The Regional Factor in Contemporary Ukrainian Politics: Scale, Place, Space or Bogus Effect?[1]

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Abstract

Post-independence Ukraine continues to be the subject of intense interest about its regional political divisions and ethnic/language tensions. The debate between the school arguing that regional cleavages are ebbing and thatwhich holds that Ukraine has not yet become a political community, is also fundamentally a geographic question regarding scale and place. Using two measures of political preferences, votes in the 1999 Presidential runoff election and the political attitudes expressed in 1992 and 1996 Eurobarometer surveys, the regional effect in Ukraine is shown to be complicated by the nature of the political question and by local disparities from regional trends. New methods of analysis and graphical display of statistical results clarify these complications and challenge both schools of researchers to pay heed to issues of measurement, technique and geographic issues of scale

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Like other multi-ethnic states of Eastern Europe and the former Soviet Union, Ukraine continues to engage in nation-building at the same time as it grapples with the problems of political and economic transition from the Communist years. After nearly a decade of independence, Ukraine has not experienced any significant regional unrest or minority-majority group antagonism, despite the fears of some prognosticators at the time of the break-up of the Soviet Union in 1991. Whether by luck, accident, clever design by successive Ukrainian governments, or a lack of ethnic-based mobilization, Ukraine has been an island of probity in the restless ocean of national rivalries of eastern Europe. Yet, doubts persist about how sustainable this calm will be in the face of regional demands for redress of economic disparities and perceived cultural-language inequities. Recurring arguments about language laws, suspicions about former Communists and blame attribution for the continued worsening of the economy in Fall 2000 spur further worries about the stability of the country.

In the early 1990s, academic papers, as well as popular and journalistic accounts of ethnic hostility, anticipated an upsurge in regional mobilization and direct challenges to the unity of the Ukrainian state.

Others (mostly Ukrainian authors, especially Kuzio, 1998a) maintained that the nation-building process in Ukraine is proceeding slowly but consistently and that fears of a splintering of the state along regional lines are vastly exaggerated as the various parts of this large state become more similar in political beliefs and attitudes. To judge these competing claims, I adopt and develop recent methodological innovations in Geography and Political Science that produce explicit measures of the extent of the regionalization of Ukraine. Using two different sets of data (representative surveys of political attitudes and voting returns for the recent elections), I report the extent of regional differentiation and thus, my account helps to separate myth from reality. My basic contention is that the study of regionalization in Ukraine has been hindered by improper attention to geographic scale issues, by reliance on one type of data, and by inadequate attention to the choice of measures in statistical analysis. Cartographic techniques allow continuing uncertainties about issues of geographic scale, spatial clustering and regional cleavages to be clarified.   The analysis of regional cleavages in Ukraine is more than an academic exercise.   As expressed by a Western diplomat in Kyiv in April 1994: "No one can say what is happening in Ukraine, or where the country as a whole is heading – as you can in Poland for example – because no one can grasp the country as a whole. The different areas are totally different. The people in some of them hardly know each other, and the politicians have completely different priorities. That doesn't mean that the country will break up – what happens is that the center and the regions circle slowly around each other, trying to extract concession" (quoted in Lieven, 1999, 79).

One advantage of the lack of a national platform for parties and candidates in Ukraine is that the existing identities and allegiances have not magnified into nationalist movements that might coalesce into either regional separatism or a center-based promotion of a strong state. As Lieven (1999, 137) states "(President) Kuchma's Ukrainian nationalism is far from being ethnicist or intolerant. On the contrary, it is mostly moderate, civic, integrationist, and has indeed successfully appealed to many of the Russian and Russian-speaking elites of eastern and southern Ukraine (although a narrower and harsher strain of nationalism resides among certain state elements, especially in the education ministry)." National surveys have shown that the Ukrainian mass public has, on the whole, a tolerant attitude toward citizenship for all residents of Ukraine. An exclusivist attitude (the state only for those declaring themselves Ukrainian) is

found only among residents in western Ukraine but 84% nationally adopted weakly or strongly inclusivist stances for all residents of the country (Zimmerman, 1998, 53). Public opinion polls has consistently shown that Ukrainians value economic prosperity over any other post-independence aim and have little time for misty-eyed nationalists who hark back to the fleeting periods of Ukrainian independence and the long agitation for Ukrainian separatism in Tsarist and Communist times. In Ukraine, Galicia (Ukrainian nationalism) and Crimea (Russian language and ethnic mobilization) are partial, but only partial, exceptions to these trends (Lieven, 1999, 68). Ukraine is not alone in this regard; polls conducted in Russia over the past five years have shown the overwhelming majority of respondents ranking living standards and economic growth high above "national issues."

The conclusions of previous studies on the regional element in Ukrainian politics must be viewed with caution because the authors typically do not try to separate regional effects from alternative explanations by consideration of notions of space and place as they have developed in the geographic literature (Tuan, 1977). Reliance on the data from 26 oblasts hides many intra-oblast differences and conflates local and regional scale elements in the measure of regional differentiation. Similarly, the addition of a regional dummy variable in a regression model, such as the study by Hesli, Reisinger and Miller (1998) though useful in extending explanatory power in attitudinal models, assumes a certain regional scale and does not decompose the regional factor into geographic scale or compositional elements (cultural, linguistic, economic, historical or ethnic). A combination of specific methods developed to examine geographically-coded aggregate data and visualization methods designed to highlight key comparisons addresses these deficiencies in the determination of the extent of regional differentiation in contemporary Ukraine.

Region and Language in Contemporary Ukraine

The regional issue in Ukraine has, unfortunately, been conflated with ethnic and language questions. As in other East European states, there is a concentration, though not a complete clustering, of minority populations in certain regions. Ethnic Russians are typically considered to constitute 22 percent of the total

population of Ukraine but a simple dichotomy of the population into majority-minority groups does not accurately reflect the combination of ethnicity and language groups that constitutes the Ukrainian peoples. Because so many ethnic Ukrainians speak Russian as their first language, Ukrainian society should not be dichotomized into Ukrainians and Russians, but into at least three major groups: Russophone Russians (about 20 percent), Ukrainophone Ukrainians (about 45 percent) and Russophone Ukrainians (about 30 percent). This asymmetry of language and nationality has led to the weakest sense of national identity among the Russophone Ukrainians, who are mostly "Ukrainian" in political terms, and mostly "Russian" in terms of culture (Ryabchouk, 1999). With respect to geographic distribution, the west of the country has a small Russian minority with a strong preponderance of Ukrainian-speaking Ukrainians, the center of the country (including Kyiv, the capital) has a large Ukrainian majority but a mixed Russian-Ukrainian speaking population; the south has a Ukrainian majority but a Russian-majority (over 60%) in Crimea and a mixture of languages; and the east has close to a 50-50 ratio of the two nationalities but a Russian-speaking majority (Janmaat, 1999). In 1989, the last Soviet census showed an Ukrainophone Ukrainian percentage ratio in the regional capitals equal to 76.6% in L'viv, 60.0% in Kyiv, 29.6% in Odessa, and 18.3% in Donets'k (Arel and Khmel'ko, 1996). By contrast, the Russophone Ukrainian percentages ranged from 16.1% in L'viv, 15.4% in Kyiv, 19.3% in Odessa, and 21.1% in Donets'k. Though many Russians claim to speak Ukrainian fluently, in practice almost all members of this ethnic group chose Russian as the language of the home (Janmaat, 1999; Lieven, 1999). Official language policies since 1991 to promote Ukrainian as the national language are making inroads in the Russian populations in L'viv and Kyiv, especially in the areas of schooling and state institutions, but are encountering resistance in Odessa and Donets'k (Janmaat, 1999). The high rate of inter-marriage between Ukrainians and Russians and the presence of children in these families, especially in the center and east of the country, do not allow a simple equation of region and nationality. Multiple identities characterize a large proportion of the population; a strong feeling of attachment to the locality is added to the cultural-linguistic, national and state identities (Pirie, 1996; Lieven 1999).

For social and political geographers, the influence of regional loyalties and a strong sense of locale are well documented for contexts in Western Europe and North America. The hollowing-out of the

European states has occurred in the face of the growth of the European Union at the super-national scale and the (often-reluctant) recognition by national governments of the demands for more autonomy at the regional level (Delamaide, 1995). Debates between political geographers, like Agnew (1996), and political scientists highlighted the issue of whether regional peculiarities are ebbing in the face of nationalizing politics in the Western states. According to the classic political science model, during the early stages of democratic politics (either during the early years of mass suffrage or consequent on independence), parties and political movements will tend to have strong regional components that wither as the parties begin to broaden their appeal beyond traditional strongholds and adopt national platforms. The hypothesized end-results of this process are political patterns that do not vary from region to region, but instead are explained by compositional factors (class, gender, age, education, etc). The United States is often viewed as a good example of this nationalization thesis. Hinich, Khmelko and Ordeshook (1999, 182) make the comparison explicit by arguing that the apparent regional diversity in Ukrainian politics today is probably no greater than the early post-colonial years of the United States.

Ukraine is officially in the process of building a "civic nation', one whose ideals are not ethnic-based but that transcend national interests in the goal of uniting all residents as part of the Ukrainian nation. While the language policies emanating from parliament and governments in Kyiv have caused some concern in the Russian-majority cities, the slow pace of language policy change in the educational and governmental spheres, as well as the absence of any rules that target minorities for special membership qualifications, have eased minority concerns about the nature of the post-1991 Ukrainian independent state. Janmaat (1999) finds regional differences in language retention policies – Russians opt for language retention in Donets'k and Odessa, for language integration in Kyiv, and depending on family situation for assimilation (Russians in mixed couples) or retention (Russians in purely Russian families) in L'viv; Janmaat thinks that fear of cultural loss may have prompted the response of Russians in L'viv. It is important to keep in mind that Ukrainians prefer Russians more than any other nationality (Miller, White and Heywood, 1998, 446).

In a sense, the relative lack of nationalist push factors from Kyiv has not created a regionalist backlash in the minority areas, as was the case in neighboring Moldova after independence in 1991. But it is

still an open question if Ukraine is coming together in a political community, becoming more regionalized, or essentially remains in a state of little change. In opposition to the Lieven argument for the tolerance of the Ukrainian state stands the position that to speak of "Ukrainian" as some sort of unitary or homogenous identity is to assign to a population a position that does not (yet) exist. Zimmerman (1998) believes that the existence of an Ukrainian political community (when citizens in a territory share a range of values and perceptions that distinguish them attitudinally) is still an open question. While regional cleavages are prominent in the Ukrainian social, cultural, linguistic and political landscapes, they show no evident signs of becoming mobilized into regional separatist or nationalist movements. Though there is significant differences between the 3 regions (west, center and south/east) on key questions like "Ukraine and Russia must be absolutely separate countries", the difference is less than Ukrainians assumed. Asked to estimate strength of feelings on this question, they guessed right for eastern Ukraine but over-estimated the support of Ukrainian independence in the west of the country.

In quantitative geography, the term "regional effect" can have multiple meanings and can be caused by two different, but related, processes. We thus need to separate "spatial dependence" (the contagion effects of adjoining or neighboring spatial units) from "spatial heterogeneity" (usually considered to be equivalent to the regional effect). Clusters of similar political patterns can be produced from spatial dependence that shades into spatial heterogeneity. In order to test the validity of the claims about regional effect, we need to use the smallest units available to see if the regional effect is a function of scale. In the case of Ukraine, it is plausible that one could mistake clustering of the 26 oblasts of Ukraine for evidence of a regional effect but examination of cities and *rayoni* (rural districts) could reveal intra-oblast discrepancies that undermine any notion of homogenous oblast. Local and oblast-level patterns could show different trends and support contradictory hypotheses regarding the significance of the geographic effect in Ukraine. Unfortunately, most work to date on the political geography of Ukraine has been at the oblast level or even at the macro-regional scale. Examination of the political data at a variety of scales should help to remove some of the confusion about the significance of the regional effect in post-independence Ukraine. The strong

emphasis in this paper on methods of visual display can be helpful in defining the nature of the level of aggregation and in turn, the displays can clarify the most promising paths to further analysis.

Regions in Ukraine

In the former Communist states of Eastern Europe and the Soviet Union, the legacies of regional histories lie heavy on the contemporary political landscapes. In the territories of the former Austro-Hungarian Empire, regional historical memories are being rediscovered and re-created in attempts to highlight traditions that allow regional interest groups to certify their European credentials and to attract tourists and investment from the West (Bialasiewicz and O'Loughlin, 2001). In countries such as Russia (Kolossov, 1993) and Poland (Zarycki, 2000), regional divisions of the past are easily visible in the contemporary political maps. Ukraine has a complex regional mosaic developing out of its centuries of division between the Russian, Austro-Hungarian and Turkish empires and the imprint of these legacies are still visible in the electoral maps (Birch, 2000). The contemporary boundaries of the state date only from 1945, and it is especially significant that the region of Galicia in the far west, distinctive on all Ukrainian political and economic maps (Craumer and Clem, 1999; Holdar, 1995; O'Loughlin and Bell, 1999; Wilson, 1997; Wilson and Birch, 1999), was a Polish territory until the end of World War II. While Ukraine can be dichotomously divided at first glance along the Dnipro river into east and west, a more nuanced political perspective would separate the state into four (east, west, center and south) or five (further division of the south region into Crimea and the rest) macro-territories.

The regional patterns in political preferences come through clearly in relation to Ukrainian foreign policy with two broad preferences apparent which can be usefully, though perhaps simplistically, represented as those who would prefer Ukraine to adopt a "Slavic choice" and those who support a "European choice" (Light, White and Löwenhardt, 2000, 82-83). Communists and other left-wing groups favor the restoration of the Soviet Union or at the least, a Slavic confederation with Russia and Belarus; they live predominantly in the east, south and Crimea. Those who favor a European choice tend to be centrists by political conviction, staunch defenders of Ukrainian sovereignty, in particular its independence from Russia, though they

understand that Ukraine must have good relations with Russia; they tend to predominate in the center, including Kyiv, and the west. Shulman's (1999) survey of approximately 1000 members of the elites in L'viv and Donets'k confirms the powerful pull of external linkages to Russia in the east and the degree of alienation of elites in the west towards the Donbas. On the basis of these answers, he argues that this "asymmetrical international integration" weakens the state and undermines national unity in Ukraine.

There is no doubt that a strong geographic pattern exists in other aspects of Ukrainian political life. In general, from west to east, there is a fairly regular distance-decay in support for the nationalist parties in the *Verkhovna Rada* (Supreme Parliament) elections in March 1998 (Wilson and Birch, 1999). In 1994, President Leonid Kuchma received his strongest support in the east and south in running against the incumbent President Leonid Kravchuk (Holdar, 1995). Crimea is the most "Russified" region of the country and other southern regions also behave politically more like the east. Kyiv is split between nationalists and Communists and the center is generally becoming more nationalist over time (Craumer and Clem, 1999). In economic terms, the east is more industrialized than the rest of the country and in general, has higher incomes and a more urbanized population.

In the numerous surveys of Ukrainians taken since 1991, one of the most remarkable features is the east-west split in perspectives on the future prospects for the Ukrainian state. Respondents in the west are significantly more optimistic than other Ukrainians and more supportive of the attempts of the Ukrainian regimes since 1991 to reduce economic dependence on Russia and promote political and economic ties to the West. Even simple measures of civic engagement, such as membership of clubs and organizations, also show a strong east-west gradient, further evidence of the acceptance and optimism that people in the western part of Ukraine hold for the new state and society (O'Loughlin and Bell, 1999). Attempting to explain these differences, Åberg (2000) uses another survey of respondents in L'viv and Donets'k to argue for the persistence of non-communtarian social capital in the post-independence Ukrainian west as a device for practical problem solving in a time of economic difficulties. Residents of L'viv are much more likely to join organizations, to sign petitions, to contact government officials and to participate in demonstrations that residents of Donets'k.

In his dissertation, a study of political life in L'viv (west) and Donets'k (east), Clem (1995) compares the regional differences that exist on all the types of measures of political institutionalization. He concludes that in western Ukraine, reform-minded party activists successfully co-opted local pre-independence power structures but in eastern Ukraine, leftist parties used preexisting ties to local government and other resource providers to maintain their dominance in the region. In a parallel survey, Shulman (1998) finds that elites in L'viv are suspicious of the ethnic and national ties between Russians in the Donbas and fellow Russians across the border, believing that these ties tug on Russian loyalties in the Donbas: elites in Donets'k strongly reject this claim. To prevent against the possibility of further integration with Russia and a loss of political and economic independence for Ukraine, nationalists in the west want a unitary territorial-administrative structure, while for the elite residents of the Donbas, a more federal structure that would allow their region more autonomy including the chance to intensify cross-border relations with neighboring Russian regions (Kolossov and O'Loughlin, 1998).

Underlying most explanations of the regional patterns, both statistical and historical, is the linguistic distribution of Russian and Ukrainian-speakers and the associated, but incomplete, correlation with ethnic Ukrainians and Russians. One of the major difficulties with the national identity literature that has emerged in Europe in the past few decades is the assumption that individual members of a nation will hold fast to a single (national) identity and that over time, other members born into the group or entering through marriage or immigration will assimilate to this single identity. Recent research has challenged this assumption and has shown that individuals can have multiple identities and place attachments. In the former Soviet Union, the state promoted a Soviet identity that was supposed to supersede ethnic and national orientations but in practice, tended to become layered on top of the local and republic attachments (Kaiser 1994). In Ukraine, layering in a kind of "matrioshka doll" fashion became common especially because of close relations between the two language communities and the high rate of inter-marriage across ethnic lines (Taras, 1993). The Ukrainian scholar, Taras Kuzio (1997, 1998) assumes that Ukraine is becoming a modern state as national identity is both promoted by the state apparatus and adopted by most residents. For those residents who reject these practices, he labels the self-professed Soviet identity of some eastern Ukrainians as "pre-modern

or transitional" claiming that "national identities are indispensable for political reform because only in nation-states have democracies been traditionally created" (Kuzio, 1998, 144), a position challenged by Flynn (2000). She particularly disputes Kuzio's claims that civic society is weakest in south-eastern Ukraine because national identity is weakest there.

The dispute between Kuzio and Flynn reflects a bigger debate between promoters of unitary national identities for the newly-independent states of formerly-Communist Europe and those who insist that this centralization will inevitably lead to "backlash nationalisms" as minorities become mobilized in the face of nationally constituted majority practices. What distinguishes Ukraine from this conflict scenario is the common belief across the majority-minority divide that all sit in the same leaking economic boat, though in general residents in the western region remain more optimistic about their economic and political futures, expecting a strengthening of ties to the West. Russian identity in the east and south of the country is much more tied to the Russian heritage and people, and not to the idea of unification with the state of Russia (Lieven, 1999, 141). Thus, to speak of a bifurcated state or ethnic mobilization in Ukraine is certainly premature. The fact that no party or group has developed since 1991 to represent all the strongly-Russian oblasts, despite the severe decline of the Soviet planned regional economy, can be seen as further evidence of the lack of identity based on language or ethnicity (Lieven, 1999). Instead, fierce competition at the regional and national levels between cadres of political and economic elites, especially those from Donets'k and Dnipropetrovs'k, has characterized political life in the east of Ukraine.

It has become evident from surveys of elites (Shulman, 1998 and 1999; Clem, 1995) and the public (Arel and Kmelko, 1996; Hesli, Reisinger and Miller, 1998) that "the Russian question", consisting of the dual elements of the nature of the relations of the Ukrainian and Russian states, as well as the cultural and political expression of the "Russophone" population in Ukraine, overrides other polarizing issues in post-independence Ukraine. As noted by Hesli *et al* (1998), the shared misery of a declining standard of living since 1991 helps to unite Ukrainians across ethnic, linguistic and regional lines. However, there are some sizeable differences by region and ethnic/linguistic groups on the question of the best strategy of dealing with the shrinking economy. Residents of western Ukraine, especially the three Galician oblasts of Ivano-

Frankivs'k, Ternopil' and L'viv, show significantly more support for the privatization strategy enounced, though not effectively pursued by successive Ukrainian governments, than residents of other regions, especially in the Donbas industrial agglomeration (Arel and Kmelko (1996). Part of the explanation for the differences in attitudes towards privatization could be attributed to the fact that privatization of the large industrial enterprises (coal mines and steel mills, for example) is unlikely to be successful, while the chances of success of the small, often agricultural, enterprises of the West look more promising.

The "Russian question" touches on both internal and external relations in Ukraine, making the issue doubly sensitive. The sensitivity can recently be judged by consideration by the state of instituting Ukrainian as the only language for official state business after the Constitutional Court ruled that all state officials should know and use Ukrainian; this proposal generated a major backlash in the Russian-speaking area. Local officials in L'viv (Galicia) went farther by limiting the use of Russian in public places, including popular music, and business (Kuzio, 2000). Earlier surveys between 1991 and 1994, reported in Arel and Kmelko (1996), clearly indicate that the most sensitive issue in Ukraine was the status of the Ukrainian state vis-à-vis Russia. Enveloped in that sensitivity is the worry for some Ukrainian created by the "pro-Russian" attitudes of a large segment of the population, especially in the east. Only the composite index, "pro-Russian" elicits a significant territorial polarization in Ukraine and Arel and Kmelko (1996, 88) conclude that "*if* (their italics) Ukrainian politics is territorially split at a given moment, the sources of the split are to be predominantly ascribed to the clashing attitudes of the electorate over the Russian question".

Layered on the cultural and linguistic identities are local identities, circumscribed by locality or oblast. According to Lieven (1998, 79), "Many Ukrainians could still be plausibly described as *tuteshni* – that is to say, people whose primary identification is with their locality rather than with their state or 'nation.'" Ryabchouk (1999) indicates that this local identity is strongest for Russophone Ukrainians (about 30% of the national total), many of whom have a mixed and vague identity and who usually identify themselves in pre-modern terms as 'locals' ("Odessans', "Kyivans", "Donbasians." In the Donbas, the industrial heartland of Soviet eastern Ukraine, the region's economic *raison d'etre* has been damaged by the loss of centrally-planned markets in other former Soviet republics. Economic dislocation, felt most severely by coal miners and their

communities, has been partially transformed into a stronger sense of betrayal by the Ukrainian state than is felt in other (also economically depressed) regions. Many respondents in this region hark back nostalgically to the banner years of the Soviet state and enounce a stronger Soviet identity than other regions of Ukraine (or indeed, of many parts of the other Soviet republics) (Kolossov and O'Loughlin, 1998).

The summary of the literature on Ukrainian identity indicates that expectations of ethnic-based conflict have been proven wrong by accommodations on all sides, including the state and dominant political figures, since 1991. While the electoral maps of Ukraine seem to indicate a strong east-west divide, the same geographic cleavages can be observed in other democratic states, such as Italy, the United Kingdom, and Germany. The electoral geographic cleavage can be produced by many factors, especially the clustering of compositional groups (classes, religions, ethnicities, urban populations, etc) differentially across the regions. The unresolved question is whether the east-west divide remains visible when these factors are taken into account. In preparing the statistical analysis of the influence of these compositional elements, we need to remain attuned to the warning of Lieven (1998, 80) in summarizing the Ukrainian regions debate. "(Commentators) have missed three important elements of Ukrainian political geography: the fact that nationalist Galicia does not make up the whole of 'western Ukraine' and that its specific variant of nationalism has very limited cultural and economic appeal outside its own region, the critical importance of central Ukraine, and the divisions within the whole of the Russian-speaking area." The analysis in this paper specifically incorporates these three elements in the determination of the size and importance of the regional factor in Ukrainian political life.

Statistically isolating the regional factor in Ukrainian politics: From the literature examined above, it is clear that significant differences in political preferences, ethnic identification, national mobilization, regional loyalties, and language use exist between west and east/south Ukraine. It is also evident that these elements overlap to such an extent that it is difficult to isolate the relative importance of each. In the past 5 years, numerous studies have used statistical methodologies to determine the relative importance of the regional factor, controlling for other compositional characteristics (ethnicity, language use, age, education, etc).

Though the studies report regression-type results, they use different polls and the comparison of the conclusions is thus not as conclusive as might be expected. In general, the conclusion is that the regional factor exists independent of the compositional effects, though why it persists is not evident.

In their comparative surveys of post-Communist societies in eastern Europe and the former Soviet Union, Miller, White and Heywood (1998) use broad regional divisions to see if there are any consistent elements in the survey responses. While their tripartite regional division of Ukraine (east, west, and center) does not include all oblasts, it is used as a sampling framework but, unfortunately, regional controls or variables are not incorporated into their statistical models. It is noticeable that the fits of their statistical models using only compositional variables are lower in Ukraine that the other countries surveyed (Russia, Czech Republic, Hungary, Lithuania, and Slovakia). In a similar comparative study of social identities in Russia, Ukraine and Lithuania between 1995 and 1997, Miller, Klobucar, Reisinger and Hesli (1998) found that the explanatory regression model for Ukraine was significantly improved by dividing the sample into respondents from west and east Ukraine. In east Ukraine, political orientation was strongly connected to class identification, while in the west, ethnic identification was dominant, leading to the conclusion that in this region, a strong national identity promotes democracy and opposition to communists. However, the authors optimistically conclude that, in Ukraine, as in Russia and Lithuania, class interests are replacing ethnic identification as the major factor behind the consolidation of state identification.

Studies of the regional factor in Ukraine have frequently used public opinion surveys of political attitudes and aspirations for the future. While there is a hypothesized translation of these attitudes into political party preferences, the correlation is not precise and it is expected that regional traditions and historical patterns of political behavior will modify the national model. In a study comparing 1995 and 1997 survey data for Ukraine, Hesli, Reisinger and Miller (1998, 237) argue that "national integration is occurring in the sense that the Ukrainian electorate is becoming less polarized over time, despite the existence of deep historically-based cleavages in the society." Like other studies (e.g. Arel and Kmelko, 1996), they use the "Russian question" to isolate the level of regional and political party polarization. Not surprisingly, they find that religion, language, nationality, region and party identification are all intertwined and that each makes a

contribution to the polarization of Ukrainian society. In a regression model, a comparison of the standardized regression coefficients leads to the conclusion that region, measured by residence in the western part of Ukraine, is the most important determinant of answers in 1995 on the "Russian question", followed by self-identification as "Ukrainian": it is important to note that party affiliation (Communist, nationalist, etc) was less important. By 1997, the party affiliation indicator had moved into second place behind region. These models certainly offer no support for the ebbing of the regional factor in Ukraine; for that claim, the authors rely on a logit model of voting choice for either Communist or nationalist candidates. Negative orientations on the "Russian question" and use of the Ukrainian language offer the most important explanations of the vote choice, with the regional variable (residence in west Ukraine) lagging behind. It would appear that the conclusions of the study should concern the nature of the issue; for the "Russian issue" debate, regional location is clearly still most important, while other questions require different explanations. It is unsurprising why this regional difference on the "Russian question" should persist since the subject goes to the heart of Ukrainian independence and separation from Russian dominance. The study, however, does not mark the end of the search for an account of the regional factor in Ukraine.

Kubicek (2000) challenges the Hesli *et al* (1998) study's conclusion about the decline of the regional factor. Using time-series Eurobarometer data (same as this study), electoral results and voting in the Rada by deputies, he argues for the persistence of regional divisions. However, a closer look at the statistical support for Kubicek's conclusion reveals a mixed picture. The regional variables (west, south, east, center, Crimea) vary greatly in their significance according to the survey question and year (Kubicek, 2000, Table 3, p. 281). Furthermore, the absence of any party and other political controls on the distribution of deputies' voting in the Rada exaggerates the level of their regional polarization. Using a series of dummy variables for language groups, ethnicity, and regional location for a 1994 national survey on loyalty to the state of Ukraine, Barrington (1997) comes to the same conclusion as Kubicek (2000), that region is not declining in significance in post-independence Ukraine. However, once more, the study fails to account for the independent effects of region, language and ethnicity, arguing that they are once again intertwined.

"Is the East-West divide in Ukraine so deep that voters from one geographic region see a different political universe than do voters from the other?" is the direct question asked by Hinich, Khmelko and Ordeshook (1999, 152), a question that lies at the heart of the many research papers on Ukrainian regionalism. Using data from a large sample (2923 respondents) in early 1998, they asked respondents to rate themselves on an ideological scale and they then examine scale positions using respondent characteristics. The greatest variation in the "ideal points" (a self-identified position on two ideological scales) among different groups is found for the 26 oblasts of Ukraine but when individual voters are mapped in ideological space by region, there exists quite a bit of overlap in their ideological spaces. The authors conclude that this overlap offers some room for optimism because it might allow a "centrist" party to appeal to this compromise position, thus undermining the regional identification. So far, no national party has filled this ideological vacuum in Ukraine and only the Communist party is a national party by virtue of its organization across the geographic units of the country.

We can conclude from the mass of studies over the past decade that the Ukrainian political community has not yet fully formed. While there is some evidence that the regional factor is becoming less important for some issues, such as the preferences for the capitalist or communist economic model, it persists strongly for issues surrounding the "Russian question." Because parties tend to have regional bailiwicks, measures of regional polarization that use party votes, party memberships, deputy behavior in parliament and other "formal political" measures will tend to show greater levels of polarization of the electorate. Public opinion surveys, by contrast, offer more evidence for compromise positions because the correlates of preferences to ethnic, national, regional and especially compositional (age, education, gender, etc) variables are relatively weak. In the empirical part of this paper, I will use both survey data and voting outcomes as measures in the attempt to clarify further the nature and scope of the regional polarization of Ukraine.

Data and Methodologies

To filter out the different kinds of possible causes of the so-called "regional factor", we need to employ specific statistical methodologies that have been developed in Geography and Political Science in the past decade. Unfortunately, the full suite of spatial techniques cannot be deployed since the data available for analysis are limited, inconsistent across time and region, and do not include the usual variable mix that are incorporated into census materials. Ukraine has not had a national census since the last Soviet census of 1989 and given the dramatic economic and population changes since then, use of these data to reflect contemporary developments would be highly questionable.

Electoral returns for recent Ukrainian elections are the most reliable data available and also possess the advantage of national coverage. Parliamentary elections were held in March 1998 and were the subject of a recent paper by Craumer and Clem (1999) that indicated a strong regional factor in the oblast returns. Dissection of this factor is difficult since there are no aggregate socio-economic correlates available at the *rayon* or constituency level (225 in the country) and party formation is still evolving in the new democracy. With the exception of the Communist party, parties do not have a national range, appeal or organization, and further, they tend to be non-ideological, strongly focused on personalities, and unstable in membership and loyalty. In the current (June 2000) *Verkhovna Rada* (parliament), 13 fractions were registered but 35 deputies stated no fraction preference instead opting for a "regions" label (Laboratory F-4, 2000). Most of these deputies are independents who have aligned themselves with local "parties of power" in the oblast capitals.

The 1998 Presidential election run-off in Ukraine offered a clear ideological choice to the electorate. President Leonid Kuchma (originally a Russian-speaking missile factory manager from Dnipropetrovs'k) had been elected with strong support from the east and south in the 1994 election, but over his five year term, he espoused a moderate Ukrainian nationalist position, aligning himself with the west and center of the country. In the first round of the Presidential contest, he won 36% against 12 opponents on a platform of continuing the pro-West policies of his first term, of more privatization, of promoting Presidential authority in the face of parliamentary opposition, of instituting more control of the government, and of changing the constitution to encourage more stable government and fewer parties. His runoff opponent, Petro Symonenko from Donets'k, won 22% of the first round total as head of the Ukrainian Communist party. His party had

emerged in the March 1998 parliamentary elections with 26% of the vote and formed the most coherent opposition in the Rada to the policies of President Kuchma and his prime ministers. Symonenko barely edged two other leftist candidate in the first round and therefore, allowed President Kuchma to portray the run-off as a stark choice between an independent Ukraine and a return to a Soviet-style economy, society and identity for Ukrainians. In the run-off on November 14, 1999, Kuchma received 56% to Symonenko's 37% percent on a national turnout of 79%. For the run-off, the votes for the candidates as well as other constituency data (urban or rural district, turnout rate, valid votes) were used in the analyses. The sources of the data are the official returns of the Ukrainian Election Commission available from International Foundation for Election Study (www.ifes.kiev.ua).   Because the run-off dispensed with any confusion generated by multiple candidates, the aggregate statistics are more representative of voter preferences and Ukrainian electoral divisions.

The second data set has been used widely in the study of the evolving political beliefs of the citizens of the new democracies of Central and Eastern Europe (Haepfer, Milosinski and Wallace, 1999). Conducted for the Eurobarometer by local polling firms, the yearly survey included Ukraine from 1991 until 1996; since then, the surveys have been confined to those former Communist countries that have aspirations to join the European Union.   While many of the questions concern attitudes toward the European Union, standard questions also asked for opinions on democracy, aspirations for the country, language used, ethnic identification, relations with neighboring states (including Russia), the rate of privatization, as well as the usual compositional questions (age, gender, education, income, subjective measure of the standard of living, and regional location – 10 in the case of Ukraine). The large sample size in each country was designed to produced a margin of error about 3%. In the case of Ukraine, the sample size was 1400 in 1992 and 1200 in 1996, the two years used in this analysis. While the Eurobarometer surveys allow some geographic analysis at the macro-regional level (groups of 3-4 Ukrainian oblasts, termed the Northwest, West, Southwest, etc. in the survey), they are not fine-grained enough to match to oblast-level aggregate results for elections and other political expressions. In this study, I used the Eurobarometer surveys to construct logit political preference models and then re-calculated the simulated regional mean preferences as well as the means for other specific

populations (Ukrainian-speakers in the west, 65 year old people, urban residents of the south, etc). By comparing the expected regional means for the sub-groups using a simulation model, we can gauge the relative significance of the regional factor. The null hypothesis is that the simulated means will not display any significant differences across the four macro-regions (east, center, west, south). The Eurobarometer data are available from the Inter-University Consortium for Political and Social Research (ICPSR) at the University of Michigan (www.icpsr.umich.edu).

This article offers the first combined use of two statistical methodologies. Each offers a specific advantage in answering the question posed in the sub-title of this paper. Is the regional factor in Ukraine the product of some scale effects caused by the over-reliance on oblast-level data and where the use of data at a finer spatial resolution (for constituencies and *rayoni*) does not support a regional explanation? Perhaps the regional factor is a spatial artifact - that is, it is the manifestation of a clustering effect that cannot be removed by the incorporation of more compositional variables. King (1996), in responding to the statement of John Agnew (1996) about the meaning and expression of contextual effects in politics, argued that "geography should not count", meaning that proper statistical analysis combined with appropriate data and a good theory should be able to account for any spatial variation in the political phenomenon under study. But as is well demonstrated in dozens of statistical analyses of elections, significant spatial clustering of error terms in regression equations cannot be easily explained away (O'Loughlin, 2001). We can call these remaining clusters of significant residuals the "effects of space". When we can identify a geographic factor that correlates well with the cluster, such in a region with a distinctive history and identifiable political or cultural profile, we can call this factor the "place effect". Here I follow Tuan's (1977) place-space distinction, an approach continued recently by Taylor (1999). If the "regional effect" disappears in the face of careful statistical controls and appropriate methodologies, I will refer to this "effect" as bogus.

It has been the norm in electoral geography to calibrate regression models that use compositional variables as independent predictors of the dependent variable, the vote percentage for a particular candidate or party. To avoid falling into the trap of the "ecological fallacy", geographers and other social scientists

have resorted to such statements as "Counties with large percentages of African-Americans supported the Democratic candidate." But what geographers typically cannot do is infer the ratio of the population of interest (say, African-Americans in Alabama) that voted for the Democratic candidate nor can we provide small-scale estimates (say, for precincts or counties) of the ratio using aggregate data available from the census and from election commissions. While surveys of individuals are widely used by political scientists, geographers tend to rely more on aggregate data that can be mapped and interpreted. A recent development by the political methodologist, Gary King (1997), has combined two existing estimation methods of inferring individual votes from aggregate data. Kings' method allows not only estimates of individual behavior but also provides a suite of confidence measures and graphical displays that allow the analyst to calculate the reliability of the inferences (O'Loughlin, 2000). While some disputes and concerns about King's method still abound (see, for example, Anselin, 2000), the EI (ecological inference) program, available from *http://gking.harvard.edu*, that has been developed by King provides sufficient information to allow the analyst to decide how much confidence he/she should place in the estimates.

A brief exegesis of the King ecological inference method is necessary to introduce its use in this paper. In the absence of any aggregate census data for the constituencies or *rayoni* of Ukraine, I had to rely on the data provided on the election commission. The quality of the ecological inferences relies heavily on the quality of the data used to construct the inferences. Data sets with many geographical units, relatively low heterogeneity, a proportional distribution across many categories, and a temporal coincidence in the collection of the data sets all help to generate accurate inferences. With 675 cases, as in this study of Ukraine, the estimates were reliable for most analyses, though the program failed in two instances (see Table 1). The key predictor variable for the Kuchma vote was the level of turnout in each constituency. Did Kuchma voters go to the polls to vote for their candidate at a significantly higher or lower rate than Symonenko voters, and did these differences vary spatially across the country? To test the accuracy of the claims for the presence of a regional factor in the country, regional differences in the turnout rates of the supporters of the two candidates are measured using cartographic and statistical methods, with a null hypothesis of no significant regional differences.

Table 1: EI estimates of the Turnout of Kuchma and Symonenko voters, Ukrainian Presidential runoff election 1998

	Number of Cases	Average Turnout Ratio	Kuchma Ratio	Estimated Turnout of Kuchma Voters	Estimated Turnout of Symonenko Voters	Over (+) or Under (-) Representation of Kuchma Voters
All Ukraine	675	.793	.516	.829	.655	+.036
Cities	196	.711	.548	.727	.660	+.016
Rayoni	489	.828	.511	.924	.721	+.096
West	156	.847	.795	.937	.538	+.090
Central	213	.778	.422	N/A	N/A	N/A
South (inc. Crimea)	103	.707	.452	N/A	N/A	N/A
East	203	.796	.452	.723	.786	-.072

N/A - EI estimates not provided because the estimates are not reliable. The distribution (density plot) of the estimates is very broad and the model fit is questionable. See King, 1997, Chapter 9 and pp. 242 ff.

In order to calculate the turnout rates for the Kuchma voters, we use the overall turnout rate (B_i) and the Kuchma percentage (W_i) for each geographic unit, in this case, the 675 geographic units (*rayoni* and cities) of Ukraine to calculate the overall rate of turnout for the Kuchma voters and the estimates for each of the individual districts. The procedure follows that used by O'Loughlin (2000) to estimate the turnout of Nazi party voters in the general election in the Weimar Republic in 1930. Using King's notation, in the turnout example, the independent variable, X, is the Kuchma runoff vote and the dependent variable is overall voter turnout, T. An identity is used for combinations of the district values for T_i (turnout) and X_i (Kuchma voters), $T_i = ?_i^b X_i + ?_i^w (1 - X_i)$. The purpose of the EI modeling is to estimate $ß^b$ (the aggregate turnout rate for Kuchma voters for the whole country) as well as the estimates for the individual *rayoni* and cities (675 units in all), $?_i^b$. Combined with information about the bounds for each district, found by projecting the line onto the horizontal ($?_i^b$, the Kuchma voter turnout) and the vertical ($?_i^w$, the non-Kuchma turnout) axes, the EI method combines two earlier inference methods (King, 1996). Clearly, the narrower the bounds on the axes, the stronger the chances of a plausible solution to what Anselin (2000) calls an "unobservable" value. In the application of King's EI methodology to the Ukrainian Presidential runoff data, five of the seven

analyses generated reliable estimates for the turnout rate of Kuchma voters but the distributional requirements of the method precluded reliable estimates for the southern and central regions of Ukraine. (See Table 1).

The second method used extensively in this paper also derives from the work of Gary King and his associates (King, Tomz and Wittenberg, 2000). This methodology develops the presentation of statistical results in a visual format. King and his co-authors argue correctly that too much of the impact and importance of statistical analysis is hidden by the difficulty of interpretation of parameter values, coefficients and significance tests in tabular form. In line with other initiatives in geography (Fotheringham, 1998) and other social sciences (Cleveland, 1993; Tufte, 1983), the emphasis in this new approach is to take full advantage of the large amount of information embedded in statistical analysis. It is especially the case that the results of logit and other non-linear modeling exercises are hard to interpret when presented in the usual tabular form and translation of the coefficients into graphical form helps the reader enormously in understanding the nature of the significant relationships. Called CLARIFY (available for the Stata© statistical package from http://gking.harvard.edu), the new technique is a program that uses Monte Carlo simulation to convert the results of statistical analysis, like logit modeling, to new quantities of interest that, in turn, can be displayed in graphical software packages. CLARIFY is composed of three steps, estimating the model and simulating the parameters, setting the values of independent variables before the simulation of the quantities of interest, and simulation. In the case of the Ukrainian data from the Eurobarometer surveys, suppose we wished to examine the influence of age on the outcome variable, preference for privatization or socialism, in a logit model, controlling for the effects of regional location, education, gender, urban or rural residence, ethnicity and language status. A table of coefficients can provide the necessary evidence of the direction and strength of the relationships but a more effective presentation is a graph showing the change in preferences according to age category (20 to 85 in 5 year increments) for comparative populations (by region, for example). Figure 4 provides examples of these models.

The Geography of Ukrainian Presidential Turnout: Who Benefited? Who Lost?

The first set of analyses reports, in two sections, the calculations of the estimated national benefit (or loss) to the Presidential candidates from the differential turnout across the 675 geographic sub-units (cities and rural districts) of Ukraine. Using the program EI procedures described in King (1997), the estimates for the whole country, for the four regions (west, east, central and south/Crimea), and separately for cities and for rural regions, are shown in Table 1. (Color maps of the Presidential election results and other Ukrainian electoral results are available from http://www.colorado.edu/IBS/PEC/johno/maps/ukraine.html). Since the analysis was designed to estimate the turnout of Kuchma voters, aggregate turnout rates for the geographic sub-units are the values for the "dependent" variable while the vote proportion for the Kuchma candidacy represents the "independent" variable. Since the average values represented in the table correspond to the average of the geographic units, they are slightly different than the national figures reported by the Central Election Commission of Ukraine and other sources. With the exception of the analyses for the central and southern regions discussed below, all of the distributions of estimated turnouts are tightly bunched in a relatively narrow range and meet the requirements of the EI methodology for reliability. (See King, 1997, 184-196).

Overall, Kuchma voters went to the polls at a higher rate than Symonenko voters. The overall national difference (average turnout minus average turnout of Kuchma voters across the 675 sub-units) was 3.6% in favor of President Leonid Kuchma (estimated turnout rate for Kuchma voters of 82.9% minus national turnout of 79.3%). Potential Symonenko voters stayed away from the polling places in droves, perhaps disillusioned by national polls that projected Kuchma as the overwhelming winner, perhaps alienated from formal political activity in Ukraine, or perhaps angry about the relative neglect of their region and oblast by the Ukrainian state apparatus that appears to be dominated by nationalists from the center and western regions of the country.

Exit polls and focus groups at the time of the Presidential election shed some light on the reasons for the significant difference in the respective turnouts of the two candidates. All figures are from Wagner and

Skoczylas, 1999a, 199b; 6034 Ukrainian voters were interviewed as they left 300 polling places and focus groups were held in the cities of Kharkiv, Odessa and Kyiv.   Using compositional groups as their predictors, Wagner and Skoczylas determined that men were more likely to vote than women, voter turnout was lower in larger cities, that older people voted at a higher rate than younger voters, and that turnout for ethnic Russians was lower than turnout for ethnic Ukrainians. The implications of these trends for the candidates were significant since they drew differential support from different blocs. Older people and Russians were more likely to support Symonenko, who received 68% of the votes of Communist party supporters in the first round. These correlations are well known and have been consistent since the early post-independence elections (Holdar, 1995; Wilson, 1997) but the big difference between the November 1999 run-off and earlier elections was that President Kuchma split the eastern region with his opponent and did not lag far behind in the vote of ethnic Russians (41% to 31% in the first round). Kuchma won the oblasts of Kharkiv (58%), Dnipropetrovs'k (56%), Donets'k (53%) and the autonomous republic of Crimea (50.2%) in the runoff, thus undermining the Communist candidate's strong regional and population base.

Why Kuchma voters turned out at a significantly higher rate than Symonenko voters can be gauged from the focus group discussions where Kuchma was clearly seen as the candidate of the center (and of the right in the runoff election). Using the median voter model (following the assumption that the median Ukrainian voter is moderate in political preferences), Kuchma's self-placement and perceived location at the center of the political spectrum gave him an enormous advantage. In a one-on-one contest with a candidate who was widely perceived to be a leftist that would move Ukraine significantly towards a re-union with Belarus and Russia and who would restore socialist economic principles for a population that was firmly wedded to the idea of capitalist economic development, Kuchma won easily. Both the focus groups and the exit polls show a convergence of opinion between ethnic Russians and Ukrainians in 1999 so that a candidate making an ethnic appeal was less likely to be able to win predominant ethnic support than had been the case in the past, most notably for Kuchma in the 1994 Presidential election runoff. Though no one candidate was viewed by the focus groups' participants as being able to solve the myriad of problems facing Ukraine at the turn of the millennium, the incumbent President escaped blame for these problems and he was helped

enormously by the fact that the media, including the widely-read national newspaper, *Fakty*, were favorable to him (Wagner and Skoczyplas, 1999b). Participants in the focus groups were generally frustrated with the lack of specific information on the candidates' positions and qualities, a factor that further hurt Symonenko.

The advantage accruing to President Kuchma from the differential turnout of his supporters extended across almost all geographic divisions of Ukraine (Table 1). In line with the exit polls, the EI estimates show that turnout was generally lower in cities than in rural areas for both candidates but the difference benefitted Kuchma. The president's advantage over Symonenko was only 6.7% in the cities but was enormous in the *rayoni* at 20.1% (92.2% minus 72.1%). It was only in the eastern region that President Kuchma's supporters came to the polls less than the estimated turnout of Symonenko supporters, 72.3% to 78.6%, but this relatively small margin of advantage for Symonenko was not nearly enough to overcome his 40 point disadvantage in the west (93.7% to 53.8%). As was noted in the exit polls and the focus groups of Wagner and Skoczylas, Symonenko was unable to mobilize his natural constituency of the east (urban, elderly, ethnic Russians, communists) to the same extent that Kuchma was able to motivate his supporters, especially in the west, to come to the polls.

The ecological inference method does not always yield results that are meaningful; much of the statistical reliability depends on the nature of the data distribution and the strength of the relationships. In the case of the sub-samples for the south (which includes Crimea) and the central regions of Ukraine, the estimates for the Kuchma voter turnout are not provided because they are unreliable due to distributional issues. The plot of the estimates is flat and shows a large range, from .1 to .98; this variance does not inspire confidence in the value of the median estimates. Though the number of cases in these sub-samples is smaller than in the other analyses, they are sufficient for statistical inference purposes if the relationship between turnout and the Kuchma vote ratio had been stronger. For similar reasons, the estimates for the turnout of the Symonenko voters are unreliable. It is possible that a more refined spatial division of the oblasts would enable a result than can be statistically defended but, as noted by King (1997), the ecological inference method does not always produce a meaningful answer to the unknown individual values.

The second part of the analysis of the ecological inferences of the turnout rates of Kuchma voters involves the disaggregation of the national and regional estimates to the local level. One major advantage of the King method over previous ecological inferential techniques is the ability to generate (and map) the estimates for the individual geographic sub-units that constitute the national total. King (1997) notes that these values can be used in "second-stage analyses", as dependent variables in a regression with the compositional characteristics of the areas. However, significant statistical concerns about the reliability of the coefficients has led to the proposal of altered regression techniques for these second-stage analyses (Herron and Shotts, 2000). The issue is moot in Ukraine since there are no recent aggregate socio-economic or other compositional data available at the level of the 675 units of this study. Instead, as in O'Loughlin (2000), the EI estimates are mapped and analyzed in an exploratory spatial data manner.

Three maps display the results of the cartographic analysis of the idependent (Kuchma voters), and dependent (turnout) variables as well as the ecological estimates of their relationship (ratio of turnout of Kuchma voters). A quick comparison of the three sets of maps indicates that the clustering of the ecological estimates is greater than either of the other two variables. Separate plots of the quartile values for each of the variables superimposed on an oblast map of Ukraine allows a clearer identification of the scale of the regional clustering in the data. Each dot represents the centroid of each of the 675 geographic units in the analysis and each map contains 149 points.

The distributions on the turnout maps show dramatic clustering of the highest quartile values in the west of Ukraine, especially in the three Galician provinces of L'viv, Ternopil' and Ivano-Frankivs'k. (The mirror map, lowest values below 68.3%, reveals no points in these oblasts). The only other points of highest values (more than 89.1% turnout, a remarkably high value) are found in about 25 locations scattered in the rural districts of eastern and north-eastern Ukraine. Unlike the concentration of the west, the values of these points must be explained by local, almost anecdotal, conditions, but the fact that turnout in some eastern districts fall into the highest quartile is at odds with the general trends in recent Ukrainian elections (Craumer and Clem, 1999). In fact, examination of all four maps of turnout shows that the eastern and southern districts, areas of Russian population concentration, mostly fall into the middle 50% of districts. Crimea, the
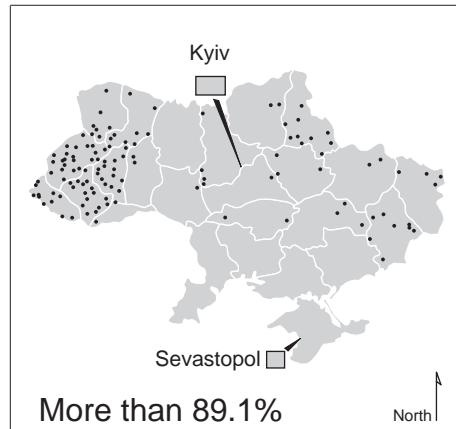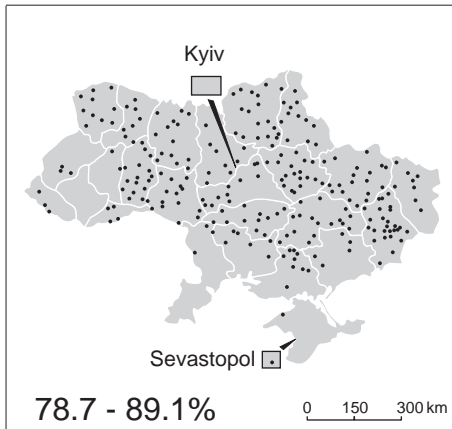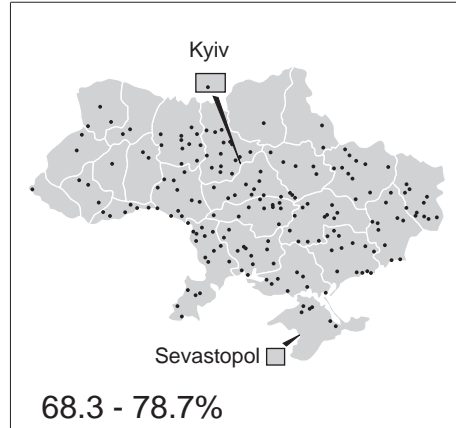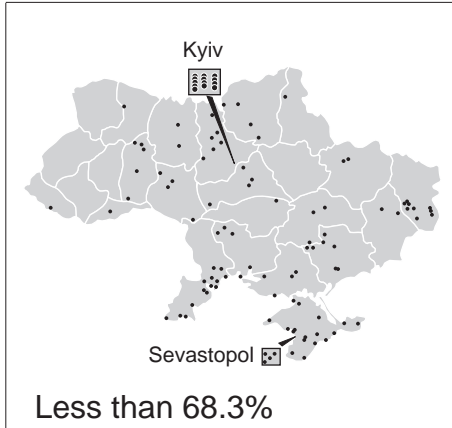
Figure1 Turnout Rates Presidential Run-Off

area of greatest Russian concentration, clearly is distinguished by low turnout rates of less than 68.3% (Figure 1). The districts in an adjoining oblast to the west, Odessa, also fall predominantly into this category. Unlike most accounts of the turnout rates in Ukraine that are made on the basis of oblast-level data (see, for example, O'Loughlin and Bell, 1999), these four maps indicate a more complex pattern for extreme high and low values and though the Galician concentration of high values and the Crimean clustering of low values are consistent with previous accounts, regional anomalies are also evident.

President Leonid Kuchma's key to electoral success in the Ukrainian runoff elections was a strong concentration of support in the nationalist heartland of western Ukraine and in the capital region of Kyiv, coupled with a slightly-above vote in the population-rich districts of Donets'k and Dnipropetrovs'k oblasts in eastern Ukraine (Figure 2). Dnipropetrovs'k is Kuchma's home oblast and he managed his 1994 success in two oblasts that had been key when his vote was concentrated east of the Dnipro river. In the Ternopil' oblast in the west, Kuchma won over 4 of every 5 votes cast in the runoff. Since his opponent in 1994, Leonid Kravchuk, won similar support in these western districts and still lost because of the population regional imbalance in Ukraine, it was clear that Kuchma needed to win substantial votes in the east and be competitive in the central oblasts to build a winning regional coalition. The specific combination of personal attributes (ethnic Russian, resident of the east), prominent position in the media as incumbent President, and policies that have brought him close to the nationalists of the center and west who opposed him in 1994, led to a strong majority in the runoff for Kuchma. It still seems too early to claim, as Wagner and Skoczylas (1999a) have done, that the ethnic division of Ukraine is ebbing and that the Communist appeal has peaked. While the national project received a strong fillip as a result of the Kuchma election victory in November 1999, it is clear from the detailed map of his support that the regional factor has become less prominent. Whether this easing of regional tensions will continue cannot be certified on the basis of one election.

The ecological inferences for the geographic units for the turnout rates of Kuchma voters are mapped in Figure 3. At one level, we might expect the maps to show even distributions across the country since there are no obvious theoretical reasons to be found in the political science literature why the rates should vary by region. This is essentially the argument made by King (1995) in stating that the purpose of
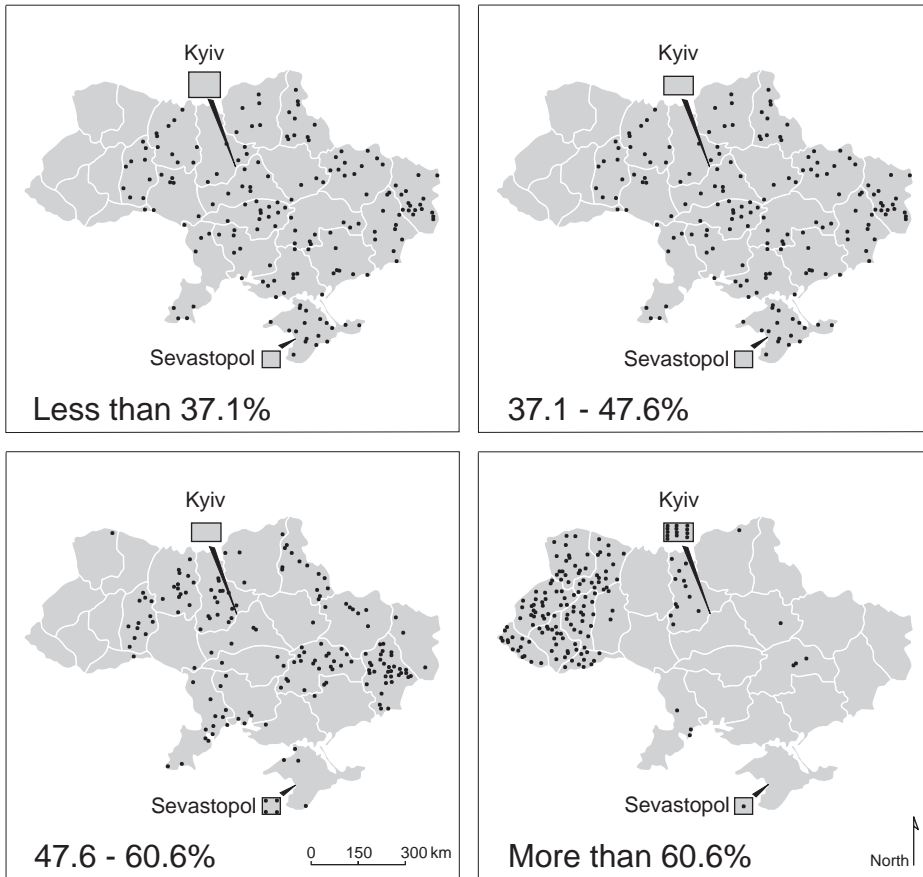
Less than 37.1%

37.1 - 47.6%

47.6 - 60.6%

More than 60.6%

Kyiv

Sevastopol

0   150   300 km

North

Figure 2   Vote for Leonid Kuchma in Presidential Runoff Election

Kyiv

Sevastopol

Less than 81%

Kyiv

Sevastopol

81.1 - 90.1%

Kyiv

Sevastopol
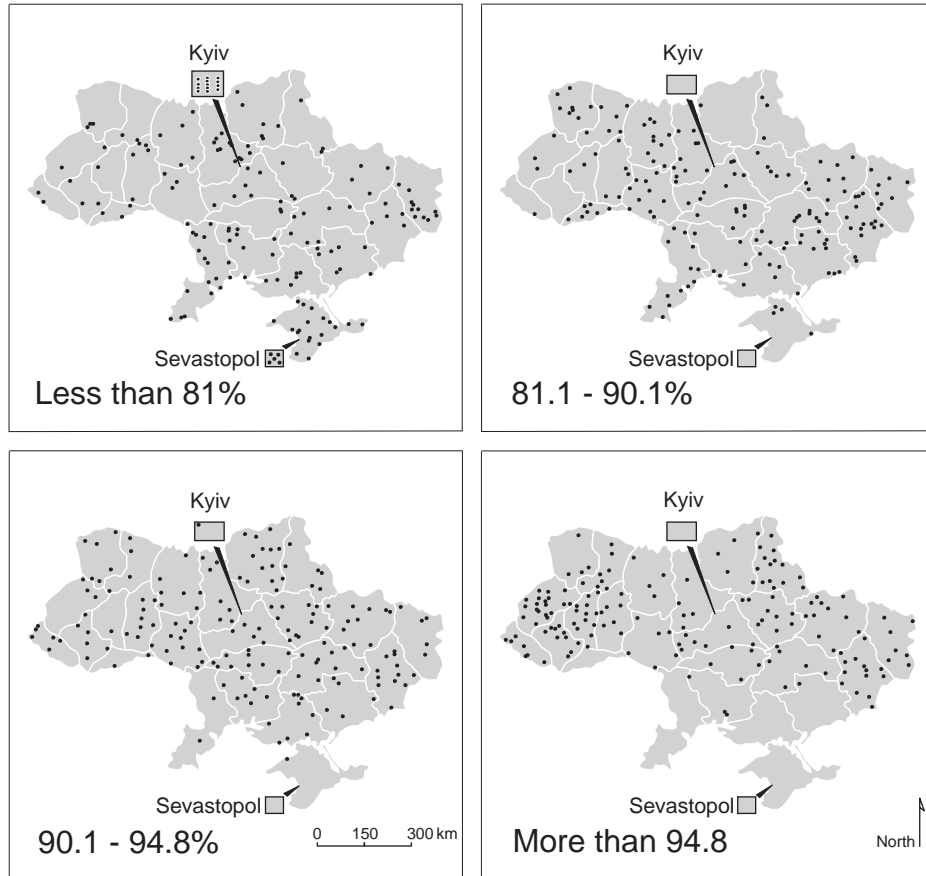
90.1 - 94.8%

0   150   300 km

Kyiv

Sevastopol

More than 94.8

North

Figure 3:   Estimated Turnout of Kuchma Voters,
Presidential Run-off Election

electoral geographic research should be to account for any underlying factors in the explanation of the voting behavior so that the final map portrays an even distribution or no evidence of regional clustering of the phenomenon of interest. However, King's (1997, 25) own map of the ecological estimates of white turnout in New Jersey elections shows clustering of high values near Newark and King speculates that a contextual factor (though he does not use this term), proximity to the predominantly African-American city of Newark might motivate higher involvement of whites in the electoral process. Similarly in Ukraine, it is possible that regionally specific factors such as ethnic tension in Crimea between Tatars, Ukrainians and Russians might influence the local turnout rates.

The dominant feature of the four maps of the ecological estimates of the Kuchma voter turnout is of relatively even distributions, with a more modest concentration apparent in the west than was the case for either the overall turnout or Kuchma vote percentage maps. Only the Crimean peninsula shows an oblast-level concentration of values – in this case, of low values less than 81% turnout. All five districts of the port city of Sevastopol and all but five of the other districts of the peninsula fall into this category. Overall, Kuchma won just over half of the votes in Crimea but if his supporters had turned out here at the same rate as they had elsewhere in the country, he would have added significantly to his strong majority. Exactly why the Kuchma voter turnout in Crimea should be lowered is not evident; if the pattern identified elsewhere in Ukraine holds in the peninsula, it is expected that Kuchma would be disproportionately supported by ethnic Ukrainians. While the Kuchma voter turnout is low, it should also be noted that the overall turnout in Crimea is low (Figure 1) and therefore, any regional advantage accruing to Symonenko was minimal.

As might be expected from studies of both electoral and grassroots political activism (Birch, 2000), the west of Ukraine, especially Galicia, is the core of Kuchma support. Almost all his potential voters came to the polls in this region (Figure 3). Political geographers have stressed the legacy of regional and local historical memories and traditions in explaining the disparities in electoral maps, especially higher than expected values (Agnew 1987). Galicia is such a region with a distinctive regional history as a result of location in the Austrian-Hungarian empire (Bialasiewicz and O'Loughlin, 2001) and a pre- and post-

independence tradition of Ukrainian nationalist mobilization (Birch, 2000). The map of Kuchma voter turnout provides further evidence of the importance of this distinctive regional legacy.

King's (1997) ecological inference method has provided a major new tool for analysis in electoral geography. While most of the attention since the method first came to prominence has been on national-level estimates and checks against individual-level data to see if the method proves reliable, the value of the unit-level estimates has largely gone unmarked, except by geographers. Though the reliability of the disaggregated estimates is clearly less than the national-level figures, the values nonetheless are very useful because they show geographic variation in a key relationship. Since individual level data are very rarely available for historical study or for states in transition, researchers are often forced to use estimating methods to arrive at individual level relationships. Though this was the motivation for the ecological inferential techniques, the value of the district-level inferential methods should not be under-estimated. It can lead to a renaissance of electoral geography because it enhances the possibility of examining traditional geographic hypotheses about the relationship of a voter to his or her local context.

The Regional Geographies of Ukrainian Political Preferences

Underlying the voting choice of the 1999 Presidential election were the political preference structures of Ukrainian citizens. While almost all Ukrainians (95% in 1999) are dissatisfied with the state of their democracy and are worried about their declining standard of living, they are some significant regional, class, ethnic and other differences apparent in public opinion polls (Ferguson, 1999). Unfortunately, these polls are rarely consistent across the years, either in the nature of the questions asked, the distribution of the sample across population groups, or geographic spread across all the regions. The latest large-scale reliable survey data available from the Eurabarometer date from 1996. A comparison of results from the survey in the first year, 1992, with the last year, 1996, allows some consideration of trends in the Ukrainian political setting and whether preferences are underpinned by similar factors across the years.

Of the many questions asked of Ukrainians in the Eurobaromter polls, two questions stand out as highly relevant to the state of politics in the country. The first question asked directly about the "Russian dilemma", phrasing the question as "As things stand now, with which of the following countries do you see Ukraine's future most closely tied up?" One of the options was Russia. The same question posed other options, including preferences about a geopolitical orientation towards the Western states (U.S., European Union and other European countries). The cleavages revealed in Ukraine on the Russia and Western orientations are mirror images of each other.   A second set of questions asked about the nature of preferences for the economy and society - "Do you personally feel that the creation of a free market economy, that is one largely free from state control, is right or wrong for Ukraine's future?" Background questions asked about age, gender, education, location, oblast residence, language use, ethnicity, urban or rural residence.   The questions about income and standard of living were amplified by a key question about recent changes in the family situation, phrased as: "Compared to 12 months ago, do you think the financial situation of your household has... ."; options included got a lot better, got a little better, stayed the same, got a little worse, got a lot worse, and don't know. In the analyses reported here, this change in the standard of living is a key explanation of preferences for the western model (orientation to the West) and the economic model (free market or socialism).

To illustrate the point made repeatedly in this paper that the strength of the regional factor in Ukraine is correlated with the nature of the issue, the results of a logit regression for the "satisfaction with democracy" question are presented in Table 2 for 1992 and 1996. The model yields an explanation that those with a Ukrainian mother tongue, males, and households with an improvement in standard of living in the previous year were more satisfied with the state of Ukrainian democracy in 1992. Those with a higher income were more dissatisfied but importantly, the regional factor was not significant. By 1996, Ukrainian-speakers and households with improved standard of living were still more satisfied, as were older citizens, but better educated respondents were dissatisfied. The regional variable (using a four categorical variable for respondents from the west, center, east and south plus Crimea) did not enter the equation at any level of significance and is thus excluded from consideration. The results are not too surprising since the

Table 2: Logistic Regression Estimates for Satisfaction with the State of Democracy in Ukraine 1992 and 1996

Predictor	Satisfaction with Democracy 1992*			Satisfaction with Democracy 1996**		
	Coefficient	Std. Error	z	Coefficient	Std. Err.	z
Household Finance	.397	.060	6.608	.496	.074	6.659
Mother Tongue	.486	.155	3.132	.746	.181	4.114
Income	-.004	.002	-1.961	--	--	--
Region	-.025	.072	_-0.346_	--	--	--
Male	-.262	.142	-1.845	-0.14	.076	_-0.194_
Age	--	--	--	.011	.005	2.285
Education	--	--	--	-.208	.111	-1.862
Constant	.112	.284	_0.395_	-1.22	.556	-2.210

Non-significant z –values at a = .10 are underlined

* Observations = 1400; ?² = 59.16 (significant at a = .001)
** Observations = 1200; ?² = 88.09 (significant at a = .001)

dissatisfaction with the nature of Ukrainian democracy was pervasive across all populations and regions, and when some key personal characteristics are controlled, the regional factor disappears. Geographers do not always expect to find regional significance but if we start with an expectation that compositional characteristics provide adequate explanation of preferences and behavior, we can reject that hypothesis when careful statistical analysis suggests the persistence of the regional and local elements as part of the explanations.

A more elegant visual presentation and a more easily interpreted display of the results of the logit models can be seen in Figure 4. Using the point estimates and the parameters from a logit model, the simulation used a large sample (usually 1000 draws) to draw a value of Y (the dependent variable) conditional on one chosen value of each explanatory variable. The expected or mean value of Y is computed in this manner as well as measures of uncertainty around the mean. Values of the independent variables in the equation can be set to fixed values (say, age set to 30 and gender to men) and then, the CLARIFY program will generate quantities of interests (King, Tomz and Wittenberg, 2000). We can, for example, then compare the expected level of satisfaction in Ukraine of men aged 30 to women aged 30 or to men aged 40, thus computing the difference in the dependent variable from changing gender, holding age constant, or a 10 year increase in age, holding gender constant. Generation of many such expected outcomes holding various
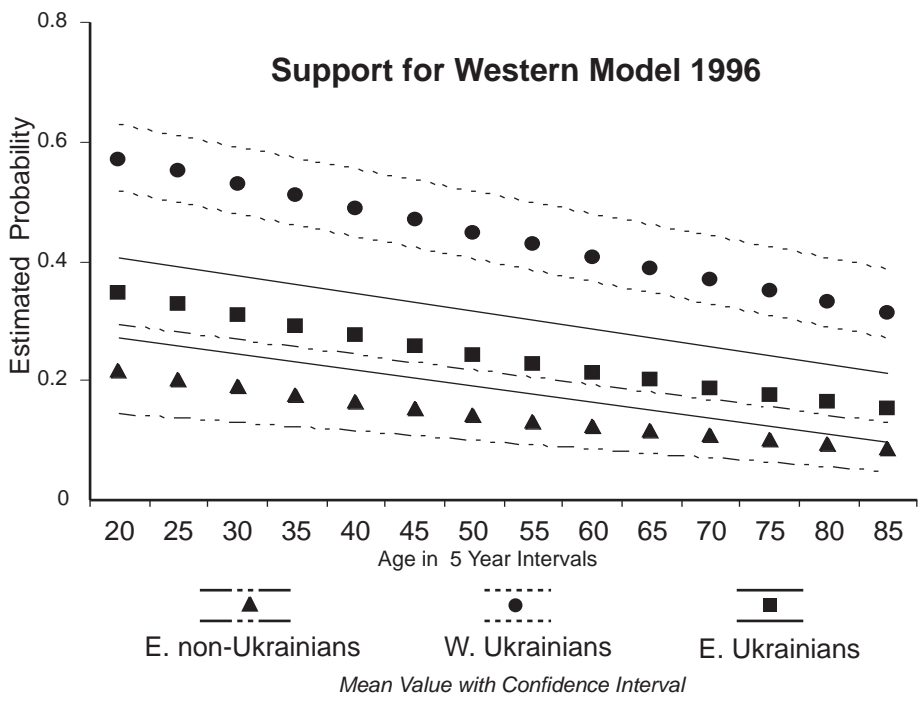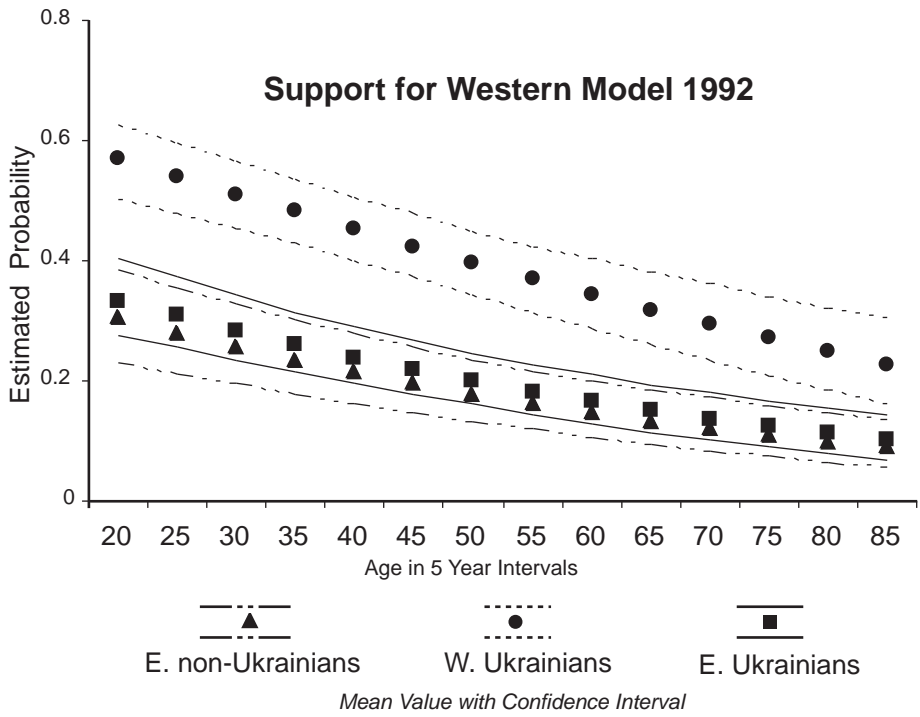
Figure 4: Probabilities of Support for the Western Model, 1992 and 1996

combinations of independent predictors constant allows presentation in a graphical form. In Figures 4-11, I highlight the regional element in the displays because that factor is the focus of my study.

A simple display of the expected outcomes of support for the Western model (future should be ties to either the U.S., European Union or other European state) is shown for both the 1992 and 1996 Eurobarometer surveys in Ukraine in Figure 4. The logit model of orientation to the West contained predictors for region, age, ethnicity, education, income, and change in the standard of living over the previous year. All independent variables, except the regional factor, ethnicity and age are set at their median values to approximate an "average" respondent in these categories and a focus on the three factors of region, ethnicity and age. The graphs in Figure 4 display both the expected mean values and the five percent confidence intervals. Ethnic Ukrainians in the west have a significantly higher level of support for the western model than the other two groups (Ukrainians in the east and Russians in the east) at all age intervals. Not only is the mean value higher but also the confidence intervals do not intersect with those of the other samples. The gap between the groups widens perceptibly between 1992 and 1996 and as is common throughout the former Communist states, support for the Western model is strongest for the younger populations and decreases gradually for all groups. There is no significant difference between the ethnic groups in the east of Ukraine, with non-Ukrainians (almost all are Russians) and Ukrainians showing similar mean values in 1992; by 1996, the gap between these groups in the eastern region has grown as a result of more support for the Western model by the Ukrainian sample but the confidence intervals overlap so that the gap is not statistically significant. A verbal interpretation of the 1992 graph might be that a typical 50 year old Ukrainian in the west of the country have a 45% chance of choosing a Western country as a partner, while the same person in the east has only a 22% chance of picking this option for the future. This difference is statistically significant. As a method to clarify regional differences, this methodology offers a significant advantage over tabular formats.

The remaining seven analyses are presented in a box-plot format. Box-plots offer an advantage over graphs because the distributional characteristics of the estimates are more clearly displayed. On each of the figures 5-11, the median value of the estimated probabilities is shown, with below average values shaded. On a box-plot, 50 percent of the cases have values within the box (from the 25th to the 75th percentile) and the

whiskers extending from the box mark the largest and smallest observed values that are not outliers. Extreme points beyond the whiskers are identified individually. In comparing the plots, it is important to note that the scale of the Y-axis is not standardized across the analyses while each of the sub-populations is denominated individually on the horizontal line. Logit models with both regional and non-regional controls are presented but it should be stressed again that not all the analyses showed significant regional conditions after the compositional effects are controlled.

Satisfaction with democracy estimates are shown for 1992 and 1996 in Figures 5 and 6, and the logit models from which the estimated probabilities are derived are shown in Table 2. Across all groups, satisfaction with the state of Ukrainian democracy is low, but there are some significant compositional effects as seen in the box-plots. The biggest difference is between the language groups, Russophones and Ukrainophones, while the regional differences across these groups are almost non-existent at less than .01 (Figures 5 and 6). While a 6 point difference (1992) or 14 point difference (1996) does not seem dramatic, it is significant given the generally low level of satisfaction with democracy. Most significantly, the gap between the language groups widened between 1992 and 1996, though the controls were slightly different. It is still too early to speculate about the fact that inter-group differences are larger than regional differences; generally, the most dangerous scenario for a society is when an ethnic-linguistic minority is regionally-concentrated in a periphery and subject to economic and cultural discrimination (Gurr and Moore, 1997). Ukraine does not fit this scenario and there are enough cross-regional and cross-cultural linkages, as well as careful state policy, to head off any murmurings of ethno-territorial mobilization.

The clearest expressions of the regional factor in the logit analyses surround the question of whether Ukraine's future lies with Russia. In 1992, the regional factor (residence in one of four regions) is highly significant, though by 1996, this factor had ebbed to insignificance to be replaced by ethnicity, occupation and the trend in household finances as statistical predictors of preferred relations with Russia (Table 3). Only language group and big-city residence remains as significant predictors across the samples. The estimated probabilities for different combinations of sub-groups are shown on Figures 7-9. Combinations of the ethnic groups, language groups and the four regions are presented for 1996 in Figure 7 and arranged for
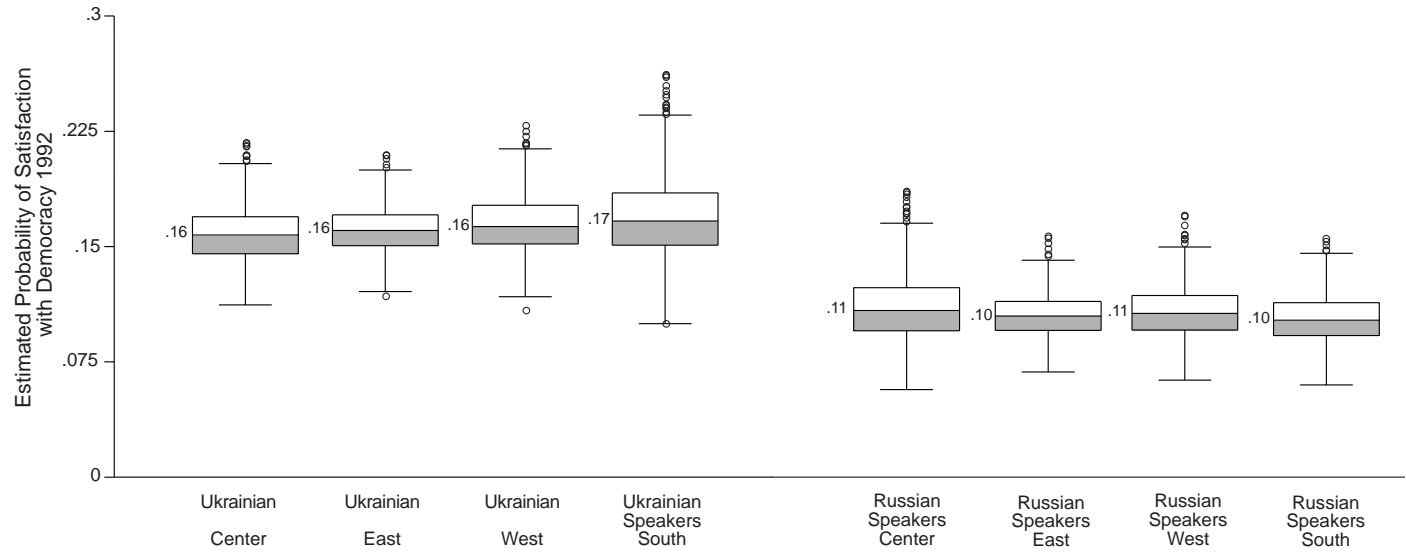
Figure 5: Estimated Probability of Satisfaction with Democracy
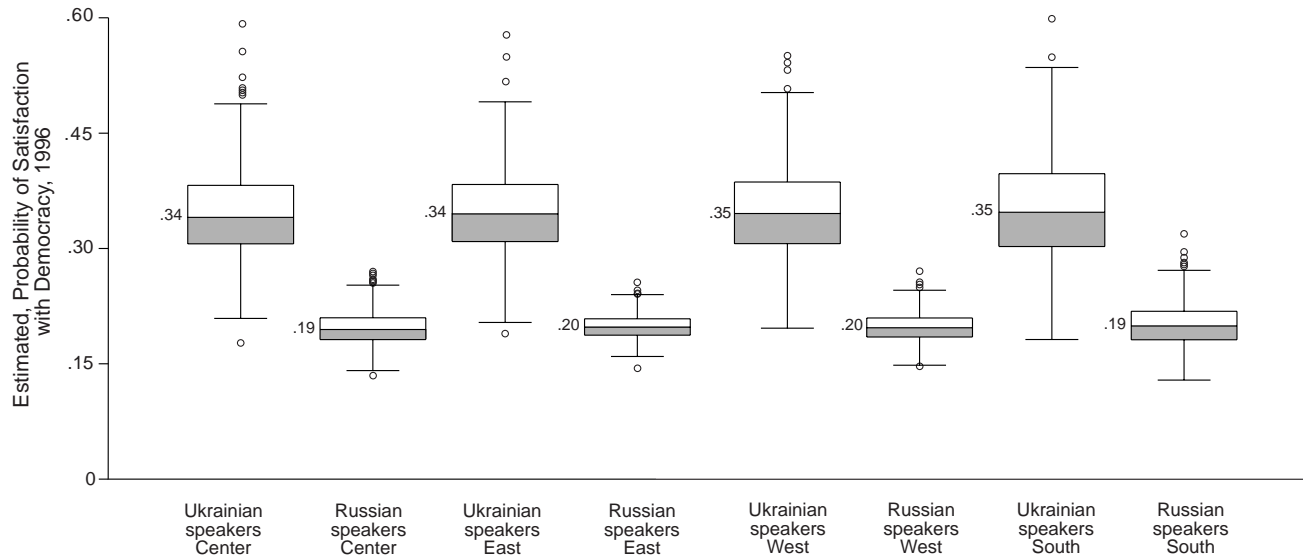Ukraine 1992 by Region and Language

Figure 6: Estimated Probability of Satisfaction with Democracy
Ukraine 1996 - by region and language

Table 3: Logistic Regression Estimates for Views on a Future tied to Russia, Ukraine 1992 and 1996

Predictor	Future tied to Russia 1992*			Future tied to Russia 1996**		
	Coefficient	Std. Error	z	Coefficient	Std. Err.	z
Religion	-.292	.127	-2.299	--	--	--
Mother Tongue	.344	.128	2.678	.745	.185	4.023
Church Attendance	.699	.138	5.040	--	--	--
Region	-.195	.060	-3.244	-.069	.059	<u>-1.166</u>
Big City	.269	.129	2.077	.154	.067	2.307
Age	.021	.003	5.877	.016	.003	4.163
Household Finance				.208	.060	3.450
Ethnicity				.532	.199	2.666
Occupation				-.055	.021	-2.590
Constant	-1.524	.244	-6.244	3.367	.402	8.358

Non-significant z –values at a = .10 are underlined

* Observations = 1400; $?^2$ = 101.32 (significant at a = .001)
** Observations = 1200; $?^2$ = 122.37 (significant at a = .001)

ease of comparison. The lowest support (median expected value of .10 or 10%) is found for Ukrainian-speakers, who are resident in the central region and are also ethnic Ukrainians. Similar low values are found for this ethnic-language combination in the West (.12), East (.11) and South (.13), though a sizeable spread is indicated by the extent of the whiskers from each box. By contrast, the ethnic Russian population that speaks Russian has the highest expected median value (.34 in the south, .33 in the west, .31 in the east and .30 in the center). In between these extremes are ethnic Ukrainians who speak Russian with median values about .23. The main point of these box-plots, however, is that the regional factor is not significant once the values are computed separately for each of the three ethnic-language groups in Ukraine.

The expression of the significance of the regional factor in 1992 can be gauged from Figures 8 and 9. Using only language groups and region, it is clear from Figure 8 that sizeable regional differences remain in the median estimated probabilities of rejecting the future with Russian option. The same Ukrainian-speaking person (with median values set for the other significant parameters in the model) would see a 14 point rise in the rejection of the Russian model if he moved from the center to the east, while for a Russian-speaker, the rejection probability would drop by 14 points if he moved from the south to the east. The inter-group (between the language groups) differences (about 8 –10 points) is smaller than the biggest regional (intra-group) differences (14 points). Further evidence of the importance of the regional element in the debate
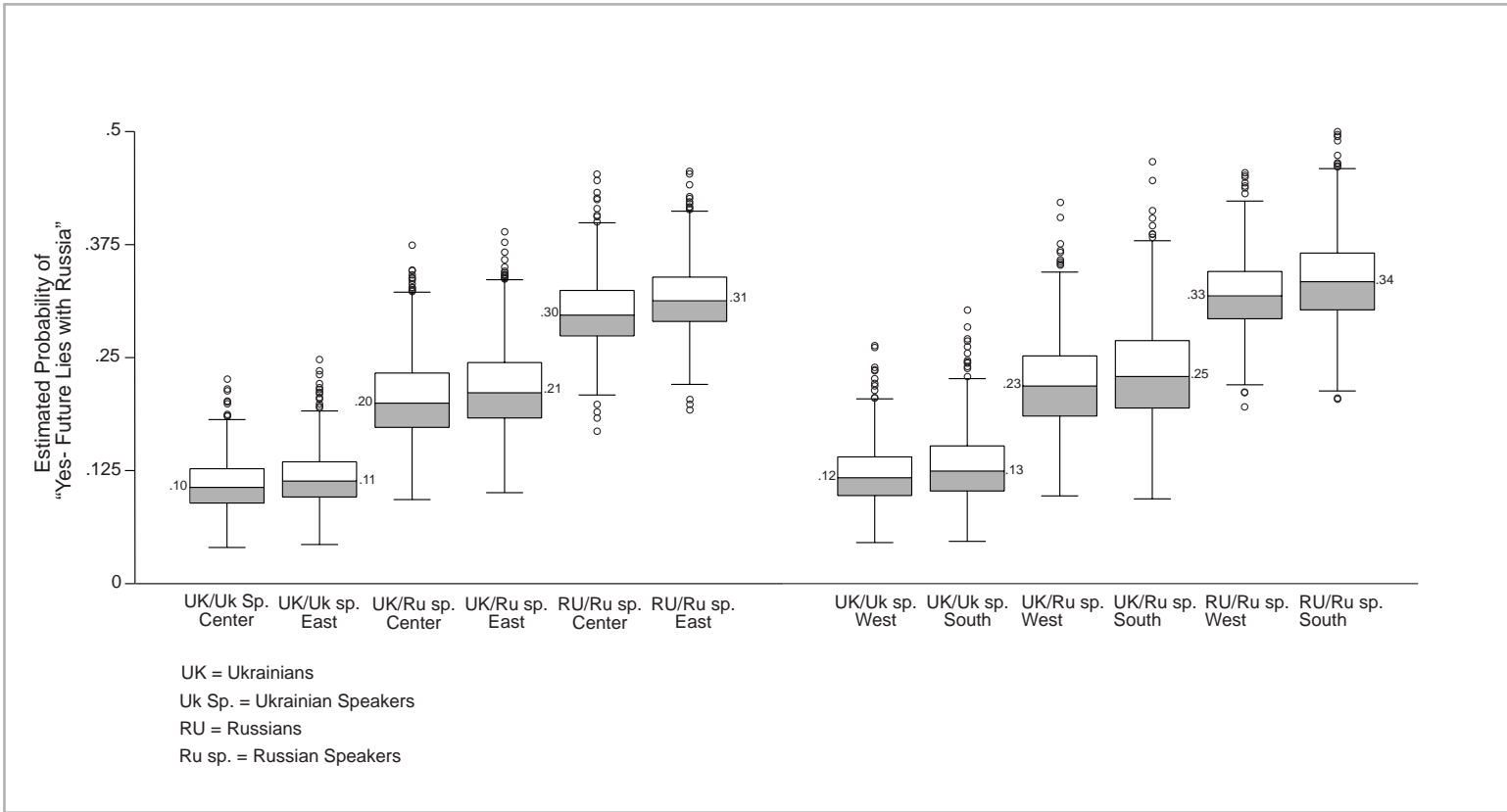
Figure 7: Estimated Probability of Support for the Russian Model
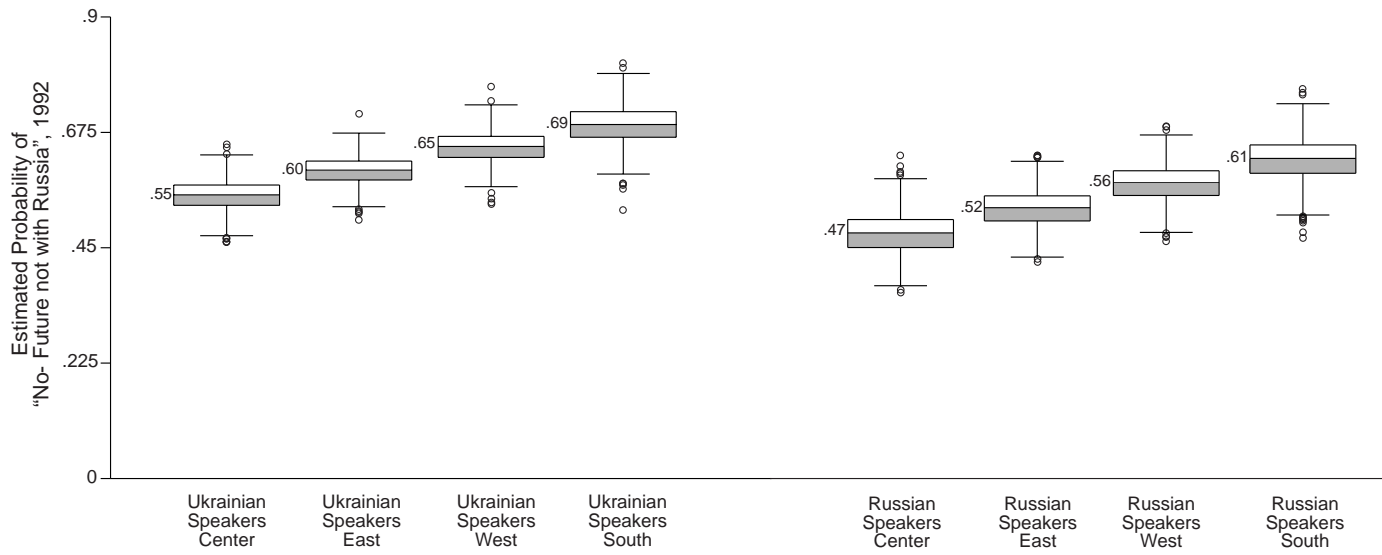by Ethnicity, Language and Region - Ukraine 1996

Figure 8: Estimated Probability of Rejection of the Russian model
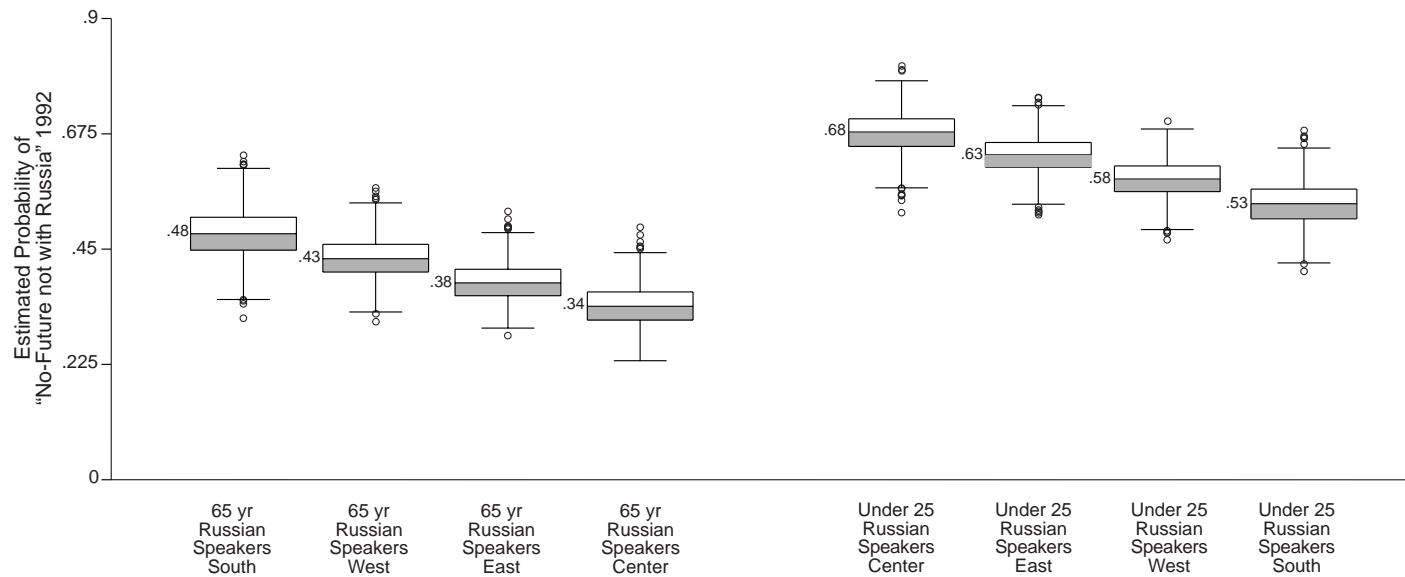by Ethnicity, Language and Region - Ukraine 1992

Figure 9: Estimated Probability of Rejection of the Russian Model
by Language, Age and Region - Ukraine 1992

about relations with Russia is found in Figure 9, where age group values are plotted for Russian-speakers of ages 25 and 65. As might be expected, age is a strong predictor of relations with Russia with young people showing far higher probabilities of saying that the future of Ukraine does not lie with Russia (.68 in center to .53 in the south). By contrast, older Russian-speakers who spent most of their years in the Soviet state show less likelihood (under 50% in all regions) of rejecting a future with Russia. But the regional gap remains consistent as well, with a spread of 14-15 points evident from the most rejectionist region (center for young people, south for old) to the most supportive (south for young, center for old). In this instance, we can conclude that the regional factor is not as significant as the age of the respondent but remains an important predictor of geopolitical preferences of Ukrainian citizens.

Table 4: Logistic Regression Estimates for Support or Opposition to the Free Market, Ukraine 1992 and 1996

Predictor	Free Market 1992*			Free Market 1996**		
	Coefficient	Std. Error	z	Coefficient	Std. Err.	z
Household Finance	.411	.053	7.663	.378	.066	5.698
Education	-.328	.086	-3.809	-.445	.103	-4.335
Age	.026	.004	6.452	.014	.004	3.234
Income	-.005	.002	-2.301	--	--	--
Big City	-.339	.129	-2.622	.157	.072	2.185
Left-Right	.262	.094	2.769	--	--	--
Region	.002	.094	0.033	.094	.064	1.466
Male	-.485	.121	-4.017	--	--	--
Constant	-1.202	.441	-2.721	-.270	.531	0.508

Non-significant z –values at a = .05 are underlined

*   Observations = 1400; $?^2$ = 239.43 (significant at a = .001)
** Observations = 1200; $?^2$ = 112.80 (significant at a = .001)

The final two figures portray the box-plots for the responses to the question on support for a free market in Ukraine in 1992 and 1996. In neither year was the regional factor significant in the logit model (Table 4). Predictors of support for capitalism across both samples are found in the educational level of the respondents, the state of household finances (improving or getting worse), age, and urban residence. A respondent's ideological preference was an important predictor in 1992; ideology was self-identified. Respondents were asked to categorize themselves as leftist, centrist or rightist and the expected median values

of these groups by region are shown in Figure 10. There is a consistent ideological gap of about 5 points from centrist to rightist and from rightist to leftist. By 1996, this factor had disappeared as a major element in determining the choice of a future economic model for Ukraine. Instead, the main division between respondents is based on the trend in household finances in the previous year. Using a bifurcated classification (better or worse household finances), a large gap of about 35 points is evident on Figure 11 for each region. This gap is the largest of any observed in the analysis of Ukrainian political preferences and reflects a rational and predictable reaction to whether past economic trends can predict future developments.

Visual display of statistical results is likely to become more common in geographic research reports. The availability of new procedures and developments in statistical software packages to allow easier graphical display of results is encouraging this trend which is promoted by the computer revolution in graphical user interfaces. Geographers typically have ready access to large aggregate datasets but the use of survey data is relatively sparse, probably because individuals are often not asked locational and other geographic-relevant questions. There seems to be growing acceptance among survey pollsters of the need to add some contextual variables to the analysis. The displays of political preferences in Ukraine using box-plots and graphs helps to highlight significant regional elements that are often hidden in statistical reports. The converse is also true, as was seen in the displays in this paper. Apparent regional influences on individual preferences and behavior will often disappear with the implementation of proper controls. The visual displays of these controls highlight the occasions when regional and other contextual effects are significant and when they are not.

Conclusions

Since 1991, Ukraine has been the site of intense interest in its regional character. Adhering to a formal definition of a civic-based identity conditioned on loyalty to the Ukrainian state, the successive governments have pledged to work to reduce the regional, ethnic and language divisions in Ukrainian society. The absence of any violent conflict since 1991 makes Ukraine a model for its region. But this relative peace does not preclude the continued existence of regional tensions and fractures. Previous research has both indicated that these tensions remain in political preferences and voting behavior and there remains a debate about the extent
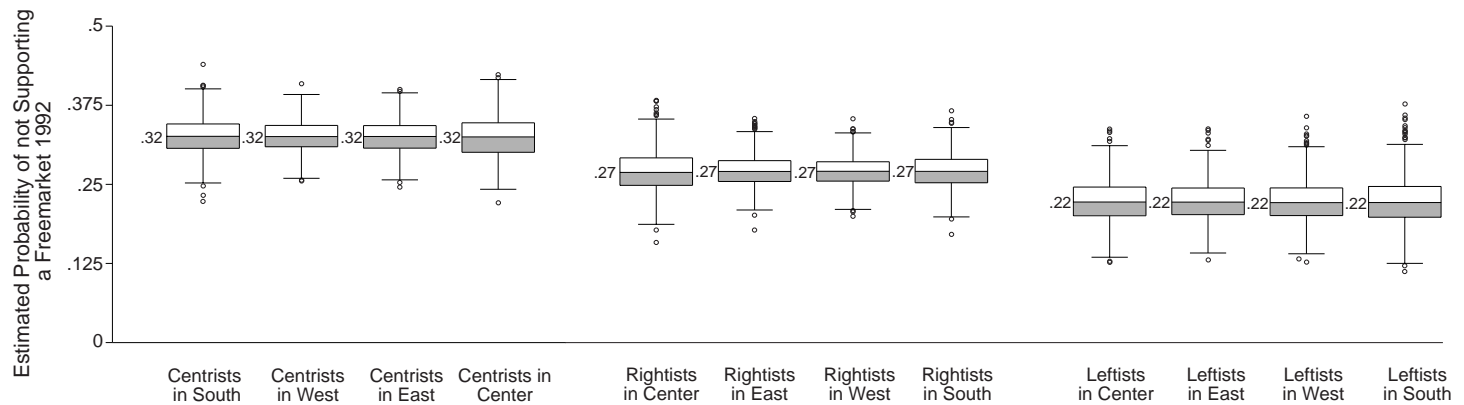
Figure 10: Estimated Probability of Support for the Free
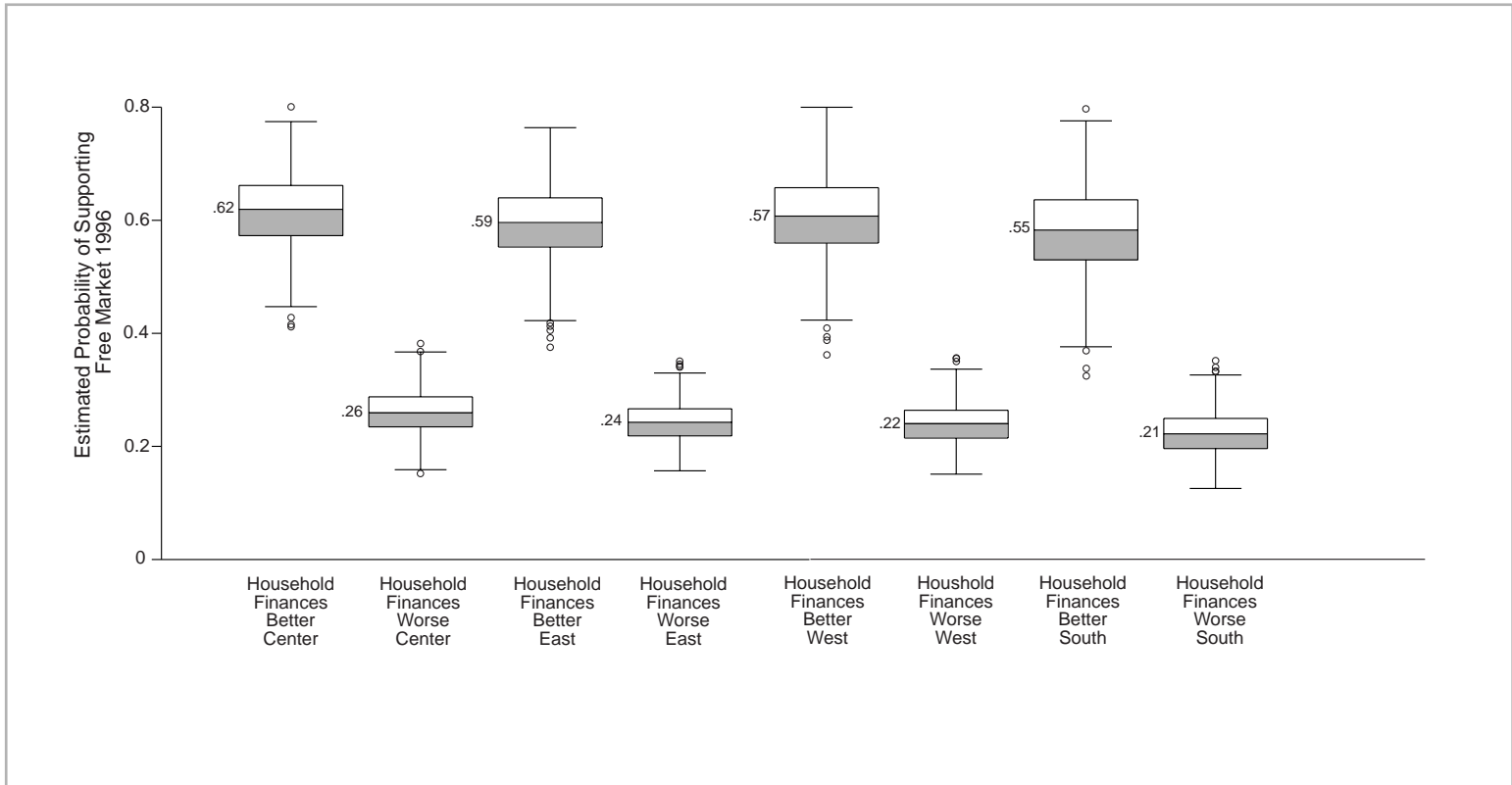Market Model by Ideology and Region - Ukraine 1992

Figure 11: Estimated Probability of Support of the Free Market Model by Household Finances and Region - Ukraine 1996

to which the re-election of President Kuchma signifies the beginning of the end of ethnic, language and regional fractures.

Using two methods recently developed in political science for the examination and display of individual behavior, this paper includes more evidence of the specific nature of the regional factor in Ukrainian politics. The ecological inferences and their mapping suggests an easing of the regional clustering of vote preferences that had characterized earlier Ukrainian elections. Visual displays of political opinions demonstrate again that the regional factor in Ukraine is not a uniform feature of the country's political landscape. The role of region varies dramatically by issue area. As noted by other scholars, the most regionally-divisive issue is the so-called Russian question that involves both relations with the neighboring state as well as the relative acceptance of Russian language and culture within Ukrainian society. Though not posed directly as a contrast, it is possible that the question of relations with Russia is more sensitive than the question of Russian as a second state language. Unfortunately, the Eurobarometer data used in this study are now almost 5 years old. Since that date, relations between Russia and Ukraine have improved as major trade and geopolitical agreements have been signed. It is likely that these improved relations will be reflected in Ukrainian public opinion but there are still some uncertainties about the nature of relations between the two main language groups regarding state promotion of Ukrainian and the use of Russian in education and public life. It is always possible that local events, such as the conflict in L'viv described by Kuzio (2000) can undermine national efforts at reconciliation.

This paper has offered a rather complicated geographic pattern in Ukrainian electoral maps and while the survey questions do not allow a detailed breakdown of the regional variable, there remains a hint of local impacts in the appearance of the rural-urban variable in some of the predictive models. The so-called regional effect may not be as fixed and as broad as the term indicates. Whether three, four or five macro-regions, Ukraine's political geography may be more diverse than a simple regional division. Issues of scale, specifically, the complicated maps produced by localities (urban, rural, industrial, ethnic, etc) can render simple regional-based explanations implausible. The electoral maps of this paper showed strong evidence of local effects, or stated another way, considerations of scale have challenged the macro-regional explanation.

In her account of the regional factor in Ukrainian politics, Birch (2000) divides the country in five historical regions (former Habsburg lands, Volhynia in the north-west, right-bank of the Dnipro, left-bank of the Dnipro, and the former Ottoman lands of the south). Examining survey data disaggregated by residence in each of these regions, she concludes that only the distinct electoral behavior of western Ukraine that can be traced to historical experience, specifically, the legacy of the Habsburg empire. Other regional effects must be traced to regional economic circumstances, such as the loss of industry or relative deprivation. Such factors seem to be the most important for the left in Ukraine (Birch, 2000, 1035). While Birch is aware of the political geographers' arguments regarding the role of place in shaping human behavior, she seems unaware about the critical element of scale in the definition of what constitute a "place". While it is plausible that regional economic conditions help shape a respondent's political attitudes, it is more likely that the specific place experience in the form of local impacts will have a greater impact. Work by Johnston and his colleagues in the United Kingdom (Johnston, 1991; Pattie, Dorling and Johnston, 1997) have certified that voters will consider the relative economic of their locality in their voting calculus and therefore, they offer an important explanation of the persistence of local outliers that seem at odds with regional trends. Their work suggests that further consideration of regional effects in the form of sampling designs that allow for consideration of local circumstances (place effects) is needed. The separate definition of place and space effects and their individual measurement continues to be hindered by confusion about the respective terms.

Ukraine continues to offer a significant opportunity to track the development of geographic-based explanations of political behavior in a polity that is still in transition. Whether Ukrainian politics becomes nationalized as is expected from the political science models, devolves to smaller geographic units in a more complicated mosaic of votes and political behaviors, or maintains its current modest regional divisions is still open. However, it remains a question whose answer will have many implications for other societies in the early stages of the transition to sustainable democracy and for the study of political geography.

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