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Incumbents, Post-Communists and Local Welfare:
Disentangling the Aggregate-Level Economic Voting Regularities in 2002 and 2006 City President Elections in Poland

Abstract: In this paper, I examine the patterns of economic voting in 2002 and 2006 city president elections in largest Polish cities. I draw on the conceptual distinction between "conventional" and "transitional" economic voting. While the former concept stresses a general positive link between economic welfare and the results gained by incumbents, the latter, developed in course of studies on the post-communist countries, emphasises a negative relationship between welfare and the electoral fortunes of post-communist parties and candidates. Relying on aggregate-level data relating to 2002 and 2006 city president elections, I conduct analyses suggesting that both types of economic voting can be observed at the local level in Poland. On one hand, the electoral achievements of incumbents in the cities with high average wages tend to be greater than in the case of the cities with low average wages. On the other, low average level of wages favours presidential candidates affiliated with the post-communist party. Moreover, there is suggestive evidence that incumbency status interacts with affiliation with the post-communist party. The results tend to be robust with respect to different model specifications, including those accounting for unobserved heterogeneity.

Keywords: conventional and transitional economic voting, city president elections in Poland.

The General and the Specific: Two Faces of Economic Voting

The interest in economic voting on part of social scientists dates back to at least the highly influential work by Anthony Downs (1957) and V. O. Key (1966). However, the emergence of the concept in its current form is usually associated with the work of Morris P. Fiorina (1978; 1981) and his examination, at the individual level, of the regularities suggested by earlier aggregate-level studies (Nordhaus 1975; Tufte 1978; Wright 1974). The latter pointed to the existence of strong relationships between the performance of a given economy and electoral results as well as to increased government's activities in the area of broadly conceived economic welfare at times preceding elections. In short, Fiorina (1978; 1981) posits that the citizens satisfied with their own economic standing and the performance of economy as a whole, and more specifically with the development of these two over time, become more prone to support the incumbent parties and candidates. Consequently, the economically dissatisfied will, all else being equal, be more inclined to support opposition. Moving to the aggregate level (in practice, as it was said, at least provisionally examined before Fiorina's research efforts to uncover the regularities at the individual level),

this leads to a prediction that the overall electoral results of incumbents will, all else being equal, be significantly better at times of economic prosperity or in wealthier countries (or territorial sub-entities within a given country). Even though the work by Fiorina has been highly influential it must be said that the empirical results (relating to the elections in the United States between 1956 and 1974) obtained by this author, despite being undoubtedly suggestive, have only partially corroborated the theory of economic voting. As Fiorina (1978: 440) himself indicated, it might be that the direct reactions to the economic conditions occurring at election times can be mostly seen in behaviour of politicians rather than that of voters. For instance, when the state of economy is poor those candidates from incumbent parties who treat the elections most seriously will refrain from running in order not to invest funds in a campaign whose prospective outcome they assess pessimistically. This may end with incumbent parties being represented by less strong, under-funded candidates whose chances of winning would be lower. Similar reasoning can certainly be conducted with respect to opposition candidates at times of economic prosperity. In the end, positive correlation between the performance of the economy and the results gained by incumbents could be observed, at least at the aggregate level, but this effect could be in great part ascribed to the actions on the part of the candidates or potential candidates, not to a straight causal relationship between economic welfare and voting behaviour. The problem of spuriousness of aggregate-level findings is difficult to get around and certainly also the results presented later on in this paper may potentially suffer from it.

However, another, equally important, problem arises when comparing the aggregate-level and individual-level regularities. Fiorina (1978; 1981), like other prominent students of economic voting, including Michael S. Lewis-Beck (1988) or more recently Raymond M. Duch and Randy Stevenson (2006), has emphasised the retrospective nature of the individual-level regularities. In other words, those re-searchers predict that retrospective assessment (i.e. some form of comparison between the present state of economy and its past condition) rather than pure assessment of the present economic situation will lie at the core of economically driven vote choice. Even though this principle of retrospection has been largely utilised also for the pur-pose of aggregate-level studies (see for example Fidrmuc 2000), it appears worthwhile asking whether this is indeed the best strategy. If, for instance, in the case of sixty five largest Polish cities (referred to later on in this paper) the correlation between the average wages before the local election of 2002 and those before the election of 2006 equals approximately 0.8 (i.e. little dynamic variability here), does that mean that no aggregate-level economic voting phenomena could by definition take place in 2006 or that average wages should be abandoned as an indicator of economic welfare (even though widely used elsewhere, also by the aforementioned Fidrmuc (2000))? Cer-tainly, this is questionable. However, there are more substantive reasons, in addition to the largely practical ones mentioned above, in favour of relying on absolute (but standardised) measures of economic welfare at given points in time. These reasons refer to the recently highly influential concept of the so-called "habitual voting." The concept has most widely been applied to the issue of voter turnout at both the individ-ual (Gerber, Green and Shachar 2003; Plutzer 2002) and aggregate (Franklin 2004)

level. Nonetheless, there is also considerable evidence (Shachar 2003) in support of the thesis of relevance of the notion of voting as habit with respect to vote choice. The concept of voting as habit is based on radically dynamic assumptions, namely it is assumed within the framework that, all else being equal, the fact of voting at a given time increases the probability of similar behaviour at a next occasion (i.e. the probability of both voting as well as voting in a specific way). In other words, it is posited that there is a positive causal relationship between electoral choices at different moments in time. Conceiving, like Shachar (2003), of habitual vote choice in terms of utility (even though the rational choice terms are not entirely suitable here which is, however, beyond the scope of this paper), it can be said that the utility of different potential choices at a given point in time is directly related with past choices. In the context of economic voting, given the apparent high reproducibility of geographic differences in economic conditions, it would lead to a prediction that the voters living in wealthier areas may be somehow more inclined to view incumbents in a more favourable way. On the other hand, comparing economic welfare in different areas using multiple observations on the same entity at different times (i.e. longitudinal data), if the substantive and statistical problem of unobserved heterogeneity is accounted for, in some cases allows for an assessment of both static and dynamic regularities. As a result, estimation of the impact of welfare on aggregate electoral results, if unobserved heterogeneity is assessed and (if needed) taken into account, may potentially uncover both the long-term regularities proposed under the habitual voting framework and the short-term ones resulting from economic dynamics.

The concept of economic voting, as developed by Fiorina (1978; 1981), was supposed to be very general and applicable to different democratic settings. However, the emerging post-communist democracies have delivered a context in which it has appeared justified to speak about a new specific form of economic voting. One of the most important pioneering contributions in this respect has been made by Alexander C. Pacek (1994) who has, on the basis of aggregate data concerning the elections conducted in early 1990s in Bulgaria, the Czech Republic, Poland and Slovakia, concluded that, at this particular time, pro-reform incumbents suffered from deterioration of economic conditions. The latter conditions did, on the other hand, favour challengers, especially those taking left and extreme right positions. These included, where applicable, also post-communist parties, originating from the past regimes. Pacek's findings, because of the very fact of relating to the early period of the post-communist transition process, may still be attempted to be understood in terms of the general economic voting framework referred to above. For one can still argue that incumbency status, rather than the specific profiles of different parties and/or candidates, is the core of the economic voting phenomenon observed here. However, aggregate-level findings (relating to the Czech Republic, Hungary, Poland and Slovakia) presented by Jan Fidrmuc (2000), drawing on the mentioned work by Pacek (1994), strongly suggest that the regularities found by the latter author were not only a characteristic of the early transition period. On the contrary, they seem to have persisted during, in practice, at least the whole decade of 1990s. It is not to say that Fidrmuc completely rejects the applicability of the general notion of economic voting with respect to

the post-communist electoral setting. However, he makes quite a strong point about prevalence of the specific post-communist form of economic voting over the form observed in the established democracies. Incumbency status, central to the latter type of economic voting phenomenon, has had, according to Fidrmuc (2000: 199), only marginal significance as regards vote choice in the post-communist countries. Similar type of argument, although focused specifically on Poland (and more precisely on the parliamentary election of 1993), has been advanced by Jack Bielasiak and David Blunck (2002). These authors, working within a more general conceptual framework supposed to help in understanding of the emergence of Polish party system, argue that the pro-reform post-Solidarity bloc, and especially its rightist part, was disproportionately strongly supported by those segments of society that displayed satisfaction with the economic reforms. On the other hand, the supporters of the post-communist party, the Democratic Left Alliance—SLD, tend to be recruited at a disproportional rate from the groups of the dissatisfied with the economic side of the transition process as well as with their own economic standing. In the work by Bielasiak and Blunck (2002: 574–577), one issue, namely the significance of the orientation towards economic legacy of communism, deserves special emphasis. The voters of SLD, in fact, seem to constitute a single separate group whose characteristic is strong nostalgia after the economic arrangements of the fallen regime. The propositions by Bielasiak and Blunck (2002) are already quite close approximations of the concepts presented very recently by Joshua A. Tucker (2006), in a work that undoubtedly constitutes a milestone as regards social scientific understanding of the economic voting phenomena taking place in the post-communist setting. Tucker (2006: 3) explicitly posits that, in the course of the process of economic evaluations, voters distinguish among parties according to the latter's "transitional identity" and their association, in voters' minds, with the "old" or the "new" regime. Working with the aggregate-level data concerning presidential and parliamentary elections conducted between 1990 and 1999 in the Czech Republic, Hungary, Poland, Russia and Slovakia, Tucker presents extensive evidence supporting his concept of "regional economic voting," positing that parties identified as "predating" the transition period tend to get more support in the regions where the "losers" of the new economic reality tend to prevail. Parties associated with reforms, on the contrary, are commonly supported in the regions the can be regarded "winners," benefiting from the economic transformation. This way, in Tucker's (2006) view, in the post-communist political setting the economic voting phenomenon takes a very specific historically grounded form. The main characteristic of the latter form is that the preferences displayed through voting are more permanent than in the case of economic voting phenomena known from the established democracies. Here being a "loser" or "winner" (in the economic sense) of the transition processes means that the inclination to vote for concrete parties and/or candidates tends to be, at least in theory, relatively independent from the transitory traits of those parties and/or candidates, including the latter's incumbency/opposition status.

In the context of all the issues raised in the previous paragraphs, it appears sensible to ask whether the classic concept of economic voting, according to which voters' economic evaluations are linked with vote choice through incumbency/opposition status

of the particular parties or candidates, may at all be relevant in the post-communist context. Raymond M. Duch (2001) is certainly a scholar whose work can be regarded particularly revealing here. The author, in his interpretation of the post-communist reality, puts special emphasis on dynamics and heterogeneity. The central notion on which Duch bases his considerations is trust in electoral institutions. This trust is assumed to be increasing over time and varying over different subsections of society. While trust in the electoral process increases the magnitude of economic voting, in its most classic form (i.e. support for incumbents being positively related with economic satisfaction), also increases. In other words, the more the voters in the emerging post-communists democracies become politically trusting the more prone they are to view their electoral choice as having economic consequences and, therefore, the more they engage in economic voting in the form observed in the established democracies. On the basis of individual-level data collected in 1997 in Hungary and Poland, Duch (2001) finds suggestive support for his propositions. The citizens who are better informed about the functioning of democratic institutions and, as a result, more politically trusting, display higher (in comparison to other citizens) propensity to base their vote on economic evaluations. This, assuming that the fraction of politically informed and trusting citizens would increase, suggests that the magnitude of incumbency-based economic voting should increase over time. Therefore, as recently noticed by Andrew Owen and Joshua A. Tucker (2007), in the post-communist context the economic voting phenomenon may manifest itself in at least two forms, the "conventional" encountered also in the established democracies and the "transitional" form, specific for the post-communist societies. Empirical evidence presented by the two aforementioned authors, concentrating on the individual-level regularities in Polish parliamentary elections of 1997, 2001 and 2005, seems to support such a thesis.

Given all the above theoretical considerations, my purpose in this paper is twofold. On one hand, building on the previous work, I attempt to test, on the aggregate level, the thesis, expressed most recently by Owen and Tucker (2007), on the existence (at least in Poland) of both forms of economic voting analysed above. On the other, I try to, so to speak, utilise aggregate-level data for the purpose of an analysis of the economic voting phenomena taking place in recent (conducted in 2002 and 2006) city president elections in Poland, the elections in which city presidents were directly elected. More precisely, the purpose of this paper is to examine the electoral fortunes of those who may potentially (at least on the basis of theory) gain electoral profits from local economic wealth and those who should, theoretically, benefit (in electoral sense) from lack of this wealth. The first are incumbent candidates and the latter are candidates representing the post-communist political camp. More, in this paper I am also explicitly asking a question about the possible interaction between incumbency status and post-communist origins. This can potentially yield an answer to an interesting question about whether the incumbent post-communist candidates are, so to speak, viewed mainly through the prism of incumbency status or through the prism of their political origins. As a result, some tentative predictions may be possible as to the potential development of economic voting phenomena in the Polish context.

Hypotheses, Data and the Concept of Research

I attempt to test four hypotheses concerning the relationships between the state of local economies, and 2002 and 2006 city president election outcomes. As a measure of the performance of local economies, I take one of the measures utilised by, among others, Fidrmuc (2000), namely average monthly wage. I expect that this measure should, on the one hand, be correlated with potential alternatives (like unemployment rate or average household income) and, on the other, be an arguably good proxy capturing the state of a given local economy. I will test the following hypotheses:

H_1: Holding the number of candidates constant, the higher the average monthly wage in a given city the higher the percentage vote share of an incumbent presidential candidate.

H_2: Holding the number of candidates constant, the positive relationship between cities' average monthly wages and incumbent presidential candidates' vote shares is weaker in the case of post-communist candidates (comparing with other incumbent candidates). In other words, a negative interaction effect between the average monthly wages and post-communist political origins is expected.

H_3: Holding the number of candidates constant, the higher the average monthly wage in a given city the lower the percentage vote share of a post-communist presidential candidate.

H_4: Holding the number of candidates constant, the negative relationship between cities' average monthly wages and post-communist presidential candidates' vote shares is weaker in the case of incumbent candidates (comparing with other post-communist candidates). In other words, a positive interaction effect between average monthly wages and incumbency status is expected.

Before proceeding to the description of dependent and independent variables used in this study, I will let myself digress a bit on the nature of incumbency status in this particular context as well as on the criteria of determining which candidates should be regarded post-communist. At first look, the problem of incumbents seems clear. An incumbent candidate is a city president currently in the office and running for re-election. One must, however, remember that the status of the incumbent candidates potentially differs between 2002 and 2006. Before 2002, city presidents were not elected directly. Local elections determined the composition of a respective city council and the latter's prerogative was to elect a president. This changed in 2002 when a new law on local elections, introducing direct elections of city presidents (as well as the holders of analogous positions in smaller local communities), was enacted. This was preceded by a heated debate on how the exact system of electing local officials should look like (see for instance Kaczmarczyk 2002). Even though the idea of direct elections had moderate support on part of the then largest parliamentary party—the Democratic Left Alliance (SLD)—and very strong support on part of the then largest opposition party—the Civic Platform (PO)—the breadth and the depth of the reform were subject to major controversies. The very details of the debate are only indirectly related to the main purpose of this paper. However, it is worthwhile mention that a major disagreement concerned the problem of whether direct elections

should be conducted everywhere or only in smaller communities as well as the issue of what the way of proceeding should be in case the first round of elections does not end with one of the candidates being supported by more than 50% of voters. Eventually, the more radical reform proposed by PO got more parliamentary support than the limited version favoured by SLD. A two-round system of direct elections, analogous to the one utilised in state presidential elections, was introduced for all local communities. As a result, the 2002 election was the first in which city presidents were elected directly. Hence, the incumbent candidates were city presidents originally elected by a city council and running for re-election in the course of popular ballot. By contrast, the incumbents running for re-election in 2006 were those already directly elected in 2002. An obvious question follows whether these two types of incumbents can be treated equally in course of analyses of economic voting phenomena. My assertion, accompanied by some degree of caution, is that still a positive answer to this question can be given. The rationale behind that relies mainly on the fact that the analyses will take into account only those incumbents who decide to run for re-election. In 2002, fifty (76,9%) of the sixty five presidents of largest Polish cities, elected by respective city councils, decided to stand for re-election under the new system. I expect that those standing for re-election significantly differ, in terms of their potential as local political leaders, from those not running. The latter are likely to be those elected by city councils as a result of coalition compromises and, not expecting significant popular support as well as organisational party support during a campaign, deciding not to waste their broadly conceived resources to a "hopeless" campaign. By contrast, my assumption about the running incumbents, to whom my analyses are limited, is that these are those who would have also been candidates in direct elections before 2002 had such elections been conducted before this date. Turning to the post-communist candidates, I define them as those starting on behalf of SLD or any broader coalition in which SLD participated at a given time (e.g. the 2002 coalition with the Labour Union—UP). Also, in the case of the 2006 local election, in a few cases (for which I have not been able to identify post-communist candidates on the basis of the above criterion) I extend (not to say stretch) the above definition, including a few candidates starting on their own but who were SLD candidates in 2002. This way, for the sixty five cities to which I limit my analyses (reasons for which I am explaining in the next paragraph) I have been able to find a post-communist candidate everywhere in 2002 and in sixty one (93,8%) of them in 2006. The fact that I rely on such a simple definition does not mean that I somehow neglect the possibility that in many local contexts the nature of post-communist status may be, and certainly is, much more subtle. On the other hand, I must again emphasise that here the analyses are limited to the largest cities where SLD, as a party with an arguably strong structure (largely inherited after its communist-era ancestor), have its local organisations that actively participate in local political life, including elections. The ability to fairly easily identify post-communist candidates in almost all instances seems to support this claim. Nonetheless, potential future analyses relating to smaller local communities will certainly need a closer elaboration of what being a post-communist candidate actually means.

As regards the dependent variables (I use the word "variables" because separate analyses for incumbent and post-communist candidates will be conducted) used in the analyses to follow, I rely on the election results available from the Electoral Commission's website (pkw.gov.pl). The results of 2002 and 2006 elections in only the sixty five largest Polish cities are taken into account. The reason for this is the fact that the lowest administrative level at which data on average monthly wages (i.e. the data constituting the main explanatory variable) are available is county (Polish "powiat"). The mentioned sixty five cities possess county status, and so precise information on monthly wages is, in practice, available solely for these largest cities. The electoral results obtained by both incumbent and post-communist candidates are measured in percentage points.

The main explanatory variable is average monthly wage in a given city, measured in new Polish zlotys (PLN). The monthly wages taken are those reported for the years preceding a given election, i.e. for 2001 in the case of the 2002 and 2005 in the case of 2006 local election (see *Statistical Yearbook of the Regions—Poland* 2002; *Statistical Yearbook of the Regions—Poland* 2006). In addition, to ensure comparability between the two moments of time, I have taken into account the cumulative inflation rate between 2001 and 2005. The value of the latter was approximately 9% (see for instance *World Development Indicators Online 2007*), and so the average monthly wages in 2005 were divided by 1.09. As a result, all data on wages are standardised at the 2001 price level. Apart from monthly wages, other variables are also included in the analyses. First of all, in the analyses of the results attained by incumbents I included a dummy variable referring to a candidate's status as a post-communist. The variable takes the value of 1 when an incumbent candidate is, at the same time, a post-communist candidate and zero if otherwise. An analogous dummy variable referring to candidates' incumbency status is included in the analyses of the electoral results achieved by the post-communist candidates. Moreover, as follows from the hypotheses H_2 and H_4, appropriate interaction effects between monthly wages and the mentioned dummy variables are tested. Finally, the only control variable (certainly the most obvious one) included is the number of candidates. One reason for the models' parsimony is the availability of only a relatively small number of observations (which, if many variables were included, would easily lead to the problem of multicolinearity). On the other hand, it must be said that the strategy appears justified also because the statistical techniques used here (referred to more closely in the next paragraph) allow for testing and, if necessary, accounting for not only autocorrelation of errors but also, more importantly, model misspecification.

Before the statistical techniques to be used are referred to, a clear statement on the general research design issues must be made. As I noted before, election in sixty five cities with county status are to be analysed here. In practice, in the case of the analyses for incumbent candidates, sixty three cities are included as in two of them incumbent candidates did not start in either 2002 or 2006. Anyway, I am dealing with a time-series-cross-sectional design with every city forming a separate panel comprising a maximum of four observations (first and second round in both elections). Obviously, there are a considerable number of gaps in many of the panels as, in some

cases, a second round might not have been needed or a candidate of interest might not have qualified to a second round. In addition, incumbents and, much less frequently, post-communist candidates do not always run in even a first round. Overall, there are 165 observations for incumbents and 181 for post-communist candidates. As the data set is of longitudinal nature, important problems may arise here as regards application of simple OLS regression. The problems include not only potential autocorrelation of errors but also, maybe more crucially, misspecification of the regression structure or, in other words, unobserved heterogeneity (see for instance Rabe-Hesketh and Skrondal 2005). Nonetheless, in the analyses done in this paper the point of departure is a simple pooled OLS model with cluster-robust standard errors (see Williams 2000), i.e. errors adjusted for clustering within cities. Then, I estimate a random-effects GLS regression model, accounting for potential unobserved time-constant factors resulting in heterogeneity among cities. Then, on the basis of Breusch-Pagan Lagrangian multiplier test I decide whether the random-effects model is better than pooled OLS. If not, I rely on Prais-Winsten regression with panel-corrected standard errors, proposed by Nathaniel Beck and Jonathan N. Katz (1995; 1996), a technique allowing, after accounting for first-order serial correlation, to adjust standard errors also for contemporaneous autocorrelation (which is not possible with pooled OLS). This is done to estimate standard errors the best possible way in a situation when there are no clear signs of misspecification, and so relying on a random-effects model (with its arguably strong assumption of unobserved heterogeneity following normal distribution) does not appear necessary. Finally, in case Lagrangian multiplier test indicates that random-effects GLS model is better than pooled OLS I proceed to estimate a fixed-effects model. The results of the latter estimation, if different than those obtained using random-effects GLS, would indicate inconsistency of the latter. I test it with a Hausman specification test and, depending on the result, rely on either a more efficient random-effects GLS or a consistent fixed-effects regression model (see Rabe-Hesketh and Skrondal 2005: 42). Such a sequence of estimation should ensure that the results chosen for final interpretation reveal as much as possible from the "real" structure of the data set.

Results and Discussion

The results for incumbent candidates are presented below in table 1 and those for the post-communist candidates in table 2.

As it can be seen in table 1, pooled OLS regression estimates (first column) indicate a statistically significant ($p < 0.05$) effect of average wages on the incumbent candidates' electoral results. Holding the number of candidates constant, with a 1 PLN increase in average monthly wage in a given city the predicted electoral result of an incumbent presidential candidate increases by 0.011 percentage points. This means a 1.1 percentage points increase when average monthly wage rises by 100 PLN and an 11 percentage points increase when the wage rises by 1.000 PLN. As predicted here, there is also a negative interaction effect for post-communist incumbent candidates.

Table 1

Determinants of Support for Incumbent Candidates in 2002 and 2006 City President Elections in Polish Cities with County Status: Estimates Obtained Using Pooled OLS Regression, Random-Effects GLS Regression and Prais-Winsten Regression with Panel-Corrected Standard Errors

	Pooled OLS	RE GLS	PCSEs
Average Wage in PLN (2001 Price Level)	0.011*	0.011*	0.011**
	(0.005)	(0.004)	(0.003)
Post-Communist Candidate	16.936	9.152	13.369
	(19.120)	(22.873)	(16.532)
Average Wage in PLN* Post-Communist Candidate	–0.008	–0.004	–0.007
	(0.009)	(0.011)	(0.008)
Marginal Effect of Av. Wage for Post-Communist Candidates	*0.003*	*0.007*	*0.004*
	(0.007)	*(0.011)*	*(0.007)*
Number of Candidates	–2.709**	–2.897**	–2.768**
	(0.291)	(0.320)	(0.286)
Constant	35.605**	38.193**	37.047**
	(11.171)	(9.408)	(10.032)
$F_{(4, 160)}$	22.690**	—	—
R^2	0.288	0.287	0.304
SEE	13.776	—	—
Breusch-Pagan $\chi^2 (1)$	0.390	—	—
Wald $\chi^2 (4)$	—	87.010**	102.930**
$\sqrt{\psi}$	—	9.282	—
$\sqrt{\theta}$	—	11.815	—
ρ	—	0.382	0.255
Breusch-Pagan Lagrangian Multiplier $\chi^2 (1)$	—	1.550	—
Number of Observations	165	165	165
Number of Cities	63	63	63

* $p < 0.05$; ** $p < 0.01$

Note: Main entries are unstandardised regression coefficients and the numbers in parentheses are standard errors.

The latter effect is not statistically significant ($p > 0.05$). However, the more crucial outcome here is the marginal effect of average wages when an incumbent candidate is, at the same time, affiliated with post-communists (in all analyses the marginal effects have been written in italics as they essentially do not belong to the models themselves). In this case, there is a significant decrease in the positive effect of wages on electoral outcomes, in comparison to the analogous effect for non-post-communist incumbents. The marginal effect is substantially weaker and not statistically significant. All this provides suggestive support for hypotheses H_1 and H_2. As it can be seen in the second column, the results obtained using random-effects GLS regression appear a bit different. However, the value of the Breusch-Pagan Lagrangian

Table 2

Determinants of Support for Post-Communist Candidates in 2002 and 2006 City President Elections in Polish Cities with County Status: Estimates Obtained Using Pooled OLS Regression, Random-Effects GLS Regression and Fixed-Effects Regression

	Pooled OLS	RE GLS	FE
Average Wage in PLN (2001 Price Level)	–0.006 (0.004)	–0.008* (0.003)	–0.015* (0.007)
Incumbent Candidate	–2.089 (15.936)	–3.981 (19.390)	–10.806 (20.302)
Average Wage in PLN* Incumbent Candidate	0.009 (0.007)	0.009 (0.009)	0.010 (0.011)
Marginal Effect of Av. Wage for Incumbent Candidates	*0.003 (0.007)*	*0.001 (0.009)*	*–0.005 (0.012)*
Number of Candidates	–2.416** (0.224)	–2.177** (0.246)	–2.044** (0.249)
Constant	53.262** (8.738)	54.264** (7.551)	71.972** (14.259)
F(4.170)/(4.106)	63.150**	—	26.270**
R^2	0.477	0.475	0.420
SEE	12.524	—	—
Breusch-Pagan χ^2 (1)	0.930	—	—
Wald χ^2 (4)	—	155.860**	—
$\sqrt{\psi}$	—	8.040	11.477
$\sqrt{\theta}$	—	9.215	9.215
ρ	—	0.432	0.608
Breusch-Pagan Lagrangian Multiplier χ^2 (1)	—	20.430**	—
Hausman χ^2 (3)	—	—	26.610**
Number of Observations	181	181	181
Number of Cities	65	65	65

*p < 0.05; **p < 0.01

Note: Main entries are unstandardised regression coefficients and the numbers in parentheses are standard errors.

multiplier test statistic is low (p > 0.05) which suggests that the individual-level heterogeneity is not substantial enough so as to justify switching to random-effects GLS estimation. In this situation, I finally decide to rely on Prais-Winsten regression with panel-corrected standard errors (third column). This technique suggests essentially the same, again statistically significant (p < 0.01), effect for the incumbents who are not post-communist as it was in the case of pooled OLS. The interaction effect for post-communist incumbent candidates is slightly weaker than in the case of OLS estimation. However, the marginal effect for post-communist incumbent candidates, even though positive, is not statistically significant (p > 0.05). As for its strength,

holding the number of candidates constant, with a 1 PLN increase in average monthly wage the predicted post-communist incumbent candidate's electoral result rises by 0.004 percentage points. While, in this case, the notion of statistical significance may seem less applicable (I am analysing the whole "population," not a "sample," of city president elections conducted in 2002 and 2006 in the cities with county status), the differences in the effects between post-communists and other incumbents, as well as the differences in the estimated standard errors, must be regarded at least very suggestive. In the case of electoral results attained by the post-communist incumbents, the positive effect of wages is not only weaker but also appears to be subject to greater variability (considerably larger estimated standard error). Also, given the high level of reproducibility of local welfare and the research design adopted here, it must be said that large average wages favour incumbent presidential candidates regardless of whether the results are analysed from a cross-sectional or longitudinal perspective. For such results as presented here, obtained relying on this particular design, suggest that not only are the inhabitants of the wealthier cities generally more prone (in a long-term perspective) to vote for incumbents but also that when wages in a given city increase between the two local elections analysed here the presidents of the cities, if running for re-election, could expect better results than those previously obtained by incumbents. These effects appear to be seriously attenuated in the case of the post-communist incumbent candidates. As a result, I can certainly conclude here that the "multifaceted economic voting effect" (Owen and Tucker 2007) can be observed also at the local level and that the candidates' different identities (as incumbents and as post-communists), at least in the case of incumbent candidates, interact with each other, producing an economic effect predicted in the hypotheses H_1 and H_2.

The results for post-communist candidates (table 2) are also revealing. This time, Breusch-Pagan Lagrangian multiplier test statistic ($p < 0.01$) indicates that the amount of unobserved individual-level heterogeneity justifies relying on random-effects GLS rather than pooled OLS. More, fixed-effects regression has also been run (results presented in the third column) and the high obtained value of Hausman test statistic ($p < 0.01$) suggests that the random-effects GLS estimates are substantially different from those obtained using fixed-effects. In particular, application of the latter technique results in a substantially higher estimated amount of unobserved heterogeneity ($\rho = 0.608$), in comparison to the value obtained with random-effects GLS ($\rho = 0.432$). It is, therefore, highly likely that random-effects GLS estimates are inconsistent. As a result, I decide to rely on the fixed-effects estimates. The effect of average monthly wages, in the case of non-incumbent post-communist candidates, is quite substantial and statistically significant ($p < 0.05$). Holding the number of candidates constant, with a 1 PLN increase in average monthly wages the predicted electoral result achieved by a non-incumbent post-communist candidate decreases by 0.015 percentage points. At the same time, as predicted, there is a strong, even though again statistically insignificant ($p > 0.05$), interaction effect for incumbent post-communist candidates. As a result, the marginal effect of wages on the electoral results attained by the latter candidates is substantially weaker. Therefore, a conclusion follows that also hypotheses H_3 and H_4 appear to have considerable empirical

support. These results, along with the ones for incumbents (table 1), seem to form a fairly cohesive image. With respect to economic voting effects, the post-communist incumbent candidates tend to be, so to speak, in the middle between non-incumbent post-communists and non-post-communist incumbents. In other words, the economic effects for the post-communist incumbents are much less straightforward than for the two other aforementioned groups of candidates. To rely on the terminology used by Owen and Tucker (2007), in the case of post-communist incumbent candidates transitional and conventional economic voting effects, working in opposite directions, suppress each other, making local welfare affect the electoral results to a lesser extent than it is in the case of the candidates whose identity is less complex (as they are just incumbents or just post-communists).

Conclusion

In this paper I attempted to asses the impact of local welfare on the electoral fortunes of incumbents and post-communist candidates in the direct presidential elections in the largest Polish cities, the elections conducted in 2002 and 2006. The aggregate-level results presented lend suggestive support to the general thesis about a positive relationship between local economic conditions and the incumbent candidates' electoral results as well as about a negative relationship between the mentioned conditions and the results attained by the post-communist candidates. More, the results also suggest that the two opposite economic effects interact with each other. The results tend to be fairly stable (though with deviations) with respect to different model specifications, including the ones accounting for potential unobserved heterogeneity. The latter seems to be a problem especially in the case of the post-communist candidates which clearly suggests that the concepts presented here should be treated as inevitably partial, i.e. not precluding relevance of other explanations. On the other hand, it must be remembered that the very fact of accounting for unobserved heterogeneity, even when the latter's magnitude is large, provides strong support for the thesis that, to put it bluntly, the economic effects are really there. This makes prospective research efforts in the area referred to here most worthwhile making. There are at least two other reasons to claim so. First, extending the analyses to future local elections would help increase the number of observations available. This would be very helpful from the purely statistical viewpoint. For instance, the design adopted here could be regarded imperfect as unobserved heterogeneity may be "located" also at other levels than the cities (for example, at the level of different candidates). Inspecting such a possibility would require estimating a three-level model which would, in turn, require applying maximum likelihood estimation. The latter, unfortunately, tends to yield biased results when the number of observations is small (certainly below two hundred). Finally, and probably more crucially, I believe that the regularities presented in this paper may be interpreted as providing interesting suggestions as to the future developments of the economic voting regularities in Poland. In particular, analysing the regularities depicted here, one can conclude that the interaction effect for post-communists

(table 2) is slightly stronger than that for incumbents (table 1). Therefore, I expect (with high level of caution) that, in the long run, the post-communists, because of the fact of winning particular elections and acquiring incumbency status, will be able to gradually dispose of their specific transitional identity with respect to economic effects. Before, however, this end of post-communism in the area of economic voting is announced a lot of further (better than possible to be done here) aggregate-level research should be conducted. Pointing to this exciting research perspective is maybe the most important potential contribution of this paper.

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