

**INTERNAL MIGRATION DYNAMICS IN RUSSIA,
1985-2001:**

Determinants, Motivations and Consequences

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Executive Summary

This report presents the main findings from a study of internal migration in contemporary Russia based on individual level survey data. The Survey on Stratification and Migration Dynamics in Russia (SMDR) provides migration histories spanning 1985-2001 for a representative sample of 7167 Russian adults. The survey results yield novel insights that cannot be derived from analyses of aggregate migration data. Although the individual and regional factors identified by economic theories of migration generally shape economic migration within Russia, only about 25% of internal migrations are motivated by economic incentives, and non-economic migration responds to different. Neither the rates of overall migration and of economic migration nor the effects of individual characteristics on migration behavior were demonstrably affected by the collapse of the Soviet Union and the attendant economic shocks and political changes. Economic migrants appear to have enhanced access to employment relative to non-migrants with similar characteristics.

Introduction

How, if at all, have the frequency, patterns, motives, and consequences of internal migration in Russia evolved since the collapse of the Soviet system? Internal migration can play a vital role in redistributing the work force from struggling regions to economically dynamic regions within a country, thereby allocating labor more efficiently and ameliorating inter-regional disequilibria in employment and wages. The potential economic benefits of internal migration should be especially pronounced in a country like Russia that has experienced severe and regionally uneven exogenous economic shocks. The collapse of the Soviet system removed many legal barriers to migration. In principle, the demise of the planned economy and the growth of market institutions should have created substantial economic incentives to migrate. However, poorly developed housing and credit markets, some remaining residential restrictions in major cities like Moscow, and a general lack of information regarding job opportunities in other regions due to weak existing migrant networks might hinder migration. Thus, from a policy perspective the study of recent patterns of internal migration in Russia can reveal whether it has fulfilled its potential role in revitalizing Russia's economy. From a theoretical perspective, contemporary Russia offers an interesting case for assessing the relative weight of economic motivations and forces in shaping migration behavior.

A growing number of studies have examined internal migration in post-Soviet Russia (Bond 1994; Mitchneck and Plane 1995a, 1995b; Heleniak 1997, 1999; Zayonchkovskaya 1999; Andrienko and Guriev 2004, 2005; Gerber forthcoming). However, these studies all rely on highly aggregated official data, in some cases supplemented with highly selective surveys of migrants or potential migrants. While this type of data is useful for many purposes, it also has some limitations. The research project reported here takes a novel empirical approach, analyzing

individual-level data from a unique, nationally representative survey containing the migration histories from 1985-2001 of 7,167 Russian aged 16 and older. In this paper, I report the main findings from the survey data. First, I examine trends over this period in the overall internal migration rate, as well as in different types of migration as defined by the self-reported motives of the migrants. Next, I estimate statistical models that reveal how individual, local, and regional variables are associated with the internal migration behavior of individuals. I then examine whether economically-motivated migrants have improved labor market outcomes compared to non-migrants with similar characteristics. Before presenting the results, I provide some background on the topic and describe the data.

Background

Russia is a federation of 89 territorial units, the rough equivalent of American states. These legal “subjects” of the Russian federation fall under several administrative categories: oblasts, krais, “autonomous okrugs,” “autonomous republics,” one “autonomous oblast,” and two “gorods” (cities) – Moscow and St.Petersburg – which have subject-level status. They are conventionally referred to as Russia’s “regions” (or “oblasts”). I define internal migration a change of permanent residence within Russia that involves the crossing of an oblast boundary.¹ Note that changes of residence within an oblast do not count as internal migration, nor do moves across international borders.

¹ I do not count moves across boundaries that separate “autonomous okrugs” from the larger oblasts of which they are part: for example, a move from the Khanti-Mansiiskii autonomous okrug to another part of Tiumen oblast would not qualify as an inter-regional move. This is necessitated by the problematic way that Goskomstat reports statistics on oblasts that contain autonomous okrugs: it is not possible to treat the autonomous okrugs as independent oblasts because no data are provided on the parts of the larger oblasts that fall outside of the autonomous okrugs. Thus, for the sake of consistency across analyses, it is preferable to subsume the eleven autonomous okrugs into the larger territories of which they are part.

Spanning over 6.5 million square miles of territory, 11 time zones, and latitudes from above the Arctic circle to northern Turkey, Russia's oblasts are highly diverse climactically, geographically, and culturally. Despite their nominal autonomy, regions had little or no leeway to pursue independent economic policies during the Soviet era. In the absence of market forces, disparities in natural resource endowments, industrial structure, and, as a result, growth rates (see Shaw 1999) did not translate into correspondingly large differences in average real wages, living standards, and labor market conditions. Instead, regional economic conditions were made relatively uniform by the integrating force of the Soviet administrative system. Full employment prevailed, reflecting the lack of technological innovation, low labor productivity, an "extensive" development pattern, and soft budget constraints that characterized the Soviet economy (Kornai 1981). What differences in labor market conditions did exist were purposefully introduced by authorities to realize policy objectives. For example, the Soviet regime instituted wage bonuses to attract workers to under-populated but resource-rich northern and eastern regions (Bond 1994; Heleniak 1999).

The relative uniformity of labor market conditions removed the key incentive for inter-regional mobility posited by the neo-classical economic explanation of migration. According to the neo-classical approach, individuals move from one region to another when the economic benefits of doing so exceed the costs (Greenwood 1997). In aggregate terms, this means that migrants flow predominantly from regions with relatively low wage levels to regions with relatively high wage levels, and, because wage gains are contingent upon securing employment, from regions with relatively high unemployment to those with relatively low unemployment (Sjaastad 1962; Todaro 1969). Soviet authorities implicitly adhered to the neo-classical model when they used wage incentives to attract migrants to the far northern and eastern regions of the

country as part of their development strategies. But aside from these campaigns, low regional disparities in employment and wages gave Russians little economic incentive to migrate internally.

Soviet citizens who wished to change regions despite the uniformity of wages and labor market conditions throughout the country often faced serious obstacles. Mandatory residential permits (*propiski*) – which were often not forthcoming, depending on labor migration policies, political or security considerations, and housing availability – closed cities, and the national passport system posed practical, if imperfect barriers (Matthews 1993; Buckley 1995). Housing was very scarce in attractive areas, given the absence of a housing market, administrative allocation of housing via waiting lists, and the chronic shortage of new housing. The distribution of housing and social benefits through employing organizations on the basis of seniority provided incentives for staying put. These various restrictions and incentives could not be entirely effective at limiting internal migration that did not conform to the plans of the authorities (Buckley 1995). Nonetheless, Soviet economic and institutional conditions of the limited both the incentives and opportunities for inter-regional migration, making it relatively rare, and responsive mainly to state-sponsored regional development projects, the desire to live in Moscow, and the pursuit of more plentiful consumer goods and services (Mitchneck 1991; Mitchneck and Plane 1995a, 1995b; Lee and Struyk 1996).

Post-Soviet Changes

The collapse of the Soviet state in late 1991 eliminated most, though not all, of the conditions discouraging inter-regional migration. The new Russian government introduced sweeping market reforms in January 1992. Initiated in a context of general institutional and

economic breakdown, Russia's market transition quickly led to recession, hyper-inflation, spiraling inequality, and labor market turmoil (Gerber and Hout 1998; Clarke 1998; Gerber 2002). Economic motives become more pressing in times of crisis. Regional disparities in incomes, living standards, and labor market conditions have tended to grow in post-Soviet era (Sutherland and Hanson 1996; Van Selm 1998). Political changes also paved the way for freer migration: the Russian Constitution adopted in 1993 formally banned residence restrictions, though they persist in Moscow and other cities. Thus, post-Soviet developments created both incentives and opportunity for increased inter-regional migration. From a policy perspective, internal migration has great potential to re-equilibrate the national labor market and improve overall economic productivity by redistributing the workforce from economically struggling to economically thriving regions (see Andrienko and Guriev 2005).

Yet, the presumed economic benefits will only be realized if the internal migration behavior of Russians responds to economic incentives in the manner proposed by the neo-classical economic theory. There are grounds for skepticism on this count. Decades of Soviet experience, in which migration was not a realistic option for improving one's economic status, may have inculcated a habitual disinclination to view migration as such an option. Malfunctioning housing markets, particularly in more desirable regions, and the lack of access to credit deter migration. Poor information about economic conditions in other regions and concerns about finding housing may impede economic incentives. Finally, recent work on migration behavior emphasizes how migrant networks foster additional migration (Massey and Espinosa 1997; Massey et al. 1998). Given that migration in the Soviet era tended to be relatively infrequent, migrant networks are probably poorly developed within Russia.

Recent studies based on official aggregate panel data conclude that absolute region-to-region flows (Andrienko and Guriev 2004) and regional net migration rates (Gerber forthcoming) respond to regional economic characteristics (unemployment and mean wages) in the manner predicted by the neo-classical economic approach. However, the aggregate data do not show an increase after the Soviet collapse in the volume of inter-regional migration, which remains low by international standards (Andrienko and Guriev 2004). In any case, definitive conclusions about individual-level behavior cannot be reached using aggregate-level data: while the aggregate patterns are consistent with the economic explanation of migration, the patterns may not be driven by the mechanisms specified by that theory. As a result, the aggregate analyses do not provide convincing refutation of assertions that migration behavior of Russians tends not to be shaped by the standard economic incentives (e.g. Zayonchkovskaya 1999; Earle and Sabirianova 2002).

Aggregate data also leave key questions unanswered: which Russians are more (and less) likely to migrate? How important are economic motives relative to other motives? How does migration affect the labor market outcomes of migrants? Only by addressing these questions can we assess whether the economic perspective and findings from the broad literature on the individual-level determinants of migration apply (e.g. Sandefur and Scott 1981; Long 1982) to the Russian context. Also, these questions are essential for evaluating whether internal migration is playing the positive role anticipated by economic theories and, if not, what policies might help it do so. In short, the only way to obtain a satisfactory understanding of internal migration in Russia and to see if the transition has affected migration patterns, is to analyze individual-level data.

Data

The data are from the Survey on Stratification and Migration Dynamics in Russia (SMDR), which combines three nationally representative samples of adult Russians surveyed by the Moscow-based survey firm, VTsIOM (subsequently renamed the Levada Analytic Center), in September 2001-January 2002 (total N=7,167).² The samples were drawn using VTsIOM's standard multi-stage procedure.³ A special battery of questions obtained information about the respondent's place of residence in December 1984 and the month and year of all changes in residence from that date through the month of the survey. I constructed a spell file containing the complete residential histories for respondents from December 1984 through the time of the survey. The survey elicited the oblast (or country), the number of inhabitants, and whether close friends and/or relatives were present for each place where the respondent lived for *at least six months*. I restricted the operational definition of migration to moves involving residence of at least six months to eliminate temporary labor migrations and other short-term stays.

I merged official data on oblast-level characteristics (Goskomstat 1998, 2002) with the individual spells, obtaining time-varying measures of the regional labor market and other conditions experienced by respondents. The official data are reported annually, so regional characteristics are time-varying covariates even when respondents do not change region of

² I acknowledge support for data collection in the form of a grant from the National Science Foundation (SBR-0096607)

³ All urban population points and rural administrative areas were divided into 65 strata according to region, a proxy for ethnic composition, size, and administrative status. A total of 110 PSUs were systematically selected within strata with probabilities proportionate to size (Moscow and St.Petersburg were self-representing.) SSUs consisting of either electoral districts (in urban PSUs) or villages (in rural PSUs) were selected within each PSU such that 8-12 interviews were conducted in each SSU. Addresses within SSUs were selected using a random walk algorithm. At each address, the respondent with the nearest birthday was selected for interview. Among target respondents who could be contacted in three or fewer attempts (the minimum required by the field protocol), the response rate was 63%. Originally 7,267 interviews were conducted. However, subsequent checks revealed misconduct on the part of an interviewer. As a result, all 100 interviews (across the three waves) conducted at that interviewer's regional office were deleted. Further investigation revealed no other evidence of systematic misconduct by the interviewers. All analyses apply post-stratification weights to correct the sample distributions by gender, age, education, and type of locality (urban vs. rural).

residence. Table 1 provides official statistics on the inter-regional means and standard deviations of the two key measures of labor market conditions: mean real wages (computed by discounting the annual nominal mean wage by the cumulative region-specific price index) and the unemployment rate. These figures show the sharp drop in real wages after the Soviet collapse and the introduction of market reforms in late 1991. Also, they demonstrate the dramatic growth of inter-regional variance in real wages and in unemployment: even as the inter-regional mean real wages recovered in the mid-1990s and again at the end of the decade, the inter-regional wage variance remained stable or increased moderately. The inter-regional mean and variance in unemployment rates both grew steadily until 1998. The trends in the inter-regional variances of these two measures of labor market conditions suggest that migration has not played the equilibrating role anticipated by economic theories of migration.

TABLE 1

Inter-regional means and standard deviations on real wages and unemployment, selected years
(Source: Goskomstat Data)

	1990	1992	1994	1996	1998	2000
Mean logged average wage (1000 regionally adjusted 1991 rubles)	6.62	5.41	5.59	5.80	5.42	5.62
SD	.14	.32	.36	.39	.38	.41
Mean unemployment rate (%)*	.00	4.92	8.10	10.54	14.76	11.79
SD	.00	1.60	2.34	4.11	4.83	4.19

*No regional data on unemployment are available for 1990 or 1991, so the rates are set to zero for all regions.

TABLE 2

Descriptive statistics, cross-sections of SMDR analysis sample on January 1, selected years

	1985	1988	1992	1995	1998	2001
N	4761	5062	5545	5951	6382	6866
Woman	.57	.56	.56	.55	.55	.54
Age (-18)	20.25	21.65	23.18	24.16	25.57	26.89
University	.10	.10	.11	.11	.12	.12
Specialized secondary	.25	.26	.26	.26	.27	.26
General secondary	.17	.17	.18	.18	.17	.18
Vocational	.16	.17	.18	.18	.19	.19
Less than secondary	.32	.30	.27	.26	.25	.24
Working for hire	.76	.71	.64	.58	.54	.49
Unemployed	.01	.01	.02	.03	.04	.06
Self-employed	.00	.00	.01	.01	.02	.02
Maternity leave	.03	.04	.03	.02	.02	.02
Not in labor force	.01	.02	.03	.04	.05	.06
Retired	.12	.16	.21	.25	.28	.31
Studying, university	.02	.01	.02	.02	.02	.01
Studying, other	.03	.02	.02	.03	.02	.03
Military service	.02	.02	.02	.01	.01	.00
"Other" activity	.00	.00	.00	.00	.00	.00
Never married	.19	.17	.16	.17	.16	.16
Married	.69	.68	.65	.62	.57	.54
Divorced/separated	.05	.06	.07	.08	.10	.11
Cohabiting	.02	.02	.03	.03	.04	.06
Widowed	.06	.07	.09	.10	.12	.14
Ln(children at home + 1)	.52	.52	.51	.50	.49	.47
Ln(years current oblast)	3.19	3.27	3.35	3.40	3.44	3.48
Family current oblast	.81	.81	.81	.81	.81	.81
Friends current oblast	.80	.80	.80	.80	.79	.79
Village	.18	.18	.18	.18	.18	.17
Moscow	.06	.06	.06	.06	.06	.06
Sampled oblast	.98	.99	.99	.99	.99	1.00
<i>Regional variables (centered at annual means for all regions):</i>						
Logged wages (1991 rubles)	-.06	-.05	-.03	.03	.03	.05
Unemployment rate	.00	.00	.03	-.65	-1.55	-1.60
Small business employment rate	.00	.02	.21	.04	1.28	1.72
Murder rate	-.10	-.10	-.10	-.09	-.14	-.14
Male life expectancy	64.15	64.15	62.29	58.51	61.32	58.96

The survey also obtained employment and family structure histories, which I used to prepare time-varying measures of respondents' main activity (employed, in school, retired, unemployed etc.), marital status, and the number of children in the household. Age and

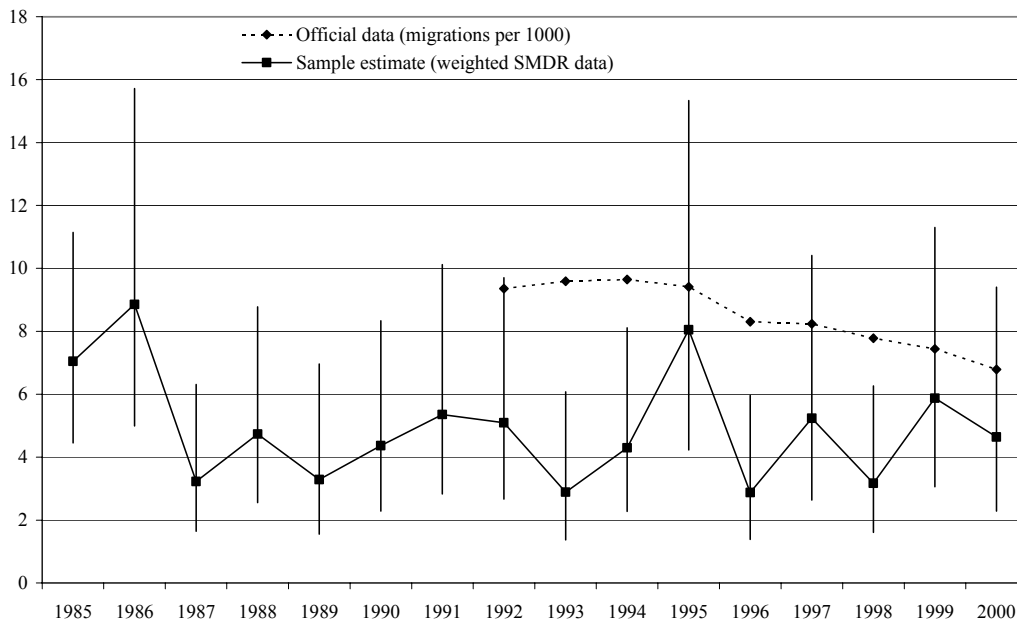
education are also time-varying, the latter based on imputed year when the highest degree was attained. Finally, I created a time-varying measure of duration (in years) of residence in current oblast. To understand the structure of the data analyzed, consider the descriptive statistics in Table 2. This table presents “snapshots” of the analysis sample – those 18 years or older residing in a Russian oblast other than Chechnya in the given month – taken in January of the respective years.⁴ The sample size increases over time as more respondents turn 18. The distributions of variables within the sample change over time, due to the addition of respondents who turn 18, move to Russia, or leave Chechnya, the loss of those who leave Russia or move to Chechnya, and, more importantly, changes (in marital status, number of children, education, main activity, place of residence) experienced by respondents. The SMDR data capture well-known trends in Russia over this period in time, such as the growth of unemployment and non-participation in the labor force, the decline of marriage, and the increase in cohabitation and divorce, suggesting the data are reliably representative of the Russian population.

To assess their suitability for the analysis of internal migration, I compare the observed rates of internal migration in the SMDR data to the available official figures. Figure 1 plots the annual estimates of the rates of internal migration from the SMDR residential histories (number migrations in the course of the year per 1000 residents at the start of the year), along with the 95% confidence intervals around those estimates, and the official rates (from Goskomstat 2000).⁵

⁴ I exclude the few spells formed by respondents living in Chechnya because the military conflict there makes it unsuitable for analyzing typical patterns of migration behavior. An argument can be made for excluding elderly respondents – e.g., those above working age – but doing so has no influence on the findings.

⁵ These rates were estimated on the entire SMDR sample for each year rather than the analysis sample as defined above, because the entire sample yields the greatest degree of comparability with the official rates (because the latter include, presumably, the migrations of those under 18). The confidence bars are not symmetrical because the estimates are calculated based on dummy variable coefficients and their respective upper and lower confidence limits from a hazard model: the non-linear relationship between the logged hazard and the estimated rate inherently produces this asymmetry.

Figure 1. Internal migration rates, 1985-2000: sample and official estimates



Over the period for which official data are available, the sample estimates are consistently below the official rates. The official rates are within the 95% confidence interval in five of the nine years. Yet the overall picture suggests that the SMDR data may underestimate migration rates somewhat. In fact, this divergence from the official figures is to be expected, since the official figures relate to all migrations while the SMDR only capture those that lead to a stay of at least 6 months in the destination region. The SMDR data also exclude movements across the boundaries of autonomous okrugs that do not involve a change in the larger oblast of which they part. In light of these considerations, the SMDR data should in fact exhibit lower levels of migration than the official rates. Altogether, Figure 1 indicates that the SMDR data are well-suited analysis of internal migration. In addition, the annual migration rates based on the SMDR data exhibit trendless fluctuation rather than a clear pattern. In any given year, the estimated rate might be unusually high or unusually low. Therefore, for all further analyses I aggregated the

years into five more-or-less equal periods: 1985-87, 1988-91, 1992-94, 1995-97, and 1998-2001. Smoothing the annual fluctuations in this manner is justified, given the apparently arbitrary nature of the year-to-year variations.

Results

Motives for Migration

Although the economic approach emphasizes the role of economic incentives in driving migration behavior, migration can result from other motives as well: unification or re-unification with family members, the pursuit of educational opportunities, a desire to return to one's place of origin, political reasons (avoiding persecution), pursuit of better climate, quality of life, or other non-economic amenities, or even a wish for new experiences and challenges. Many individuals migrate as a result of decisions made by other household members. A major advantage of individual-level migration data is that they permit one to distinguish different forms of migration based on the motivations for migration. By doing so, we can evaluate what proportion of migrations are in fact inspired by economic motives rather than assume that all or most are.

The SMDR asked respondents to indicate which of fourteen possible motives was the primary reason for each move they undertook during the observation period. I grouped the response categories into six broad groups: economic (post-graduation job assignment, to look for a job, to start a new job, to pursue new business opportunities), education (attending university, pursuing opportunities for oneself or one's children), family (joining or moving closer to family members, getting married), political (fleeing conflicts or persecution, nationalism), return to one's place of origin, and other or no reasons (including migrations undertaken as the result of somebody else's decision). The results reveal that the majority of migrations

undertaken by Russia from 1985-2001 were *not* motivated by economic incentives: instead, family reasons were the most frequently cited motive (Table 3). Generally, only about 25% of migrations were motivated primarily by economic incentives. Moreover, the relative importance of economic incentives declined in the most recent period. Economic incentives play a relatively minor role (though a greater one than political factors, a desire to return to one's origins, and education) in shaping the migrations that do take place in Russia.

TABLE 3
Main reason for inter-regional migrations, by period (Source: SMDR data)

	1985-1988	1989-1991	1992-1994	1995-1997	1998-2001	Total	N
Economic	26.0%	22.8%	23.2%	27.5%	17.8%	23.7%	105
Education	3.9%	7.8%	10.3%	4.2%	6.3%	6.0%	27
Family	39.9%	27.2%	45.3%	51.6%	44.9%	42.4%	189
Political	0.0%	3.2%	0.0%	0.4%	0.6%	0.7%	3
Return	10.8%	12.4%	0.0%	4.7%	4.9%	6.9%	31
Other/none	19.4%	26.5%	21.3%	11.6%	25.5%	20.4%	91
Total	27.3%	14.7%	14.6%	21.6%	21.7%		445

Economically-motivated internal migration is even less frequent than Russia's already low migration rates imply. Of course, retrospective accounts for the motives behind migration may not be entirely reliable, and some migrants who were motivated by economic motives may erroneously cite other factors instead. Perhaps some of those who did not make the decision to migrate (and thus are coded in the "other/none" category) could be considered economic migrants, if whoever did make the decision for them had economic motives. These caveats notwithstanding, the data strongly imply that a relatively small and declining proportion of the migrations undertaken by Russians during this period were motivated by economic incentives.

Who migrates? Individual and locality characteristics

To determine which groups of Russians are most likely to migrate internally – an issue both for migration theories and for policy makers – I estimated multivariate hazard models with repeated events for any type of migration, economic migration, and non-economic migration. The preferred model specifications exhibit a great deal of similarity with the patterns of effects identified in studies of individual-level migration behavior in other contexts (Sandefur and Scott 1981; Long 1992). Women are less likely to undertake economic migration and age reduces migration rates.⁶ Higher and specialized secondary education increase the rate of economic migration, as anticipated by human capital theories, but education has no effect on non-economic migration. Compared to employed Russians, the unemployed are considerably more likely to migrate, particularly for economic reasons. The self-employed are less likely to migrate for non-economic reasons, while women on maternity leave and retirees are more likely to do so (though neither group differs significantly with respect to economic migration). Non-participants in the labor force and students have higher net rates of both types of migration.

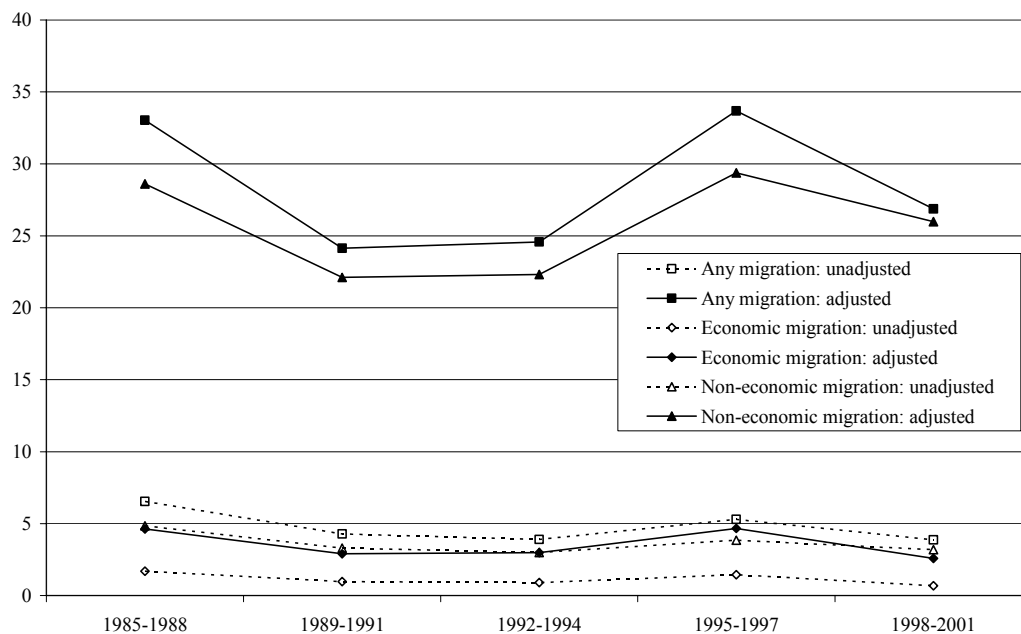
Somewhat surprisingly, marital status does not affect individual migration rates; the inhibiting effect of having children in the house only applies to non-economic migration. Duration of residence exerts a negative effect: the longer one lives in a place, the less likely one is to leave, though the logarithmic form of this effect suggests it declines in strength over time.⁷ All these effects, aside from the null finding regarding marital status, are intuitively plausible and consistent with findings from other contexts. The distinctions between the patterns for economic and non-economic migration enhance confidence in the reliability of our measures that distinguish economic from non-economic migration.

⁶ Various curvilinear specifications of the age effect did not improve the fit of any of the models.

⁷ Here too I tested and rejected various non-monotonic specifications.

The presence of family members in one's locality reduces the rate of non-economic migration, but not economic migration, and the presence of friends has no effect at all. Otherwise, locality characteristics do not exert much of an effect. Naturally, migration rates are far lower in sampled oblasts.⁸

Figure 2. Period specific inter-regional migration rates estimated from SMDR (Migrations per 1000 population aged 18+)



Finally, net of the individual variables in the models, migration rates exhibit no pattern of change over the five 3-4 year periods. The dramatic social and economic dislocations accompanying the Soviet collapse in late 1991 had no statistically discernable effect on

⁸ While the SMDR sample might reasonably be viewed as a probability sample of the Russian adult population in late 2001, it cannot be viewed as representative of the Russian population in some earlier year because members of that population who were living abroad or in non-sampled oblasts at the time of the survey were excluded by design. Since migration behavior obviously affects the probability of residing abroad or in a non-sampled oblast, the sample may be biased. Moreover, respondents who lived in prior years in oblasts that were not included in the sample perforce *must* have migrated to a sample oblast prior to the survey. Thus, they on average had substantially higher probabilities of migrating at any given month than did those who lived in sampled oblasts. Unfortunately, there is no ready solution to this problem: it inheres in the multistage sampling design, which is unavoidable in modern surveys of large societies like Russia. Of course, the impact of this potential bias on results will be most severe if residence in non-sampled oblasts at prior times correlates with individual or local characteristics. To minimize the possible impact, I therefore include a dummy variable denoting residence in a sampled oblast in all models.

migration behavior: neither economic nor non-economic migration rates increased as a result. Although none of the period effects is statistically significant, it is still useful to consider the net patterns of change over time (the “adjusted”) and the gross (“unadjusted”) patterns implied by the corresponding point estimates of the dummy variable coefficients and constants in Table 4 and from the equivalent reduced form models (Figure 2). First, the patterns are nearly identical, implying that aggregate trends cannot be attributed to changes in population composition. Second, if we look only at developments during the post-transition era, it might appear that migration rates increased after 1992 then decreased later in the decade. However, the magnitudes of these changes (which, it should be remembered, are not statistically significant) are smaller than the decline in migration that took place during the late 1980s: based on the SMDR data, there was as much or more internal migration taking place in the mid-1980s as in the mid-1990s. Thus, any patterns in the 1990s should not be casually interpreted as reflecting the impact of Russia’s economic transition. Overall, the emerging picture is one of tremendous stability in internal migration rates. Furthermore, I tested for changes over time in the effects of education, unemployment, gender, and age on each form of migration: I found no statistically significant changes.

Regional effects

The existing empirical literature focuses on how regional labor market characteristics affect aggregate migration flows or net rates, as economic theories of migration would clearly predict (Andrienko and Guriev 2004; Gerber forthcoming). To see if regional characteristics exert “push” or “retention” effects on each form of migration using individual data, I first estimated hazard models incorporating only regional characteristics and time (to obtain

TABLE 4
Hazard models for inter-regional migration

	<i>Any migration</i>		<i>Economic Migration</i>		<i>Non-economic Migration</i>	
	B	SE	B	SE	B	SE
Woman	-.271 *	.159	-.865 **	.284	-.099	.184
Age (-18)	-.030 **	.009	-.047 **	.017	-.027 **	.010
Education (General Secondary)						
University	.471 **	.223	1.442 **	.394	.170	.273
Specialized secondary	.271	.202	1.183 **	.408	-.004	.220
Vocational	-.129	.221	.152	.480	-.207	.241
Less than secondary	-.105	.320	.059	.970	-.197	.378
Main activity (Working for Hire)						
Unemployed	1.095 **	.311	1.349 **	.555	.998 **	.370
Self-employed	-1.220 **	.479	-.573	.695	-1.676 **	.728
Maternity leave	.605 *	.338	-.782	1.109	.813 **	.347
Not in labor force	1.700 **	.228	1.282 **	.463	1.776 **	.264
Retired	.459 *	.270	-.136	.971	.490 *	.290
Studying, university	1.067 **	.366	1.382 **	.408	.908 *	.479
Studying, other	.954 **	.338	1.347 **	.586	.776 **	.387
Military service	.601	.419	.741	.511	.520	.581
"Other" activity	.698	.744	-15.697 **	.359	.985	.749
Marital Status (Never Married)						
Married	.149	.273	-.141	.351	.208	.337
Cohabiting	.008	.468	-1.111	.944	.201	.518
Divorced/separated	.295	.319	.640	.600	.164	.360
Widowed	.268	.427	-13.463 **	.460	.359	.468
Ln(children at home + 1)	-.397 *	.206	.057	.357	-.506 **	.237
Ln(years current oblast)	-.453 **	.091	-.359 **	.151	-.482 **	.109
Family in current oblast	-.443 **	.219	.012	.454	-.570 **	.250
Friends in current oblast	-.063	.212	-.382	.412	.029	.239
Village	-.133	.201	-.146	.376	-.141	.251
Moscow	-.020	.297	.693	.501	-.391	.389
Sampled oblast	-2.996 **	.218	-3.149 **	.377	-2.965 **	.250
Period (1985 to 1988)						
1989 to 1991	.295	.210	.436	.409	.248	.239
1992 to 1994	-.018	.228	-.031	.501	-.010	.276
1995 to 1997	.315	.224	.446	.409	.275	.280
1998 to 2001	.089	.231	-.144	.497	.152	.258
Constant	-3.195 **	.326	-5.149 **	.625	-3.322 **	.342
N respondents	6864		6864		6864	
N events	448		106		342	
Person months at risk	1132653		1132653		1132653	
Log-likelihood	-1488		-450		-1242	

Note: Dummy variables denoting missing data on locality type, children at home, main activity

*p < .05, one-tailed

**p < .05, two-tailed

“unadjusted” estimates of the effects of regional characteristics), then I adjusted the regional effects by incorporating the individual and locality characteristics from the models in Table 4. I trim the non-significant regional variables to arrive at preferred specifications of regional effects. Economic theory dictates a focus on regional wages and unemployment, but I also included measures of quality of life (the murder rate), health conditions (male life expectancy), and the extent of reforms (relative size of small business employment), on the expectation that non-economic migration might respond more strongly to these non-economic factors. In addition, I included interaction variables to test whether the effects of regional labor market conditions were especially strong in 1992-1994, the period when the exogenous shocks should have exerted the greatest force (see Gerber forthcoming).⁹

Regional characteristics affect overall migration rates, but in a puzzling fashion: higher real wages do reduce out-migration (at least in 1992-4, when their effects should be strongest) and higher murder rates exert push effects, but higher unemployment reduces out-migration, contrary to theoretical expectations. This pattern makes more sense when we analyze economic and non-economic migration separately. For economic migration, both wages and unemployment have the effects predicted by economic theory, while the other regional characteristics exert no effects at all, at least net of controls for individual characteristics. Thus, the individual-level regional effects are consistent with the results obtained in studies analyzing aggregate data, but only when the analysis is limited to economically-motivated migration. Also broadly consistent with the economic approach, the analysis suggests that the effects of wages on economic migration were strongest in the immediate aftermath of the shock of transition. The counter-intuitive unemployment effect applies only to non-economic migration, as does the

⁹ Due to the limited availability of regional data prior to 1990, I estimated the models testing for regional effects only on spells that began in January 1990 or later.

predictable effect of high murder rates. Once again, these results point to the value of distinguishing empirically between economic and non-economic forms of migration.

Benefits of migration?

Another question that can be addressed most effectively using individual-level data is whether economic migration actually improves the labor market fortunes of migrants. It is risky to make inferences about the general impact on the basis of the observed patterns in the data because of obvious endogeneity of migration to its returns: if individuals act rationally, then those who actually migrate are precisely those who are most likely to benefit from doing so; therefore, we are likely to overestimate its positive benefits. The problem is compounded in our current application, because many migrations may have resulted from job offers, rather than vice versa, and our data do not permit us to distinguish these two situations. Given the complexity of various statistical approaches to deal with this issue and the lack of other empirical evidence bearing on the question, I limit myself here to descriptively analyzing the “effects” of recent economic migration using regressions for different labor market outcomes. I operationalize “economic migrants” as those who migrated for economic reasons within the last year.

Hazard models for employment entry estimated on spells comprised by, respectively, unemployed respondents and non-participants show evidence of superior outcomes for economic migrants (Table 6). Controlling for age, education, gender, duration in current oblast, and period, economic migrants have substantially higher rates of getting new jobs than non-migrants do: the hazard ratio among the unemployed is roughly 2.0 for the unemployed and 3.0 for non-participants, implying that migrants are, respectively, twice and three times more likely to get jobs than non-migrants with the same values on the other variables. These findings should be

TABLE 5

Effects of regional characteristics on individual internal migration in Russia, 1992-2001

Any Migration

	<i>Unadjusted, full</i>		<i>Adjusted, full</i>		<i>Adjusted, final</i>	
	B	SE	B	SE	B	SE
Logged wages (1991 rubles)	.094	.391	.322	.331		
Logged wages*1992-1994	-1.047 *	.562	-1.088 **	.474	-.848 **	.416
Unemployment rate	-.053	.038	-.065 **	.033	-.068 **	.031
Unemployment rate*1992-1994	-.099	.154	.007	.129		
Murder rate	.516 **	.200	.473 **	.205	.373 **	.157
Male life expectancy	.002	.076	.080	.062		
Small business employment rate	.010	.020	-.017	.023		

Economic Migration

	<i>Unadjusted, full</i>		<i>Adjusted, full</i>		<i>Adjusted, final</i>	
	B	SE	B	SE	B	SE
Logged wages (1991 rubles)	-.374	.721	-.071	.727		
Logged wages*1992-1994	-2.505 **	1.099	-2.485 **	1.108	-2.347 **	.852
Unemployment rate	.090	.082	.102 *	.054	.080 *	.044
Unemployment rate*1992-1994	-.247	.306	-.154	.321		
Murder rate	-.120	.399	-.108	.371		
Male life expectancy	-.268 *	.139	-.141	.112		
Small business employment rate	.091 **	.037	.028	.038		

Non-economic Migration

	<i>Unadjusted, full</i>		<i>Adjusted, full</i>		<i>Adjusted, final</i>	
	B	SE	B	SE	B	SE
Logged wages (1991 rubles)	.260	.471	.417	.352		
Logged wages*1992-1994	-.695	.668	-.787	.538		
Unemployment rate	-.108 **	.034	-.135 **	.037	-.133 **	.036
Unemployment rate*1992-1994	-.035	.172	.070	.140		
Murder rate	.715 **	.236	.649 **	.248	.658 **	.236
Male life expectancy	.095	.089	.148 *	.077	.131 *	.075
Small business employment rate	-.018	.022	-.029	.026		

Note: Table entries are coefficients from hazard models for different types of inter-regional migration estimated on person-months from 1992-2001. All regional variables are centered at the annual mean for all regions. Unadjusted models contain only dummy variables for period. Adjusted models contain all individual-level and locality variables included in the models presented in Table 4.

*p < .05, one-tailed

**p < .05, two-tailed

TABLE 6
Hazard models for employment entry

	<i>Sample:</i>		<i>Not in Labor Force</i>	
	<i>Unemployed</i>			
	B	SE	B	SE
Economic migrant (within one year)	.724 **	.352	1.114 **	.375
Woman	-.378 **	.115	-1.460 **	.148
Age (-18)	-.012 *	.007	-.015 *	.008
Education (General Secondary)				
University	.461 **	.171	1.174 **	.235
Specialized secondary	.235	.173	.530 **	.226
Vocational	.240	.161	.230	.242
Less than secondary	.134	.231	.128	.321
Regional unemployment	-.044 **	.018	-.034 *	.019
Years in current oblast	.005	.005	-.011 **	.006
Year (1985)				
1986	-.950 **	.414	.342	.265
1987	-.299	.264	.421	.291
1988	-.811 **	.385	-.088	.246
1989	-.636 *	.346	-.222	.288
1990	-.813 **	.384	.137	.262
1991	-.554	.339	-.265	.274
1992	-.798 **	.314	.006	.256
1993	-1.029 **	.306	-.154	.273
1994	-.969 **	.306	-.583 **	.254
1995	-1.104 **	.308	-.670 **	.289
1996	-.939 **	.295	-.651 **	.277
1997	-1.154 **	.317	-.792 **	.282
1998	-1.391 **	.307	-.782 **	.292
1999	-1.213 **	.302	-.697 **	.271
2000	-1.238 **	.303	-.647 **	.269
2001	-1.153 **	.297	-.012	.257
Constant	-1.864 **	.308	-1.771 **	.311
N respondents	1404		1577	
N events	1601		1805	
Person months at risk	28532		40193	
Log-likelihood	1491		1571	

*p < .05, one-tailed

**p < .05, two-tailed

interpreted cautiously, in light of the potential endogeneity: they should not be taken to indicate that others will benefit in the same fashion from migrating. But at least they provide some evidence that Russians who have migrated internally for economic reasons have, on average, enjoyed better labor market opportunities than non-migrants in a similar position. The government might use this information in campaigns to promote more economic migration. I also tested for “effects” of economic migration on the occupational earnings associated with new jobs and on earnings at the time of the survey using OLS and fixed effects regressions. In neither case did economic migrant status have a statistically significant effect.

Conclusion

The analysis of individual-level migration behavior yields several new insights into internal migration in contemporary Russia. First, only about 25% of the migrations undertaken by Russians since 1985 were motivated by economic incentives. This underscores the need to distinguish empirically and theoretically between economic and non-economic migration when analyzing migration patterns in Russia (and, presumably, elsewhere). Although the economic explanation of migration is the most developed and commonly applied theory, it may account for only a fraction of the migrations that take place. The broader economic impact of internal migration will depend on the patterns and volume of both economic and non-economic migration. Future research should analyze these two types of migration separately, as they respond to different individual, local, and regional influences. Broadly speaking, economic migration within Russia is shaped by the factors identified by economic theories of migration; non-economic migration less so. Since non-economic migrations account for the lion’s share of migrations, more theorizing and empirical study of them would be useful to advance theoretical

understanding of migration, as well as the goal of formulating policies to increase the overall levels of migration.

Second, the rates of overall migration and of economic migration were not demonstrably affected by the collapse of the Soviet Union and the attendant economic shocks and political changes. Nor were the effects of individual characteristics on migration behavior. This suggests that severe barriers to internal migration remain in Russia. These barriers may take the form of continuing residency restrictions, housing and credit shortages, poor information, or weak migrant networks.¹⁰ Additional research on these barriers is required to determine which are the most significant and to develop policies to overcome them: otherwise, Russia will fail to enjoy the economic benefits that higher levels of economically-motivated internal migration might offer. From the perspective of migration theory, it will be helpful to gain an empirical understanding of why exactly Russian migration behavior appears relatively impervious to change in response to severe exogenous shocks.

Finally, there is some evidence, albeit tentative, that economic migration does typically improve the labor market opportunities of migrants. In particular, non-employed migrants have greater probabilities of securing employment than those who do not migrate. More data and more sophisticated statistical modeling (to control for the endogeneity of migration to labor market opportunities) are necessary before this finding can be considered definitive. However, it may prove useful for the development of campaigns to promote economic migration.

¹⁰ Alternatively, the Russian labor market may be in inter-regional equilibrium, whereby non-economic amenities and disamenities offset wage and employment differentials. This seems highly unlikely, however.

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