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**The Evolution of an Economic and Political
Middle Class in Transition Countries**

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Abstract

It is generally believed that successful economic and political transitions, and even development more broadly requires the development of a significant and stable middle class. This middle class is defined in both economic terms, meaning a relatively flat income distribution, and in political terms, meaning a bloc of centrist voters. This paper examines measures of income shares and growth, political attitudes and voting in Poland and Russia during the 1990's to test the proposition that the growth of an entrepreneurial based sector of new enterprises is an important factor in the growth of an economic and a political middle class. The evidence is in both countries regions with a larger de novo economic sector have increased the income share going to the bottom two quintiles, have higher income growth rates, and have given more political support to centrist liberal parties. We also show that individuals employed in these new firms and/or living in these successful regions are more likely to have economically and politically liberal attitudes. We conclude by suggesting that de novo firm creation is an important factor in successful and stable transitions.

JEL Codes: D3, O87, P2

The Evolution of an Economic and Political Middle Class in Transition Countries

We think a fair description of the end state envisioned by most reformers in the former Socialist states in Central and Eastern Europe was a society that closely resembled those in Western Europe, North American and parts of Asia. Key features of these countries, broadly defined, is a capitalist based market economy and a liberal democracy with a significant economic, social and political middle class. To say that success in reaching that goal is mixed is a clear understatement. One simple way of seeing the different levels of success is through the changes in the income distributions in the transitional countries. Table 1 shows the gini coefficients describing the pre-transition and current income distributions in some of these countries and the distributions in a set of traditional developed market democracies.

(Table 1 About Here.)

The countries in Central and Eastern Europe have quite modest increases in inequality, averaging about +0.05, and now quite closely correspond to the OECD mean of about 0.31. These are also the countries generally seen as having relatively successful transitions by a number of criteria. The countries from the former Soviet Union, by contrast, experienced substantial increases in inequality, averaging a whopping +0.17 increase in the average gini. Russia, which underwent extensive privatization, had a +0.20 increase in its gini coefficient and a level in 2001 well above the OECD mean. Estonia, which is one of the most successful of the former CIS states, had an increase in inequality that slightly exceeded that of the CEE states. Both Belarus and Ukraine, which did little reform and whose economies have been extremely hard hit have little or modest increases in inequality, showing that lack of any reform has little impact on inequality.

There are other ways to measure the success, or lack of, in these transitions, such as income growth, life expectancy, electoral competition, etc. But, an equitable income distribution that is conducive to the formation a powerful middle class is, in our view, critical because it enables institutions that are critical for market economies, such as independent courts and voting that reflects the preferences of a broad spectrum of the populace. For example, when there is a massive income inequality, the very rich substratum can easily subvert courts by bribing and threatening judges and bailiffs (Glaeser, Scheinkman and Shleifer, 2003). Similar arguments can be made about the ability of the very rich to subvert fair voting and the emergence of political competition. We will examine several other measures in addition to the changes in income distribution just described. There are many factors that correlate with these measures of performance and there is no single factor that predicts the presence of absence of a successful transition. But, we want to explore one aspect of the transition we believe consistently correlates with all these measures of success. This is the ability of the economy to generate new firms to replace the old state firms. This replacement process is critical whether or not the state firms are privatized.

In this paper we examine a number of these associations among regions in Poland and Russia. These two countries offer two stark contrasts in the path and success of the transition. Our strategy is that if these associations are evident in these two contrasting settings it will lend credibility to our basic argument. These two countries provide an important context for this analysis as each has enough regions with very heterogeneous experiences to support comparative statistical analysis. In the first section we argue about why the rate of new firm entry and growth is likely to be related to the expansion and well-being of an economic and political middle class. This section is followed by a discussion of the data and methods used to examine these relationships. Then we present the findings and conclude with a discussion of the implication for successful transitions.

1. New Firm Entry and Changes in Economic and Political Structures

The classic argument making the creation of new firms the key to economic growth is Joseph Schumpeter's (1934) description of creative destruction. In this model, innovation and adaptation are done much better by new firms than by old firms. This view of firm replacement as the central feature of economic expansion is also seen in the work by various Sociologists (Hannan and Freeman, 1977 and 1989; Carroll, 1984 and reviews by Amburgey and Hayagreeva, 1996; Carroll, 1988; Singh, 1990; and Singh and Lumsden, 1990). In both the economic and sociological models replacement is the key to growth and to the ability for economies to adapt to radically changing environments. Consistent with this view of development de novo enterprises are virtually the sole source of job creation in the transitional economies, offsetting the layoffs produced by hard budget constraints, privatization and restructuring among the state and former state firms. (See Bilsen and Konings, 1998, for evidence from Romania, Bulgaria and Hungary; Jackson, Klich and Poznańska, 2005 for evidence from Poland; and Jurajda and Terrell, 2001, for evidence from the Czech Republic and Estonia. Kornai, 2000, offers a similar description of Hungary, but no data are available to support the observation.)

The growth of this de novo sector stimulates the growth of the economy and of the middle class in a number of ways. Most obviously, these new firms provide employment for those who might otherwise be unemployed as a consequence of the restructuring of the former state sector. These jobs stimulate the aggregate economy and as they are likely to provide more income than unemployment benefits the wages earned will boost the earnings at the lower end of the income distribution.

Less directly, new firms contribute to a higher and a more equitable income distribution through their contribution to aggregate productivity. There is empirical evidence that these new firms have higher productivity than the firms they are replacing, following the Schumpeterian idea of creative destruction. DeLoecker and Konings (2005) develop a comparison of new and old manufacturing firms in Slovenia based on estimates of total factor productivity. They conclude that, "…the net entry of de novo private firms is an important component explaining growth in total factor productivity." Jackson, Klich and Poznańska (2005), using longitudinal data on cohorts of new and old enterprises, find several relationships that are consistent with the DeLoecker and Konings results. They do not have measures of total factor productivity but examine sales per worker as a substitute. They find that within cohorts of new firms both survival and growth are strongly related to average sales per worker, indicating that over time the most productive firms are employing a larger share of the workforce. They also show that the wage growth among surviving firms in a cohort is strongly related to sales per worker and to the firms' sales growth. Lastly, their analysis indicates that wage growth is more closely tied to productivity growth in the surviving de novo firms than it is among the state and former state owned firms. In the short-run it is impossible to say how this Darwinian process will affect regional incomes as that will be a function of the aggregate demand for and supply of labor, which will be related to more factors than just the number and growth of new firms, such as the unemployment rate. (For discussions of how wages might relate to unemployment see Jackson, 2003 and Tichit, 2003.) In the longer run, however, with a competitive labor market the equilibrium wage will reflect this higher level of productivity among the surviving new firms.

A high rate of entry and survival of new firms increases the competitiveness of product and labor markets, eventually eliminating the monopoly rents that accrue in concentrated markets (McMillan, 1995). Johnson, McMillan and Woodruff (2002) argue that in the first years of transition small start-up firms in Poland and Russia (and in many other post-socialist economies) entered sectors, such as consumer goods, light manufacturing, trade and services that had been dominated by large state enterprises under socialism. The inefficiencies of the state enterprises in these sectors created tremendous profit opportunities for initial entrants. Over time, the continued entry of these firms reduced these profits. Johnson, et. al. (2002) show that in Poland by 1995

these rents fell as competition increased. This was not so true in Russia, however, as the slow development of market supporting institutions and lower rates of firm entry led to the persistence of initially high profit rates (see McMillan and Woodruff, 2002). Also, Frye and Shleifer (1997) present evidence that in 1996 small firms in Warsaw were operating in a more competitive market than their counterparts in Moscow. The de novo sector then provides employment through its job creation, is likely to produce higher wages in the long run due to the high productivity, and reduces monopoly rents because of the increased competition in a broad range of industries.

The economic competition created by the de novo sector increases the likelihood of a political middle class that will support centrist, and liberal, parties. The early political economy of transition literature predicted that the unemployed and those in restructuring firms threatened with unemployment would join parties of either the right or the left that promised to slow or halt the reforms or at least to continue the soft budget constraints enjoyed by the large enterprises. (See Elster, 1993; Chan, 1995; Nelson, 1993; and citations in Hellman, 1998, fn. 2.) The specter of this constituency was joined by the predictions of the creation of an oligarchic elite based on the rents accruing to the new monopolies resulting from large scale privatization. These oligarchs would then use their positions and resources to capture the government and restrict the entry of domestic or foreign enterprises that would reduce their rents. The owners and often the workers in the de novo sector, however, have no desire to support parties that either want to continue soft budget constraints or that want to protect the large monopolies. Those in the de novo sector have an interest in continuing to deregulate the economy and to increase competition in sectors on which they depend for resources, such as materials, financing, labor, etc.[1]

Our contention is that the faster the emergence of this de novo sector and the larger and more robust it is the faster will be the emergence of a prominent economic and political middle class and the greater the economic growth in the transitional countries. The remainder of the paper relates several measures of the size and characteristics of this middle class to the size and growth of this de novo sector. Much of the evidence we present is not new to this paper, but it has not been pulled together to make a broader assessment of the connections just outlined.

2. Assessing the Economic and Political Middle Class

As the preceding discussion suggested we examine several measures of well being and the growth of a middle class. The regions in Russia and Poland are the focus or our attention. Unfortunately the data are not particularly comparable between the two countries, which necessitates some compromises on our part and weakens the ability to make direct comparisons. Nonetheless, the patterns we observe with the available data from the two countries tell a consistent story. We begin by describing our measures of income growth and distribution in Poland and then Russia.

Measuring Income Growth and Distribution and New Firm Creation

The data and methods used to estimate the changes in regional income and shares going to the lowest quintiles are described in detail in Berkowitz and Jackson (2005) and are only summarized here. Estimates of regional income distributions and of the size of the de novo sector in Poland come from specialized data collections. The Polish Central Statistical Office does not

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[1] We do not want to sound naïve about what the owners in these emerging markets would like, as they would like subsidies and protection as much as any oligarch, it is just that they are not in a position to achieve these goals, so they are more likely to support the liberal parties. Likewise, their employees would prefer the protections and wages offered by state unions, but again they are not in a position to achieve these ends.

disseminate publicly data on the regional distribution of income, necessitating a second best strategy. The Institute for Social Studies at the University of Warsaw has conducted the Polish General Polish Social Survey since 1992 (Cichomski and Morawski. 2002). This survey interviewed a nationally representative random sample of about 1600 households in 1992, 1993, and 1994 and of about 2300 households in 1997 and in1999.[2] One of the questions asked for total monthly family income. The 1992, 1993 and 1994 samples are pooled and family incomes in 1993 and 1994 adjusted to 1992 price levels using the consumer price index. This set of respondents is referred to as the 1993 sample. Similarly the 1997 and 1999 surveys are pooled and 1999 incomes adjusted to 1997 levels. This sample is referred to as the 1998 sample. Each is disaggregated by region (voivodship), of which there are forty-nine. Measures of income level and distribution are computed for each region based on the respondents residing in that region.

Table 2 provides descriptive statistics for the means and ranges among voivodships. (The Warsaw region is omitted from these statistics for reasons we discuss subsequently.) The average and median growth in family incomes between 1993 and 1998, adjusted for changes in the CPI, are about thirty-five percent. There is also a considerable range with the worst off region having a decline of thirteen percent and the best off region increasing by ninety-five percent. Income distribution shows a modest improvement during this period as well. The income share of both the first and second quintile increases by two-tenths of a percent during the 1993 to 1998 period. The standard deviation of the change in income shares at the regional level indicates there is considerable heterogeneity among regions, which is also shown by the difference between the minimum and maximum changes. The former is a negative ten percent while the largest is a growth of twelve percent. The correlation between regional shares in 1993 and in 1998, which is -0.2, further underscores the substantial regional variations. The question we explore with the Polish data is whether these variations in income growth and shares are related to the size and growth of the de novo sector.

(Table 2 About Here.)

Measuring the size and growth of the de novo sector in transitional economies is a daunting task. In Poland, however, we have access to a unique dataset developed by the Economics and Statistics Research Office of the Polish Central Statistical Office (GUS). They created longitudinal data tracking individual firms from annual reports filed by individual enterprises that measure the entry, survival and growth of new firms for the period 1990 through 1997. (See Jackson, Klich, and Poznańska, 1999 and 2005.) The firms' filings are linked to follow the survival and employment growth of small firms that existed in 1990 and the entry, survival and growth of new firms that entered after 1990. From these data we calculate the number of firms in each region in 1997 that were small in 1990 or had entered since then and their total employment. These counts of employment and firms are denominated by the size of the workforce and by population, respectively. These firms' employment share in 1997 and the change in their employment share from 1993 to 1997 are our measures of the size of the de novo economic sector in each region. The bottom part of Table 2 shows the summary statistics for these variables.

The effort to develop comparable data for Russia draws upon official Russian sources summarizing income distribution and small enterprise formation. We use published regional data supplied by the official Russian statistical agency (Goskomstat Rossii, 1996, 2001, 2002). These contain representative regional surveys of household income, regional registries of small enterprises, and data on the number of employees and sales in these new enterprises. Regional income distribution is reported in 1995, 2000 and 2001 and the methodology does not change

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[2] There is also a 1995 study that is not included in our analysis.

over time. Russia contains 89 regions; the 1995 national survey covers 75 of the regions, and the 2001 survey covers 77. We match data from the national sample with our regional data set, which includes early privatization data and other regional covariates, and obtain a sub-sample of 67 regions in 1995 and 2001 (Moscow is excluded for reasons we discuss in the next section). Data on average per capita household income, which we use to measure regional incomes, goes back to 1993. All subsequent per capita household income measures are deflated in terms of 1993 so that a real growth figure can be computed.

Table 2 reports the changes in regional income and the share of income held by the bottom forty percent of the regional income distribution. The data on income growth (actually decline) are from Berkowitz and DeJong (2005) and cover the period 1993 to 2000. The data on the changes in income distribution are from Berkowitz and Jackson (2005) and are for 1995 to 2001. The devastating effects of the 1998 crash are evident in the data on income changes as average regional income fell by about seven percent and declined in all regions except Moscow.[3] In terms of income distribution, between 1995 and 2001 income distribution within Russian regions becomes slightly more inequitable. Households in the bottom 40-percent of the income distribution on average lost 1-percentage point of their share of overall income. There is less variation in income shares within Russia than within Poland. For example, the correlation between 1995 and 2001 income shares is 0.45 for the first and second quintiles combined. And, the range across regions is relatively smaller, from -6.5% to 5.2% for the first and second quintiles. Nevertheless, there is more than enough variation across the regions over time for us to be able identify reasons for the change in distributions. Finally, it is also clear that income distribution is more inequitable in Russia: during 1993 and 1998, the bottom 40-percent in Poland receives roughly 21.7% of the income, while in Russia, during 1995 and 2001, this group receives 19.6%.

For Russia we use small enterprise employment as a share of the regional workforce as measures of new and small enterprise development. These legally registered small enterprises include spin-offs from state enterprise and start-ups as well as privatized small former state enterprises. Before 1996, these small enterprises were defined by employment ceilings: over the course of a year on average a small enterprise could hire no more than 200 workers; and employment ceilings varied across branches, for example, the ceiling was 100 in scientific services and 15 in retail trade. However, as of 1996, small enterprises are defined by both ownership structure and employment. Regarding ownership, any enterprise, no matter how small, is not legally defined as small if it has an outside owner (a large company, a charitable organization, social organization or religious organization) that owns at least 25% of the initial enterprise capital. And, regarding employment ceilings, these have also changed and generally become smaller, for example, the highest ceiling is now 100 and applies to industry, construction and transport; and, the retail trade ceiling is elevated to 30 employees on average per year. Because the definition of a Russian and Polish small enterprise is very different, our small enterprise data cannot be used to compare small enterprise levels in these two countries.

Table 2 reports data on the evolution of small enterprises for pairs of years in which the definitions are comparable and for which data are available. Remarkably, the number of small enterprises per capita and the share of the labor force employed in small enterprises decreases over time. There is an increase in employment shares in only two regions in our sub-sample, Nizhni Novgorod and St. Petersburg. Thus, even though we are using somewhat different

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[3] We also examine regional income growth for 1993 to 1997, where the average growth is 1.3% with a range of -8.2% to +10.8%, again excluding Moscow where it increased by over 18%.

definitions of start-up and de novo activity, it is clear that small enterprise development is much more dynamic over time in Poland than in Russia.

3. New Firm Creation and the Economic Middle Class

For the social transition to succeed it is vital that standard of livings, which we measure by regional and personal income, increase and that this income is shared equitably. This section discusses estimation of the influence of small enterprise development on income growth and distribution in Poland and Russia. Our analysis begins with the following equation:

$$\Delta Y_t = \alpha + \beta SMENT + \delta X + \rho Y_{t-1} + \varepsilon_t, \qquad (1)$$

where ΔY_t and Y_{t-1}, denote either the change in income or the income share going to the lowest two quintiles and its lagged value respectively. *SMENT* is a measure of small enterprise development. Its primary measure is the employment share of this sector in 1997 in Poland and in 2001 in Russia. *SMENT* is also measured by the number of de novo private firms denominated by population divided by one hundred and then by the change in de novo private employment share from 1993 to 1997 for Poland and for 1995 to 2001 for Russia. Our interest is in the size of β as it indicates by how much we expect income levels and its distribution to improve as regions increase their rates of growth of new firms. *X* is a vector of regional covariates. These are education and log of population in the income distribution equations. The income growth equation for Poland also includes both education and the log of population and for Russia it includes log of population and initial industrialization.

Estimation Strategy

Estimation of eq. 1 is complicated by the possibility of reverse causality. The likelihood that increases in income stimulate new business formation is obvious. As for income distribution, Gabszewicz and Thisse (1980) and Shaked and Sutton (1982) show through formal models that the entry of new firms in markets characterized by monopolistic competition is related to the distribution of income. There is also a set of empirical studies arguing that more equitable income distributions are associated with higher rates of economic growth. For a summary of this research see Aghion, Caroli and Garcia-Peñalosa (1999) and Forbes (2000) for a contrary view. Keane and Prassad (2002) report a strong negative correlation between growth and inequality for fourteen transition countries over the first eight years of the transition. If growth in these countries is strongly related to the growth of the de novo sector, as we believe it is, then our measures of small enterprise development will be endogenous in eq. 1.

To overcome the estimation problems created by this endogeneity we develop a set of instruments for *SMENT* that should provide consistent estimates for the relationship between new enterprise development and changes in income equality. We use early privatization and initial conditions as our instruments. Because of differences in data availability and in their approaches to reforms the precise variables differ in each country. For Russia the two instruments are the large and small scale privatizations, defined as the number of privatized firms in each category per 1000 population (source: Goskomstat, 1994).[4]. In Poland only data on large scale privatization, defined as the proportion of the 1993 workforce employed in firms privatized to that point, is available. Additional relevant initial condition variables are the proportion of the

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[4] The regional privatization combined voucher and cash privatization of large and medium sized companies. In an effort to avoid problems associated with over-identification, we do not include early regional privatization.

1990 non-farm workforce employed in state-owned enterprises and the proportion of the workforce employed in private enterprises with fewer than one hundred employees.[5]

The first requirement for our instruments is that they be directly related to the size of the de novo enterprise sector. This assumption is inspired by McMillan (1995), who argues that early privatization affects the emergence of a regulatory environment that enhances the entry and development of small enterprises. It is expected that privatization, if done properly, weakens the political connections of the controllers of formerly state owned enterprises. In this case governments, both national and local, would not have an incentive to use their tax and regulatory policy to protect state owned enterprises against entering small enterprises. Further, governments can expand their tax base and enhance the standard of living by developing a pro-small business regulatory environment. If privatization fails to eliminate these political connections then we have the same conditions that exist with a large concentration of state enterprises where governments will have an incentive to protect the large enterprises. Berkowitz and Holland (2001) find strong positive relationships between new firm registrations and federal and regional privatization in Russia, but small negative relationships for local privatization.

The greater the degree of capture of government agencies by the privatized firms and the smaller the separation of these firms from the government the weaker should be the relationship between privatization and new firm entry. Poland and Russia have quite different privatization experiences. Poland proceeded very slowly with large scale privatization while Russia privatized very rapidly. Several papers argue that early Russian privatization led to a corrupt regulatory environment that persisted through at least the mid 1990s while early Polish privatization had the opposite effect. (See Alexeev, 1999; Berkowitz and Li, 2000; Black, Kraakman and Tarassova, 2000; Frye and Shleifer, 1997; Hellman, 1998; and Shleifer and Vishny, 1993.) A number of estimates of corruption indicate far less corruption in Poland than in Russia (Johnson, et. al., 2002; Hellman, Jones and Kaufman, 2000; Karatnycky, et. al., 2001; Transparency International, 1996) and less governmental capture (Hellman, et. al., 2000). These differences should produce stronger associations between large scale privatization and new firm growth in Poland than in Russia.

Initial conditions are important factors in the development of the Polish de novo private sector. Poland had a nascent small private sector and a varied mix of state-owned, collective and large domestic and foreign enterprises before the transition began. The concentration of these enterprises varied substantially by region. Given the importance of agglomeration, learning, and political effects the presence of a significant number of small private enterprises at the beginning of the transition gives a region a substantial advantage in expanding its de novo sector as the transition proceeds. The presence of state-owned enterprises at the beginning of the transition is expected to depress the entrepreneurial process and therefore the growth and ultimately the size of the de novo sector. These enterprises pay higher wages, thus raising the labor costs and reducing its supply for new enterprises, which will restrict their growth. Even within the more benign Polish environment these firms are likely to be able to exert undue influence on a range of institutions from financial organizations to governments for preferential treatment and various subsidies, which again creates an unfavorable climate for enterprise creation. Finally, there is empirical evidence from the U. S. and Poland that individuals residing in regions dominated by large organizations, which dominate the state-owned sector, independent of the size of their own employer, and employees in large organizations express less support for entrepreneurs and are less likely to say they would undertake entrepreneurial activity. (Jackson and Rodkey, 1994 and

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[5] For the equation with new firms per capita we denominate the employment in small firms by population.

Jackson and Marcinkowski, 1999.) All three factors lead us to expect a negative relationship between a region's density of state-owned enterprises and the development of its de novo sector. These initial conditions will be relatively unimportant in explaining the development of the de novo sector in Russia as there was virtually no small private sector and all employment was in state firms at the beginning of the transition.

A second assumption in our choice of instruments is that they are not systematically related to the change in income and in the income share of the bottom two quintiles after we control for new firm entry, lagged income or income shares and the other covariates. In other words, their effect on income and income shares is only through their relationship with new firm creation and growth. In order to empirically validate this identifying assumption we take two steps. First in the estimating equation we control for the influence of initial income and income distribution. Initial conditions and early privatization are measured prior to our measure of initial income shares so that if these variables directly affect inequality their strongest effects should be on this variable and not on the subsequent change in income. Second, we validate our exclusion restrictions by employing over-identification tests. (See Hansen, 1982, and Baum, Schaffer and Stillman, 2003.) These tests examine whether the identifying variables are individually or jointly correlated to the changes in income distribution conditional on firm entry and the other covariates in equation (1). If we do not reject the null hypothesis of no correlation it provides some statistical confidence in our assumption.[6]

Based on these propositions the first stage regression used to identify the impact of *SMENT* on $\Delta DIST$ is

$$SMENT = \alpha_1 + \beta_1 PRIV + \beta_3 COND_0 + \delta_1 X + \varepsilon_1 \tag{2}$$

where PRIV denotes the privatization during 1990-93 for Poland and small and large privatization in 1993 for Russa and $COND_0$, which applies only for Poland, is the 1990 employment in small private and in state-owned firms.[7] We therefore use the variables in PRIV and in $COND_0$ as over-identifying restrictions when we estimate (1) for either Poland or Russia.

We make one adjustment to the data before estimating eqs. 1 and 2. The Warsaw region is dropped from the Polish sample and the Moscow from the Russian sample because they are extreme outliers whose inclusion exerts undue influence on the results. (The dfits statistics for Warsaw and Moscow for each first stage estimation are about six times larger than both the next largest value and the conventional threshold for concluding that the observation may be problematic.) Both are capital cities with a very high proportion of government employees, whose wages are not determined by usual market forces but are more reflective of political interests. Both also dominated other regions in the amount of foreign investment, accounting for about half of all employment in new foreign owned firms, further skewing the income data.

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[6] As with all conventional statistical tests, not rejecting the null hypothesis does not mean we can accept it. On the other hand, the higher the probability of getting our statistical results by chance under the null, the more likely the null is to be correct.

[7] The privatized employment in 1993 and the state-owned employment in 1990 are denominated by the non-farm workforce as we are using these variables to measure the concentration of industrial and commercial activity in these firms. For the small private and de novo sector variables we are trying to assess the level of participation of the entire workforce in these enterprises.

Empirical Results – Income Distribution

We begin with the relationships between new enterprise creation and changes in income distribution. The full results for these estimations including detailed assessments of the quality of the instrumental variables is presented in Berkowitz and Jackson (2005). Here we only present the results for the second stage estimations relating new enterprises to changes in the income share of the bottom two quintiles. These results are shown in Table 3. The top part of the table presents the results using the proportion of the workforce employed in new and/or small enterprises in 1997 and 2000 for Poland and Russia respectively. The second part uses the change in this variable as the measure for new enterprise development while the last part uses the number of firms per hundred workers as the measure of the new economy.

(Table 3 About Here.)

Regardless of which measure is used and for both countries there is a strong and significant association between the growth of the de novo sector and the growth of the income share of the lowest two quintiles. The coefficients are not comparable because of the different ways that *SMENT* is measured, but in substantive terms each indicates substantial increase in income growth as de novo employment increases. In Russia, a one standard deviation difference in each of the measures of new and small firm growth is associated with between a larger income share for the bottom forty percent of 1.4%, a 3.1% and a 3.2% The smallest share growth is associated with the measure of new employment. In Poland these one standard deviation differences are associated with a 1.4%, a 1.7% and a 1.6% larger share for the first and second quintiles. In both countries differences in the size and growth rate of the de novo sector have a large association with changes in income shares suggesting that it is the dynamics of this sector that are important in maintain income equality.

The other variables suggest that changes in income shares are negatively related to the initial shares, to education levels and to populations. Thus, in larger regions and in those with higher education levels the poor are likely to have become relatively worse off during the transition. Lastly, the Hansen J-statistics suggest it is difficult to reject the null hypothesis that the instruments are uncorrelated with the error term in the equation for changes in income shares. In both countries the likelihood of getting this statistic by chance with no correlation is above 0.4. We do not report it here, but these instruments also have a very high partial association with the size and growth of the new and small enterprise sector, which is the other criteria for good instruments.

Empirical Results – Income Growth

The relations between the size and growth of the de novo sector and income growth offer an important compliment to the relations with income distribution. Table 4 shows these relations for Poland and Table 5 for Russia. The results for Russia are taken from Berkowitz and DeJong (2004) with minor changes to their specifications to make the models more similar to those in Poland.[8] We also estimate an income growth equation for Russia for the period 1993 to 1997.

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[8] The biggest difference between the Polish and Russian models is that education is positiviely and significantly related to income growth in Poland but not in Russia. It is still an important instrument for predicting new firm and new employment growth so it remains as an excluded instrument in the Russian analysis. Berkowitz and DeJong also include a measure of initial local industrial potential, which is based on an industry's labor share times its value added net of labor costs and summed for tradable industries. It is meant to measure a region's competitiveness on world markets prior to transition. Otherwise the model is similar to the Polish model and to the model estimate for the change in income shares.

There is a legitimate concern that the income changes between 1993 and 2000 will be dominated by the 1998 crash, which could make any relationships very specific to that, we hope, unusual experience. The 1993 to 1997 period was not one of robust growth but is more likely to be representative of transitions.

(Tables 4 and 5 About Here.)

In Poland and for both time periods in Russia regions with larger new and/or small enterprise sectors had significantly higher income growth rates. The coefficients are not comparable because of the different ways that new enterprise development and income are measured in each country, but in substantive terms each indicates a substantial increase in income growth as the number of de novo firms and their employment increases. In Russia, a one standard deviation difference in *SMENT* is associated with a 0.7%, a 1.9% or a 0.9% higher annual growth rate between 1993 and 2000 depending upon which measure is used. (The measure of the change in new sector employment implies the very large growth rate.) For the 1993 to 1997 period in Russia the comparable changes in annual growth rates are 1.2% and 1.5% for employment share and numbers of firms respectively. In Poland a one standard deviation increase in *SMENT* is associated with a between a 1.01% and a 1.11% higher annual growth rate between 1993 and 1998. These are substantial annual growth rates, which when compounded over five or more years imply a significantly increasing income gap between regions with successful new firm entry and growth and those regions without a robust new sector.

The control variables function as expected. In Poland education levels and population are positively associated with income growth. Interestingly, 1993 income levels are strongly negatively associated with income growth, indicating that previously better off regions had lower growth, unless they were able to stimulate new firm creation. In Russia the initial industrial capacity and population are positively associated with income growth, though weakly so for population. Initial income is essentially unrelated to income growth. The Hansen J-statistic testing the independence of the instruments from the stochastic term suggest we cannot reject the null hypothesis of independence. The lowest of the probabilities of getting the observed result by chance under this null is 0.19 and most probabilities are between 0.25 and 0.50. These results offer some support for out effort to control for endogeneity through the instrumental variables.

The results in Tables 3–5 make a strong case for the importance of new firm creation in developing an economic middle class. In Poland and Russia, despite their very different transitions, higher rates of new firm entry and growth are positively associated with both income growth and the share of that income going to the lowest two quintiles. Thus, contrary to some views that a successful transition hollows out the middle class we find that new firm growth is necessary for a successful transition and enhances the well-being of the middle class.

4. New Firm Creation and the Political Middle Class

The political side of our proposition is that the successful new firms stimulate the growth of a liberal, centrist, political constituency that supports both economic and political reforms. We have been referring to this constituency as a political middle class, which parallels our economic middle class. In this section we summarize extensive data from various Polish studies on attitudes and elections and some findings from Russia to examine this proposition.

Liberal Economic and Political Attitudes

Our first proposition is that people employed in new enterprises are more likely to express liberal attitudes towards economic and political reforms. Data from Poland and Russia are consistent with this proposition. The Russian data are from extensive studies in 1993 and 1995 of a large set of attitudes reported in Zimmerman (2002). We have extracted two questions from this survey. The first asks if it a good idea for there to be competition among political parties and

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the second if there should be competition between enterprises. These go to the heart of both the liberal reforms. Respondents are coded by type of enterprise where they work, with 7.0% and 7.8% reporting they work in private or limited liability firms in 1993 and 1995 respectively. Responses to the two questions about competition are related to this measure of private work, and measures indicating that the person is not working (primarily student, housewife unemployed), is retired, is female, lives in a village, is a church attendee, the person's education, income, and age.

The Polish data are from the General Polish Social Survey conducted by the Institute of Social Studies at the University of Warsaw throughout the 1990's (Cichomski and Morawski. 1999) and the results here are from Jackson, et. al. 2005.[9] The question on liberal economic attitudes is based on how much confidence respondents have in private relative to state owned firms. High values indicate a great deal of confidence in private firms and hardly any confidence in state firms and low values just the opposite. The question on politically liberal attitudes is respondents' assessments of Communism as a form of government, with values ranging from a zero being a good form to one indicating it is a bad form. Responses to these attitude questions are related to the same variables as in the Russian analysis plus whether the respondent is a private farmer, an employment category not present in Russia. The Polish equations also include a variable measuring the amount of de novo employment as a proportion of the workforce for the region where the respondent lives. An interesting comparison is that the proportion of the Polish respondents reporting they work in a private firm increases from 15.0% in 1992 to 26.7% in 1997, which is much larger than the seven to eight percent of the Russian respondents who indicate they work in the private sector.

Table 6 presents the estimated attitude models for both countries. (Each equation includes a year dummy variable, which we omit here.) In both countries and for both economic and political attitudes people working in private enterprises express more support for liberal outcomes than do those working in state enterprises or for the government itself. (These latter two are the base categories.) Interestingly, those who are not working express liberal attitudes similar to those of people employed in the private sector. In Poland, where we have information on the size of the regional de novo economy, the results indicate that irrespective of where one works, residents in areas succeeding at developing their de novo economies express more support for private enterprises and less support for Communism than residents in regions that are lagging.

(Table 6 About Here.)

The other significant variables in both Russia and Poland are gender and a village residence, with women and villagers less likely than men or urban dwellers to express liberal attitudes; and education, with support for liberal economic and political attitudes increasing with years of schooling. The notable differences between the two countries are the absence of any relationship between attitudes and age, income and church attendance in Russia while there are very strong relationships with these variables in Poland. Among Poles, liberal attitudes increase with income and church attendance and decrease with age until about age fifty, at which point increasing age is associated with more liberal attitudes.

Based on this evidence we feel modestly confident about the proposition that the growth of the de novo sector stimulates the growth of a set of citizens with liberal economic and political attitudes, both among its workers and in the regions where this sector is expanding.

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[9] We have reestimated their equations dropping variables with insignificant coefficients to present a more parsimonious model. The coefficients on the private sector employment and regional new sector employment variables are unchanged.

Liberal Voting in Poland and Russia

There have been extensive analyses of attitudes and voting patterns in Polish elections using both individual and aggregate data. (See Fidrmuc, 2000a and 2000b; Jackson, Klich and Poznańska, 2005; Jackson, Mach and Markowski, 20005; Mach and Jackson, 2005; Markowski, 1999 and 2002; and Slomczynski, 2002,) Unfortunately, there are fewer studies of Russian elections and only two that we know that includes information on de novo employment (Frye, 2002 and 2005 and Berkowitz and DeJong, 1999). One consistent result in both the individual and aggregate analyses is the association between being an owner or to a lesser extent an employee in a new firm or residing in an area with a high rate of new firm creation and voting for one of the liberal parties. The individual level analyses also show strong associations between the liberal attitudes just discussed and voting for liberal, pro-reform parties.

Zimmerman (2002) shows that in the 1996 Russian presidential election whether one held economic and politically liberal attitudes very clearly separated Yeltsin voters form Ziuganov voters. Over ninety percent of those with liberal attitudes (fifty-three percent of the voters) voted for Yeltsin while eighty-five percent of those with non-liberal attitudes voted for Ziuganov in 1996. Frye (2002 & 2005) shows that managers in newly formed enterprises have more liberal economic and political attitudes and are more likely to vote for liberal candidates than managers in the state firms and/or in state firms that were privatized.

In Poland, Jackson, et. al. (2005) show strong associations between the economic and political attitudes just analyzed and voting in the 1993 and 1997 parliamentary elections and the 1995 presidential election. People with liberal attitudes are more likely to vote for the liberal Democratic Union in 1993, Wałęsa in 1995 and the Union of Freedom in 1997. The liberal votes came at the expense of both the post-Communist parties, the SLD and the PSL and the far right and trade union parties. The Polish far right and the trade union both espoused non-liberal economic policies, favoring more state control and subsidies for farmers and old industrial firms. Mach and Jackson (2005) take the argument one step further using a longitudinal data set. Their evidence shows that respondents whose opinions became more liberal were likely to switch their votes to liberal parties and away from both the right and the left. And, vice-versa for those whose attitudes had become less liberal.

We finish the discussion with a presentation of the evidence from aggregate election data that liberal parties will have larger vote shares in regions with higher rates of new firm entry and growth, every thing else equal. This evidence, coupled with the evidence about the relationships between attitudes favoring liberal policies and liberal voting, will be the strongest evidence about de novo economic activity and a rising political middle class.

Berkowitz and DeJong (1999) in a study of internal goods prices in Russia separate regions based on how they voted in the two rounds of the 1996 Presidential election. Those voting for Ziuganov in both rounds are labeled Red States, those voting for Yeltsin in both are Blue states (cross-national, cross-discipline consistency?) and the few that divided are Yellow. The paper's focus is not on correlates of voting, so they do not present a specified model relating vote shares for each candidate to de novo firm activity and other covariates. They do, however, show descriptive statistics on the difference in enterprise start-ups per capita in Red and non-Red states. The difference is statistically significant, with non-Red states having a two-thirds higher rate of start-ups, 5.3 to 3.23 per capita. For our purposes we can turn this association around to say that states with higher rates of startups are more likely to have voted for Yeltsin than Ziuganov.

The evidence from Central Europe is much stronger as both Fidrmuc (2000a and 2000b) and Jackson, et. al. (2005) relate regional election returns to measures of the size of the regional de novo economy, along with other covariates that help account for voting patterns. Fidrmuc uses an admittedly weak measure of de novo activity in his analysis of voting in the Czech and Slovak

Republics, Hungary and Poland.[10] The evidence generally shows a statistically significant and positive correlation between the amount of entrepreneurial activity and votes for the so-called reform parties and a negative association with votes for the left and the nationalist parties in these countries. Across eight elections and multiple parties per election there are less than a handful of results that are inconsistent with his proposition. Of these is for the MSzP party in Hungary in 1994, which Grzymała-Busse (2002) characterizes as having become increasing liberal as it strived to be an electoral success. Fidrmuc concludes by saying, "The *winners*, who form the pro-reform constituency, are the private entrepreneurs, urban residents, white-collar workers and highly educated voters.." (Fidrmuc, 2000b, p. 13, emphasis his.)

 Jackson, et. al. (2005) use a more inclusive and updated measure of regional de novo activity based on data filed with the Polish Central Statistical Office and integrated into a longitudinal file to track survival and employment growth in individual firms. (These are the data used to analyze income distribution and growth in Poland.) They show that for both the 1993 and 1997 parliamentary elections that the amount of de novo employment in a region is negatively related to vote shares for both the post-Communist, left parties (the SLD and the PSL) and the trade union and far right parties (Solidarity and the KPN respectively in 1993 and the AWS and the ROP, respectively in 1997) while positively related to vote shares for the economically liberal UD and KLD in 1993 and the UW in 1997. The extend the analysis to simulate vote and seat shares for counterfactual elections assuming fifty percent higher rates of de novo job creation. In both elections, the centrist, liberal UD and UW would have gained a significant bloc of seats.

Taken collectively, the voting evidence from the set of countries and early elections is that de novo activity is positively related to increasing vote shares for the centrist, liberal parties, and negatively related to shares for both left and far right parties. We acknowledge the weaknesses of each specific regression equation, but feel this collective evidence provides strong and consistent support for the proposition that an expanding de novo sector fully in private hands is a stimulant to the growth of a centrist, liberal political bloc, what we are calling the political middle class.

5. Conclusions

The success of a transition depends upon the development of a growing aggregate economy with an expanding middle class and a stable political structure with effective competition among contending parties. The evidence from a number of studies cited here and from the analyses presented in out tables is that this economic growth and its more equitable distribution is dependent upon the growth of a privately owned, entrepreneurially based de novo sector. Countries where this activity is weak in the aggregate, such as much of Russia, are likely to have a very weak economic transition, despite enormous raw material resources. By contrast, countries where this activity is strong, such as Poland and Hungary, are predicted to have a successful economic transition, despite the absence of natural wealth.

On the political side, this private entrepreneurial activity is expected to stimulate the growth of a centrist bloc of voters, our so-called political middle class. Even when this bloc does not dominate in terms of absolute proportions of the electorate, the larger its size the more it shifts and concentrates the distribution of voters, often denoted by the median voter, in a more liberal direction. This bloc is important directly as it is supports centrist liberal parties. It is important

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[10] He uses the number of unincorporated entrepreneurs per capita, which misses the employment generated by de novo firms as well as the owners who incorporate their businesses. The measure is also not updated to match the elections, as for example, the variable for the Polish elections is the same in 1997 as in 1993, yet we know the de novo sector was substantially larger in 1997 than in 1993.

beyond that, however, as it and the shifts in the aggregate electorate it produces puts constraints on the policies of parties further to the left and to the right, at least if these parties hope to obtain a substantial bloc of seats in parliament or run competitive presidential candidates. For superb evidence on how post-Communist parties' choices with respect to becoming more centrist affected their political success see Grzymała-Busse (2002) and Jackson, Mach and Markowski (2005). We further contend that that this shift of voters towards the center and its electoral implications will be associated with the development of a more stable party structure and a more mature democracy, as measured by the ability to transfer power during post-election transitions. Without major disruptions. [11] One only needs to look at the transitional history in Hungary and Poland, where post-Communist governments succeeded the early reform governments only to be succeeded by governments led by reformers, without major disruptions to economic policy or to the efforts to meet the demands of joining the EU.

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[11] We want to make clear that our claim is that de novo economic activity and the emergence of this centrist bloc is important in developing a stable party structure, not that it is necessary and it surely not that it is sufficient.

Table 1: Income Distibution, Gini Coefficients			
Country	1987-89	1997-99	Change
Czech Republic	0.20	0.26	+0.06
Hungary	0.23	0.25	+0.02
Poland	0.28	0.33	+0.05
Slovakia	0.19	0.25	+0.06
Slovenia	0.21	0.25	+0.04
Central-East Europe Mean	0.25	0.30	+0.05
Estonia	0.28	0.36	+0.08
Russia	0.27	0.47	+0.20
Ukraine	0.23	0.32	+0.09
Belarus	0.23	0.24	+0.01
Former CIS Mean	0.26	0.43	+0.17
OECD Mean		0.31	

Data from UNICEF, 2001.

Table 2: Descriptive Measures of Changes in Income Distributions and Level				
Variable	Russia: 1993-2000 [a]		Poland: 1993-1998 [b]	
Percent Change in Household Income				
Regional Mean	-7.4%		34.5%	
Regional Median	-7.7%		35.6%	
Regional St. Deviation	3.0%		24.4%	
Regional Minimum	-14.6%		-12.8%	
Regional Maximum	0.9%		94.8%	
Change in 1st and 2nd Quintile Income Shares	Russia: 1995-2001 [a]		Poland: 1993-1998 [b]	
Regional Mean	-1.0%		0.2%	
Regional Median	-1.3%		0.3%	
Regional St. Deviation	2.5%		4.2%	
Regional Minimum	-6.5%		-9.7%	
Regional Maximum	5.2%		12.2%	
Employment in Small or New Firms/Workforce	2001	Δ'95-01	1997	Δ'93-97
Regional Mean	7.6%	-5.3%	11.0%	6.7%
Regional Median	7.1%	-5.5%	9.7%	5.8%
Regional St. Deviation	3.4%	3.3%	4.7%	3.0%
Regional Minimum	2.4%	-14.8%	3.6%	2.0%
Regional Maximum	26.4%	7.2%	23.0%	15.4%
a. Moscow region omitted from all statistics.				
b. Warsaw region omitted from all statistics.				

Table 3: Changes in Income Shares and the New Enterprise Sector				
	Russia: 1995-2001		Poland: 1993-1998	
Variable	Coeff	St. Err.	Coeff	St. Err.
$Dist_{t-1}$	-0.79	0.08	-1.50	0.22
New Emp /Work.	0.41	0.13	0.31	0.11
Education	-0.29	0.12	-1.35	0.77
Log(Pop)	-0.92	0.23	-1.01	0.45
Constant	22.39	2.95	42.76	9.66
R^2	0.63		0.64	
Hansen J	0.05	0.83 [a]	1.50	0.47 [a]
$Dist_{t-1}$	-1.04	0.24	-1.50	0.23
Δ(*New Emp/Work*)	0.92	0.56	0.57	0.25
Education	-0.35	0.28	-1.36	0.80
Log(Pop)	-2.81	1.25	-1.32	0.58
Constant	50.07	19.58	42.27	10.02
R^2	-0.09		0.63	
Hansen J	0.13	0.72 [a]	1.60	0.45 [a]
$Dist_{t-1}$	-0.83	0.13	-1.50	0.21
New Firms/Pop	1.84	0.96	2.00	0.79
Education	-0.88	0.51	-1.46	0.85
Log(Pop)	-1.22	0.60	-1.14	0.54
Constant	31.84	10.12	43.35	10.24
R^2	0.21		0.63	
Hansen J	0.01	0.92 [a]	1.83	0.40 [a]

a. Probability of getting this statistic by chance if instruments are independent of ε_t.

Table 4: New Firm Creation and Annual Income Growth Rates in Poland, 1993 – 1998[a]						
	New Emp /Workforce		Δ(*New Emp*/*Workforce*)		*New Firms/(Pop/100)*	
Variable	Coeff	St. Err	Coeff	St. Err	Coeff	St. Err
$\text{Log(Inc}_{t-1})$	-0.260	0.028	-0.258	0.032	-0.258	0.031
De Novo Sector	0.213	0.080	0.369	0.183	1.420	0.647
Education	0.023	0.004	0.023	0.005	0.022	0.005
Log(Population)	0.019	0.004	0.018	0.005	0.018	0.005
Constant	-0.527	0.053	-0.529	0.058	-0.519	0.052
R^2	0.73		0.68		0.70	
Hansen J	3.32	0.19 [b]	2.78	0.25 [b]	2.06	0.36[b]
a. Left-hand side variable is $\text{log(Mean Income}_{98}/\text{Mean Income}_{93})$						
b. Probability of getting this statistic by chance if instruments are independent of ε_t.						

Table 5: New Firm Creation and Annual Income Growth Rates in Russia[a]						
	1993 - 2000					
	(New Emp /Workforce)$_{2000}$		Δ*(New Emp/Work.)*$_{2000}$		*New Firms/(Pop/100)*$_{2000}$	
Variable	Coeff	St. Err	Coeff	St. Err	Coeff	St. Err
Log(Inc$_{t-1}$)	-0.007	0.018	-0.008	0.023	-0.006	0.017
De Novo Sector	0.202	0.122	0.562	0.280	0.515	0.205
Indust Capacity	0.044	0.025	0.033	0.027	0.046	0.027
Log(Population)	0.010	0.006	-0.001	0.010	0.009	0.006
Constant	-0.151	0.060	-0.025	0.113	-0.148	0.061
R^2	0.11		-0.19		0.13	
Hansen J	2.78	0.25[b]	1.45	0.48[b]	1.65	0.44[b]
	1993 - 19997					
	(New Emp /Workforce)$_{1997}$				*New Firms/(Work/100)*$_{1997}$	
Variable	Coeff	St. Err			Coeff	St. Err
Log(Inc$_{t-1}$)	0.009	0.017			0.001	0.018
De Novo Sector	0.364	0.189			0.881	0.381
Indust Capacity	0.044	0.038			0.049	0.034
Log(Population)	0.011	0.007			0.012	0.007
Constant	-0.124	0.055			-0.114	0.054
R^2	0.15				0.22	
Hansen J	1.21	0.55[b]			0.38	0.83[b]
a. Left-hand side variable is log(Real per capital income$_t$/Real per capita income$_{93}$)						
b. Probability of getting this statistic by chance if instruments are independent of ε_t.						

Table 6: Attitudes Towards Liberal Economic and Political Issues				
	Russia		Poland	
Variable	Economic	Political	Economic	Political
Pvt. Work	0.050	0.055	0.059	0.034
	(0.023)	(0.030)	(0.006)	(0.008)
Not Work	0.040	0.060	0.059	0.010
	(0.021)	(0.028)	(0.010)	(0.011)
Retired	0.001	-0.049	0.011	0.008
	(0.021)	(0.028)	(0.008)	(0.010)
Education	0.016	0.023	0.009	0.016
	(0.003)	(0.003)	(0.001)	(0.001)
Log(Income)	-0.004	-0.002	0.013	0.019
	(0.005)	(0.006)	(0.004)	(0.006)
Age/100	0.151	0.254	-0.732	-0.482
	(0.235)	(0.312)	(0.083)	(0.128)
$(Age/100)^2$	-0.161	-0.119	0.721	0.521
	(0.237)	(0.314)	(0.077)	(0.129)
Female	-0.050	-0.080	-0.011	-0.023
	(0.012)	(0.016)	(0.004)	(0.006)
Village	-0.056	-0.047	-0.011	-0.028
	(0.016)	(0.021)	(0.005)	(0.010)
Church Attend.	-0.004	-0.003	0.012	0.049
	(0.003)	(0.004)	(0.004)	(0.008)
Pvt. Farmer			0.083	0.009
			(0.010)	(0.012)
%De Novo Emp			0.094	0.481
			(0.061)	(0.098)

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