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Ukraine's 2007 Parliamentary Elections: Free and Fair or Fraud Once Again and the Argument for Election Observers

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Ukraine's 2007 Parliamentary Elections:

Free and Fair or Fraud Once Again and the Argument for Election Observers

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Ukraine's 2007 parliamentary elections, like its 2006 vote, passed with few of the allegations of fraud and electoral malfeasance that characterized the second round of its 2004 presidential balloting. There was, though, one potentially disquieting note – the suspiciously late returns from Donetsk, which suggested that those returns were being manipulated in some way to help Moroz's SPU pass the three percent threshold for representation and, thereby, preserve Yanukovich's governing coalition in the Verkhovna Rada. However, once all ballots had been counted and seat allocations announced, insinuations of electoral fraud largely disappeared from view and attention turned to whether Our Ukraine and Tymoshenko's BYuT could form a governing majority coalition. The question we address here, then, is: Were the suspicions of fraud in Donetsk well-founded? And if so, why didn't Tymoshenko or Yushenchko or any of their allies object to the final tally and demand a recount in the suspect election districts? The answer we offer to these questions is: Yes, there was fraud in Donetsk – although not of the same magnitude as what occurred in 2004 – but owing to the failure of the strategy pursued by the Party of Region's and Yanukovich's allies, the fraud inadvertently worked to the advantage of BYuT and Our Ukraine.

The ostensible advantage of the alleged manipulations of the vote in Donetsk lay in the attempt to sustain the parliamentary representation of the SPU. Nationally, the SPU garnered 2.86 percent, or 0.14 percent less than what it needed to secure representation in parliament. Had it succeeded in winning that extra increment so as to move it above the threshold at, say, no one else's expense, seat allocations would have changed markedly. First, the SPU would have won 15 seats while Regions plus the Communist Party of Ukraine (CPU) would have lost 7, for a net gain of 8 seats for the coalition {Regions, CPU, SPU}.¹ In the meantime, BYuT would have lost 6 seats while Our Ukraine would have lost 2. BYuT plus Our Ukraine would no longer be a majority coalition, and although Regions plus the CPU plus the SPU would also fall short of a

majority (with 210 seats), surely Yanukovich preferred negotiating with Litvyn's block or forcing a more encompassing "coalition of national unity" that might preserve his position as Prime Minister. Of course, such an event did not come to pass and we need to ask whether it was, in fact, attempted via the manipulation of vote counts as initially alleged by some observers.

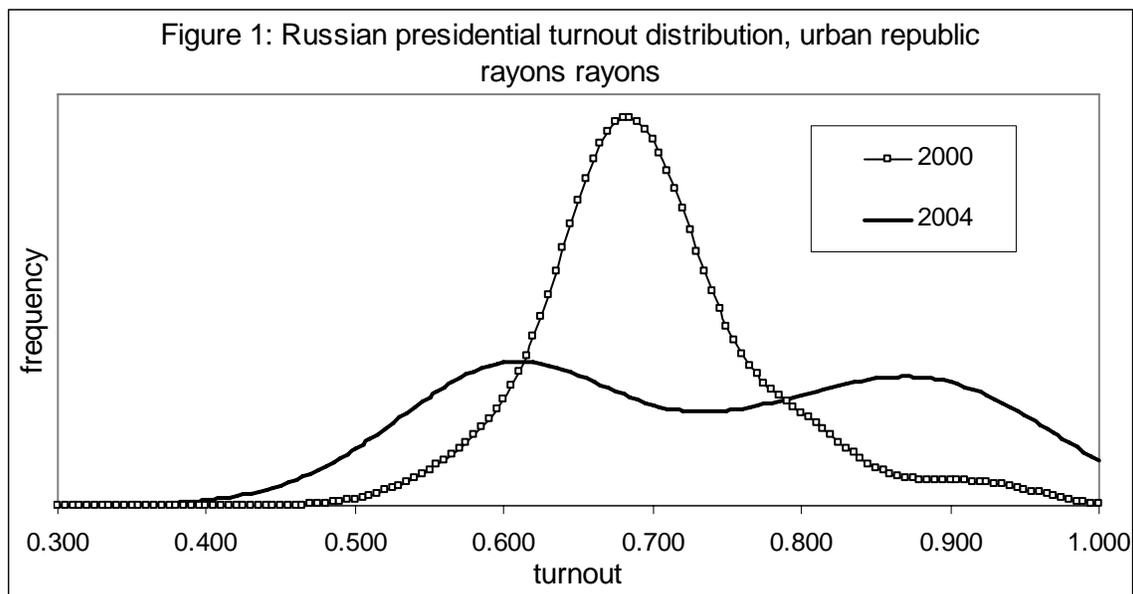
In addressing the issue of electoral fraud we look here at two forensic indicators discussed elsewhere in the context of earlier Russian and Ukrainian elections (Myagkov, Ordeshook and Shakin 2005, 2007, 2008). Briefly, the first indicator looks at the distribution of turnout within regions and elections districts using official precinct level returns while the second, using the same data, looks at the relationship between turnout and a candidate or party's share of the eligible electorate. The first indicator is especially useful for detecting instances of stuffed ballot boxes or official election protocols that are filled out without regard to actual ballots cast while the second can be used either to substantiate whatever fraud we might find using the first or to identify instances wherein, in lieu of stuffed ballot boxes, votes are fraudulently transferred from one party or candidate to another.

1. Distributions of turnout

Turnout can vary across polling stations or election districts for any number of innocuous reasons. But variations here can also have a more sinister source such as when ballot boxes are simply filled with fraudulent votes or the vote totals for specific candidates are illegally augmented when filling out official vote count summaries. To see how this indicator works, suppose we are dealing with a relatively homogeneous data set wherein turnout varies across polling stations (precincts) for largely innocuous and random reasons. Overall, then, we would expect the distribution of turnout to look approximately 'normal' (i.e., bell-shaped) with some precincts reporting lower than average turnout,

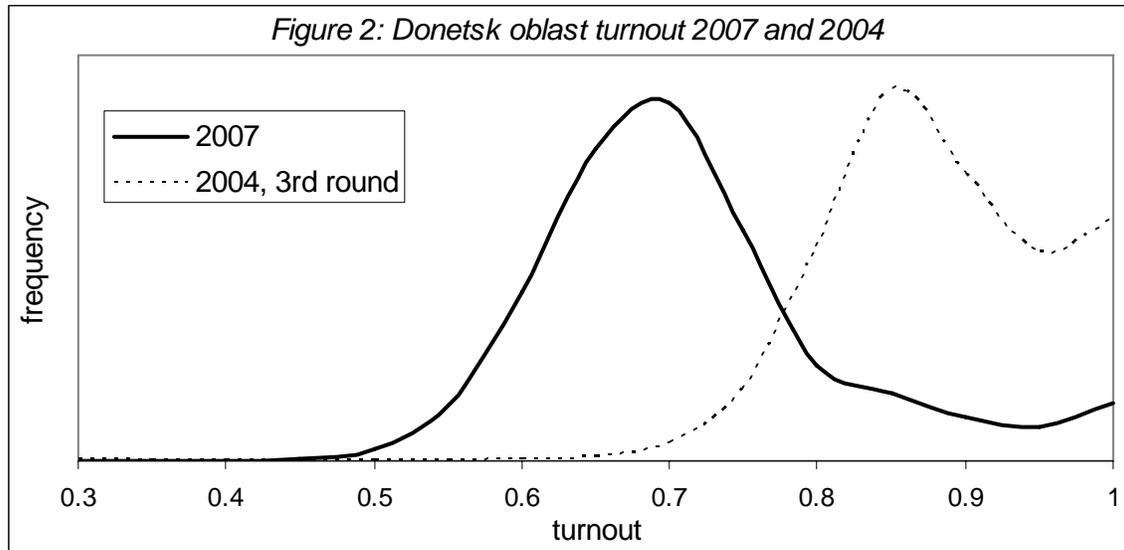
some reporting a higher than average rates of participation, and the majority reporting turnout at or near the overall average. Now, however, suppose we take a representative subset of precincts and add votes to one or more candidates or parties via the simple expedient of ballot stuffing. The turnout distribution of that subset, then, would be moved to the right since the added votes increase their apparent rates of participation. The overall distribution of turnout would now no longer be normal, but skewed to the right. And the more ballots we add, the greater would be the skewing, perhaps to the point where the overall distribution becomes bimodal.

To illustrate what can happen here when fraud of this sort becomes unashamed and extensive, consider Figure 1 which uses data taken from the urban rayons of Russia's ethnic republics.² The data for 2000 looks utterly normal and does not occasion any suspicions. For Putin's 2004 reelection, in contrast, we see a marked change in the distribution consistent with the hypothesis that turnout declined in approximately half of all urban republic rayons (which is to be expected in a normal electorate since the outcome of the 2004 vote was a foregone conclusion), but increased significantly in the other half to yield an overall bimodal distribution.



If we add to this figure the fact that the rayons reporting the sharpest increase in turnout are to be found in such places as Chechnya, Ingushetiya and Karachaevo-Cherkessia as well as Tatarstan and Dagestan – the usual suspects for electoral fraud in Russia -- then we have good reasons for supposing that we are seeing here evidence of massive manipulations of the vote committed as part of a strategy of ensuring an overwhelming victory for Putin in 2004.

Using precinct level returns, Figures 2, now, gives the distribution of turnout for Donetsk in 2007, comparing that distribution to what we find for the third (December) round of the 2004 presidential election.³ For both elections we see reasons for modest suspicions about fraud in that there appears to be more precincts reporting turnout in excess of 95 percent than we might otherwise deem normal. Nevertheless, the perturbation in neither distribution matches what we see in Figure 1. If votes were fraudulently added to the official counts for Yanukovich in the December round of 2004 or for Regions in 2007, the fraud was not of a magnitude likely to impact any eventual outcome. Moreover, we should always be cautious when assessing data from a candidate's home region, allowing for the possibility that there may be voting districts that, for wholly natural and legitimate reasons, report exceptionally high turnout rates in support of a 'favorite son' candidate. So in summary, there is little evidence here that votes were created out of thin air in Donetsk to benefit Regions.



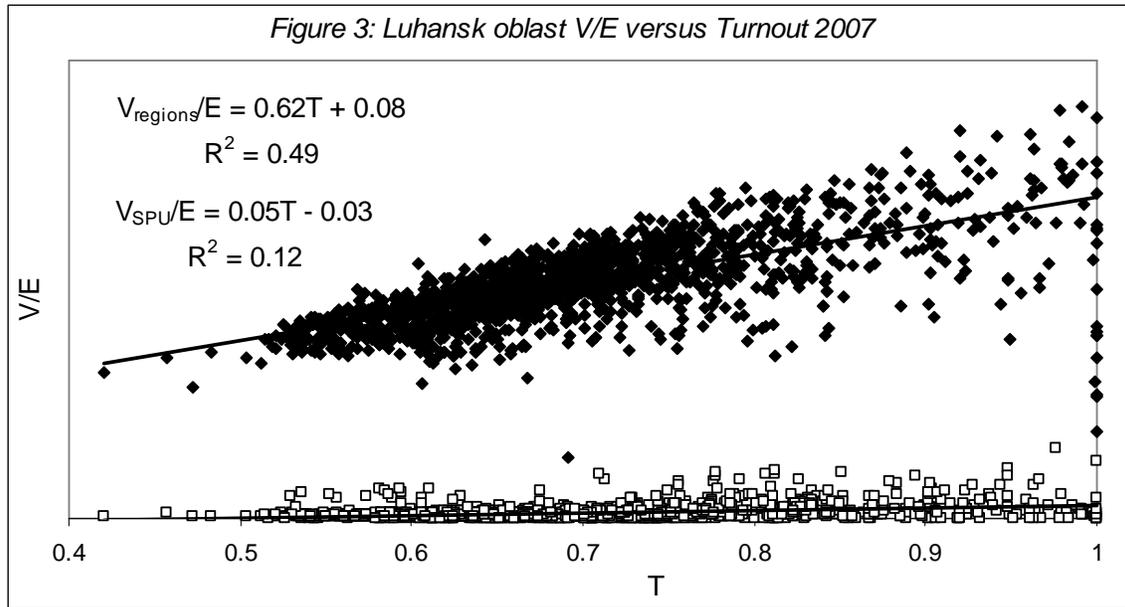
2. Share of the Absolute Vote

Having suffered international humiliation because of their unashamed and ham-handed attempt at stealing the presidential election in 2004, it should perhaps come as no surprise that Figure 2 shows little evidence of outright ballot stuffing or the manufacture of votes on Yanukovich's behalf. But parliamentary elections present their own incentives to manipulate the vote in different ways. To see what we mean, let us now turn to a second indicator of fraud – the relationship between turnout, T , and a candidate or party's share of the eligible electorate, V/E . Briefly, in a normal election this relationship ought to be logical, by which we mean that if turnout is not correlated with a candidate or party's relative popularity (i.e., if the data, in a statistical sense, is homogeneous) and if turnout increases, then *ceteris paribus*, each candidate or party should share in this increase or at least not suffer from it. Although a party may be unpopular, if more voters go to the polls, it should experience some increase in its absolute vote. So suppose we estimate the following regression

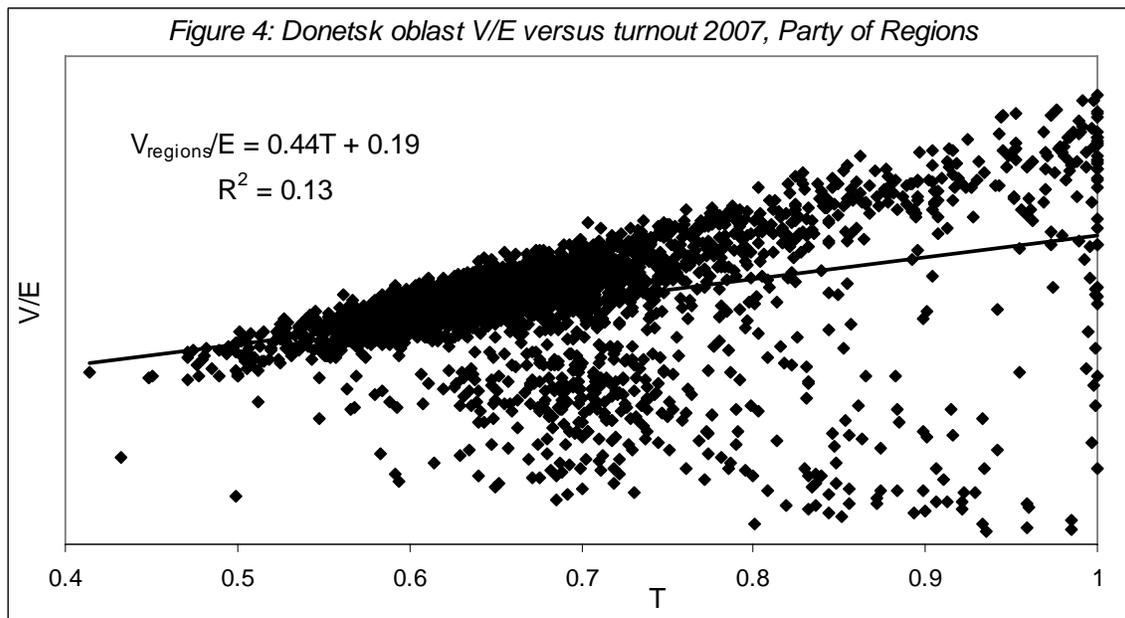
$$\text{Party } i\text{'s share of the eligible electorate} = A * \text{Turnout} + B$$

Absent fraud in homogeneous districts where turnout varies as a function of factors uncorrelated with party i 's support, the coefficient A should approximate i 's overall share of the vote and B should be zero. Hence, if i wins on average say 65 percent of the vote, then for every additional 100 voters who march to the polls, A should equal 0.65 to indicate that i receives 65 of those 100 additional votes. Moreover, to the extent that our data satisfies the assumption of homogeneity, then the variance accounted for by our regression should be reasonably high. The sole exception to this would occur for a highly unpopular party or candidate whose share of the eligible electorate is low regardless of turnout.

Before we consider Donetsk using this indicator let us first look at its 'twin' region, Luhansk which, in the second (November) round of the 2004 presidential vote, yielded a nearly equivalent measure of vote fraud on Yanukovich's behalf as did Donetsk (Myagkov, Ordeshook, and Shakin 2005). Figure 3, then, graphs V/E versus T there for both the Party of Regions and the SPU, and what we see here looks utterly unexceptional. The coefficient on T for Yanukovich's Regions, 0.62, is reasonably close to its actual share of the vote in Luhansk (0.74), the intercept term is not statistically different from 0, and R^2 is appropriate for data of the sort we consider here. Thus, there is nothing here that would lead us to reject the hypothesis that voting in Luhansk in 2007 was anything but relatively democratic, fair and free of any blatant instances of fraud.



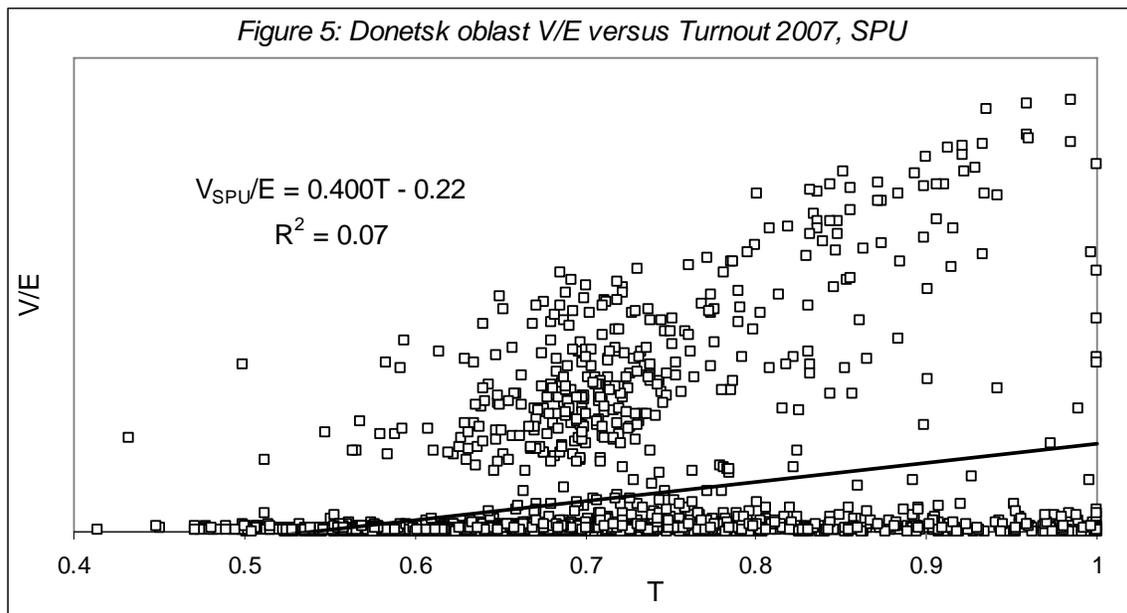
Now, however, consider Figure 4, which graphs only the relationship between V/E and T for the Party of Regions in Donetsk.



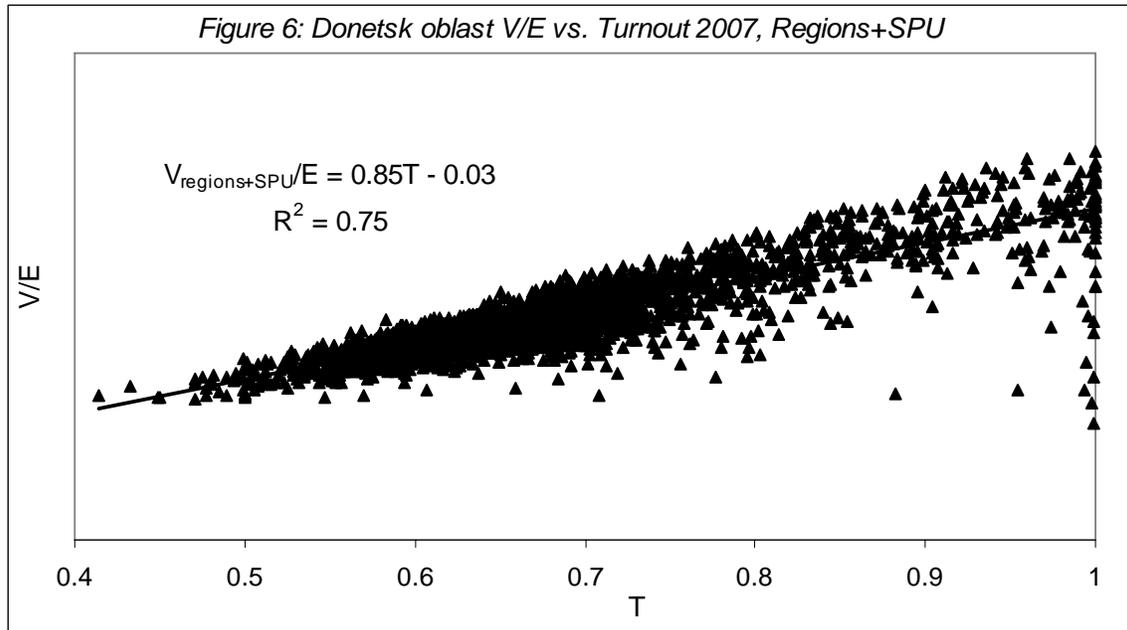
Here we see a pattern that differs markedly from what Figure 3 shows. The coefficient on T (0.44) differs significantly from the officially reported vote share for Regions (0.72), the intercept term is now significantly different from 0, and R^2 is unreasonably low for a data set that is no more heterogeneous than Luhansk's. Although we can still discern a

‘cigar shaped’ cluster of data similar to what Figure 3 shows, it is as if a substantial number of precincts have ‘fallen like snowflakes’ from that cluster.

Now consider Figure 5, which replicates Figure 4 using the vote shares reported for Moroz’s SPU. Here we see a nearly identical pattern to the one reported in Figure 4 except than now the ‘snowflakes’ (precincts) appear to be falling up.



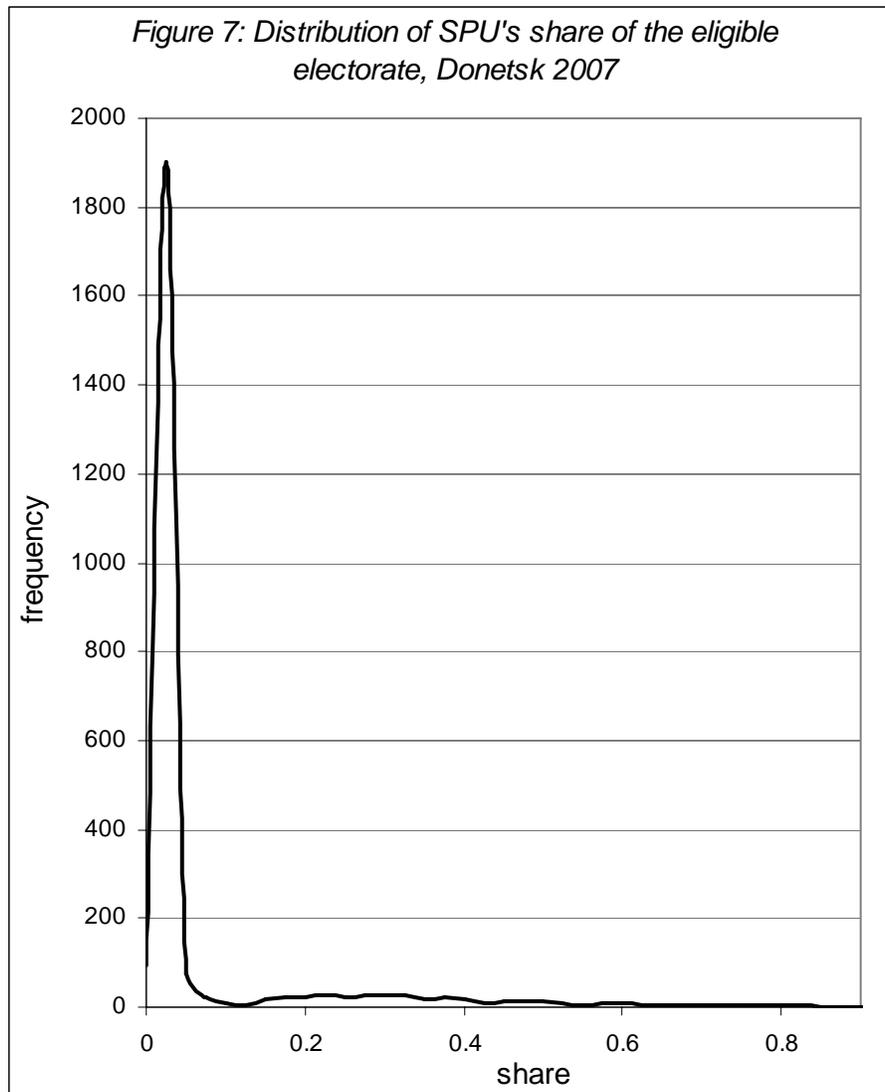
Finally, consider Figure 6 which graphs V/E against T when we add the votes reported for Regions and the SPU. Clearly, the data in Figure 6 look wholly normal and much like what we see in Figure 2 for Luhansk. And unlike what we see in Figures 3 and 4, the intercept term now is near 0, R^2 is high, and the coefficient on T nearly matches the share of the vote won by Regions and the SPU together (0.80).



3. Estimating Fraud's Magnitude

Short of assuming that voters in Donetsk are in some mysterious way wholly different from their counterparts in Luhansk, there is but one explanation for Figures 4 through 6: Votes in Donetsk (but not in Luhansk) were added to SPU's totals in a subset of precincts in the attempt to push the party above the three percent threshold for parliamentary representation. But, to keep the books balanced so as to avoid suspiciously high turnout rates of the sort that led to the overturn of the November 2004 balloting, those added votes were subtracted from Regions' totals. What remains, then, is to estimate the magnitude of that fraud and the arithmetic logic behind it. To that end, consider Figure 7 which graphs the distribution of the SPU's share of Donetsk's eligible electorate. As we can see here, there is a dominant mode to this distribution around 0.025, whereupon the distribution drops to near zero at 0.125, and then rises again slightly thereafter with some precincts (12) reporting as much as 80 percent or more of the eligible electorate voting for the SPU.⁴ Suppose we assume, then, that the SPU's

'natural' (fraud-free) share of the eligible electorate is given by the first mode of the distribution in Figure 7, 0.025 – or approximately 90,000 votes. Since official totals awarded the SPU approximately 192,000 votes, we arrive at an estimate of 102,000 fraudulently transferred ballots.⁵



Alternatively, we might speculate that the precincts in the first node of the distribution of the SPU's support are tainted by fraud as well, albeit to a less evident extent. So suppose we take the SPU's share of the eligible electorate in Luhansk, 0.008, as our benchmark of the SPU's honest vote in Donetsk. In that case, SPU's true vote is

but 29,000 and our estimate of fraud grows to 163,000 votes. Admittedly, though, neither number – 163,000 or 102,000 -- approaches the level of fraud that occurred in Donetsk in the second round of the 2004 election (where almost certainly no fewer than 500,000 votes were added to Yanukovich's total). Nevertheless, it is interesting to see what impact these transferred votes might have had on final outcomes. Suppose we take 102,000 votes as our estimate and give them 'back' to Regions, thereby increasing its vote count to approximately 8,109,000 votes. Regions plus the CPU would then qualify for one additional seat while BYuT plus Our Ukraine would lose one seat. By this 'back of the envelope' calculation, then, the net loss of the ostensible fraud to Yanukovich and his allies was 2 seats. Alternatively, if we take 163,000 as our estimate and add this number to Regions, then Regions plus the CPU gain two seats at the expense of BYuT and Our Ukraine. Thus, having gained a seat or two at the expense of their opponents, perhaps we should not be surprised that Tymoshenko, Yushchenko and their supporters chose to ignore any evidence of electoral malfeasance in Donetsk.

On the other hand, suppose an additional 0.14 percent of the entire electorate had been transferred to the SPU from Regions – or 33,600 votes. If we subtract this total from the final vote awarded Regions, its total would have been diminished only slightly with an attendant loss of at most one seat (if any). Surely, then, engaging in fraud of the sort indicated by this analysis in order to win SPU 15 or so seats in the parliament was a risk well worth taking. But now we might ask: Why did this strategy fail? Surely 33,600 votes is not a large number, especially since we estimate that between three and five times that number had already been transferred from the Party of Regions to the SPU. Here we can only speculate, but a reasonable conjecture is that those who implemented the fraud miscalculated: They assumed it would take something less than 135,600 or 196,600 votes to push SPU over three percent nationally. And what they specifically failed to anticipate was the strategic calculation of their own

supporters. It was surely apparent that the SPU would lose much of its support in the West owing to Moroz's defection from the 'Orange Coalition'. Electoral strategists might have supposed, though, that a good share of that loss would be offset by votes gained in the East. That gain, however, did not materialize – at least not to the extent anticipated. In Luhansk, for example, the SPU won less than one percent of the eligible electorate. And the reason for this seems self-evident. Consider the following strategic calculation on the part of a voter who favors Yanukovich as prime minister. A vote for Regions and for the CPU, both of which are certain to pass the three percent threshold for representation, is a clear vote for Yanukovich and his policies. A vote for Moroz's SPU, on the other hand, is to support an uncertain prospect. At best it is, like voting for Regions and the CPU, a vote to maintain Yanukovich in his parliamentary position; but at worst, if the SPU fails to clear the threshold, it is a wasted vote – nearly equivalent to voting for Our Ukraine or BYuT. Thus, a strategic voter who might even prefer the SPU over any other party would be wholly rational to cast their vote instead for Regions or the CPU, both of which are near ideological substitutes for the SPU.⁶ Thus, we might speculate that by failing to anticipate the possibility of strategic voting among their own electorate, the powers that be in Donetsk simply did not foresee the need for transferring as many as votes as would be required to move the SPU past the threshold for parliamentary representation. And when it became apparent that more votes were needed, there simply wasn't enough unreported precincts under their command to effect the outcome..

By way of conclusion, now, we note that there is an important lesson to be learned from this analysis about encouraging free and fair elections and the role of independent objective observers. Notice that what leads us to suspect fraud in Donetsk in Figure 3 is the downwards deviation of a sample of precincts and their corresponding upwards deviation in Figure 4. Suppose, however, that votes had been transferred from

Regions to the SPU uniformly across all precincts. In that case the relationship between V/E and T would have looked totally normal for both parties and the fraud would have been undetectable. In other words, we can detect fraud here only because a subset of precincts 'acted' differently than the rest. This, then, points the way on how to make the detection of fraud more likely. Specifically, if fraud is unlikely to occur in the presence of independent and objective observers, then their mere presence among a subset of polling stations will ensure that any fraud in the unobserved stations will be detectable by a careful examination of official returns.

Election observers are commonly assumed to serve two purposes: To discourage the occurrence of fraud and to detect and report it when it in fact occurs. Our analysis here suggest that it is sufficient that they simply perform the first function and that a subsequent analysis of the data can substitute for the second. Of course, we should not preclude the possibility that those intent on committing fraud will not find ways to circumvent any effort to forestall their activities. This, though, is but an argument for finding ways to augment the efforts of observers with whatever statistical tools we can develop to assist them in their purpose. Put differently, a well-monitored election requires both direct observation and statistical analysis, where the combination of the two can act as a significant incentive to conduct elections that are free, fair and democratic.

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¹ If we add SPU's 3% to the 88.58 percent of the vote won by Regions + BYuT + Our Ukraine + CPU + Litvyn's bloc we get a total of 91.58 percent of those voting casting ballots for parties at or above the three percent threshold. Dividing .03 by .9158 and multiplying by 450 gives us 14 seats for the SPU. Regions + CPU's share of the vote equals 39.76%. Multiplying 450 times .3976 and dividing by .9158 gives 195 seats.

² Data for this figure are taken from Myagkov et al, 2005.

³ Our figures here use precinct level returns after we delete the few odd special polling stations with fewer than 50 registered voters. Thus, for Donetsk we have 2477 observations and, later, when considering Luhansk, we have 1496.

⁴ The number of precincts reporting a share of the eligible electorate in excess of 0.125 for the SPU is 368.

⁵ It is perhaps interesting to note that this estimate tells us why votes had to be taken from Regions – with fewer than 94,000 votes for BYuT in Donetsk, there simply wasn't another sources of votes that if stolen, would not have revealed the fraud as self-evident.

⁶ See Hinich, Khmelko, Klochko and Ordeshook (2008) for evidence that voters did in fact see Regions, the CPU and the SPU as ideological substitutes.