on the demand for litigation.

First, history affects the priors for the assessment of probabilities of success, which are likely to depend on the overall level of confidence into the government. The last factor is claimed to be among the key issues influencing the ability of emerging economies to transplant and to establish legal institutions (see e.g. Oleinik 2005). If the government is perceived as not trustworthy, there will be low trust into the ability of courts to resolve disputes in a fair and impartial way. Therefore, litigation should be perceived as a rather useless endeavor. From this point of view, societies with lower level of confidence into the government should exhibit lower demand for litigation.

Second, it is reasonable to assume that the demand for litigation can be not only instrumental (as in the case described above), but also expressive. The expressive behavior implies that the action is chosen not in order to achieve a specific goal but rather for selfexpression purposes (the idea has been discussed in sociology by Lin (2002) and in economics by Hillman  $(2010)^1$ ). The most obvious example of expressive behavior, which received

<sup>&</sup>lt;sup>1</sup> Hillman (2010) also points out that in many cases an actor is not merely indifferent about achieving the stated goals of the expressive behavior but in fact prefers that the latter are not achieved (expressive behavior trap). This problem is typical for collective action situations; litigation is a case of individual choice, thus, in our case, expressive behavior merely implies that the decision is made regardless of the probability to achieve the

substantial attention in political economics starting from Buchanan (1954) and Tullock (1971), is voting: in this case the low costs of the voting act combined with extremely high costs of being sufficiently informed make expressive behavior a plausible explanation for the voting decisions. In this case the voters make their decision expecting that it will have no 'instrumental' benefit for them, merely to state their position (e.g. dissatisfaction with the political process). Another example of expressive behavior could be a support of a public campaign which the participant ultimately believes to be useless, but which demonstrates the signatory's position, or charitable contributions, which the contributors themselves consider to be unable to really improve the situation of those who the charity is directed to (even more, parents can derive expressive utility from overfeeding their children). Litigation, unlike voting, is a costly process, and therefore the role of expressive behavior is likely to be smaller; yet one cannot outright reject the opportunity that individuals go to court for expressive purposes. In this case, litigation can be driven by the social environment of the claimant or even by emotions.<sup>2</sup>

All three channels of the impact of history on the demand for litigation suggest a deviation from the 'optimal' litigation in individual societies. It is reasonable to hypothesize that in the societies only recently exposed to modern market economies and with long history of non-democratic regimes with strong redistributive appetites the deviation is likely to be stronger. First, these societies should have developed more advanced informal tools of conflict resolution. Second, many of them have lower trust to the state.<sup>3</sup> Hence, one can expect severely biased expectations of the litigants. Third, one could expect the litigants in these countries to be more prone to expressive behavior, as a result of lower trust to and familiarity with the legal system and legal procedure. The direction of the deviation is therefore not entirely clear: while the low trust creates a downward bias in the litigation, expressive behavior

stated goals – one goes to court even if one does not expect to achieve anything or if one knows that the court's decision will not be implemented.

<sup>&</sup>lt;sup>2</sup> For example, Russian citizens are known to be among the most active litigants at the European Court of Human Rights. Clearly, it does not always represent the expressive behavior, since the litigation procedure is difficult and costly and the Russian judicial system demonstrates very poor performance – hence, the appeal to the European institutions becomes necessary. However, it is also the case that the implementation of the decisions of the European Court in Russia is in many cases questionable and excessively delayed, so, the benefit from being successful is not straightforward – hence, some component of the expressive behavior could also be present in this case.

<sup>&</sup>lt;sup>3</sup> Though it is not necessarily the case and depends upon the peculiarities of their historical path.

is likely to shift the demand for litigation upward. Thus, even if legacies matter, one is not entirely sure in which way.

However, a more interesting link emerges if one looks not at direct impact of historical legacies, but rather at the interaction between legacies and the current economic performance. As we have mentioned, the 'investment' view of litigation suggests that the increase of economic well being should *ceteris paribus* increase demand for litigation. However, introducing the historical influences is likely to challenge this relation. For instance, if the actor has low trust into the government and legal system, she will still use extra-legal dispute resolution mechanisms even if her economic well-being increases: she will rather perceive the increase of resources as a factor improving her standing in this system of negotiations. This debate of whether economic prosperity causes more demand for good institutions, particularly given low level of trust into the government, remains unresolved as of now (see Libman 2010 for a literature survey). Similarly, expressive behavior does not depend on the actual winning probability and importance of the decisions disputed and, therefore, reduces the dependence of demand for litigation on economic well-being.<sup>4</sup>

To conclude, it is plausible to conjecture that while the direction of bias in the demand for litigation between societies with different historical legacies is not clear, in *societies less exposed to the market and with strong experience of less efficient bureaucracies in the past, the demand for litigation should be independent of economic well-being.* If the historical legacies merely reduce the trust into the government, for both high and low income these societies should exhibit lower demand for litigation than other societies, but the distance between the demand for litigation among poor societies with different legacies should be smaller than among the rich ones. If the expressive behavior also plays a certain role, an even more interesting outcome can appear: in poor societies those with historical legacies favoring expressive behavior are likely to exhibit *higher* demand for litigation; in rich societies, on the contrary, the benefits of instrumental litigation could become high enough so that the instrumental demand exceeds expressive demand, and the societies with historical legacies favoring expressive behavior should experience relatively *lower* demand for litigation than other societies.

There are several caveats to be made in this case. It is possible that the expressive behavior changes if income increases (for example, because people are more likely to behave expressively, if they expect relatively low personal costs from these actions, and the relative personal costs of litigation decrease if the income increases). However, if one expects expressive behavior to be strongly influenced by cultural norms and standards, which are subject to the legacy transmission through informal socialization mechanisms, one could expect it to be relatively robust over time. Furthermore, legacies could directly influence income and the design of legal institutions. A partial way to account for these differences is to concentrate on intra-national comparison, if there is sufficient within-country variation in historical legacies, but formal legal institutions are identical (and there is also large inter-regional redistribution from the center). The case of Romania, as it will be shown in the next section, provides an attractive empirical playground for this research. Finally, the impact of legacies does also change over time: it is possible to hypothesize that the increasing wealth could contribute to the decline of the impact of legacies. It would imply that the impact of legacies can be established only for certain income levels, but not for all of them. We will explicitly address this issue in our empirical strategy.

#### 3. The changing judicial system in Romania

#### 3.1 Ottoman and Habsburg legacies

The present-day Romanian territory has been an area of competition of great powers throughout its history. From the fourteenth century on, various parts of it have been under control of the Ottoman Empire, either directly, or through a system of suzerainty relations with local rulers. In late 17th century the north-western part of the country, Transylvania, became part of the Habsburg monarchy; the eastern and southern parts of the country, Walachia and Moldavia, remained Ottoman vassal states. In the mid-19th century Ottoman dominance was crippled; in 1859 Walachia and Moldavia were united (forming the basis for the modern

<sup>&</sup>lt;sup>4</sup> Low trust and propensity to expressive behavior can interact: if the trust in legal institutions is low, one is likely to assume that the litigation cannot be used for achieving "instrumental" goals at all, and then the judiciary is, if at all, used only due to expressive behavior concerns.

Romania), and in 1877 they declared independence from the Ottoman Empire. It was as late as after World War I that the Transylvania was re-integrated in the Romanian state, alongside with Bukovina, another part of the Habsburg Empire, annexed as part of the divisions of Poland in the 18s century.

Thus, both Habsburg and Ottoman rule over various parts of Romania stretched for at least several centuries, resulting in significant cultural, institutional and politico-economic differences. Looking at the descriptive statistics of the first half of the 20s century (see *Table 1*) clearly reveals the dichotomy between two parts of Romania. The territories of the former Habsburg Empire were economically and structurally better developed, more diverse in terms of ethnicity and religion, and had a more literate population than the Ottoman regions. In contrast, people in Ottoman regions (Moldavia, Wallachia, Dobrogea) were on average poorer, ethically less diverse, mostly Orthodox and less literate.

	Ottoman regions (Moldavia, Wallachia, Do- brogea)	Habsburg regions (Transyl- vania)
Economic and structural de- velopment		
a. railway lines by 1900 (km per 100 th. pop)	49	96
b. number of commercial banks in 1910-1911	151	430
c. output per capita in firms (horsepower and output data)		
	80	118
Illiteracy rates in towns	50.6%, 34.1%, 25% , 12.5%	27.4%, 21.5%, 13.1%, 6.7%

 Table 1: Regional historical differences in Romania under the Ottoman and Habsburg

 Empires

(for the years 1900; 1910; 1930; 1948)		
Minorities	Muslims, Russians, Ukrainians	Hungarians, Germans, Jews
Religion (1934)	Mainly Orthodox, few Muslims	Greek-Orthodox (34.8%),Greek-Catholic (25%), Catholic (17.1%), Calvinists (12.6%), Lutherans (4.9%), Jewish (3.5%)
Legal and judicial system	Customary law, French civil law, inefficient judiciary	Customary law, Austrian ABGB, Hungarian law, effi- cient judiciary
Informal institutions	Clientelist vertical networks, corruption, few trust in state institutions	Horizontal networks, few cor- ruption, more trust in state insti- tutions
Degree of foreign penetration	Weak "Ottomanization"	Strong Magyarization

Sources: Illyes 1981; Sugar 1977; Maxim 2001; Macartney 1956; Lampe/Jackson 1982.

What is more important for us is that Habsburg and Ottoman regions are claimed to have significant differences in terms of their informal institutions, though due do different factors. In some sense, it is possible to speak about *weak Ottomanization* and *strong Hungarization (Magyarization)*. In contrast to Habsburg territories, the Ottoman principalities Wallachia and Moldavia had certain state autonomy and were institutionally less penetrated by the Ottoman Empire. As vassal states, they had to pay high tribute (taxes) to the sultan but were able to keep their own nobility and princes (instead of Ottoman-Muslim governors) and their former financial, politico-administrative and judicial structures (e.g. customary law as opposed to the Ottoman religious law and local self-administration) (Maxim 2001: 20f; Sugar 1977: 281). "Ottomanization" of Wallachia and Moldavia was therefore done more indirectly with the help of Phanariots, Ottomans of Greek origins who ruled between 1711/1716 and

1822. Their period was characterized by impoverishment of the population, increasing turmoil and extreme corruption (Sugar 1977: 122f; Jelavich 1983: 103).

One can argue that blaming only the Ottoman Empire for introducing corruption and underdevelopment to Romania would be inadequate, as the principalities were already less developed than Transylvania before the Ottomans conquered the country (Maxim 2001: 208). However, it is still likely that due to the long interaction with Ottomans and Phanariots, Romanians from the principalities renewed or reinforced certain undesirable habits and attitudes to organize social, political and economic relations in a more informal way, e.g. through the use of *bakshish* (bribe) and nepotism. Overall, it is usually claimed that informal institutions in the Ottoman region were associated with clientelist vertical networks, absence of trust and more corruption (Sugar 1977; Brown 1996). Negative cultural traits, which were ascribed to Ottomans in the Romanian case, were "cleverness, expressed in attempt to get around obstacles, including those erected by authority, by using none-too-ethical (from the point of view of the government) or even illegal means. The notion persists that it is perfectly permissible to cheat and steal from the government..." (Maxim 2001: 212).

From the 18th century onwards Walachia's and Moldavia's legal system started to be influenced by Western legislation. Legal borrowings and transplants from abroad adapted the legislation to Western standards. The Moldovian Code Calimach (1817) was modeled in parts after the Habsburg ABGB Civil Code from 1811 and contained also elements from the French Civil Code (Bocsan 2006). However, the implementation of these reforms was substantially delayed as opposed to the Habsburg Empire.

In contrast, Habsburg territories were fully incorporated into the Habsburg Empire and also more influenced by its assimilation, centralization and Magyarization practices (Seton-Watson 1925: 104). From this point of view, it is not necessarily the *negative* Ottoman influence in the East and the South, and rather the *positive* effect of the Habsburg/Hungarian rule, which one has to concentrate upon. Among other things, being part of the Austria-Hungary implied that this region was subject to the Habsburg law and was ruled by relatively efficient and well-trained Habsburg bureaucracy (including judges). It was subject to the modernization reforms implemented by the Danubian monarchy throughout the 18th and the 19th centu-

ries and to Magyarization/Hungarization activities of non-Magyar population towards the end of the 19th century. Hungariziation meant first of all learning of the Hungarian language. The knowledge of Hungarian (or German), allowed mostly Magyars, (but also Germans) to occupy important administrative and judicial positions while the Romanian population remained peasants or had only subordinate positions. By 1870 the Transylvanian judiciary became entirely Magyarized (Seton-Watson 1925: 104). Compulsory instruction in Hungarian was introduced under the Apponyi Act of 1907 and most public state schools and all high schools became Magyar by 1914 (see Macartney 1956: 264). Such measures spread the knowledge of Hungarian which allowed understanding Hungarian legislation.

In Transylvania, Hungarian legislation (*Corpus juris Hungarici*) replaced the Austrian legislation (e.g. ABGB) in 1867, after the Austro-Hungarian Compromise. In contrast to the superficially transplanted Western legislation in the Ottoman regions, the Hungarian constitutional law was the result of a historical process and the outcome of a long political struggle. The Hungarian Constitution was based on many sources (e.g. own customary law, Austrian and German legislation), it followed fundamental rights (*Grundgesetze*) instead of precise formal legal norms (*Rechtsnormen*) and was relatively well elaborated. It contained detailed regulations on judicial independence (non-removability of judges, immunity, non-transferability) and on different judicial conflicts of interest such as nepotism and corruption (incompatibility). Judicial accountability over judges and their performance (e.g. punctuality, respect of law) was assured by the Ministry of Justice and disciplinary councils (von Ferdinandy 1909).

The respect of the detailed and coherent legal framework and a good educational system contributed to overall fair and impartial judicial decisions which then resulted in relatively high trust in the judiciary among citizens. A well-functioning judiciary had also a distinct impact on the informal norms of behavior than in the Ottoman regions. Informal institutions in Habsburg regions were associated with the behavioral patterns of Hungarian and German minorities which many Romanians adapted: higher social capital (presence of horizontal networks), more trust in state institutions (judiciaries), less clientelism and fewer corruption and in general more respect for the rule of law (Dimitrova-Grajzl 2007).

#### 3.2 Towards a centralized state and judicial system

The period which followed the collapse of the two Empires, however, was characterized by considerable Romanization and centralization activities, which affected especially former Habsburg regions. The creation of *Romania mare* (Great Romania, as it was referred in the contemporary literature) was followed by legal unification and the uniformaization of civil and penal codes as well as the creation of centralized law for the centralization of judicial organization (1924) (see Goga 2006). However, it was not until the 1940s that Romania saw a complete unification of legislation. While it took several years to unify the different formal institutions and to create a unitary system (e.g. administrative, legal, educational system), gaps in structural and informal institutions persisted for many years (e.g. mentality, religion, differences in literacy rates and economic development). Imported modernization was restricted to formal changes and not structural ones, resulting in a change in forms but not in content (see Schifirnet 2007).

However, Romanization of Bukovina and Transylvania meant a break at the elite level. In Bukovina, for instance (which had with 59% the biggest percentage of non-Romanians until 1918), many Jews, Germans and Ukrainians lost their positions in the public in the public administration, the judiciary and the educational system or were deported to other Romanian regions (1920s) (Hausleitner 2001: 19). Similarly, in Transylvania, Romanians from the Ottoman regions replaced the administrative and judicial positions of Hungarians and Germans. However, while most politicians in elected councils became Romanians (even in Targu-Mures a town with 75% of Hungarians), there was more continuity in the public administration and among the judiciary where minorities succeeded to keep their posts until 1932, when more systematic purges began and when it became much more difficult for minorities to enter the public services (Macartney 1965: 293-296). The educational system was Romanized as well. Most previously Magyar state schools were taken over by the Romanian state. However, the confessional school system was not abolished and many primary and middle schools were left in the hands of minorities.<sup>5</sup> Higher education became completely Romanized (Macartney 1965: 308).

<sup>&</sup>lt;sup>5</sup> In 1934, in Transylvania, Magyars had 993 primary schools and Germans 399.

This kind of break at the formal and personal level (depletion of pre-communist legacies) was further accentuated through the general emigration of Hungarians and Germans from Transylvania. To give an example, the numbers of Magyars and Germans declined steadily. In 1910, out of a total population of 5.265.444, there were 1.704.851 Magyars and 559.824 Germans in Transylvania (including Maramures). In 1930, out of 5.543.250 the number of Magyars declined to 1.353.675 and that of Germans to 543.622 (Macartney 1965: 253). The 2002 census indicates the presence of a Hungarian minority of 1.4 million people (about 7% of the population); the German minority with 60,000 people makes out less than 0.5%.

After World War II, Romania fell within the Soviet zone of influence; the Communist rule was associated with further centralization. At the level of personnel and elites, the first step of Romanian Communists was to remove state personnel identified with the previous regime. This resulted in an enormous turnover in public employees in the initial years after the Communist came to power. Referring to the changes in the legal and judicial system Veniamin (1956: 301) argues that "It is probably in the realm of justice that the Soviet-inspired innovations introduced by the R.P.R. communist regime have had the most striking consequences". Indeed, the break with the pre-communist legal and judicial system was profound. Not only did the communists change the formal legal structures and its underlying concept of justice, but they also replaced former magistrates with their own loyal personnel. Former judges which were trained according to Western standards have been "systematically eliminated" (Veniamin 1956: 303). However, in Transylvania, there was also some room for continuity or revival of pre-communist legacies, at least in the initial years after communist takeover of power. While the prewar bourgeois leadership used Romanian staff, the Romanian communist Party "made extensive use of national minorities, especially the Magyar population (Graham 1982: 42). So despite centralization measures during the communist takeover of power, there were still possibilities for survival of informal institutional legacies. However, this initial practice disappeared later on and all of these Hungarian Communists were loyal to the central power in Bucharest and its new communist ideology.

The concept of the unitary state remained the fundamental principle under the new Communist regime (Graham 198: 83). It was accompanied by a centralist and hierarchical

organization of the state (including the bureaucracy and the judiciary). Former principles of judges (impartiality and rule of law) were replaced by the new principles (obedience and discipline). In his role as a propaganda agent, the judge had to promote conformity among the citizens and the judge himself was made conform and obedient in newly created "higher juridical schools" and "short-order one-year law schools" which replaced the previous legal education at universities (Veniamin 1956: 303). These newly created law schools were created in the biggest Romanian towns, such as Bucharest, Iasi and Cluj. Initially, legal education was decentralized, which allowed for the possibility to train and (re-) educate Ethnic Hungarians even in their own language (Ciurea 1956: 241).

The break with the pre-communist system concerned also other areas relevant for the functioning of the judiciary. In the area of education, the control over private schools (de-nominational and foreign schools) was transferred completely to the state (Ciurea 1956: 178). The educational personnel were purged. The hitherto existing curricula were replaced and teaching of religion in schools was abolished. New educational institutions, such as unified gymnasiums (junior high schools), schools for party cadres and schools for illiterates as well as cultural institutes (centers o communist propaganda) were created (Ciurea 1956: 206). In short, there was reeducation through uniformization and homogenization.

#### 3.3 Formal uniformization and informal socialization

Overall, one can conclude that there was a strong discontinuity of pre-communist legacies in Romania in terms of structural, formal institutional and elite features. It seems that only informal institutions persisted to a certain degree. *Table 2* gives a historical overview of "Ottomanization", Hungarization, Romaniazation and "Sovietization" activities. There are good reasons to believe that on the level of *formal rules* and *regional elites* (as well as economic specifics<sup>6</sup>), little (if anything) survived almost a century of centralization. From this point of view one can speak about *formal uniformization* as one of the paths of the development of the Romanian institutional structure, caused by both centralization effort of the Ro-

<sup>&</sup>lt;sup>6</sup> For instance, the income per capita is currently actually significantly lower in Habsburg than in Ottoman regions. This effect is only due to the presence of the capital (Bucharest) among the Ottoman jurisdictions; if one excludes it, no significant difference of the Habsburg or Ottoman legacy regions in terms of income per capita can be established.

manian government, but also the external influences (e.g. EU conditionality) causing identical judicial and political reforms being implemented throughout the country (Schimmelfennig/ Sedelmeier 2005; Vachudova 2005).

	Ottoman regions	Habsburg regions
"Ottomanzation"	Wallachia (1476-1829), Mol- davia (1504-1829),	Transylvania (1541-1690), Bukovina (until 1774)
	Dobrogea (1419-1878)	
Hungarization	-	1690-1918 (Transylvania)
		1775-1918 (Bukovina)
Romanization/Centralization	Since 1829/1859 (since 1878 in Dobrogea)	Since 1918
Sovietization/Centralization	1945-1989	1945-1989

Table 2: Overview of Ottomanization, Hungarization and Romanization activities

Sources: Maxim 2001; Brown 1996.

Particularly, Romanian judiciary remains highly centralized. The current structure of the Romanian judicial system was established by the Romanian Constitution and the Law no.304/2004 regarding the judicial organization. The structure of the Romanian court system operates on four tiers. There are 188 local trial courts (judecatorii), 42 county courts (tribunals) which serve as the courts of appeal of the lower level, 15 courts of appeal of the higher level and the High Court of Cassation and Justice. The hierarchical and centralized system is unitary in the sense that judges are subject to the same legislation, same rules of appointment and promotion, same salary levels, independent of the region. With the creation of the National Institute in Bucharest, judicial training has been centralized and magistrates receive the same quality of education. Legal education at universities follows the same curricula so that besides the quality of the professors we can expect no regional differences.

However, the situation is likely to be different with the *informal institutions*, norms and practices. These institutions are claimed to be much more robust and persistent than formal rules (Williamson 2000; Roland 2004). The stability of informal institutions (e.g. mentality, norms of behavior) is transmitted through *informal socialization* either via education by family members (primary socialization), school or religious education (secondary socialization) (see March/Olsen 1989; Di Maggio/Powell 1991; Berger/Luckmann 1966; Checkel 1999); even if the school is controlled by the government, norms acquired through primary socialization can survive in the family, at least in form of "crypto-morality", for a long period of time (see Greif/Tadelis 2010). Thus, *Table 3* summarizes the hypothetical persistence of various aspects of Ottoman and Habsburg legacies in Romania and guides our empirical strategy in what follows.

Period	Elite continuity (politicians, bureaucrats, judiciary)	Formal/legal continuity	Structural con- tinuity (educa- tion, literacy)	Informal continuity (values, norms, mentality)
Ottoman period until 1829/ Habs- burg period until 1918	Yes	Yes	Yes	Yes
Inter-war period 1918-1939	Yes/No	No	Yes	Yes/No
Communist take- over 1945-1955	No	No	No	Yes/No
Communist period 1955-1989	Yes	Yes	No	Yes/No
Post-communist	Yes/No	No	No	Yes/No

#### Table 3: Change and continuity in Romania's history

period 1989-2007				
Hypothesized over- all persistence of pre-communist legacies	NO	NO	NO (in part)	YES (in part)

#### 4. Empirical strategy

As we have described in the previous section, we observe that the legal and judicial structures are uniform and we expect that this formal and structural uniformity does not impact on regional variation in judicial performance. If there are differences in judicial performance (an in particular litigation behavior) the sources of these differences have to be found elsewhere – specifically, given the robustness of informal institutions, in the variation of legacies.

Somewhat simplified, one could perceive judicial performance at the input level as an outcome of supply side factors and demand side factors. The *supply side* of judicial performance reflects judicial capacity (see Mendelski forthcoming). It is associated with the strength of a judiciary to implement legislation in an efficient and low-cost way. This dimension reflects structural-economic approaches that stress the beneficial role of economic development, state capacity, and human capital in the creation of democracy and rule of law (e.g. Fukuyama 2004; Besley/Persson 2009; Lipset 1959). It equally stands for the international donors' dominating approach to judicial reform (e.g. World Bank, EU) which emphasizes the importance of judicial capacity and institution building (Anderson/Gray 2007; Open Society Institute 2002; see Kleinfeld Belton 2005; Schimmelfennig/ Sedelmeier 2005; Hammergren 2007). The supply side of judicial performance (judicial capacity) is reflected in indicators of judicial strengthening such as the relative number of human resources and equipment (e.g. the number of judges and prosecutors). The *demand side* of judicial performance reflects the demand for litigation, i.e. the number of incoming cases to the tribunals, which are affected by

certain structural and behavioral features of society or contextual factors, such as education, income, ethnicity or crime rates.<sup>7</sup>

An advantage of the Romanian case is that, on the one hand, the supply-side of the judicial performance (judicial capacity) is likely to be highly homogenous due to the centurylong process of centralization described above, i.e. the formal uniformization. Then the main differences in judicial performance stem from the demand side (judicial need). The demand side, in turn, is likely to be influenced by the *past historical legacies* (inherited through *informal socialization*) and the *current development* (contextual factors). The resulting differences in the judicial performance therefore represent the *revealed demand* for litigation. It may be different from the pure "preferences for" and "perception of" the judicial system determined by legacies (which are, for example, at core of the survey-based measures often employed in the studies of economic and political institutions), as it also takes demand-side *constraints* individuals face into account (e.g. resources they have to pursue litigation); this is, however, exactly what we are interested in given our research question. *Figure 1* summarizes the logic of our investigation.

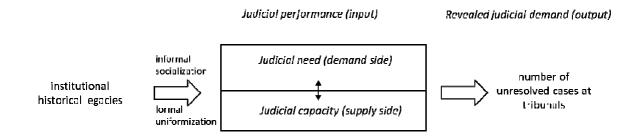


Figure 1: Judicial performance at the level of tribunals

Under these conditions, our empirical strategy is straightforward. We run a series of regressions, explaining the judicial performance by a set of contemporary and historical factors. Our dependent variable in the main regression is the *number of unresolved cases per* 

<sup>&</sup>lt;sup>7</sup> A related literature investigates the demand for law and formal legal institutions (e.g. Pistor 1999, 2002).

*tribunal* as of 2008. The tribunals as the first level of appeal are an appropriate level of the analysis: the appeal is, on the one hand, more expensive than the litigation at the trial court, and therefore, on the other hand, demand for the litigation at this level should be to a greater extent influenced by the conscious decisions of parties and the data ought to be less noisy. It does not exclude, however, expressive behavior on this level. Furthermore, the central gov-ernment puts more effort in ensuring the quality of the judges in these courts, so one can expect greater homogeneity of supply-side factors, which will make our investigation possible. So, we can sort out a lot of noise in the data. We consider the number of unresolved cases as an indicator of *revealed demand* for litigation.

Our sample includes a cross-section of 41 Romanian counties (we drop one county, Ilfov, due to the non-availability of information), which is the lowest level for which statistical data for Romania is available, and also the level courts of appeal operate with. The data on the number of unresolved cases come from the report on the prosecutor's office activity in the year 2008. They capture primarily civil lawsuits, with a certain share of criminal lawsuits (11.35 %). Other data are mostly derived from the official Romanian statistics and from the Census of 2002.

Our key explanatory variable is the Habsburg dummy, equal to one for all counties originally belonging to the Austria-Hungary (using the borders as they have been determined at the onset of World War  $I^8$ ) and zero otherwise. We attribute 17 countries to the Habsburg zone, while the rest has been primarily under Ottoman (and for shorter periods Russian) influence. In order to account for the main hypothesis of this paper, we *interact* the Habsburg dummy with the various contemporary characteristics, and, more specifically, with two key parameters possibly influencing demand for litigation: income per capita and education. Fur-

<sup>&</sup>lt;sup>8</sup> Even the intra-country studies of legacies face two difficulties: first, which historical border exactly has to be used (border between Habsburg and Ottoman zones shifted over time), and second, how to deal with counties divided between Ottoman and Habsburg (since we do not have macroeconomic data for units smaller than county, we also cannot use them in our analysis). Until mid-19th century the territories of Danubian Principalities (what we consider the "Ottoman legacy" zone) have partly fallen under Habsburg or Russian occupation for brief periods of time; however, no permanent long-lasting presence was established and therefore the impact of the Habsburg legacies ought to be much weaker than in Transylvania or even Bukovina (which was occupied in 1774). As for the borders of counties, we have simply attributed the counties, which have *mostly belonged* to Bukovina or Transylvania in terms of territory to the Habsburg zone.

thermore, we add a set of further control variables to our regressions (for details on the variables used see *Appendix*).

To start with, we look at the level of the overall economic development of the region, measured by the income per capita (net nominal monthly earnings); regional population size; and the level of unemployment.9 All data are derived from the Romanian governmental statistics, if not stated otherwise. In a couple of robustness checks we also add some further variables: the share of urban population, the share of "blue collars" (workers) in the region's workforce, as well as the share of different age groups (possibly representing both standard differences over cohorts, but also effects of the transition from Communist rule). As mentioned, we interact the economic development (measured by the income) with the Habsburg dummy: this interaction is explicitly derived from the discussion above and aims to test for the presence of conditional Habsburg effect on the demand for litigation given the level of economic development of the counties. Particularly, from the section 2 follows that the Ottoman regions are more likely to experience both forms of biases (expressive behavior and low trust to the government) than the Habsburg regions, given their historical past. Therefore, it is likely that the income will cause substantially larger changes in the demand for litigation in the Habsburg regions than in the Ottoman region, and we will test this hypothesis in what follows.

However, we also consider a number of further variables in our regressions. Specifically, we control for the quality of education in the region. For this purpose we use two measures with different advantages and disadvantages. First, we control for the students in the post-secondary education, and second, for the dropout rate in the primary and secondary education. The advantage of the first measure is that in Romania primary and secondary schooling still cover the main part of the population (if not the whole population). On the other hand, it is certainly possible that some regions produce education services for other regions (i.e. students leave after completing their studies); yet high number of students still indicates higher level of human capital accumulated in the region (given the fact that the very educational services require professional staff). As for the abandon rate, it is much closer linked to

<sup>&</sup>lt;sup>9</sup> Income per capita ought to be included anyway, since we include the interaction term of this variable with the Habsburg dummy.

the regional specifics, but may represent only the "lowest possible" brackets of the education distribution. Somewhat simplified, high number of students in the post-secondary education may indicate "very high" quality of human capital; high number of dropouts a "very low" one. We will also interact the legacy dummy with this variables, since education does affect the transmission of legacies over time (although, as mentioned, not determines it) and has a substantial influence on the presence of possible biases in the ex-ante probabilities of the success in litigation.

Furthermore, we control for the crime rate in the region, measured by the number of *cases investigated* per capita (note, that we do not take the number of *definitive convictions*; since the latter is rather the outcome of the functioning of the courts than the "input" in the efficiency of the judicative function). Although most of the cases we have are civil (88.65%), what is also consistent with our data, some fraction of the criminal lawsuits could still impact the outcomes of our regressions. Unfortunately, the quality of data we have does not allow for simply removing criminal lawsuits from the sample, therefore this procedure becomes necessary. Furthermore, in some regressions we control for the overall number of cases tried at the trial courts. Since this variable could be subject to reverse causality, we check for robustness of our estimates including and excluding this control.

Since we are estimating our regressions for a very small sample of 41 counties, where the courts of appeal operate, we have to check for the normal distribution of residuals: we do it by calculating the Jarque-Bera test and excluding outliers with large residuals until we obtain normal distribution of residuals (for other applications of this approach in region-level data regressions see Kirchgässner and Schulz 2005 and Feld et al. 2008). However, already at this stage one should remark that this procedure does yield very few changes in our findings, demonstrating the robustness of our estimations.

Finally, the Romanian case makes yet another avenue of investigation possible. We have so far claimed that the informal institutions persist primarily through socialization and informal contacts. In Transylvania, however, the persistence of informal institutions can be related to another feature: large Hungarian minorities, which survived in some of the counties. We have stated that it were Hungarian minorities, which during the Habsburg rules served as

"transmitters" of informal institutions in Transylvania (along with the Habsburg bureaucracy); thus, it is possible that these minorities have also been better at withstanding the pressure of the centralized state and keeping the informal norms. We will explicitly check for the presence of this channel of legacy transmission in our analysis, therefore contributing not only to the understanding of the *functioning of legacies*, but also of a possible *mechanism of transmission of legacies*.

Thus, our investigation will be guided by four main hypotheses.

*H1:* Institutional historical legacies (specifically, pre-Communist Habsburg and Ottoman legacies) have different effects on judicial performance at the output level.

*H2:* The impact of legacies on demand for jurisprudence is conditional on the current social and economic development of the region.

*H3:* One should observe a greater change of demand for litigation with the increase of income in the Habsburg jurisdictions than in the Ottoman jurisdictions.

*H4:* Mechanisms of transmission of legacies can be associated with persistence of ethnic minorities.

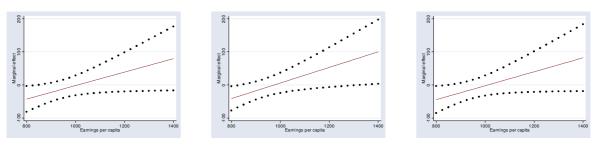
The first hypothesis is, basically, similar to what has been tested by the previous literature we have discussed before, which also looked at the impact of historical legacies on the current institutional characteristics (for financial development or trust and other institutions); we, however, add a new area of institutional structure (judicial system), complementing the previous studies. Hypotheses H2, H3 and H4 are new, and constitute the main contribution of this paper.

#### 5. Results

*Table 4* reports our main findings. In regression (1) we estimate the impact of the key control variables on the demand for litigation, still excluding the Habsburg dummy. The only significant effect is the crime rate: surprisingly, one finds that high crime rate *decreases* the demand for litigation at the level of the courts of appeal. It may indicate that in regions with

high crime rates the trial courts are overburdened; thus, the costs of litigation already at this stage are very high, making the costs of appeal prohibitive (however, since civil lawsuits dominate our sample, this effect should not be over-estimated). Adding the Habsburg dummy (regression (2)) does not change our results, but the dummy as such is insignificant. Hence, the straightforward approach would indicate that the past has no impact on the current demand for litigation.

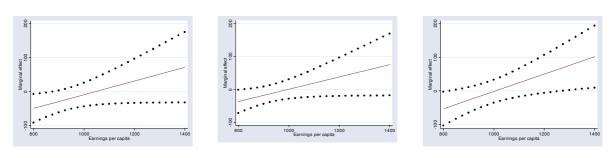
The situation looks very differently in regression (3), where we add an interaction term with income. Now both Habsburg dummy and the interaction term are significant at 10% level (what is acceptable given or very small sample). In regression (4) we replace the number of students by the abandon rates in the secondary education; results remain robust. In regression (5) we add the total number of cases in the trial courts to our control variables. As already mentioned, in this case one could expect a high level of endogeneity; nevertheless, our findings remain robust. It is interesting to notice that the number of appeals per court is independent of the litigation in the trial courts. Regressions (6)-(8) use a number of additional controls; the Habsburg dummy remains significant and negative, but the interaction term is partly insignificant, but always positive.



Specification (3)

Specification (4)

Specification (5)



Specification (6)

*Specification* (7)

Specification (8)

Figure 2: Impact of the Habsburg heritage on the demand for litigation in courts of appeal, conditional earnings per capita (10% confidence interval)

However, the simple observation of the sign and significance of the interaction term is insufficient to conduct proper analysis (see Brambor et al. 2006). Therefore in Figure 2 we plot the marginal effect of the Habsburg dummy for each level of earnings in the counties of Romania – because the sample is very small, in order to check for robustness of the findings, we do it for all specifications of *Table 4*. First, the effect *differs* for different levels of income: in extremely poor counties it is *negative* and significant for all specifications. In extremely rich counties the effect is positive, but only partly significant in some of the specifications. The set of poor counties in most specifications includes countries with earnings below 850 lei: these are, specifically, Bihor, Calarasi, Covasna, Harghita, Maramures, Teleorman and Vasilu. Three of these counties belong to the Habsburg zone, and four to the Ottoman zone; hence, there is no reason to say that our results are driven just by a small set of particular counties. On the other hand, for the very rich counties with significant and positive impact of the Habsburg heritage our estimations are rather counterfactual, since the results seem to be determined by Bucharest. The instability of results for very rich counties may be related to the effect of the already mentioned *dissipation* of legacies, which is likely to be larger for rich territories.

Because the number of cases can be interpreted as a count variable, we also reestimated specification (3) using negative binomial regression. It is known that for the nonlinear models interpretation of interaction terms is problematic (Ai and Norman 2003), hence our findings should be treated with caution: however, the sign and the significance of the Habsburg term and the interaction term between income per capita and the Habsburg dummy survive this estimation technique.

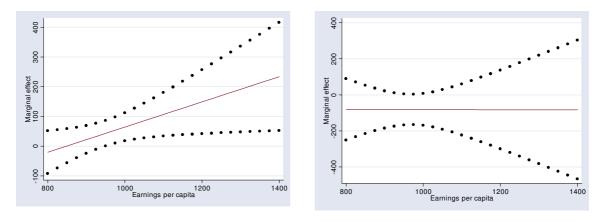
*Table 5* explores a further interaction effect: we also interact the Habsburg dummy with the education measures (number of students in post-secondary education and abandon rates in primary and secondary education). Our main results for the Habsburg dummy and the interaction terms with income do not change. The interaction term with education is in both cases significant and negative.<sup>10</sup> Unlike the effect of income, which reverses the sign of the Habsburg dummy, the effect of education just strengthens the "direct" impact: Habsburg regions are characterized by smaller demand for litigation as opposed to the Ottoman ones *ceteris paribus* especially if the education is either very good (high number of university students) or very bad (high dropout rates).

However, if both education and income influence the extent to which Habsburg legacy matters (and how), one should also look at triple interactions between the variables. This is done in the last two regressions of Table 4 (for both measures of the educational quality). Now the Habsburg dummy and the interaction terms are insignificant, but for a proper analysis one has to look at the specific levels of significance of the Habsburg dummy for different levels of income and of quality of education. For the abandon rates the results are more straightforward and reported in Figure 3. For very small dropout rates (e.g. 1%) we indeed observe the effects discussed and reported above, with significant and positive Habsburg impact for rich regions and significant and negative for poor regions. If the dropout rates are, however, high, the results are not significant at all. Thus, one can conclude that the legacies matter only in counties with small dropout rates. One possible interpretation could be that low education levels reduce the impact of income on the growth of demand for litigation even if the latter is influenced by instrumental and not expressive considerations, since in this case the probability of success ought to be estimated as very low. This claim, however, should be treated with utmost caution, since the results are not really robust: the results for regressions including education measured by the number of students show almost no significant Habsburg effects. As mentioned, the very choice of the dropout rates as a proxy for education is ques-

<sup>&</sup>lt;sup>10</sup> We have also estimated a specification for the number of university students excluding Bucharest with its concentration of university education, but the results did not change.

tionable. Thus, the conservative way of interpreting our findings suggests that we cannot exclude the impact of educational level, the findings with respect to this variable – as opposed to income – are not robust.

Overall, we can make three conclusions. First, Habsburg effects matter, but their impact depends on income and education levels. Second, Habsburg effects increase the demand for litigation in rich regions; and decrease in poor regions. Third, both very high and very low qualities of education in conjuncture with the Habsburg legacy decrease the demand for education. While the effects for income are robust, for education they are more ambiguous and (particularly for dropout rates) could be rather reflecting noise than any consistent effect (dropout rates are generally very small reaching at most 3.6%, and do not vary a lot over Romania, so some small fluctuations can produce the results we have obtained). Thus, the robust findings have been obtained only for the interaction with income per capita.



Dropout rate = 1%

Dropout rate = 4%

## Figure 3: Impact of the Habsburg heritage on the demand for litigation in courts of appeal, conditional earnings per capita and school dropout rates (10% confidence interval)

As a robustness check, we estimate regressions where as the dependent variable we use the total number of cases in the trial courts instead of courts of appeal (since we have no macroeconomic controls on the level smaller than county – which is where the courts of appeal are created – we sum up the total number of cases in all courts of the respective county).

At this level, however, we find no Habsburg effect, also in interaction with income. Thus, our observations are restricted to the appeals.

So far we were able to establish an effect, but not to show the precise channel, which influences the existence of this effect. This is a typical feature of the literature; our subsequent analysis, however, aims to discuss this problem in detail. We look at a specific channel of influence of legacies in Romania: "Habsburg legacies" here may be also associated with significant *Hungarian minorities* residing in several Romanian counties. We use the data from the Romanian Census of 2002, which report the share of ethnic Hungarians (partly forming the majority in some of the counties – all of them belong to the Habsburg group). The results are reported in *Table 6*.

 Table 4: Determinants of demand for litigation, 2008; dep.var.: number of unresolved cases in the courts of appeal per court

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Population	-0.000	-0.000*	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Earnings	0.113	0.093	0.012	0.003	-0.002	-0.017	0.040	-0.001
	(0.083)	(0.095)	(0.112)	(0.105)	(0.125)	(0.113)	(0.106)	(0.109)
Unemployment	-4.912	-6.920	-6.187	-6.238	-6.345	-6.482	-4.932	-5.765
	(4.846)	(5.421)	(4.940)	(4.553)	(5.000)	(5.076)	(4.803)	(4.145)
Education (post-								
secondary)	0.031	0.035	0.033		0.033	0.032	0.031	0.032
, , , , , , , , , , , , , , , , , , ,	(0.023)	(0.022)	(0.022)		(0.023)	(0.023)	(0.023)	(0.019)
Education	()		( )		()	()	()	
(abandon rate)				-1.448				
(				(11.433)				
Crime rate	-0.048*	-0.047*	-0.046*	-0.035	-0.046*	-0.048*	-0.039	-0.038
	(0.024)	(0.026)	(0.026)	(0.025)	(0.026)	(0.025)	(0.026)	(0.028)
Number of cases in trial	(000-1)	(00020)	(00020)	()	(00020)	(00020)	(000-0)	(
courts					0.000			
courts					(0.001)			
Urbanization					(0.001)	0.556		
C I NUMBER						(0.704)		
Blue collars						(01/01)	-1.782	
Dide condits							(1.203)	
Age > 65 years							(1.200)	-5.417
inge > 00 years								(4.062)
Age 40-64								. ,
years								-5.486
								(4.329)
Habsburg		-16.977	-206.237*	-229.536**	-213.499*	-209.918*	-185.150*	-259.001**
		(16.182)	(112.381)	(108.255)	(118.633)	(116.646)	(104.547)	(119.781)

Habsburg *								
earnings			0.204*	0.236**	0.211*	0.201	0.186	0.257**
-			(0.118)	(0.116)	(0.125)	(0.124)	(0.112)	(0.120)
Constant	77.133	114.839	177.316*	161.123*	196.329	188.527*	247.127*	419.311**
	(68.251)	(87.399)	(98.924)	(91.042)	(118.089)	(99.112)	(128.724)	(160.474)
Observations	41	41	41	41	41	41	41	41
$\mathbf{R}^2$	0.219	0.246	0.286	0.209	0.288	0.297	0.325	0.352
JB. test	8.638**	5.316*	3.765	7.570**	0.127	3.806	3.218	2.289

Note: robust standard errors in parentheses. \*\*\* significant at 1% level; \*\* 5% level; \* 10% level. J-B test refers to Jarque-Bera test for the normal distribution of residuals; H0 is that residuals are normally distributed. Outliers are Vrancea in regression (1), (2); Vrancea, Iasi and Constanta in regression (3). After exclusion of outliers all effects related to Habsburg dummy keep their sign and significance.

 Table 5: Determinants of demand for litigation, education, earnings and Habsburg legacy, 2008; dep.var.: number of unresolved cases in the courts of appeal per court

	(9)	(10)	(11)	(12)
	OLS	OLS	OLS	OLS
Population	-0.000*	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Earnings	-0.046	0.054	-0.069	-0.105
	(0.125)	(0.118)	(0.164)	(0.385)
Unemployment	-6.486	-4.028	-7.402	-4.385
	(4.974)	(4.645)	(5.523)	(4.672)
Education (post-secondary)	0.051**		0.039	
	(0.021)		(0.060)	
Education (abandon rate)		17.712		-63.043
		(20.041)		(211.695)
Crime rate	-0.042	-0.052**	-0.039	-0.050*
	(0.026)	(0.025)	(0.030)	(0.025)
Number of cases in trial courts				
Habsburg	-300.480**	-191.401*	-150.027	-452.280
	(130.236)	(110.953)	(292.085)	(430.363)
Habsburg * earnings	0.343**	0.287**	0.190	0.565
	(0.145)	(0.111)	(0.305)	(0.446)
Habsburg * Education (post-secondary)	-0.039**			
	(0.018)			
Habsburg * Education (abandon rate)		-39.750*	-0.175	92.837
-		(21.920)	(0.200)	(226.086)
Education (post-secondary) * Earnings			0.000	
			(0.000)	
Education (post-secondary) * Earnings * Habs-				
burg			0.000	
			(0.000)	
Education (abandon rate) * Earnings				0.084
				(0.214)
Education (abandon rate) * Earnings * Habsburg				-0.142
				(0.232)
Constant	223.020*	87.626	245.844	243.882
	(110.664)	(105.720)	(167.503)	(382.700)
Observations	41	41	41	41
$\mathbf{R}^2$	0.340	0.280	0.350	0.289

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formance in Romania

JB. test	3.592	4.653*	3.708	6.713**

Note: see Table 4. Outlier is Vrancea and Iasi in regressions (10) and (12). After exclusion of outliers in regression (10) the interaction term between Habsburg dummy and abandon rate is insignificant, but still negative. All other effects related to Habsburg dummy keep their sign and significance; in regression (12) Habsburg dummy becomes significant and negative; interaction term between Habsburg dummy and earnings significant and positive.

#### Table 6: Determinants of demand for litigation, 2008; dep.var.: number of unresolved cases in the courts of appeal per court, impact of the Hungarian minority

	(13) OLS	(14) OLS	(15) OLS	(16) OLS	(17) OLS	(18) OLS	(19) OLS	(20) OLS	(21) OLS
Population	-0.000	-0.000	-0.000*	-0.000	-0.000*	-0.000	-0.000	-0.000	-0.000
- • <b>F</b>	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Earnings	0.094	0.100	0.041	0.096	0.088	0.008	-0.054	0.051	0.003
	(0.094)	(0.098)	(0.102)	(0.091)	(0.098)	(0.114)	(0.129)	(0.122)	(0.118)
Unemployment	-5.161	-5.457	-4.717	-5.442	-6.740	-6.384	-6.787	-4.182	-6.894
	(4.802)	(5.427)	(5.233)	(4.898)	(5.521)	(5.041)	(5.085)	(4.909)	(5.249)
Education (post-									
secondary)	0.036	0.037	0.053**		0.036	0.031	0.048**		0.035
	(0.023)	(0.024)	(0.023)		(0.023)	(0.025)	(0.022)		(0.023)
Education									
(abandon rate)				9.275				17.507	
				(12.997)				(20.366)	
Crime rate	-0.048*	-0.048*	-0.043*	-0.047*	-0.047*	-0.045	-0.041	-0.051*	-0.044
	(0.024)	(0.024)	(0.023)	(0.026)	(0.026)	(0.027)	(0.027)	(0.026)	(0.027)
Hungarians	-30.722	81.965	-465.990	-477.930	-11.750	19.854	29.222	9.269	408.395
<b>TT</b> • 4	(34.273)	(489.889)	(484.580)	(382.969)	(30.103)	(32.770)	(27.079)	(30.305)	(541.541)
Hungarians *		0.126	0.625	0.0204					0.525
Earnings		-0.136	0.635	0.930*					-0.525
Hungarians *		(0.605)	(0.617)	(0.540)					(0.669)
Hungarians * Education									
(post-									
(post- secondary)			-0.137**						
secondary)			(0.058)						
Hungarians *			(0.050)						
Education									
(abandon rate)				-230.254*					
(usundon rucc)				(114.409)					
Habsburg				(12.0.00)	-14.650	-237.977*	-351.058**	-204.739	
8					(17.054)	(121.865)	(136.617)	(125.900)	
Habsburg *					× /		· · · · ·	. ,	
Earnings						0.234*	0.393**	0.295**	
						(0.126)	(0.150)	(0.120)	
Habsburg *									
Education									
(post-									
secondary)							-0.040**		
							(0.019)		
Habsburg *									
Education									
(abandon rate)								-38.059	
								(22.937)	
Non-Hungarian									
Habsburg									270 001**
									-378.891**
region									(174 721)
									(174.721)
Non-Hungarian									(174.721)
Non-Hungarian Habsburg									(174.721)
Non-Hungarian Habsburg region * Earn-									
Non-Hungarian Habsburg									0.394**
Non-Hungarian Habsburg region * Earn- ings	101 156	08 126	136 150	68 827	118.959	170 704*	228 408*	00 228	0.394** (0.190)
Non-Hungarian Habsburg region * Earn-	101.156	98.136 (81.537)	136.159	68.837	118.858	179.704*	228.408*	90.338	<b>0.394**</b> ( <b>0.190</b> ) 187.361*
Non-Hungarian Habsburg region * Earn- ings Constant	(81.797)	(81.537)	(83.533)	(72.421)	(90.625)	(100.669)	(114.506)	(109.616)	<b>0.394**</b> ( <b>0.190</b> ) 187.361* (102.263)
Non-Hungarian Habsburg region * Earn- ings									<b>0.394**</b> ( <b>0.190</b> ) 187.361*

Note: see Table 4. Outliers are Vrancea in regression (13), (14), (17), Vrancea and Constanta in regression (15), Iasi, Vrancea and Constanta in regression (16), Vrancea and Iasi in regression (20). After exclusion of outliers interaction term between share of Hungarians and earn-



ings in regression (16) becomes insignificant and changes its sign. All other effects remain robust.

## Table 7: Determinants of demand for litigation, 2008; dep.var.: number of unresolved cases in the courts of appeal per court, impact of other ethnic minorities

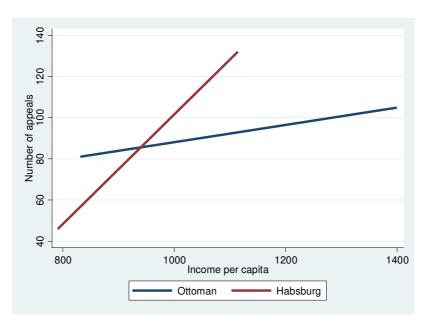
	(22)	(23)	(24)
	OLS	OLS	OLS
Population	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)
Earnings	-0.027	-0.080	0.047
	(0.115)	(0.125)	(0.131)
Unemployment	-8.080	-8.346	-5.987
	(5.791)	(6.029)	(5.826)
Education (post-secondary)	0.045*	0.058**	
	(0.024)	(0.023)	
Education (abandon rate)			26.964
			(29.665)
Crime rate	-0.044*	-0.037	-0.028
	(0.025)	(0.023)	(0.025)
Hungarians	-4.619	11.54	26.047
	(34.030)	(29.229)	(46.387)
Roma	-1,187.421	-980.608	-668.122
	(695.589)	(635.112)	(506.855)
Germans	-2,791.906	-3,280.203**	-2,027.846*
	(1,717.855)	(1,317.306)	(1,134.034)
Ukrainians	-758.993*	-484.923	-460.586
	(388.288)	(350.765)	(364.418)
Russian Lippovan	2,127.825	2,695.922	7,924.978**
	(3,708.971)	(3,396.496)	(3,758.068)
Turks	-12,147.492	-14,999.249	-42,016.127*
	(17,340.981)	(15,860.073)	(20,601.235)
Serbs	3,087.965*	3,431.232**	3,035.840***
	(1,579.051)	(1,523.438)	(977.017)
Tatars	14,414.721	17,434.143	43,350.492**
	(17,573.637)	(16,036.978)	(19,932.459)
Habsburg	-220.233*	-346.955**	-180.846
0	(108.533)	(124.201)	(156.209)
Habsburg * Earnings	0.247**	0.416***	0.284**
8 8	(0.111)	(0.135)	(0.122)
Habsburg * Education (post-secondary)	, , ,	-0.038**	
		(0.016)	
Habsburg * Education (abandon rate)			-39.096
<b>.</b>			(33.718)
Constant	254.292*	284.462*	64.973
	(138.507)	(141.959)	(136.378)
Observations	41	41	41
R-squared	0.582	0.628	0.55
J-B test	5.264*	7.646*	5.049*

Note: see Table 4. Outlier is Vrancea in all regressions; effects of Habsburg dummy remain robust.

First, we replicate our key findings simply replacing "Habsburg dummy" by "share of Hungarians". The effects for education could have been replicated, but for the income we find no effects. Second, we also re-estimate the key results including the Habsburg dummy and controlling for Hungarian dummy. Now, "Habsburg" results remain unchanged in almost all cases, with some minor exceptions. Finally, in regression (21) we estimate effects separately: we form a variable equal to the share of non-Hungarian population in the former Habsburg regions and interact this variable and the share of Hungarian population separately with earnings. The effect seems to come *only* from the regions where Hungarian minority is small; so, the presence of the Hungarian minority *as such* does not cause the effect in question. *Table 7* also controls for other minorities indicated in the Census (which, however, rarely provide more than several percent of the population of the county); our results remain robust, at least for the interaction with income. To conclude, Habsburg effect does not seem to be driven by the ethnic composition of the population.

## 6. Discussion

The econometric results clearly confirm the main conjecture of this paper: demand for litigation does depend upon the legacies, but the effects of the legacies depend on different levels of income and education. The last effect is not robust and therefore should not be over-interpreted. The first effect, however, is robust and is very interesting from the point of view of the discussion of Section 2. *Figure 4* plots the linear trend lines for the relation between income and litigation obtained from the Habsburg and Ottoman samples. Both Ottoman and Habsburg demand for litigation increases with income; however, the slope of the line for the Habsburg regions is much steeper, what causes the effect in question.



# Figure 4: Unconditional correlation between the income per capita and the number of appeals, linear fit, Habsburg and Ottoman regions

This result is entirely consistent with the theoretical discussion above. Recall, first, that the modern judiciary in Romania is an outcome of the institutional transplantation, which was heavily influenced by the European Union in the last years (Mendelski forthcoming). Thus, it is rather compatible with informal institutions determined by the Habsburg legacies, than with the dominance of extra-legal networks in the Ottoman legacies. Better adaptation to modern legal institutions through the course of their history is likely to make Habsburg counties more prone to instrumental use of the litigation. Since appeal is a costly decision (particularly in emerging economies with low level of income), it is likely that in case of high earnings Habsburg legacy will incentivize higher demand for litigation: high income allows higher investments in legal proceedings and therefore increases the chances of favorable outcome. If the income is small, on the other hand, Habsburg legacy is likely to support the decision not to appeal (because the costs are too high as opposed to possible benefits).

In Ottoman counties, on the other hand, lower trust to public institutions and expressive behavior are likely to make the demand for litigation more "flat" in income. In fact, our results provide some limited evidence in favor of the presence of expressive demand for litigation in Ottoman counties: for very low income levels demand for litigation in this part of

Romania is actually higher than for corresponding Habsburg counties. The situation changes for high level of income, when Habsburg counties over-compensate with increasing instrumental demand for litigation. For Ottoman counties, furthermore, high income may be associated merely with the willingness to explore "alternative" ways of solving problems outside of legal system (e.g. corruption, nepotism, state capture), what will dampen the increase of the demand for litigation once again (though this conclusion may be questionable<sup>11</sup>).

For the simplicity of exposition, the empirical findings can be placed in a 2 x 2 matrix according to their regional differences (Ottoman or Habsburg region) and according to their contextual variables (income), see *Table 7*. While rich people who live in former Habsburg regions use courts to solve their litigations (instrumental legal litigants), poor people from these regions refrain from appealing (instrumental extra-legal peacemakers) because of the relatively higher costs of using courts. Instead they tend to resolve their disputes outside of courts. In contrast, rich and poor people from former Ottoman regions use courts for expressive purposes (even if their financial situation is relatively bad – but generally speaking regardless of the income): in rich regions Ottoman legacy can also produce greater demand for extra-legal litigation (e.g. corruption and clientelism), which could also reduce the impact of growth of income on the demand for litigation.

	Informal institutions in Habsburg regions	Informal institutions in Otto- man regions
High income	instrumental legal litigants	expressive legal litigants; possi- bly use of clientelist networks and informal institutions for dis- pute resolutions
Low income	instrumental extra-legal peace- makers: resolution of disputes	expressive legal litigants

Table 7: Typolo	gy of different	t litigation	actors among	Romanians
	8,			

<sup>&</sup>lt;sup>11</sup> It is difficult to assess the spread of informal clientelistic networks depending on income: high income could cause greater demand for stability and rule of law, but also can make informal channels more accessible.

outside of courts	
outside of courts	

# 7. Conclusion

The impact of pre-communist legacies has been studied by several scholars (see Ekiert/Hanson 2003 for an overview). Our within-country study provides a nuanced picture of the impact of pre-communist legacies on judicial performance. Specifically, we analyze differences in litigation behavior (demand side of judicial performance) in formerly Habsburg and Ottoman regions in Romania. The literature usually assumes that there is a direct link between the long-term past heritages and the current economic performance or social environment; and that the Habsburg legacies are characterized by higher quality of economic institutions and more confidence in the legal system. Thus, it was possible to expect a higher level of demand for litigation in the Habsburg region than in the Ottoman region of the country.

Our results, however, are more differentiated: we have shown that historical legacies matter for the functioning of judicial institutions, but only in combination with current contextual factors (such as income or, to some extent, education). Specifically, we have shown that the demand for litigation in Ottoman regions is less sensitive to the increase of income than in the Habsburg regions. Thus, while in poor regions Ottoman legacy is associated with higher demand for litigation than the Habsburg one, the situation is reversed in rich regions (the result is partly insignificant, possibly due to the legacies dissipation effect). We conjecture that it can be explained by two influences of the Ottoman legacy: lower trust to government and higher propensity to expressive demand for litigation (and lower role of the instrumental demand). In fact, our results specifically can be interpreted in line with the last influence, which is a plausible explanation for the higher demand for litigation in poor Ottoman than in poor Habsburg regions.

This finding of our study has an important implication for future research. Because the interaction of distant (legacies) and proximate variables is complex, analysis of historical legacies ought to be based on more complex conceptual framework and on detailed analysis

of the interaction of contextual and historical factors in the empirical work. The right question to ask is not whether historical legacies matter, but under which conditions (contextual factors) they matter more or less, and what is their effect in a particular environment.

There are also two secondary results of this paper to be reported. First, in line with the literature on the Habsburg legacies, we have once again confirmed that the Austria-Hungarian Empire's "shadow" in Central and Eastern Europe persists until today, but also in the areas, which have not been studied before, like the demand for litigation and judicial performance. Second, we have investigated one possible transmission mechanism of historical legacies: the role of ethnic minorities. Our results, however, do not confirm that this channel indeed determines the survival of legacies; we find that the Habsburg legacies are present even in regions with smaller Hungarian minorities. It does not mean that the Hungarian minorities do not contribute to the survival of legacies. However, it means that it is not just the presence of minorities, which causes differences between Romanian regions – more detailed and nuanced analysis is, once again, required in this matter.

## 8. References

- Acemoglu, Daron, Hassan, Tarek A., and James A. Robinson (2010): Social Structure and Development: A Legacy of Holocaust in Russia. NBER Working Paper No. 16083
- Acemoglu, Daron, Johnson, Simon, and James A. Robinson (2001): The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review* 91:1369-1401
- Agh, Attila (1998): The Politics of Central Europe, London: University of Manchester
- Ai, Chunrong, and Edward C. Norton (2003): Interaction Terms in Logit and Probit Models. *Economics Letters* 80:123-9
- Alesina, Alberto, and Nicola Fuchs-Schundeln (2007): Goodbuy Lenin (or Not)? The Effect of Communism on People. *American Economic Review* 97(4):1507-1528
- Anderson, James H./Cheryl W. Gray (2007): *Transforming Judicial Systems in Europe and Central Asia*. Washington: World Bank
- Badescu, Gabriel and Paul E. Sum (2005): Historical Legacies, Social Capital and Civil Society: Comparing Romania on a Regional Level, *Europe-Asia Studies* 57(1): 117-133.
- Becker, Sascha O., Boeckh, Katrin, Hainz, Christa, and Ludiger Woessmann (2011): The Empire Is Dead, Long Live the Empire! Long-Run Persistence of Trust and Corruption in the Bureaucracy. CAGE Working Paper No. 40
- Berger, Peter, and Thomas Luckmann (1966): The Social Construction of Reality, A Treatise in the Sociology of Knowledge, New York
- Berkowitz, Daniel, and Karen Clay (2005): American Civil Law Origins: Implications for State Constitutions and State Courts. *American Law and Economics Review* 7:62-84
- Besley, Timothy and Torsten Persson (2009): The Origins of State Capacity: Property Rights, Taxation and Politics, *American Economic Review* 99, 1218-1244.
- Bocsan, Mircea-Dan (2006): L'oevre de codification-enjeu de la modernization du droit roumain, in : Giaro, Tomasz (ed.) Modernisierung durch Transfer im 19. und frühen 20. Jahrhundert, Frankfurt/Main: Vittorio Klostermann, p.33-46.
- Brambor, Thomas, Clark, William Roberts, and Matt Golder (2006): Understanding Interaction Models: Improving Empirical Analysis. *Political Analysis* 14: 63-82
- Brown, L.C. (1996): Imperial Legacy: The Ottoman Imprint on the Balkans and the Middle East, New York
- Buchanan, James M. (1954): Individual Choice in Voting and the Market. *Journal of Political Economy* 62:334-343

- Cameron, David R. (2007): Post-Communist Democracy: The Impact of the European Union, *Post-Soviet Affairs*, 23(3):185–217
- Chappe, Nathalie (2011): Demand for Civil Trials and Court Congestion. *European Journal of Law and Economics*, forthcoming
- Checkel, Jeffrey T. (1999): International Institutions and Socialization'. Working Paper no. 5. Oslo: ARENA, University of Oslo, February.
- Cirtautas, Arista Maria, and Frank Schimmelpfennig (2010): Europeanisation Before and After Accession: Conditionality, Legacies and Compliance. *Europe-Asia Studies* 62)3:421-441
- Ciurea, Emil (1956): Education, in: Cretzianu, Alexandre (ed.) Captive Rumania. A Decade of Soviet Rule, New York: Praeger, p. 165-256
- Cornell, Bradford (1990): The Incentive to Sue: An Option-Pricing Approach. *Journal of Legal Studies* 19(1): 173-187
- Darden, Keith (forthcoming): Resisting Occupation: Mass Schooling and the Creation of Durable National Loyalties. Book Manuscript.
- Darden, Keith and Anna Grzymala-Busse (2006): The Great Divide: Literacy, Nationalism, and the Communist Collapse, *World Politics* 59(1): 83-115.
- De Melo, Martha, Cevdet Denizer, Alan Gelb, and Stoyan Tenev (2001): Circumstance and Choice. The Role of Initial Conditions and Policies in Transition Economies, *World Bank Economic Review* 15 (1): 1–31
- Di Maggio, Paul J. and Walter W. Powell (1991): The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields, in Walter W. Powell and Paul J. DiMaggio (eds), *The New Institutionalism in Organizational Analysis*. Chicago, London: University of Chicago Press: 63-82.
- Dimitrova-Grajzl, Valentina (2007): The Great Divide Revisited: Ottoman and Habsburg Legacies in Transition. *Kyklos* 60(4):539-558
- Ekiert, Grzegorz and Stephen Hanson (eds., 2003): *Capitalism and Democracy in Central and Eastern Europe*, New York: Cambridge University Press
- Feld, Lars P., Schaltegger, Christoph A., and Jan Schnellenbach (2008): On Government Centralization and Fiscal Referendums. *European Economic Review* 52(4): 611-645

Feldman, Eric (2007): Law, Culture, and Conflict: Dispute Resolution in Postwar Japan. Mimeo

Fish, Steven M. (1998): The Determinants of Economic Reform in the Post-Communist World, *East European Politics and Societies* 12 (1): 31-78

- Fukuyama, Francis (2004): *State-building: Governance and world order in the 21st century*. Ithaca, NY: Cornell University Press
- Gennaioli, Nicola, and Ilia Rainer (2007): The Modern Impact of Precolonial Centralization in Africa. *Journal of Economic Growth* 12: 185-234
- Ginsburg, Tom, and Glenn Hoetker (2006): The Unreluctant Litigant? An Empirical Analysis of Japan's Turn to Litigation. *Journal of Legal Studies* 35: 31-59
- Goga, Lucian (2006): Politik und Rechtskultur in der Zwischenkriegszeit in Rumänien: Giaro, Tomasz (ed.) Modernisierung durch Transfer im 19. und frühen 20. Jahrhundert, Frankfurt/Main: Vittorio Klostermann, p.31-68.
- Graham, Lawrence S. (1982): Romania. A Developing Socialist State, Boulder: Westview Press.
- Greif, Avner, and Steven Tadelis (2010): A Theory of Moral Persistence: Crypto-Morality and Political Legitimacy. *Journal of Comparative Economics* 38(3): 229-244
- Grosjean, Pauline (2011): The Institutional Legacy of the Ottoman Empire: Islamic Rule and Financial Development in South Eastern Europe. *Journal of Comparative Economics* 39(1): 1-16
- Hammergren Linn (2007): Envisioning Reform, Improving Judicial Performance in Latin America. University Park: Penn. State Univ. Press
- Hausleitner, Mariana (2001): Die Rumanisierung der Bukowina. Die Durchsetzung des nationalstaatlichen Anspruchs Grossrumaniens 1918 – 1944. Munchen: Oldenbourg Verlag.
- Helmke, G., and S. Levitsky (2004): Informal Institutions and Comparative Politics: A Research Agenda. *Perspectives on Politics* 2 (4): 725-740
- Herrmann-Pillath, Carsten (1993): Informal Constraints, Culture and Incremental Transition from Plan to Market, in: Wagener, Hans-Juergen (ed.): On the Theory and Policy of Systemic Change. Heidelberg: Physica Verlag
- Herrmann-Pillath, Carsten (2010): What have we learnt from 20 years of economic research into culture? *International Journal of Cultural Studies* 13(4):317-335
- Hillman, Arye L. (2010): Expressive Behavior in Economics and Politics. *European Journal of Political Economy* 26(4): 403-418
- Hughes, James W., and Edward A. Snyder (1995): Litigation and Settlement under the English and American Rules: Theory and Evidence. *Journal of Law and Economics* 38(1):225-250
- Illyes, Elemer (1981): Nationale Minderheiten in Rumänien Siebenbürgen im Wandel, Wien: Wilhelm Braumüller, Universitäts-Verlagsbuchhandlung

- Jacobi, Tonja (2009): The Role of Politics and Economics in Explaining Variation in Litigation Rates in the US States. *Journal of Legal Studies* 38: 205-233
- Jacoby, Wade (2006): Inspiration, Coalition, and Substitution. External Influences on Postcommunist Transformations. *World Politics*, 58 (4): 623-51
- Jahn, Detlef and Ferdinand Müller-Rommel (2010): Political Institutions and Policy Performance: A Comparative Analysis of Central and Eastern Europe, *Journal of Public Policy*, 30(1):23-44
- Jelavich, B. (1983): A History of the Balkans, Eighteenth and Nineteenth Centuries, Volume 1, Cambridge
- Jowitt, Ken (1992): The Leninist Legacy, in: Ken Jowitt (ed.), New World Disorder: The Leninist Extinction, Berkeley: University of California Press, pp. 284-305
- Katchanovski, Ivan (2000): Divergence in Growth in Post- Communist Countries. *Journal of Public Policy* 20 (1): 55–81
- Kirchgässner, Gebhard, and Tobias Schulz (2005): Was treibt die Stimmbuerger an die Urne? Eine empirische Untersuchung der Abstimmungsbeteiligung in der Schweiz, 1981-1999. *Swiss Political Science Review* 11:1-56
- Kitschelt, Herbert. (2003): Accounting for Outcomes of Postcommunist Regime Diversity: What Counts as a Good Cause? in: Grzegorz Ekiert and Stephen Hanson (eds.). In *Capitalism and Democracy in Central and Eastern Europe*, New York: Cambridge University Press, 49–88.
- Kleinfeld Belton, Rachel (2005): Competing Definitions of the Rule of Law: Implications for Practitioners. Democracy and Rule of Law Project, *Carnegie Papers, Rule of Law Series* no.55: 1-38.
- Kopstein, Jeffrey, and David Reilly (2000): Geographic Diffusion and the Transformation of the Post-CommunistWorld, *World Politics* 53 (1): 1–37.
- Lampe, John R./ Jackson, Marvin R. (1982): *Balkan Economic History*, 1550-1959 Bloomington: Indiana University Press.
- Landes, William M. (1971): An Economic Analysis of the Courts. Journal of Law and Economics 14:101-106
- Langlais, Eric (2011): Litigations and the Pretrial Negotiation Impasse: The Role of Cognitive Biases. Mimeo
- Leipold, H. (2006): Kulturvergleichende Institutionenökonomik: Studien zur kulturellen, institutionellen und wirtschaftlichen Entwicklung. Stuttgart: Lucius & Lucius, UTB.
- Levitsky, S. and M.V. Murillo (2009): Variation in Institutional Strength. *Annual Review of Political Science* 12: 115-133
- Libman, Alexander (2010): Governments and Companies in the Post-Soviet World: Power, Intentions, and Institutional Consistency. *Eurasian Review* 3: 41-66

Lin, Nan (2002): Social Capital: A Theory of Social Structure and Action. Cambridge University Press

- Linden, Ronald H. (2002): Norms and Nannies: The Impact of International Organizations on the Central and East European States, Lanham: Rowman & Littlefield
- Lipset, Seymour M. (1959): Some Social Requisites of Democracy: Economic Development and Political Legitimacy, American Political Science Review, 53 (1):69–105
- Lukin, A., and P. Lukin (2009): Mify o Rossiyskoi Politicheskoi Kul'ture i Rossiyskaya Istoriya. Polis (1), (2)

Macartney, C.A. 1937 (1965): Hungary and her Successors, London: Oxford University Press.

- Magen, Amichai and Leonardo Morlino (eds. 2008): International Actors, Democratization and the Rule of Law. Anchoring Democracy. New York: Routledge.
- Mansfield, Edward D. and Jon Pevehouse (2006): Democratization and International Organizations, *International Organization*, 60(1):137-167
- March, James G. and Johan P. Olsen (1989): Rediscovering Institutions. New York: The Free Press.
- Maxim, Mihai (2001): Romano-Ottomanica. Essays & Documents from the Turkish Archives, Istanbul: The ISIS Press.
- Mendelski, Martin (2009): The Impact of the European Union on Governance Reforms in Post-Communist Europe: A Comparison between First and Second-Wave Candidates. *Romanian Journal of Political Science*, 9 (2): 42-64
- Mendelski, Martin (forthcoming): EU-Driven Judicial Reforms in Romania: A Success Story? Journal of Communist Studies and Transition Politics
- North, D. C. (1990): *Institutions, Institutional Change, and Economic Performance*, New York: Cambridge University Press.
- Oleinik, Anton (2005): A Distrustful Economy: An Inquiry into Foundations of the Russian Market. *Journal of Economic Issues* 39(1):53-74f
- Olsson, Ola (2009): On the Democratic Legacy of Colonialism. Journal of Comparative Economics 37: 534-551
- Open Society Institute (2002): Judicial Capacity. EUMAP Report, Budapest: Open Society Institute.
- Orenstein, Mitchell A., Stephen Bloom and Nicole Lindstrom (eds., 2008): *Tranistional Actors in Central and East European Transitions*. Pittsburgh: University of Pittsburgh Press.
- Panther, Stephan M. (1997): Cultural Factors in the Transition Process: Latin Center, Orthodox Periphery?, in: Jürgen G. Backhaus and Günter Krause (eds.), Issues in Transformation Theory, Marburg: Metropolis, p. 95-122;

- Peisakhin, Leonid (2010): Living Historical Legacies: The "why" and "how" of institutional persistence The case of Ukraine, paper Prepared for the 2010 APSA Conference Washington, 4 September 2010
- Pistor, Katharina (1999): The Supply and Demand for Law: Comment on Hendley, *East European Constitutional Review* 8: 105-108.
- Pistor, Katharina (2002): The Demand for Constitutional Law, Constitutional Political Economy 13: 73-87.
- Pop-Eleches, Grigore (2007): Historical Legacies and Post-Communist Regime Change, *The Journal of Politics*, Vol. 69, No. 4, pp. 908–926
- Posner, Richard A. (1973): An Economic Approach to Legal Procedure and Judicial Administration. *Journal of Legal Studies* 2(2): 399-458
- Roland, Gerard (2004): Understanding Institutional Change: Fast-Moving and Slow-Moving Institutions. *Studies* in Comparative International Development 38(4):109-131
- Rothstein, Bo (2000): Trust, Social Dilemmas, and Collective Memories. *Journal of Theoretical Politics* 12(4): 477-501
- Roper, Steven D., and Florin Fesnic (2003): Historical Legacies and Their Impact on Post-Communist Voting Behaviour. *Europe-Asia Studies* 55 (1):131 199
- Schifirnet, Constantin (2007): Formele fara fond, un brand romanesc, Bucharest: communicare.ro
- Schimmelfennig, Frank and Ulrich Sedelmeier (eds., 2005): *The Europeanization of Central* and Eastern Europe. Ithaca NY: Cornell University Press
- Seton-Watson, R. W. (1925): IV. Transylvania since 1867, Slavonic Review, 4 (10): 101-123
- Shavell, Steven (1982): Suit, Settlement, and Trial: A Theoretical Analysis of Alternative Methods for the Allocation of Legal Costs. *Journal of Legal Studies* 11:55-81
- Snyder, Richard (2001): Scaling Down. The Subnational Comparative Method, Studies *in Comparative International Development* 36 (1): 93-110.
- Stark, David and Bruszt, Laszlo (1998): Postsocialist Pathways: Transforming Politics and Property in East Central Europe, Cambridge: Cambridge University Press
- Sugar, D. (1977): Southeastern Europe under Ottoman Rule, 1354-1804, Seattle: University of Washington Press.
- Tabellini, Guido (2010): Culture and Institutions: Economic Development in the Regions of Europe. *Journal of the European Economic Association* 8(4):677-716

Tullock, G. (1971): The Charity of the Uncharitable. Western Economic Journal 9:379-392

- Vachudova, Milada A. (2005): *Europe Undivided: Democracy, Leverage, and Integration after Communism.* Oxford: Oxford University Press.
- Veniamin, Virgil (1956): The Judiciary in: Cretzianu, Alexandre (ed.) Captive Rumania. A Decade of Soviet Rule, New York: Praeger, p. 301-324
- von Ferdinandy, Gejza (1909): *Staats und Verwaltungsrecht des Königreichs Ungarn und seiner Nebenländer*, Hannover: Max Jänecke Verlagsbuchhandlung.
- Williamson, Oliver (2000): The New Institutional Economics: Taking Stock, Looking Ahead. Journal of Economic Literature 38(3):595-613
- Winiecki, Jan (2004): Determinants of Catching Up or Falling Behind: Interaction of Formal and Informal Institutions. *Post-Communist Economies*, 16 (2), pp. 137-152
- Wittenberg, Jason (2006): Crucibles of Political Loyalty: Church institutions and electoral continuity in Hungary. Cambridge: Cambridge University Press.
- Zarycki, Tomasz (2007): History and regional development. A controversy over the 'right' interpretation of the role of history in the development of the Polish regions, *GeoForum* 38(3): 485–49

# 9. Appendix: Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Age > 65 years	42	14.1817	1.8606	11.4000	20.3600
Age 40-64 years	42	29.9274	1.4933	26.6000	32.6300
Blue collars	42	57.9886	5.8771	42.7500	66.9000
Crime rate	42	1313.2860	235.1142	971.0000	1982.0000
Education (abandon rate)	42	2.0476	0.6830	1.0000	3.6000
Education (post-secondary)	42	976.0476	804.9567	0.0000	4323.0000
Germans	42	0.0029	0.0055	0.0000	0.0213
Habsburg dummy	42	0.4048	0.4968	0.0000	1.0000
Hungarians	42	0.0859	0.1865	0.0002	0.8471
Income per capita	42	955.9524	116.9661	792.0000	1398.0000
Number of appeals Number of cases in trial	41	84.1951	44.8220	25.0000	206.0000
courts	42	17988.0000	23614.5500	3691.0000	157681.0000
Population	42	512799.1000	278317.5000	223364.0000	1931838.0000
Roma	42	0.0268	0.0151	0.0076	0.0702
Russian Lippovan	42	0.0024	0.0103	0.0000	0.0663
Serbs	42	0.0011	0.0042	0.0000	0.0198
Tatars	42	0.0008	0.0050	0.0000	0.0326
Turks	42	0.0013	0.0056	0.0000	0.0342
Ukrainians	42	0.0028	0.0105	0.0000	0.0664
Unemployment	42	4.4643	1.7830	1.4000	9.7000
Urbanization	42	50.7902	13.6628	31.1700	100.0000

Variable	Description	Period	Source
Age > 65 years	Share of population of 65 years and	2007	Romanian National Institute
	older of age in the population, %		of Statistics
Age 40-64 years	Share of population of 40-64 years of	2007	Romanian National Institute
Blue collars	age in the population, % Share of workers in the regional popu-	2007	of Statistics Romanian National Institute
Blue collars	lation, %	2007	of Statistics
Crime rate	Criminal offenses investigated per	2007	Romanian National Institute
	100,000 people	2007	of Statistics
Education (abandon rate)	Abandon rate in pre-university educa-	2006/2007	Romanian National Institute
	tion, %		of Statistics
Education (post-secondary)	Number of students enrolled in post-	2007/2008	Romanian National Institute
	high school education programs, peo-		of Statistics
C	ple	2002	C
Germans	Share of ethnic Germans in the popu- lation, from 0 to 1	2002	Census
Habsburg dummy	1 if the region belonged to the Habs-	NA	Own compilation
Theosoning duminity	burg Empire, 0 otherwise	1 17 1	o wil compliation
Hungarians	Share of ethnic Hungarians in the	2002	Census
C	population, from 0 to 1		
Income per capita	Average net monthly earnings	2007	Census
Number of appeals	Number of appeals in the country	2008	Superior Council of Magis-
	Tribunals per courts		tracy
Number of cases in trial courts	Sum of cases investigated in all trial courts in the county	2008	Superior Council of Magis- tracy
Population	Total population, people	July 1, 2007	Romanian National Institute
1		2	of Statistics
Roma	Share of ethnic Roma in the popula-	2002	Census
	tion, from 0 to 1		_
Russian Lippovan	Share of ethnic Russian Lippovan in	2002	Census
Serbs	the population, from 0 to 1 Share of ethnic Serbs in the popula-	2002	Census
Seros	tion, from 0 to 1	2002	Cellsus
Tatars	Share of ethnic Tatars in the popula-	2002	Census
	tion, from 0 to 1		
Turks	Share of ethnic Turks in the popula-	2002	Census
	tion, from 0 to 1		
Ukrainians	Share of ethnic Ukrainians in the	2002	Census
TT 1	population, from 0 to 1	D 1	Describe Nethers 1 Institute
Unemployment	Share of registered unemployed, %	December 31, 2007	Romanian National Institute of Statistics
Urbanization	Share of urban population, $\%$	July 1, 2007	Romanian National Institute
Crounzation	Share of arban population, 70	July 1, 2007	of Statistics

#### **Table A2: Description of variables**

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