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Transition Patterns in the Russian Labor Market: 1994-2006

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Abstract:

Transition from command to market economy caused significant reallocation of resources and, in particular, labor. Regular Russian statistical publications describe transition patterns in the labor market mainly in terms of observed stocks while flows that generate these stocks are severely understudied. Based on micro-level data from eleven rounds of the Russian Longitudinal Monitoring Survey covering years 1994-2006, we estimate labor market trajectories in Russia with a special attention to flows between state and private sector and upward and downward occupational mobility. Our findings confirm significant shedding of labor from the state sector throughout the period with the main flow being to jobs in the private sector. In addition, as transition proceeded, more graduates started their careers in the private sector or in self-employment as opposed to taking jobs in the state sector. We find evidence that self-employment and entrepreneurship served as a buffer in the period of financial crisis, thus, diminishing flow into unemployment. The transition-related relocation of from the state to private sector are especially pronounced among in mid- and low qualification jobs while highly qualified jobs in state sector served as a buffer in years of economic hardships in the mid 1990s.

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1. Introduction

Transition from command market economy caused significant reallocation of resources including labor. Regular Russian statistical publications describe the transition patterns in the labor market mainly in terms of observed stocks. Flows that generate these stocks, however, have been severely understudied. In particular, literature does not give a clear picture of reallocation between state and private sector employment, self-employment, unemployment and being out of the labor force. The main questions that we address in this report are as follows. How intensive are the mutual flows among different labor market states during transition? What are the main differences in the labor market trajectories between high and low skilled individuals and between males and females?

To address these questions, we estimate conditional probabilities at each point in time for a person to move between different labor market states. In particular, we distinguish between four principal labor market states for each individual: work for wages, self-employment/entrepreneurship, unemployment and out-of-the-labor-force. Within work for wages, we identify those working in the public sector or at state enterprises with no private participation versus those working at private or mixed-ownership enterprises. In addition to the private/public division, we introduce distinction between having a high-qualification job versus low-qualification job. Our estimates of labor market trajectories are based on micro-level data. In particular, we use data from eleven rounds of the Russian Longitudinal Monitoring Survey (RLMS, <http://www.cpc.unc.edu/rlms/>) covering years 1994-2006.

2. Data and construction of variables

In each of the eleven rounds of RLMS survey (viz., each year between 1994 and 2006 excluding 1997 and 1999), respondents were asked whether they work or not, and whether they search for a job if not working. In addition, those who worked were asked to describe their job and the place of work including ownership of the firm and occupation. Additionally, respondents were asked retrospective questions about their labor market status in 1985, 1990 and 1991 in four rounds – in 1998, 2000, 2001 and 2002. This allows extending our analysis of labor market trajectories even earlier in time.

Only those in the age group 18-60 in the relevant year are included in the analysis because we focus on the shape of individual labor market trajectories inflicted by transition

rather than by aging. We label people as working for wages if their main occupation at the time of the survey is work at an enterprise or organization or being on a maternity leave not interrupting employment. Entrepreneurs and farmers according to their main occupation and those who are working not at an enterprise or organization as their main or secondary job and involved in self-employment are counted as self-employed.¹ Unemployed are those without job, looking for a job and searching through various channels. The rest in the age group 18-60 are counted as in the out-of-labor-force state.

In addition, we subdivide work-for-wages group along two dimensions: (1) working in the public sector or at a state enterprise (with no private domestic or foreign co-owner) versus working in the private sector (with any no private domestic or foreign co-owner); and (2) holding high-occupation positions (groups 1 and 2 according to ISCO) versus mid- and low-occupation positions (the rest groups). Interaction of occupation-based and ownership-based classifications is also used in the analysis.

In the years prior to 1994, i.e., in 1985, 1990 and 1991, we can distinguish only between work for wages, weaker definition of unemployment, and out-of-labor-force statuses. We assume that before transition started all work for wages was in the state sector since there was almost no private sector at the time. We have no information on the level of occupation for years before 1994.

3. *Results*

The estimated conditional probabilities of movement between labor market states at each point in time are presented in Figures 1-62.² In each figure we present six graphs that describe dynamics of all flows between states i and j . Two of these graphs plot the dynamics of the estimated conditional probabilities to stay in state i in the year t given that the person was in that same state i in the year $t-1$; and the same for state j . Another two graphs depict the dynamics of the conditional probabilities to move to state i in year t conditional on that the person was in state j in year $t-1$ and vice versa (from j and i). The fifth graph presents the dynamics of the estimated *net* flow between states i and j as percentage of working-age population. And the last sixth graph presents the dynamics of the size of the stock in each of

¹ Our definition of being self-employed is such that in the case of possible simultaneous work at two jobs – for wages and self-employment – we deem a person to be self-employed. One reason for this is that in Russia many individuals kept a nominal regular job for a long time, even though they primarily were working as self-employed.

² In order to reflect trends for the whole population, the estimates take into account the sample weights of individuals.

the categories of the labor market status (including i and j). All the estimated conditional probabilities and stocks are plotted along time dimension. Standard errors are presented for the probability estimates. Given the important differences in the labor market behavior of males and females, the estimates are calculated separately for each gender.

3.1 Work for wages in the state sector

The first set of results is related to transition between the state and private sectors within work-for-wages group (Figures 1-2). The transition clearly shows up for both males and females. The share of males staying within state sector declined from almost 80% in 1990 to 27% in 1994.³ Further, shedding of labor from the state sector continued in 1994-2000 with almost one half of all males leaving the state sector. In the later period almost 60% of males who worked in the state sector kept working in it in the next year.

In 1994, 30% of males who were employed in the state sector moved to private sector (a large part of this reallocation was automatic as mass privatization took place and jobs that formerly were in the state sector became private sector jobs). Subsequently, the share of males working in the state sector stabilized at the level of 20% between 1995 and 2000 and declined to 15% in 2001 and returned back to 20% in the next years. Noteworthy, the reverse flow of people (moving from the private sector to the state sector) declined steadily from 20% in 1994 to 8% in 2006. This difference is reflected in the net movement graph: except for 2001 and 2002, the net movement was in the direction of private sector. These flows resulted in the following change in the stock of working for wages in the state sector: it was steadily declining from almost 90% in the early 90s to 35% in 1996 and, then, to 22% in 2006.

The transition pattern for females is the same with the main difference being in the magnitudes of the change. In particular, the share of females staying in the public/state sector diminished during the early 90s and then stabilized but at a higher level compared to males. This result is rather intuitive: higher uncertainty together with lower labor protection in the private sector (albeit higher average income) makes females more likely to choose work in the public sector. This is consistent with other pieces of evidence that point to the fact that many families in Russia diversify risks across sectors with males working in the private sector and females working in the state/public sector.

³ It is worth to remind there again that we use retrospective questions to determine the labor market status in the years before 1994, because the survey in its regular form started in 1994.

The slower outflow of females from the public sector is reflected in the dynamics of stocks of females in the state and private sectors: only in 2004 the number of females working in the private sector overgrew the number of females working in the public sector (for comparison, the first time when more males started to work in the private compared to the state sector occurred ten years earlier – already in 1994).

Another transition-related result is the movement from the state sector to self-employment and entrepreneurship (Figures 3-4). The flow from state sector to self-employment is not large: the largest movement took place in 1994 when 1.7% of males employed in the state sector moved to self-employment. Later on, this flow stabilized at the level of 0.5% for males and 0.3% for females. There is some gender asymmetry here as well: the peak of movement from the state sector to self-employment is observed in 2000 for females and in 1994 for males. As above, the magnitude of these flows is smaller for females than for males.

There was also a flow in the opposite direction, i.e., from self-employment to state sector: 2-5% for males and 2% for females (the latter with rather large standard errors). The net movement from the state sector to self-employment, however, is always positive for females and almost always positive for males (with the exception of the negative net movements observed for males in 2001 and 2002). Both genders experienced an upsurge of flow from the state sector to self-employment in 1998 (the year of financial crisis) and, again, in 2000 (the beginning of steady SME growth).

Importantly, the stability of self-employment sector increased as well. The probability to remain in self-employment increased from 25-30% in 1994-2000 to 45-50% in 2001-2006 for males and to 60% for females. Yet, the flows into self-employment have been rather small: the stock of self-employed in the economy at the end of the period (in 2006) reached 3-4% of working age population for males and 2-3% for females, which is rather low by international standards.

Figures 7-8 depict flows between work for wages in the state sector and unemployment. The outflow of males from the state sector into unemployment was at the level of 2-3% of all employed in the state sector in 1994-2001 and declined to about 1.5% in the following years. The reverse flow (from unemployment to work in the state sector) was declining throughout the period from 12% to 7% of unemployed. The net flow between the unemployment and the state sector is balanced out on average for males, with the exception of an upsurge in flow into unemployment in 1994.

As a result, the stock of unemployed males based on RLMS data was rising at a modest pace and reached 9% of working age male population in 1998 and declined smoothly starting in 2000 to 4-5% in 2006. The modest outflow from the downsizing state sector into the unemployment which we observe in the micro data is in line with the well-documented prevalence of job-to-job shifts in Russia (i.e., Boeri 1999).⁴ The official unemployment rate (based on Rosstat labor force survey) is 2-3 percentage points higher than our estimates based on RLMS but also rather low. The low unemployment rate during transition in Russia sharply contrasts with the sizeable open unemployment in the Central and Eastern Europe.

The pattern is slightly different for females. In particular, the upsurge in the flow from the state sector employment to unemployment in 1998 is more pronounced. Moreover, the flow from unemployment to state sector jobs does not show a steady decline but instead has a pronounced peak in 1998-2002. This is mirrored by the net flows: the flow to unemployment from the state sector is markedly negative in 2000-2002 and becomes more balanced in later years. The dynamics of the stock of unemployment for females is the same as for males.

Persistence of unemployment in terms of the probability to stay in unemployment for the next year is in the moderate range of 10-15% for the whole period for males and is noticeably higher for females – 15-20%. Nevertheless, in both cases the share of long-term unemployed is not high by international standards. There is an additional gender asymmetry here as well: the persistence of unemployment is monotonically declining after 2002 for males whereas it is approximately constant for females.

Out-of-labor-force population (within age group 18-60) is comprised roughly of two groups: those who have not graduated from the full-time education yet and those who choose not to work even though not in the full-time education (females in child-bearing and child-caring age, early retirees, and discouraged workers). The outflow of males from work for wages in the state sector to the out-of-labor-force state, being a mixture of retirees and discouraged workers, kept steady at a level of 6-8% throughout the period, which corresponds to 0.5-1% net outflow (Figures 11-12). The pattern is more complicated for females: there was an initial upsurge to 13% in 1994 followed by a decline to the level of 8-10% in 1995-1998 and, then, to 6% in the later period. The corresponding net movements into out-of-labor-force state were positive until 2000 when the two flows started to balance each other out. The pattern reflects the adjustment of females' labor force participation rates

⁴ See Boeri, T. (1999) "Enforcement of Employment Security Regulations, On-the-job Search and Unemployment Duration", *European Economic Review*, 43, 65-89.

in Russia from the abnormally high levels under the Soviet economy (when being out of labor force was considered a crime).

The flow from out-of-labor-force state to employment in the state sector declined from 10% and 13% in 1994 to 5% and 6% in 2006 for males and females, respectively, implying that work for wages in the public/state sector became less attractive for fresh graduates from school. Altogether, the stock of out-of-labor-force individuals was increasing throughout the period for both males and females and was 4-5 percentage points higher for females.

Overall, the state sector was shedding labor throughout the period, with the major flow being to jobs in the private sector.

3.2 Work for wages in the private sector

As we already discussed, the flow from work for wages in the private sector to the state sector was steadily declining for both males and females throughout the period and reached the level of 6-8% of all employed in the private sector. Moreover, the stability of a job in private sector increased: the share of both males and females staying in private sector reached about 60% in the recent years.

There are flows between work for wages in the private sector and self-employment/entrepreneurship (Figures 5-6): about 2% of males and 1-1.5% of females leave work for a private employer for self-employment. At the same time, the reverse flow from the self-employment activity to working for wages in the private sector is also significant, although its size varies a lot across periods. The resulting net flow of males from work for wages in the private sector to self-employment increased and became positive in 1996-1998, positive between 1999 and 2000 and again negative in 2001-2002 and, then, decreased to zero. The pattern is significantly different for females: the net flow from the private sector to self-employment was negative in 1996-1998, and again negative in 2001; the net flows have opposite signs in 2000 – the year of major adjustment to 1998 shock in RLMS data.⁵ This symmetry in the behavior of males and females (with the opposite signs) can be explained by the difference in the adjustment to shock: in the periods of economic turmoil females lose jobs in the private sector and start self-employment while males are more likely to change self-employment for private sector jobs.

⁵ There was no survey done in 1999.

The flows from work for wages in the private sector to unemployment (Figures 9-10) are at the level of 2-3% for both males and females, with an upsurge of 4.5% for males and 3.5% for females in 1998. Interestingly, the flow from unemployment to work in private sector intensified in the recent years: it increased from 15% to 25% for males and from 10% to 17% for females. This is another indication of the fact that private sector overtook state sector in Russia, and more unemployed find jobs in the private sector than in the state sector. Starting with 2000, the net balance of flows between unemployment and private sector is in favor of private sector reflecting the start of country's economic growth.

The dynamic pattern of the flows between private sector and out-of-labor-force state are yet another indication of the strengthening of the private sector: even though the flows from private sector to economic inactivity were rising in 1994-2000, the pattern was reversed in the later years. The flow from economic inactivity to the private sector was increasing throughout the period reflecting the fact that graduates choose private sector rather than state sector. As a result, the net movement from private sector to inactivity which was positive in 1994-1998 became strongly negative after 2000. This pattern holds for both males and females.

Overall, private sector strengthened dramatically during the period and substituted for state sector.

3.3 Self-employment

Self-employment and entrepreneurship attracted labor from jobs for wages, especially in the state sector (Figures 15-16). The most intensive changes took place in the early years while after 2000 the in- and out- flows balanced out. As we already mentioned, the stability of self-employment also increased dramatically and now almost 50% of males and 60% of females stay self-employed in the next year conditional on being self employed in the previous year.

Self-employment served as a buffer in the period of financial crisis when the net flow from unemployment to self-employment became negative implying that more unemployed moved to self-employment than self-employed moved to unemployment (Figures 21-22). Moreover, in the same period flows from work for wages to self-employment also intensified.

Self-employment serves as a starting point for about 2% of those out of labor force. At the same time, the major flow from economic inactivity into labor force goes either through work for wages, more in private sector than in state sector, or unemployment

(Figures 25-26 and 19-20). The pattern holds for both males and females. Noteworthy, inactivity increased in the crisis years, most probably, reflecting the discouraged worker effect.

3.4 Downward and upward occupational mobility

It is well-documented (e.g., Sabirianova 2002) that transition in Russia is associated with large occupational mobility.⁶ In what follows we provide estimates of conditional probabilities to stay in or leave high- or low- qualification job in work for wages (private or state sector) for low- or high- qualification job in work for wages (private or state sector), or for self-employment, or unemployment, or inactivity.

The share of males working for wages in high qualification jobs is approximately equal in the private and state sector and is about 5% of working age males (Figure 27). The share of males in mid- and low qualification jobs in state sector declined steadily from almost 30% of working age males to 18%, while it increased from 31% to 38% in private sector. This implies that the fall of the state sector and the rise of the private sector were mainly due to relocation of people with mid- and low qualifications.

The picture is slightly different for females (Figure 28). In particular, the share of females holding high qualification jobs in state sector stayed stable throughout the period and amounted to 10% of working age females. The share of females holding high qualification jobs in private sector is twice as low – about 5%, though also stable during the period. The share of females in mid- and low-qualification positions in the state sector declined but less so than for males: from 26% to 18%. The share of females holding mid- and low qualification positions in the private sector increased from 19% to 26%. As a result, only in 2001, the share of females with low qualification jobs in the private sector became higher than the share of females with low qualification jobs in the state sector. Males had a similar reversal already by 1994.

The relative stability of stocks of high qualified jobs in the state and private sectors conceal intensive flows between the sectors in both directions. In particular, the share of males holding high qualification jobs in the state sector was only about 45% in 1994-1998 and increased to 55% in the later years. The respective shares of females were higher: 55% in 1994-1998 and 70-75% in 2000-2006. The share of males with high qualification jobs in the

⁶ Sabirianova, Klara Z., “The Great Human Capital Reallocation: A Study of Occupational Mobility in Transitional Russia,” *Journal of Comparative Economics* 30(1), March 2002: 191-217.

private sector was even lower: 25% in 1994-2000 and 55% in 2001-2006. Females followed the same pattern here.

Moreover, there were sizeable flows from high qualification jobs between the state and private sectors (Figures 33-34): from 5% to 10% of qualified males working in the state sector left each year for qualified jobs in the private sector. The process slowed down after crisis years but resumed afterwards. This process was less intensive for females: about 4-6% of females in high qualification jobs in the state sector left for the private sector. The reverse flow of high qualified labor from the private to state sector declined from 10% in 1994-1998 to 5% in 2000-2006 for males. The pattern is markedly different for females: the flow of qualified females from the private to state sector was very intensive and rising until 2001 when it reached 25%, but then declined to 7% in 2006. As a result, the net flows of high qualified males and females from state to private sector are always positive except for 2000-2001 for females and 2001-2002 for males.

The aforementioned dynamics of stocks of low qualification jobs in the state and private sectors is also a result of intensive flows. In particular, in 1994-1998 only about 45% of males and females with low qualification positions in the private sector kept their jobs in the next year, while the proportion increased to 58% for males and 62% for females in the later period (Figures 35-36). Jobs in the state sector show the same pattern implying an increased stability of both state and private sectors.

The movement of low qualification jobs between the sectors was rather pronounced throughout the period, with about 20% of males and 15% of females in low position jobs in the state sector moving to private sector. The reverse process of movement from private sector to state sector for individuals holding low position jobs declined steadily throughout the period and resulted in a 50% reduction from almost 20% of employed in low positions in the private sector in 1995 to 10% in 2005. As a result, there are pronounced positive *net* movements from state to private sector. The pattern holds for both males and females.

The most interesting cases are those of downward and upward occupational mobility. Flows reflecting downward mobility within the state sector are depicted by Figures 29 and 30. Movements from high qualification jobs to low qualification jobs are about 10% of those employed in the higher qualification jobs in the state sector on average, with variation from 5% to 15%. There is a reverse flow reflecting an upward occupational mobility within the state sector as well (around 2% of stock of low qualified jobs in the sector). The net flow from high positions to mid- and low positions in the state sector are generally in the direction of upward mobility except for the initial years (1995-96) and 2002, implying a normal

process of career improvement in the sector. There are no significant differences across genders here.

Flows between high and low qualification jobs in the private sector are presented in Figures 37-38. There is a pronounced inverse U-shape pattern of net flows from low to high qualification jobs in the private sector, both for males and females. In particular, upward occupational mobility in the private sector was observed only during the crisis years (1998-2001) while a ‘normal’ pattern in the sector seems to be a downward occupational mobility.

An interesting case is downward and upward occupational mobility across sectors. Note that a significant share (about 40% in 2005) of respondents with university degrees hold job positions that do not require a university degree, i.e., are overqualified for their positions. A flow from high qualification jobs in the state sector to mid- and low qualification jobs in the private sector, as well as a reverse flow are presented in Figures 31-32. Interestingly, transition seems to be associated with a positive *net* flow from high qualification jobs in the state sector to low qualification jobs in the private sector. The pattern is especially pronounced for females. At the same time we see a reversal of the net flows in favor of taking jobs in the state sector during the crisis period which is likely to imply that qualified jobs in the state sector serve as a buffer in the years of economic turmoil.⁷

There was also movement between low qualification positions in the state sector and high qualification positions in the private sector. The net movement is typically positive, both for males and females, though with significant variation across years. The pattern is likely to reflect the normal career improvement process when people get experience in the state sector and then move to the private sector.

Noteworthy, more and more graduates took jobs in the private sector while the tendency was the opposite for the state sector (see Figures 49-50 versus Figures 55-56).

Overall, we observe both normal upward occupational mobility in the state and private sectors, the transition-related movements of same qualification people from state to private sector, especially pronounced among those in mid- and low qualification jobs, and also the transition-related downward occupational shifts mainly in the private sector and between the state and private sectors. We also see that qualified jobs in the state sector serve as a buffer in years of economic hardships.

⁷ Note that state sector is characterized by more stable but less paid jobs.

4. Conclusions

The main findings are as follows:

- The state sector was shedding labor throughout the period, with the major flow being to jobs in the private sector.

- The private sector strengthened dramatically during the period and substituted for the state sector.

- Self-employment served as a buffer in the period of financial crisis when the net flow from unemployment to self-employment became negative implying that more unemployed became self-employed than self-employed became unemployed.

- As transition proceeded, more graduates started their careers in the private sector or in self-employment as opposed to taking jobs in the state sector.

- The transition-related movements of same qualification people from the state to private sector are especially pronounced among those in mid- and low qualification jobs.

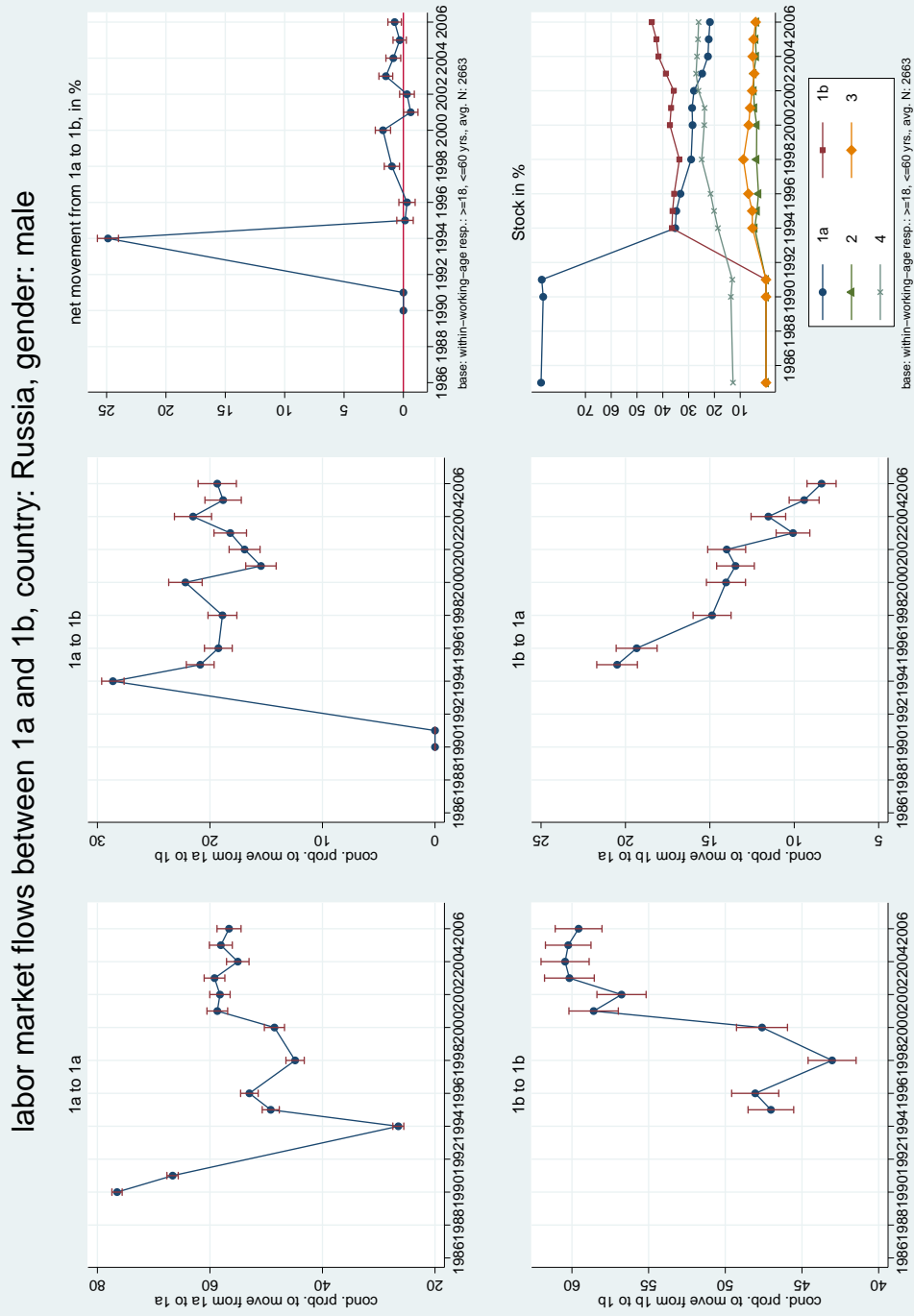
- Qualified jobs in state sector serve as a buffer in years of economic hardships.

List of Figures

1	Flows between the state sector and private sector, males	15
2	Flows between the state sector and private sector, females	16
3	Flows between the state sector and self-employment, males	17
4	Flows between the state sector and self-employment, females	18
5	Flows between the private sector and self-employment, males	19
6	Flows between the private sector and self-employment, females	20
7	Flows between the state sector and unemployment, males	21
8	Flows between the state sector and unemployment, females	22
9	Flows between the private sector and unemployment, males	23
10	Flows between the private sector and unemployment, females	24
11	Flows between the state sector and out of labor force, males	25
12	Flows between the state sector and out of labor force, females	26
13	Flows between the private sector and out of labor force, males	27
14	Flows between the private sector and out of labor force, females	28
15	Flows between work for wages and self-employment, males	29
16	Flows between work for wages and self-employment, females	30
17	Flows between work for wages and unemployment, males	31
18	Flows between work for wages and unemployment, females	32
19	Flows between work for wages and out of labor force, males	33
20	Flows between work for wages and out of labor force, females	34
21	Flows between self-employment and unemployment, males	35
22	Flows between self-employment and unemployment, females	36
23	Flows between self-employment and out of labor force, males	37
24	Flows between self-employment and out of labor force, females	38
25	Flows between unemployment and out of labor force, males	39
26	Flows between unemployment and out of labor force, females	40
27	Flows between work in state sector in low occupations work in private sector in high occupations, males	41
28	Flows between work in state sector in low occupations and work in private sector in high occupations, females	42
29	Flows between work in state sector in high occupations and work in state sector in low occupations, males	43
30	Flows between work in state sector in high occupations and work in state sector in low occupations, females	44
31	Flows between work in state sector in high occupations and work in private sector in low occupations, males	45
32	Flows between work in state sector in high occupations and work in private sector in low occupations, females	46
33	Flows between work in state sector in high occupations and work in private sector in high occupations, males	47
34	Flows between work in state sector in high occupations and work in private sector in high occupations, females	48
35	Flows between work in private sector in low occupations and work in state sector in low occupations, males	49
36	Flows between work in private sector in low occupations and work in state sector in low occupations, females	50
37	Flows between work in private sector in low occupations and work in private sector in high occupations, males	51
38	Flows between work in private sector in low occupations and work in private sector in high occupations, females	52
39	Flows between work in private sector in high occupations and self-employment, males	53
40	Flows between work in private sector in high occupations and self-employment, females	54

41	Flows between work in private sector in high occupations and unemployment, males	55
42	Flows between work in private sector in high occupations and unemployment, females	56
43	Flows between work in private sector in high occupations and out of labor force, males	57
44	Flows between work in private sector in high occupations and out of labor force, females	58
45	Flows between work in private sector in low occupations and self-employment, males	59
46	Flows between work in private sector in low occupations and self-employment, females	60
47	Flows between work in private sector in low occupations and unemployment, males	61
48	Flows between work in private sector in low occupations and unemployment, females	62
49	Flows between work in private sector in low occupations and out of labor force, males	63
50	Flows between work in private sector in low occupations and out of labor force, females	64
51	Flows between work in state sector in low occupations and self-employment, males	65
52	Flows between work in state sector in low occupations and self-employment, females	66
53	Flows between work in state sector in low occupations and unemployment, males	67
54	Flows between work in state sector in low occupations and unemployment, females	68
55	Flows between work in state sector in low occupations and out of labor force, males	69
56	Flows between work in state sector in low occupations and out of labor force, females	70
57	Flows between work in state sector in high occupations and self-employment, males	71
58	Flows between work in state sector in high occupations and self-employment, females	72
59	Flows between work in state sector in high occupations and unemployment, males	73
60	Flows between work in state sector in high occupations and unemployment, females	74
61	Flows between work in state sector in high occupations and out of labor force, males	75
62	Flows between work in state sector in high occupations and out of labor force, females	76

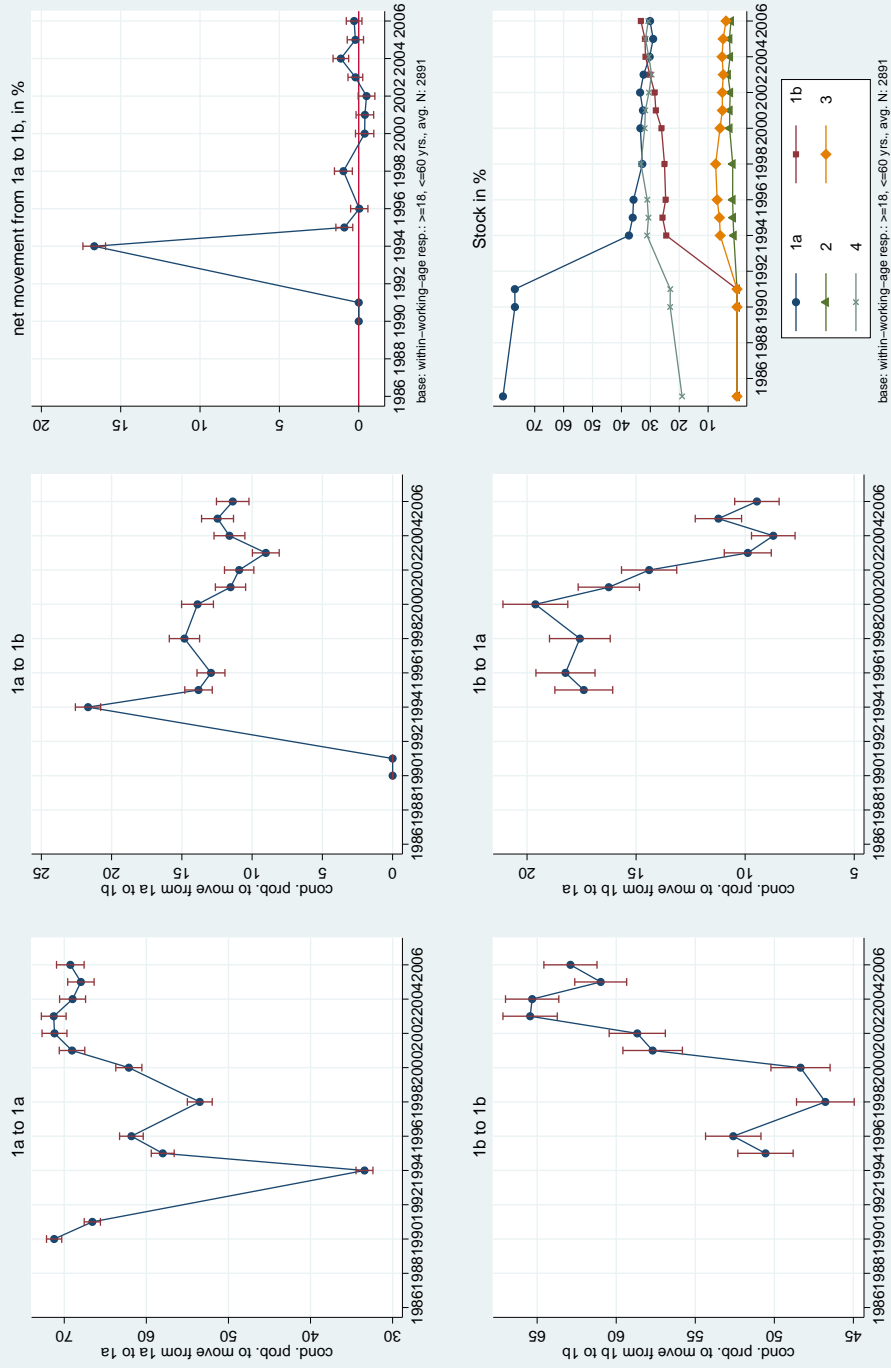
Figure 1: Flows between the state sector and private sector, males



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

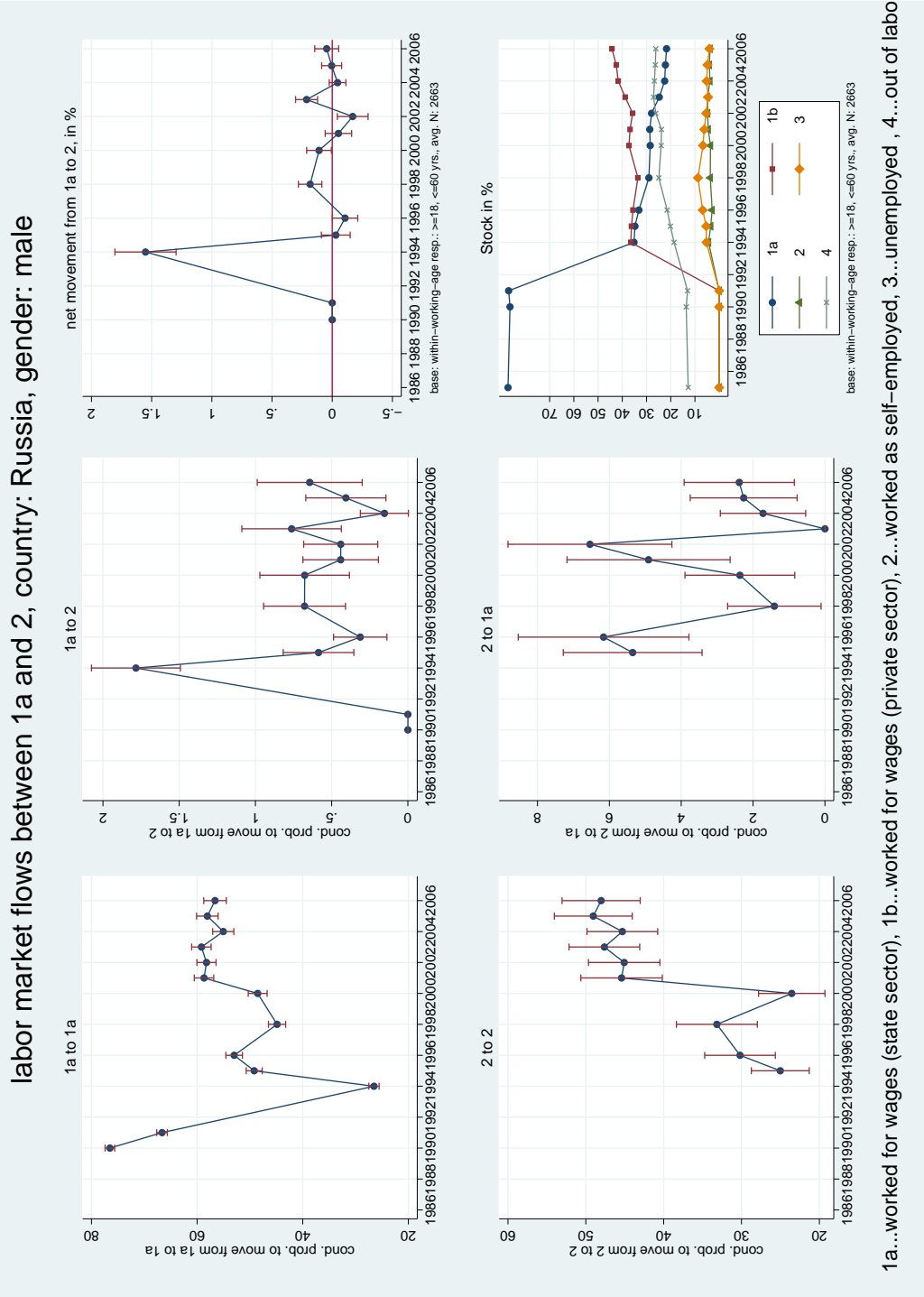
Figure 2: Flows between the state sector and private sector, females

labor market flows between 1a and 1b, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

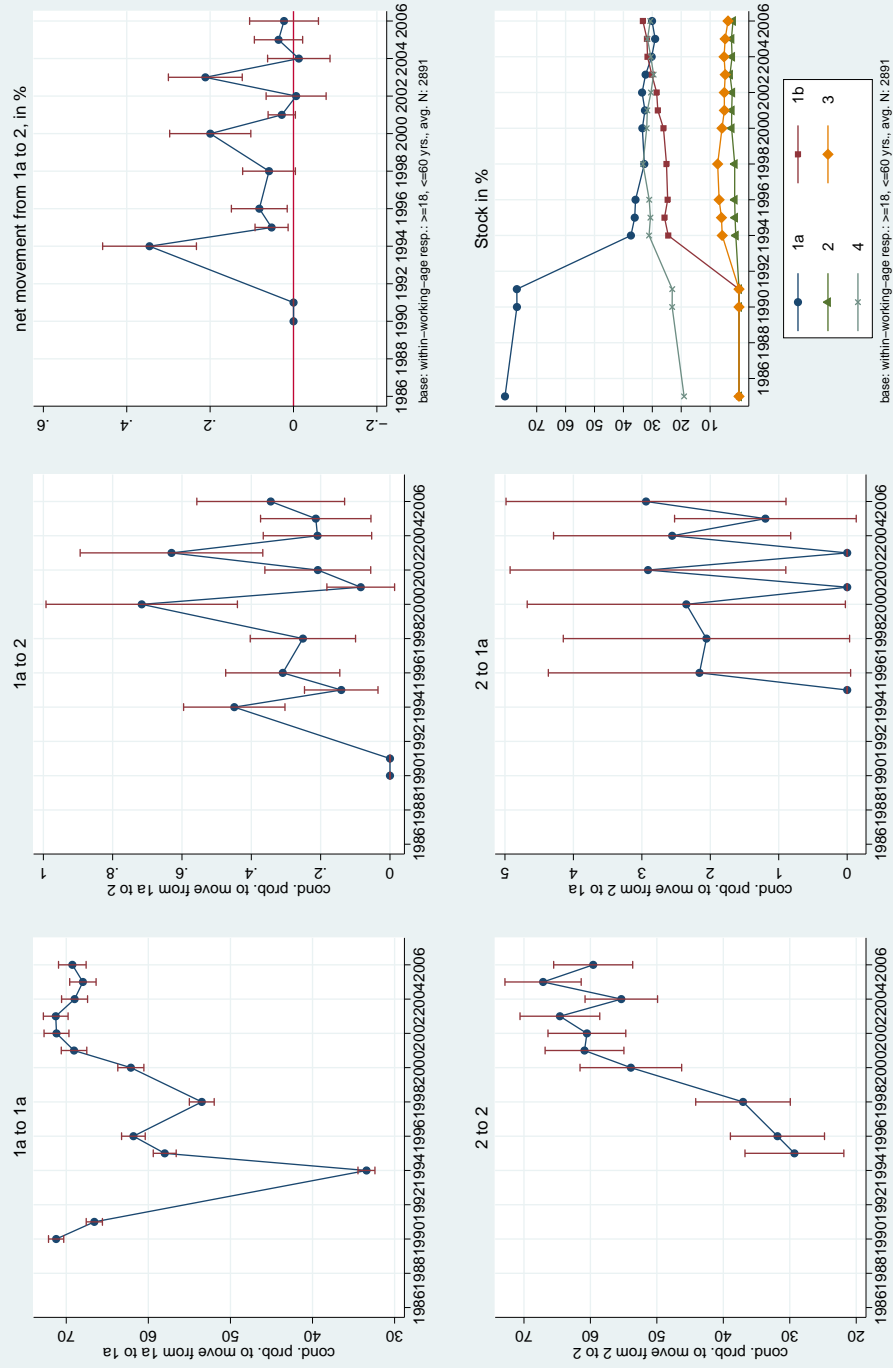
Figure 3: Flows between the state sector and self-employment, males



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

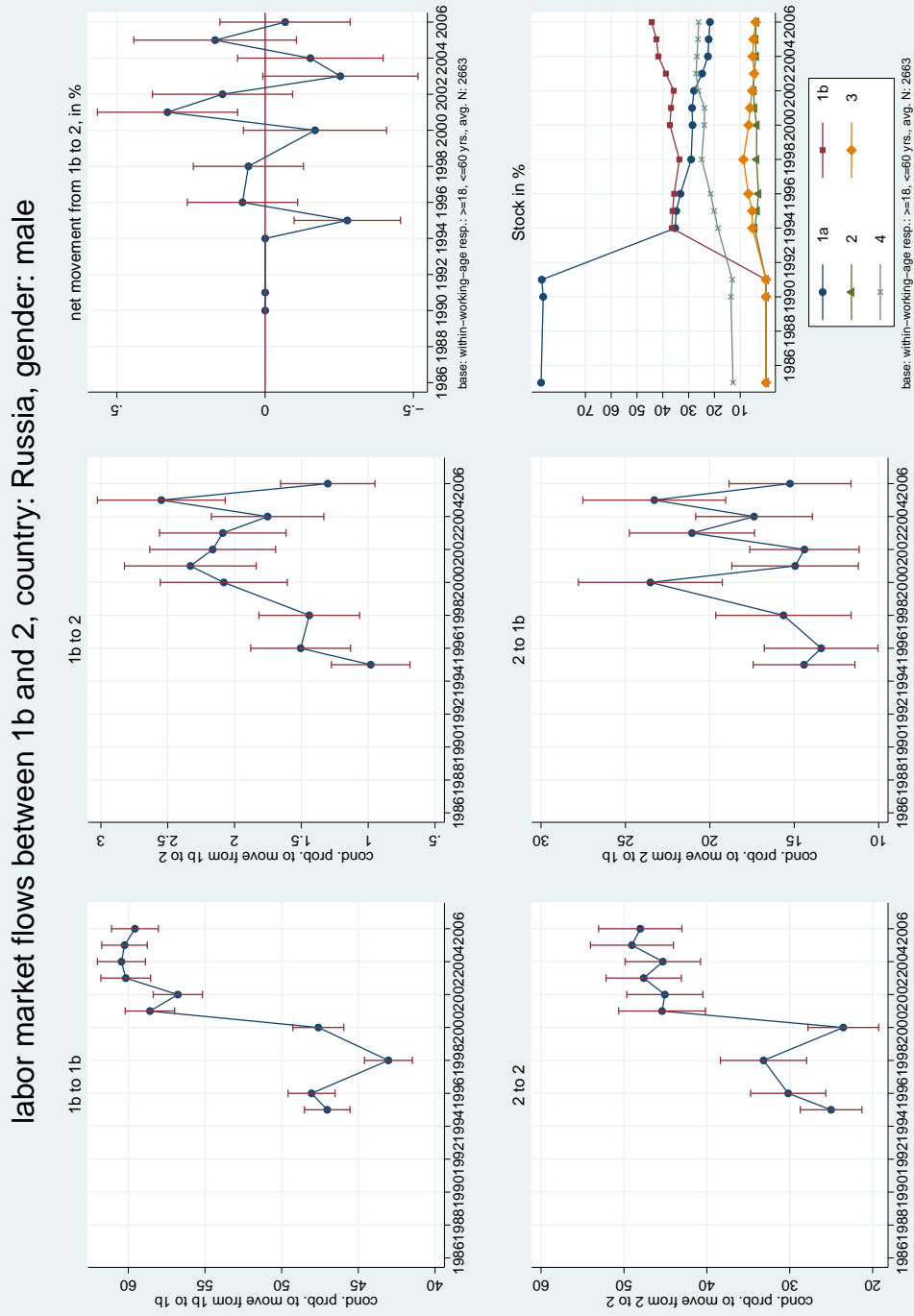
Figure 4: Flows between the state sector and self-employment, females

labor market flows between 1a and 2, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

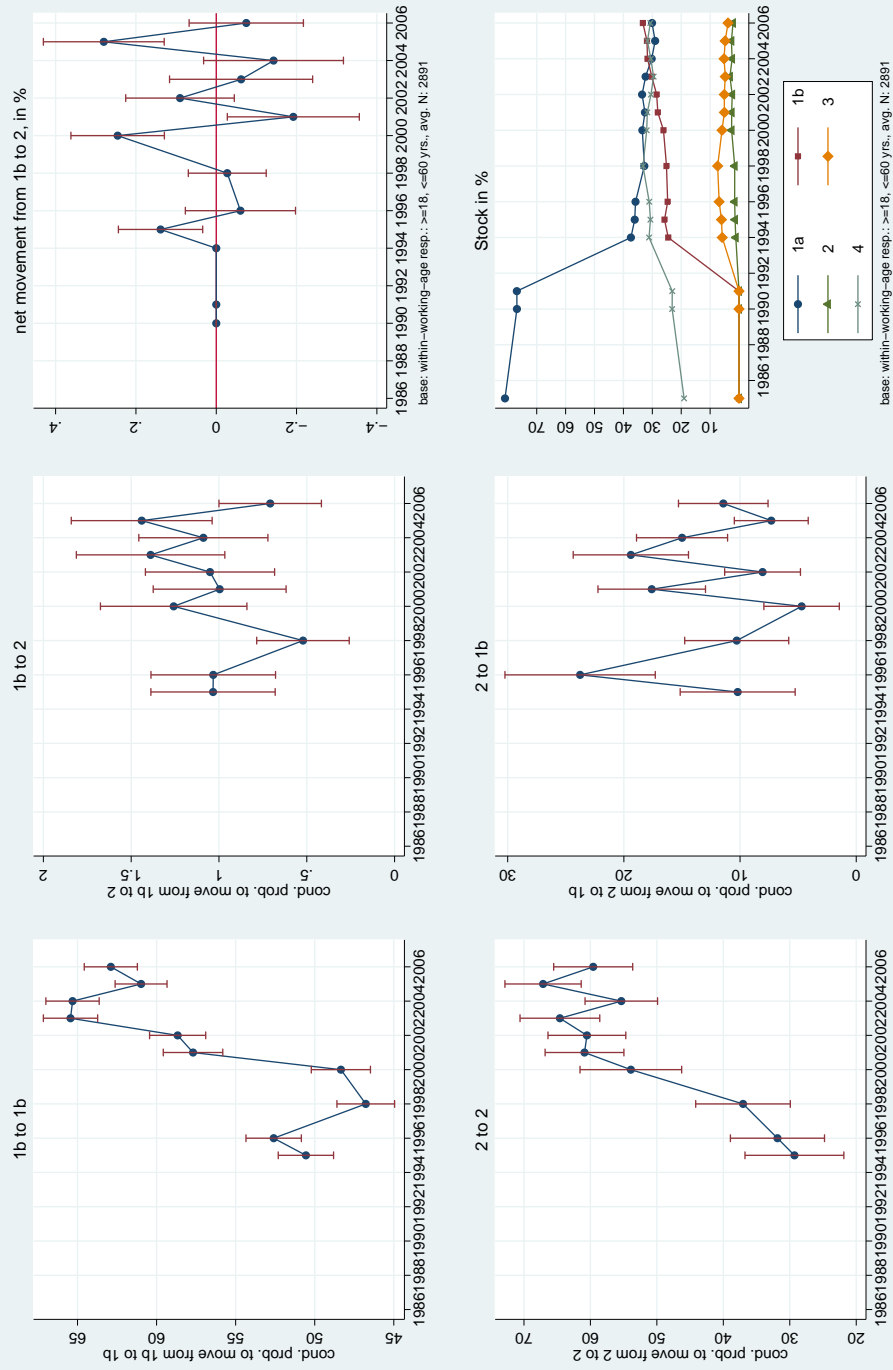
Figure 5: Flows between the private sector and self-employment, males



1a...worked for wages (state sector), 1b...worked as self-employed, 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

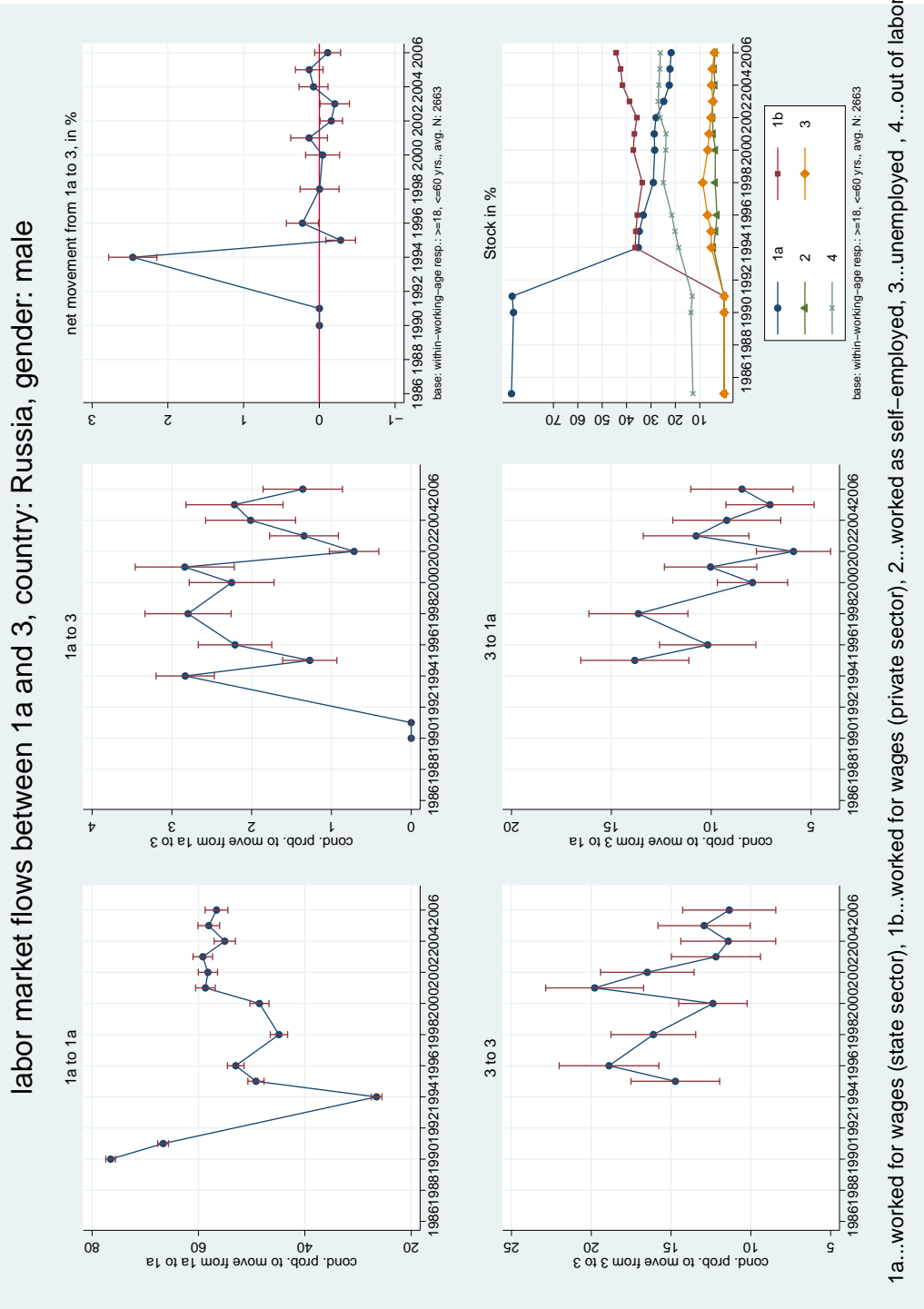
Figure 6: Flows between the private sector and self-employment, females

labor market flows between 1b and 2, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked as self-employed, 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

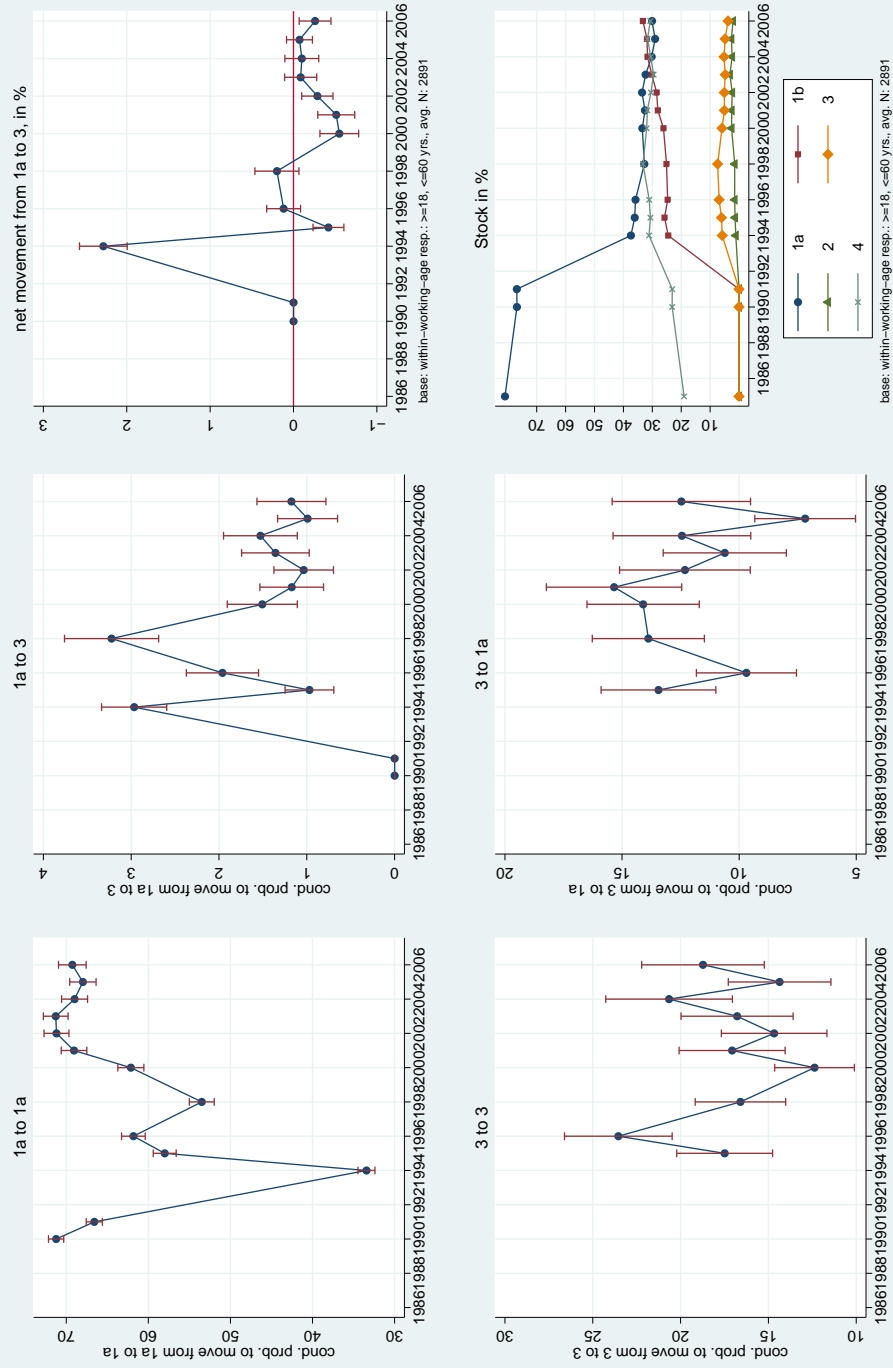
Figure 7: Flows between the state sector and unemployment, males



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

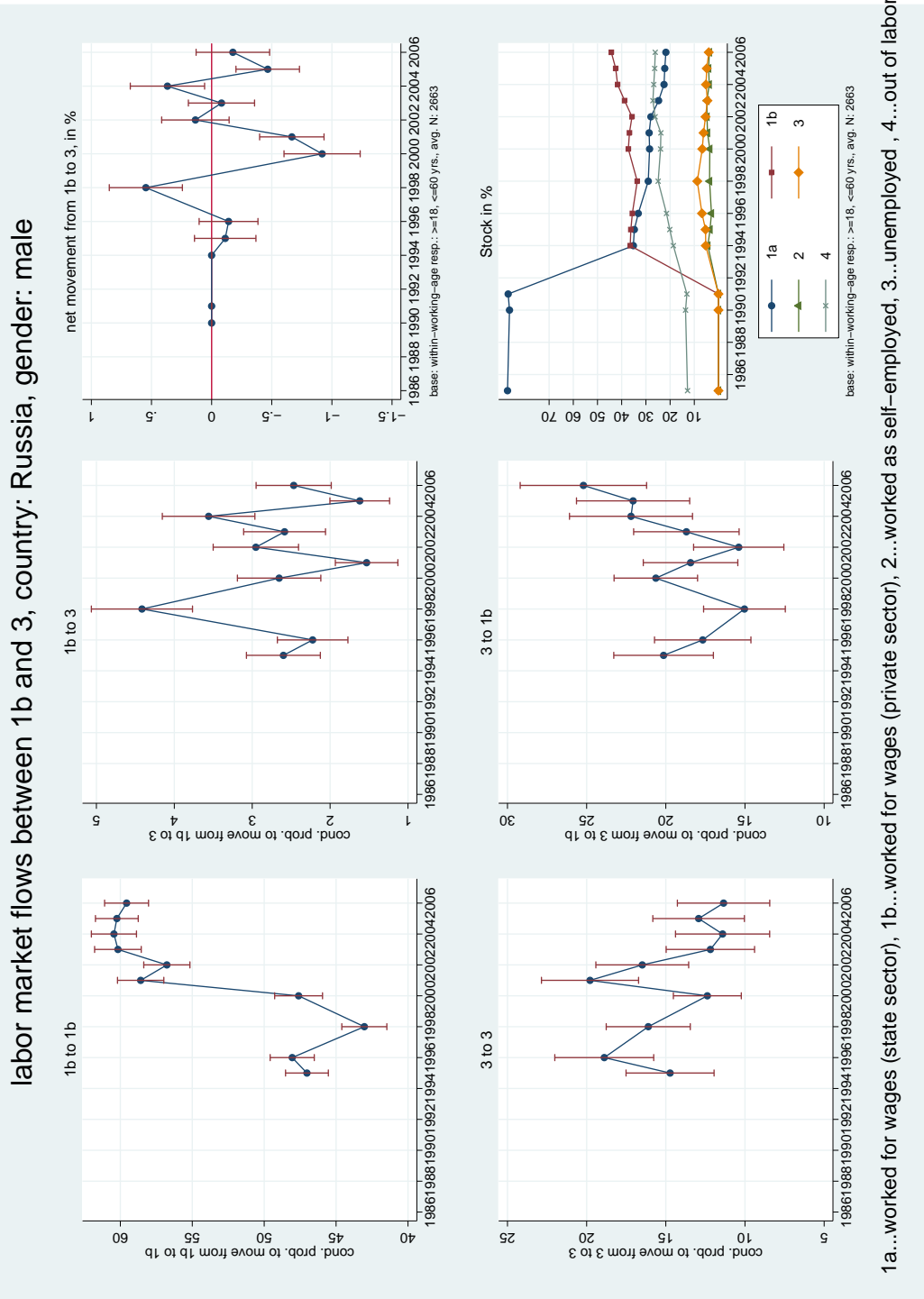
Figure 8: Flows between the state sector and unemployment, females

labor market flows between 1a and 3, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

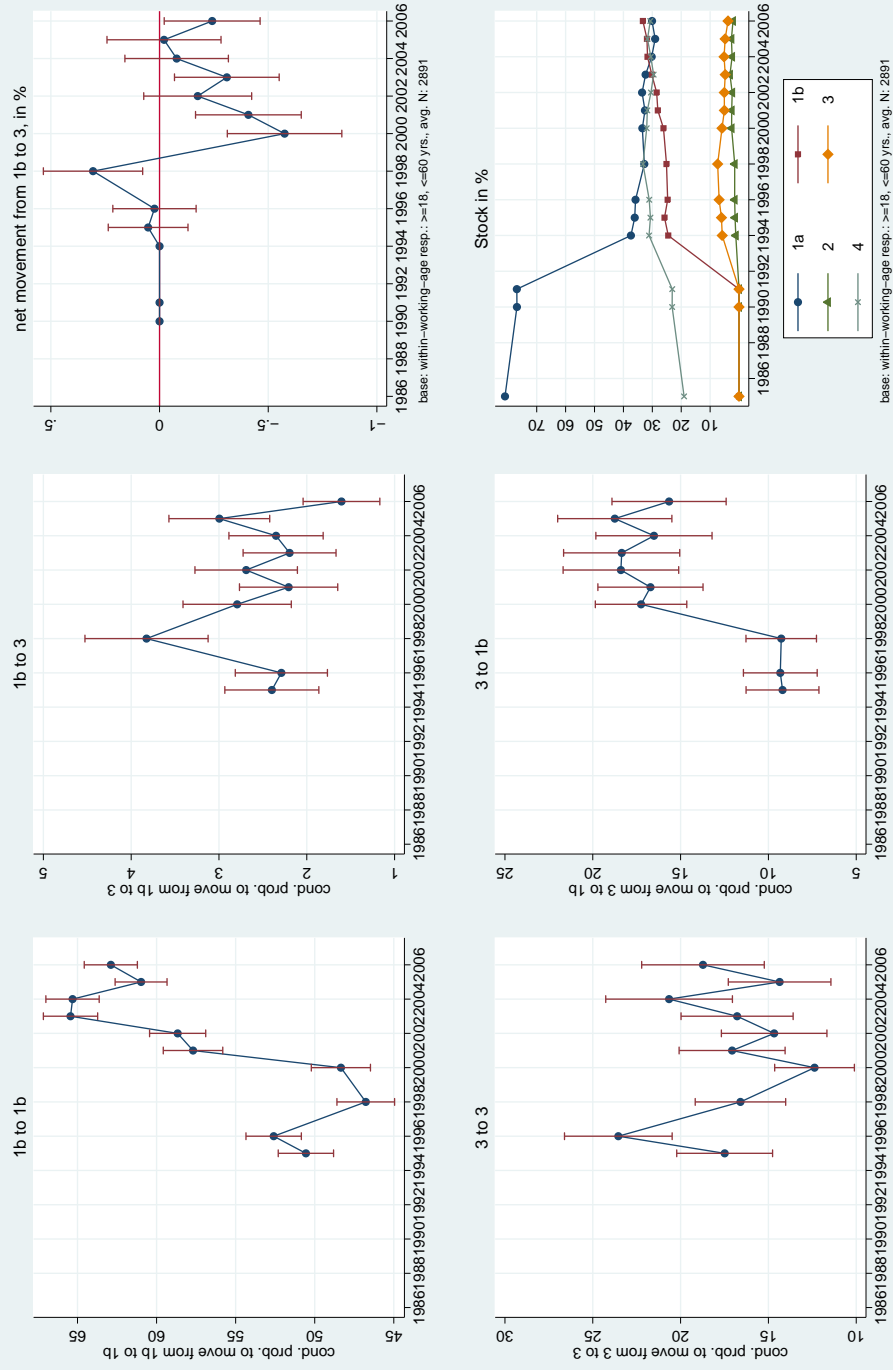
Figure 9: Flows between the private sector and unemployment, males



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

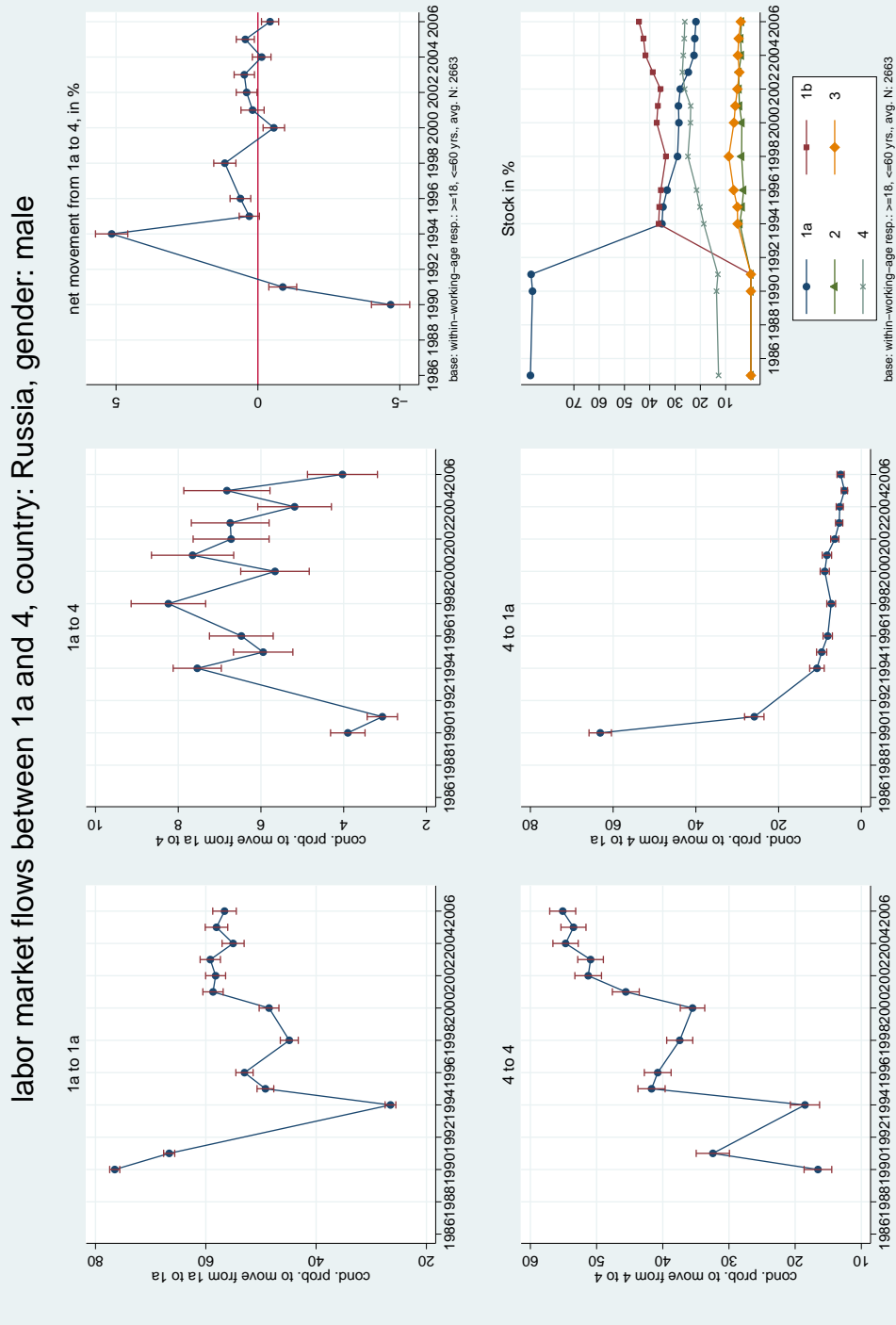
Figure 10: Flows between the private sector and unemployment, females

labor market flows between 1b and 3, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

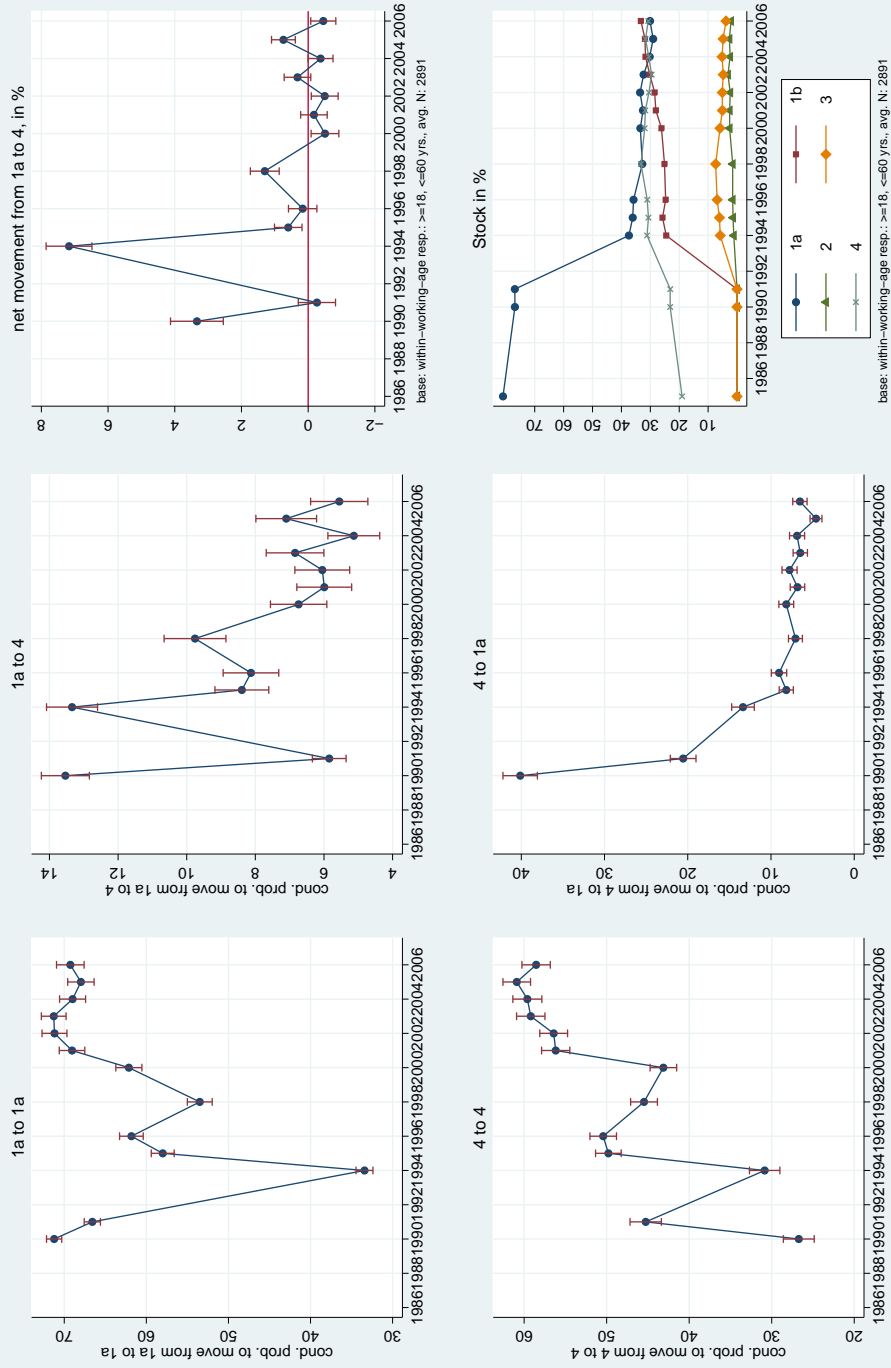
Figure 11: Flows between the state sector and out of labor force, males



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 12: Flows between the state sector and out of labor force, females

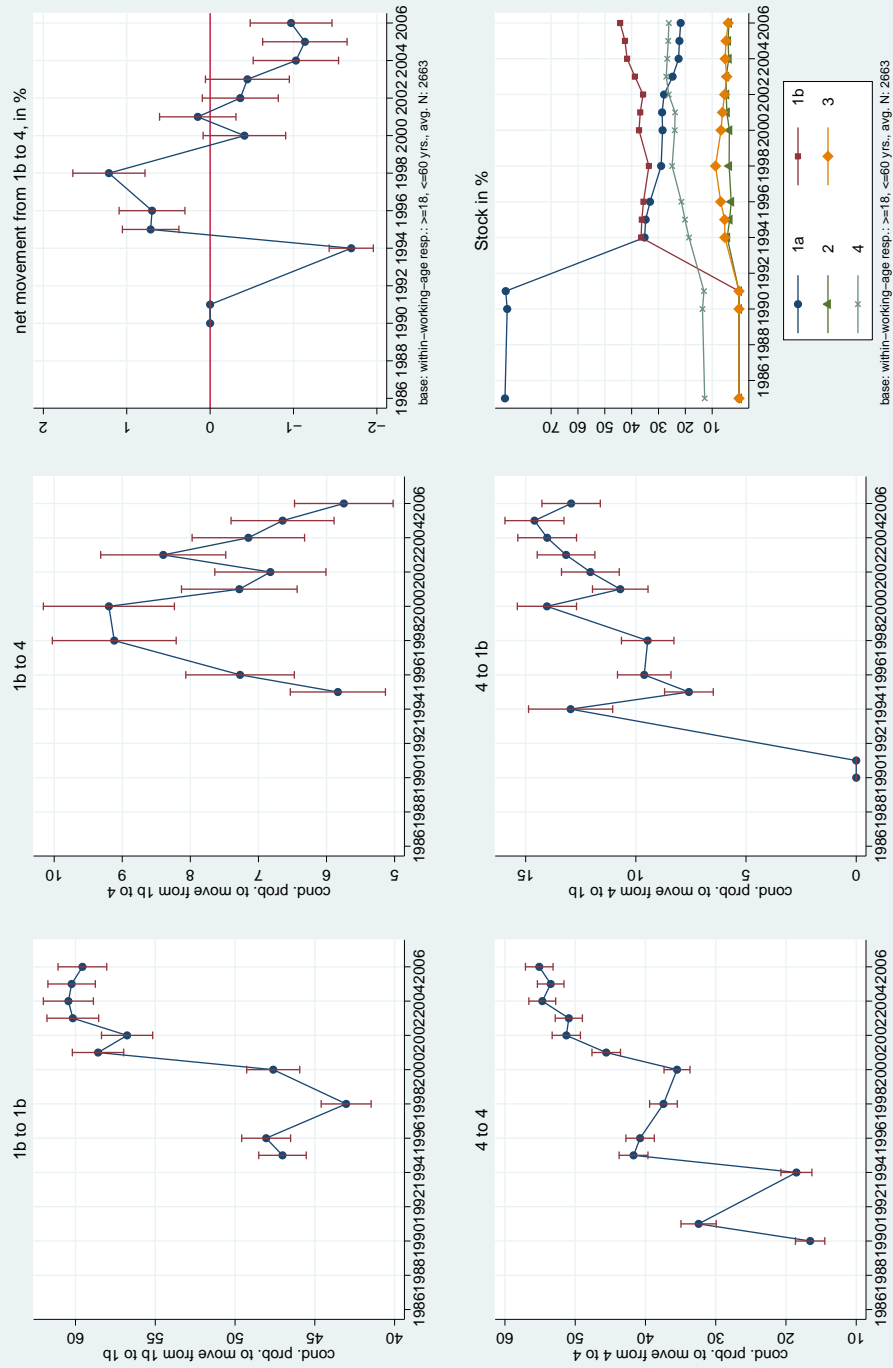
labor market flows between 1a and 4, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 13: Flows between the private sector and out of labor force, males

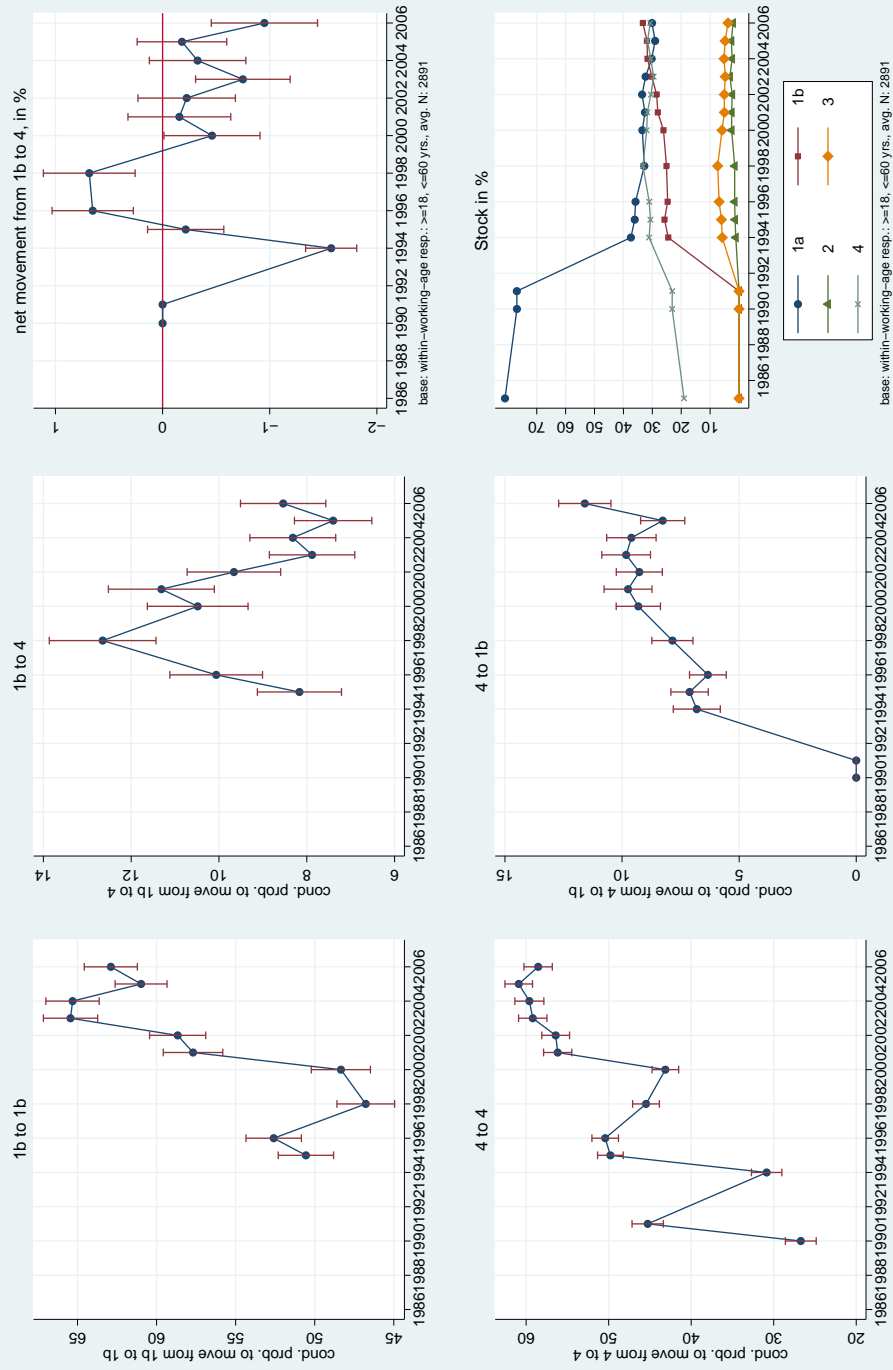
labor market flows between 1b and 4, country: Russia, gender: male



1a...worked for wages (state sector), 1b...worked as self-employed, 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 14: Flows between the private sector and out of labor force, females

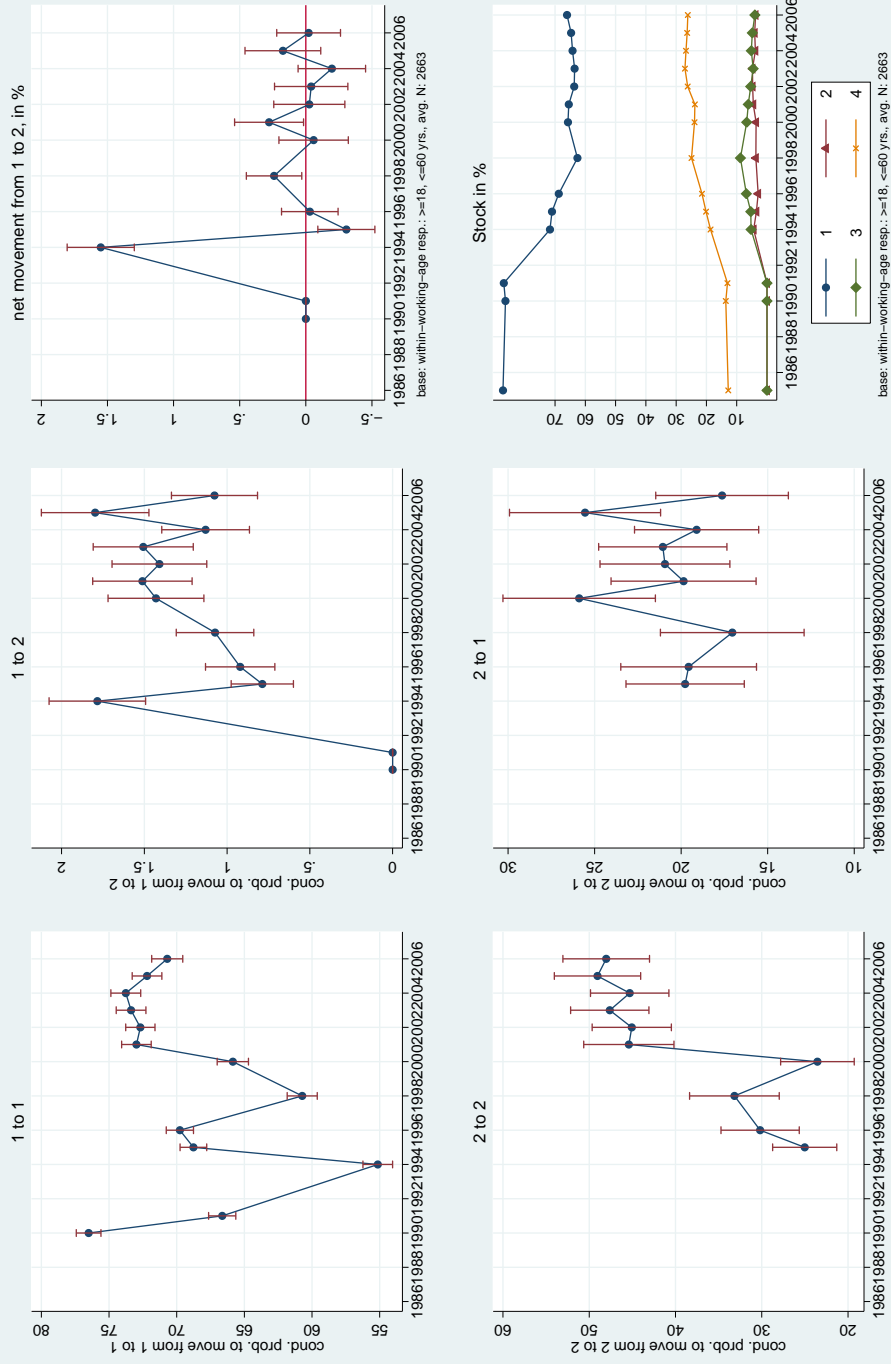
labor market flows between 1b and 4, country: Russia, gender: female



1a...worked for wages (state sector), 1b...worked for wages (private sector), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 15: Flows between work for wages and self-employment, males

labor market flows between 1 and 2, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 16: Flows between work for wages and self-employment, females

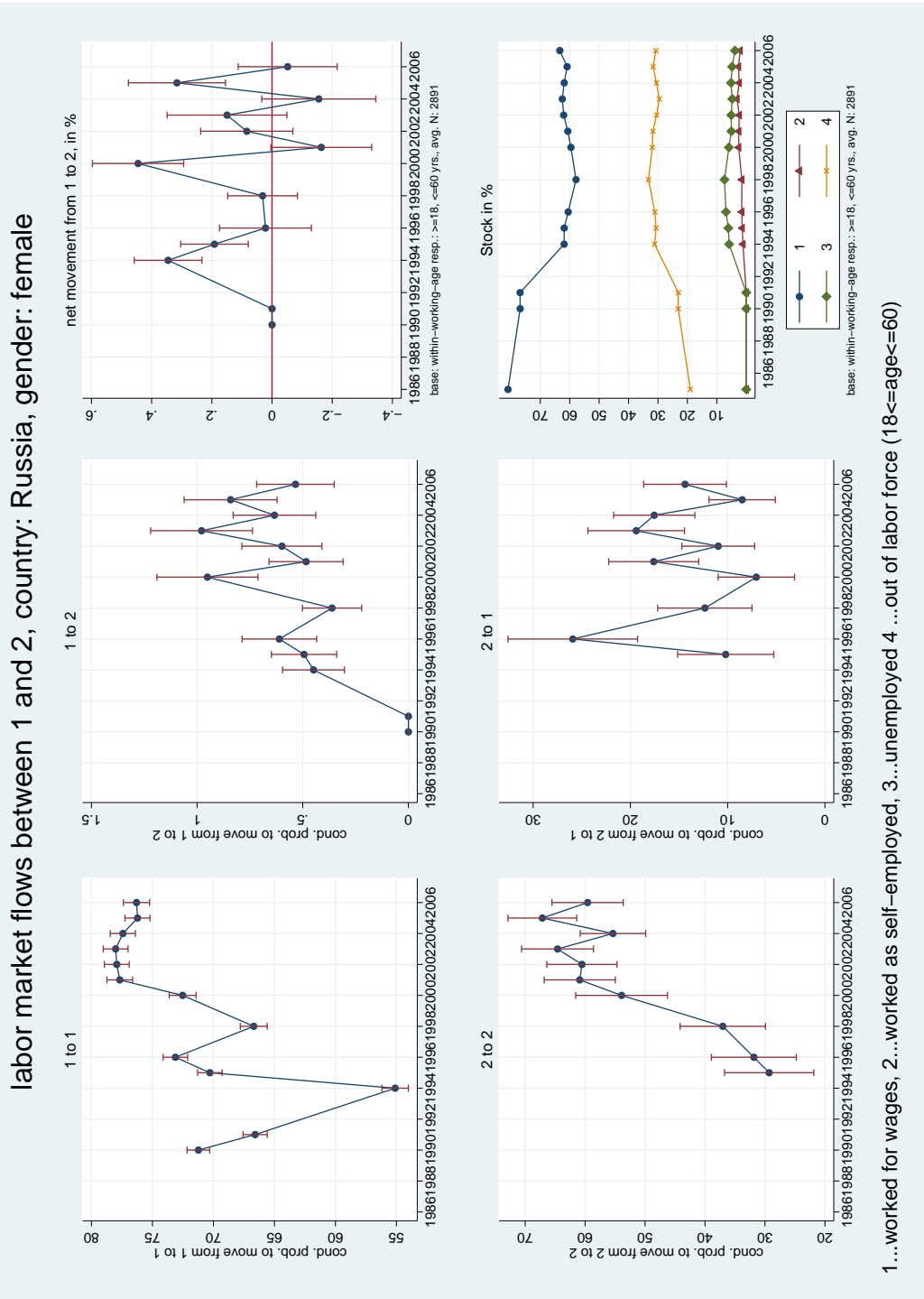
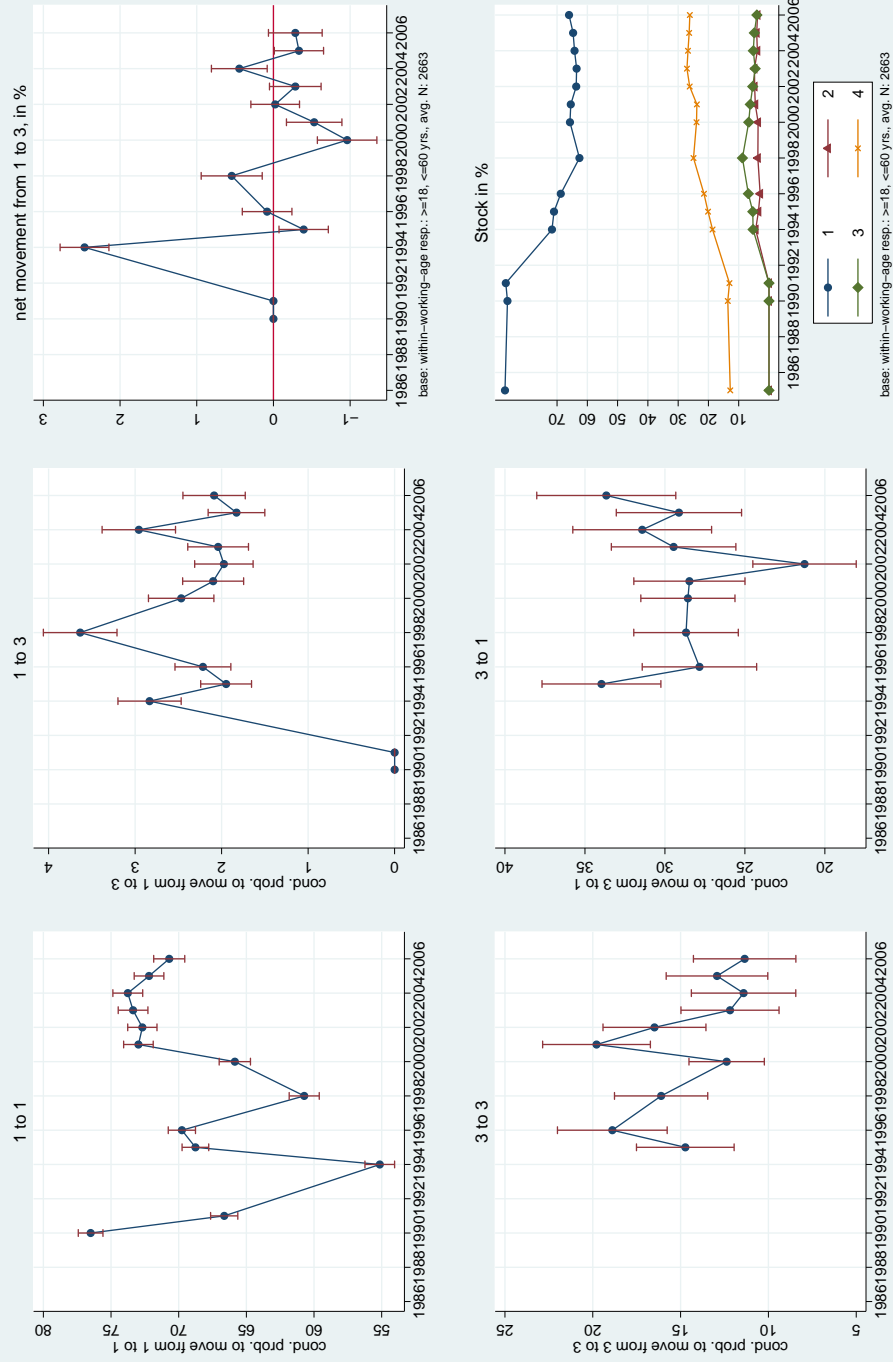


Figure 17: Flows between work for wages and unemployment, males

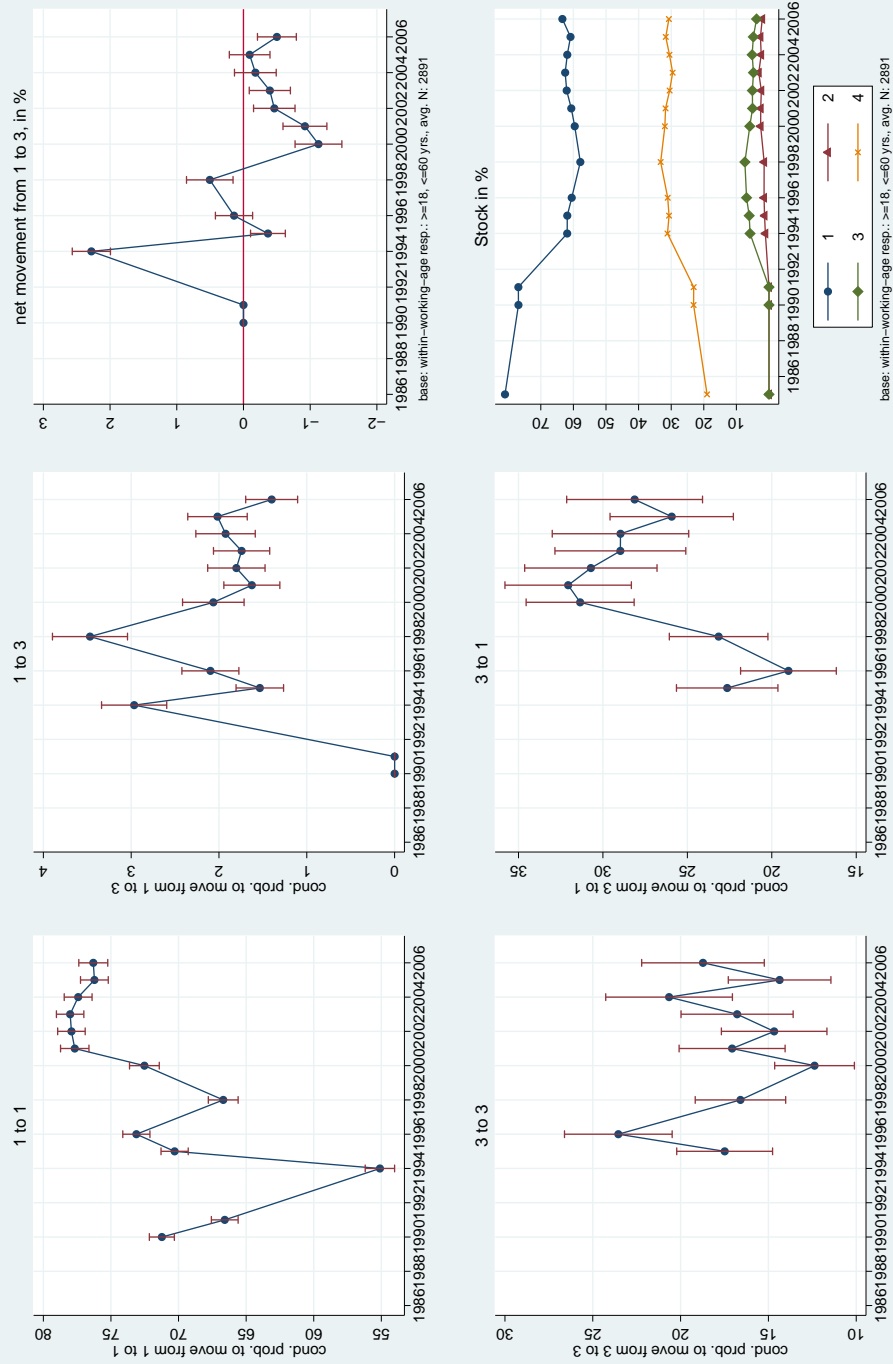
labor market flows between 1 and 3, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 18: Flows between work for wages and unemployment, females

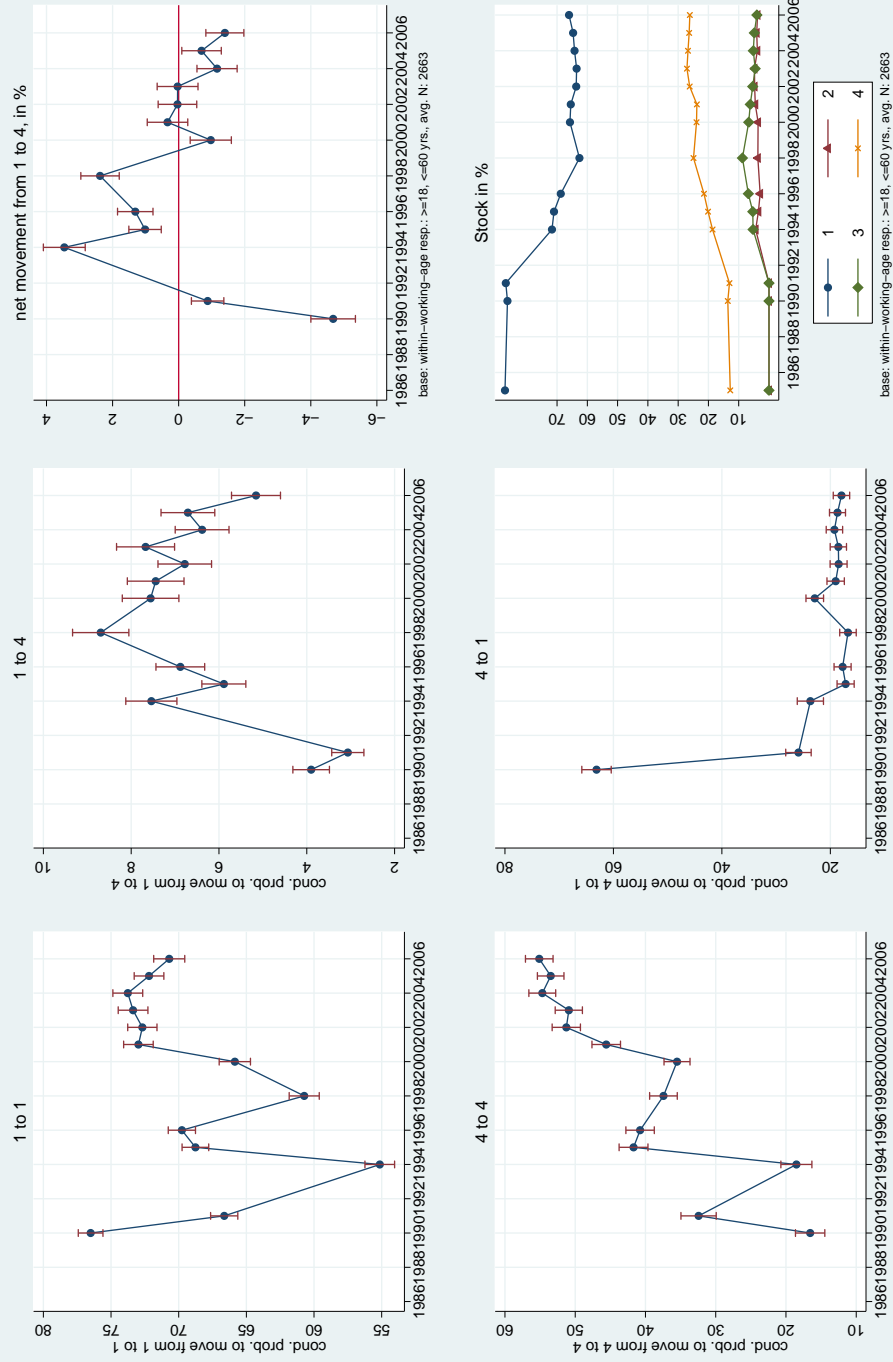
labor market flows between 1 and 3, country: Russia, gender: female



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 19: Flows between work for wages and out of labor force, males

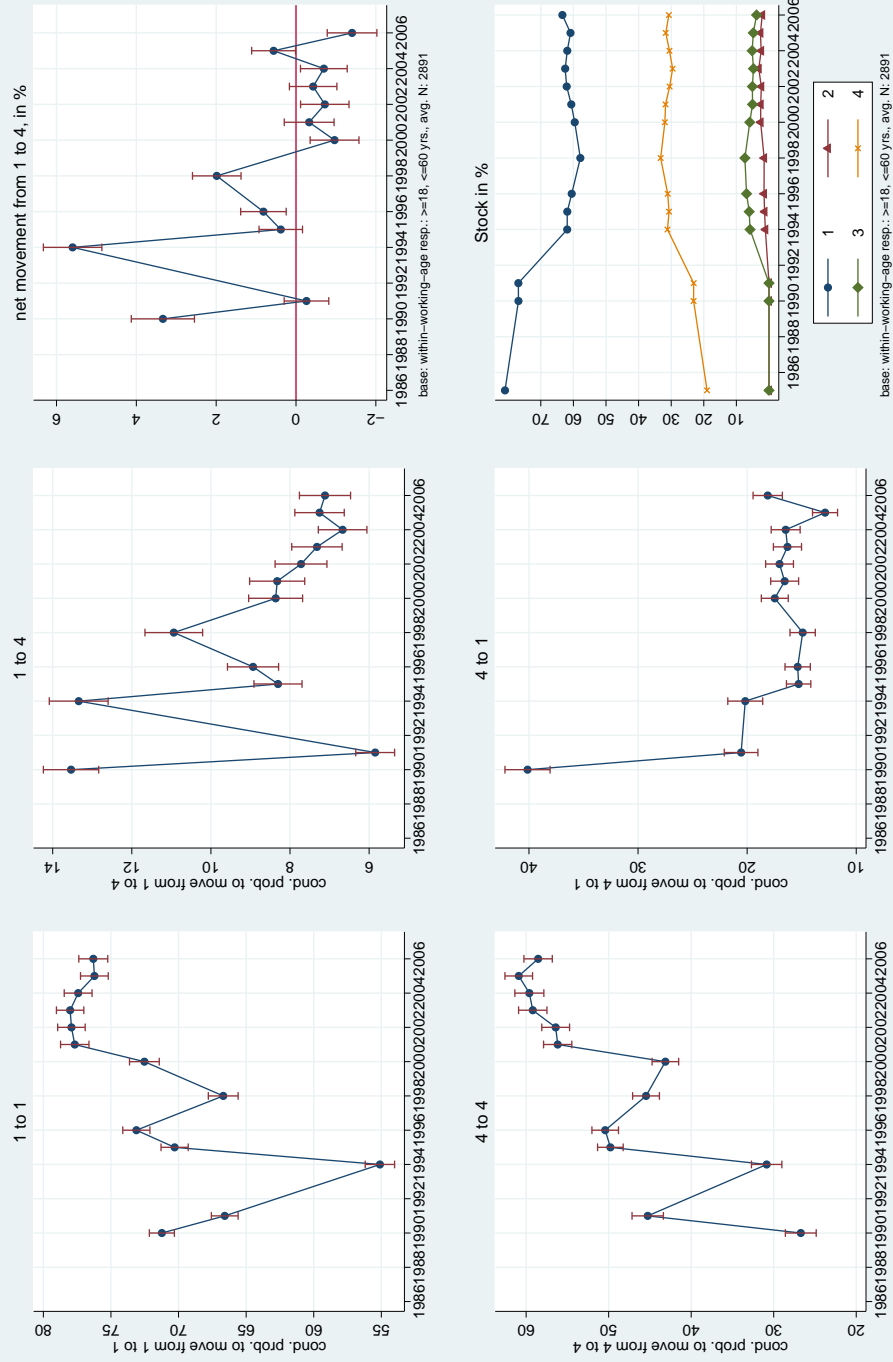
labor market flows between 1 and 4, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 20: Flows between work for wages and out of labor force, females

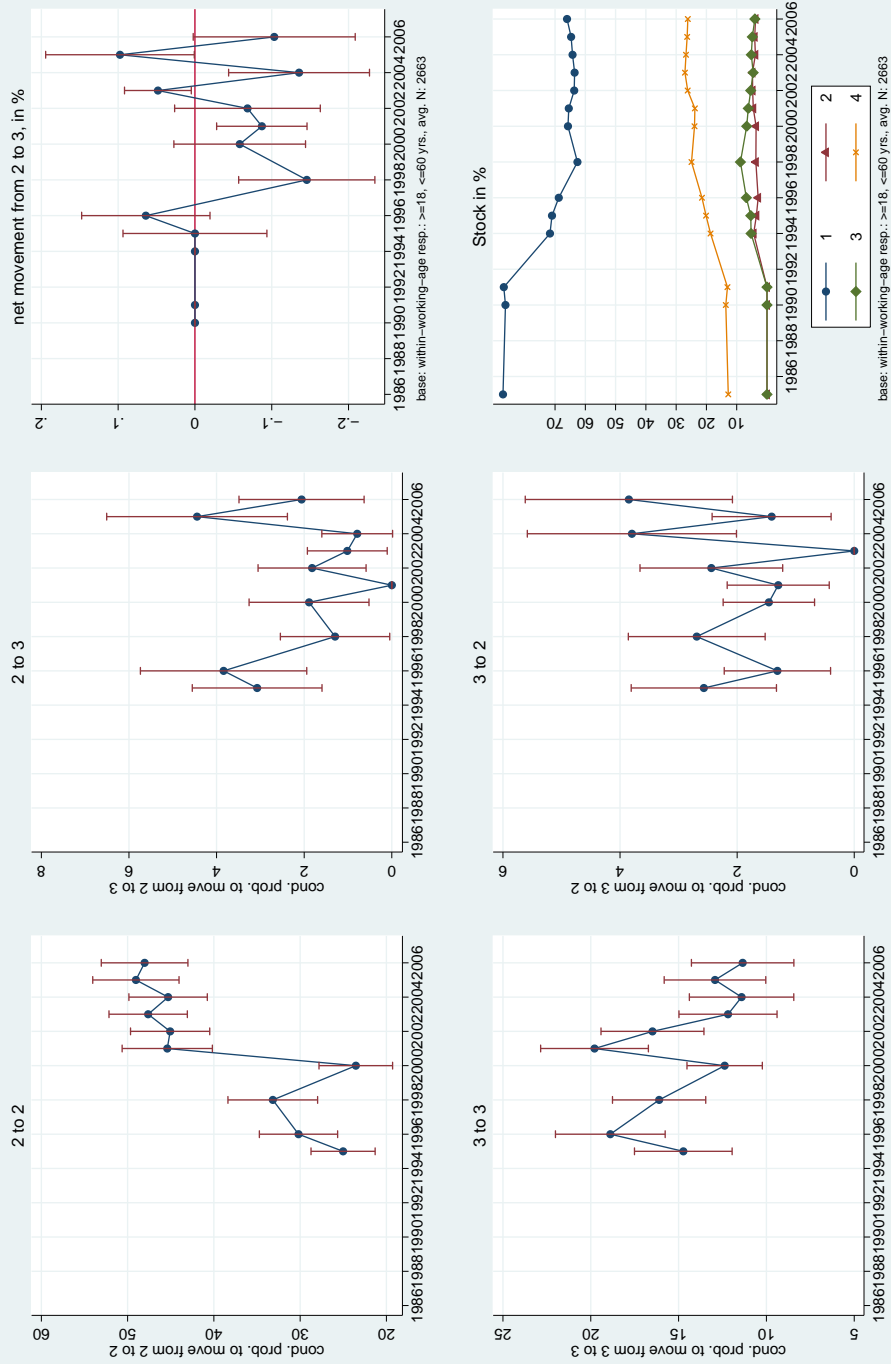
labor market flows between 1 and 4, country: Russia, gender: female



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 21: Flows between self-employment and unemployment, males

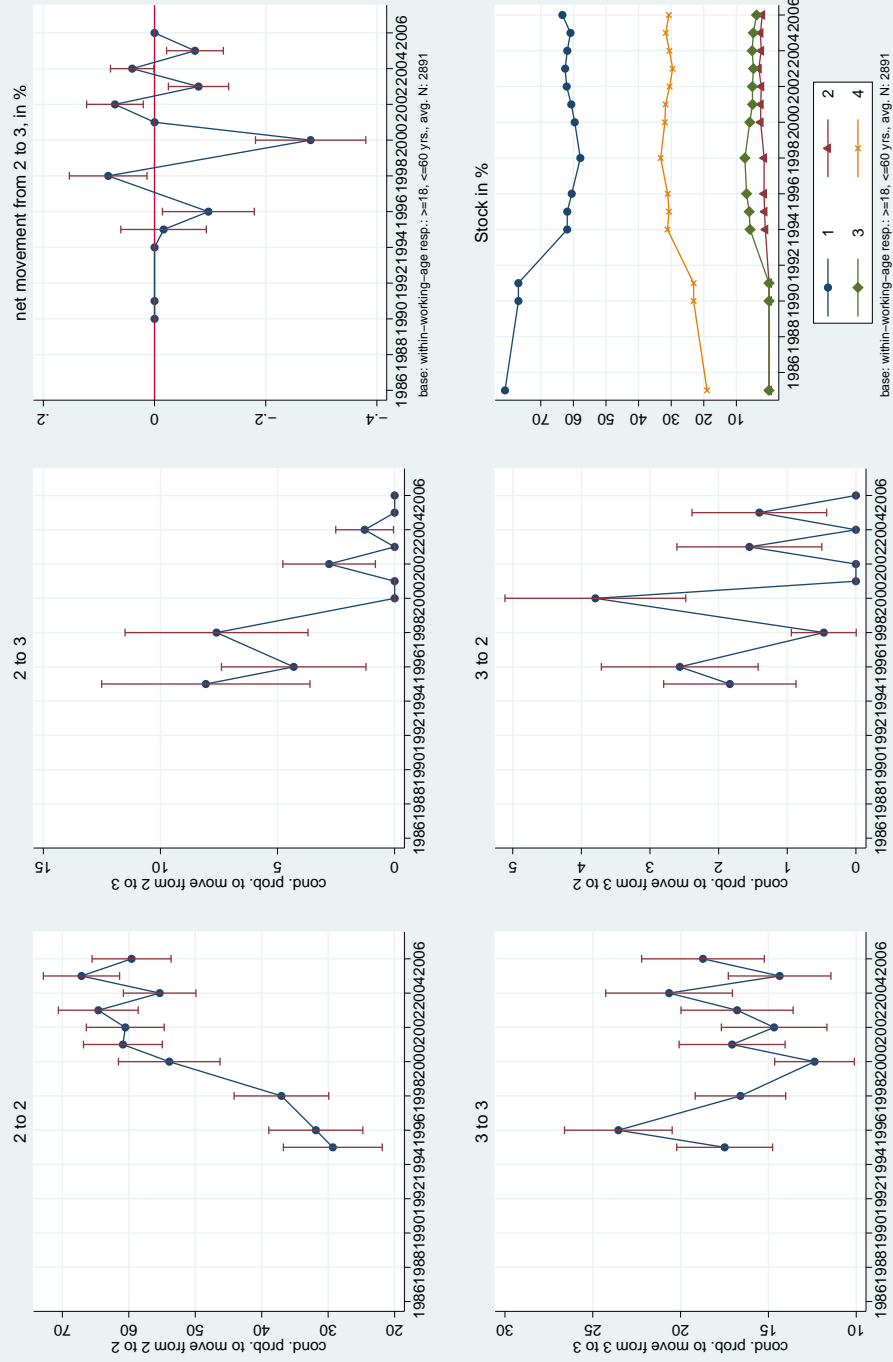
labor market flows between 2 and 3, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 22: Flows between self-employment and unemployment, females

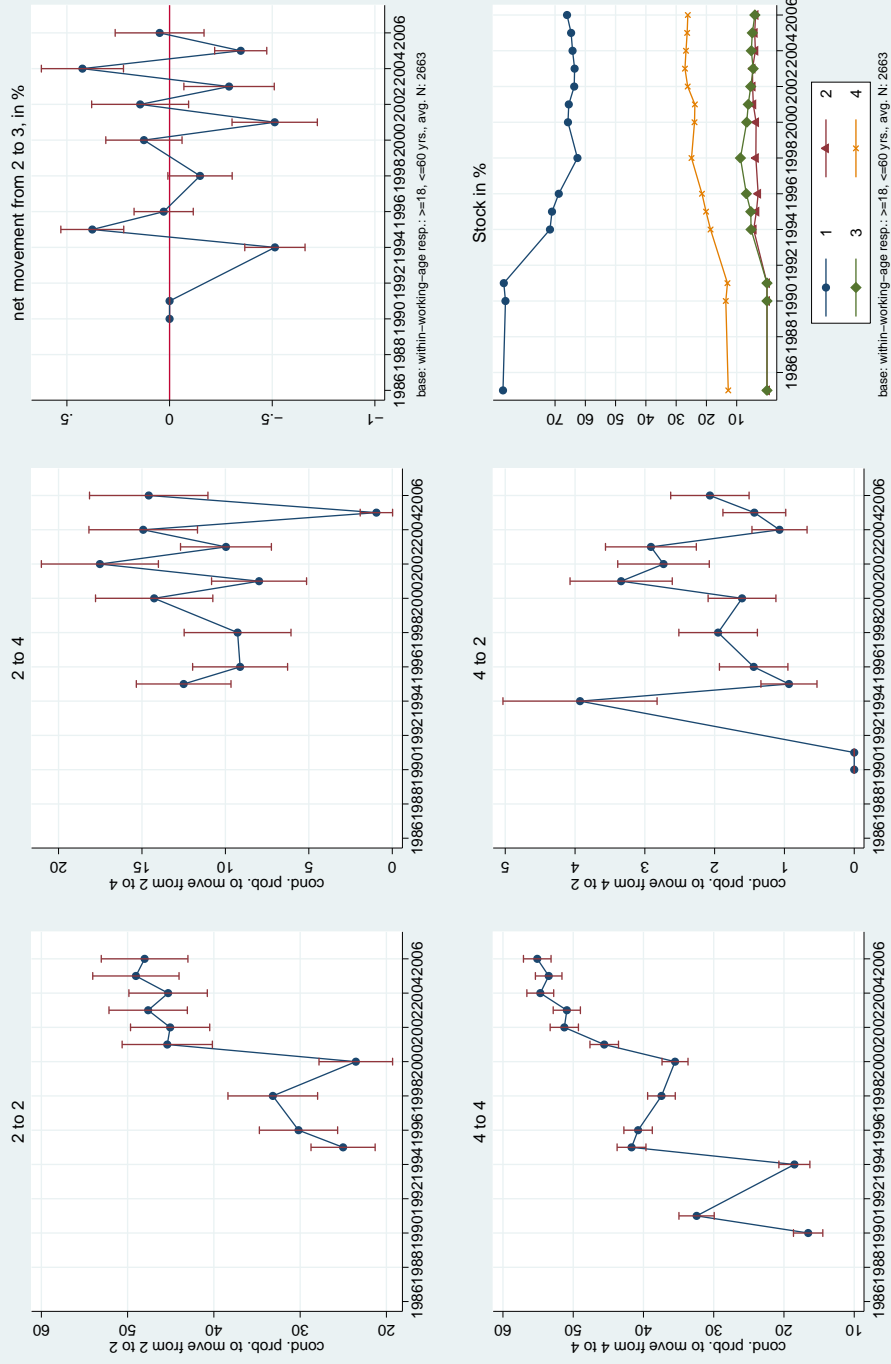
labor market flows between 2 and 3, country: Russia, gender: female



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 23: Flows between self-employment and out of labor force, males

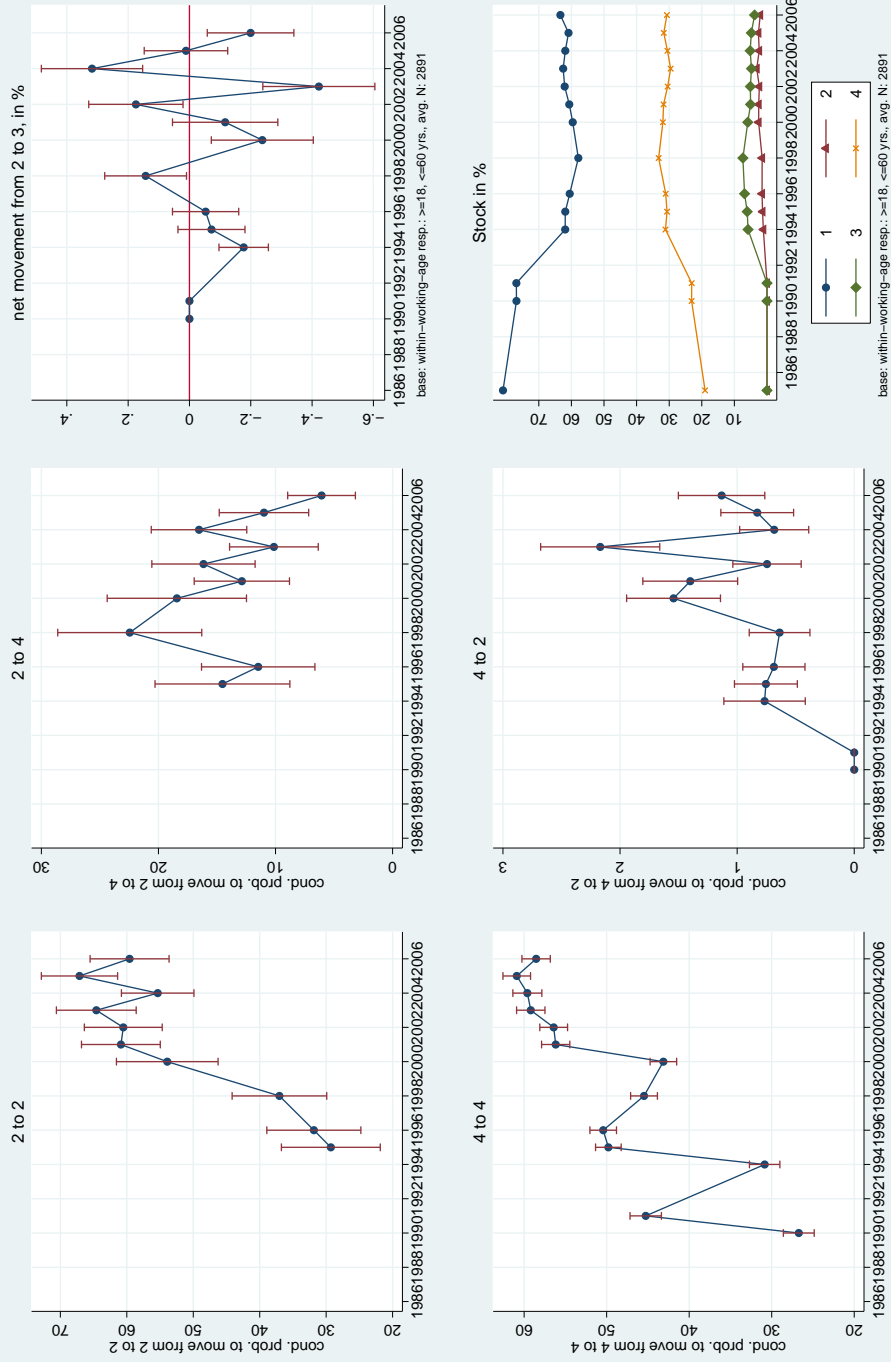
labor market flows between 2 and 4, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 24: Flows between self-employment and out of labor force, females

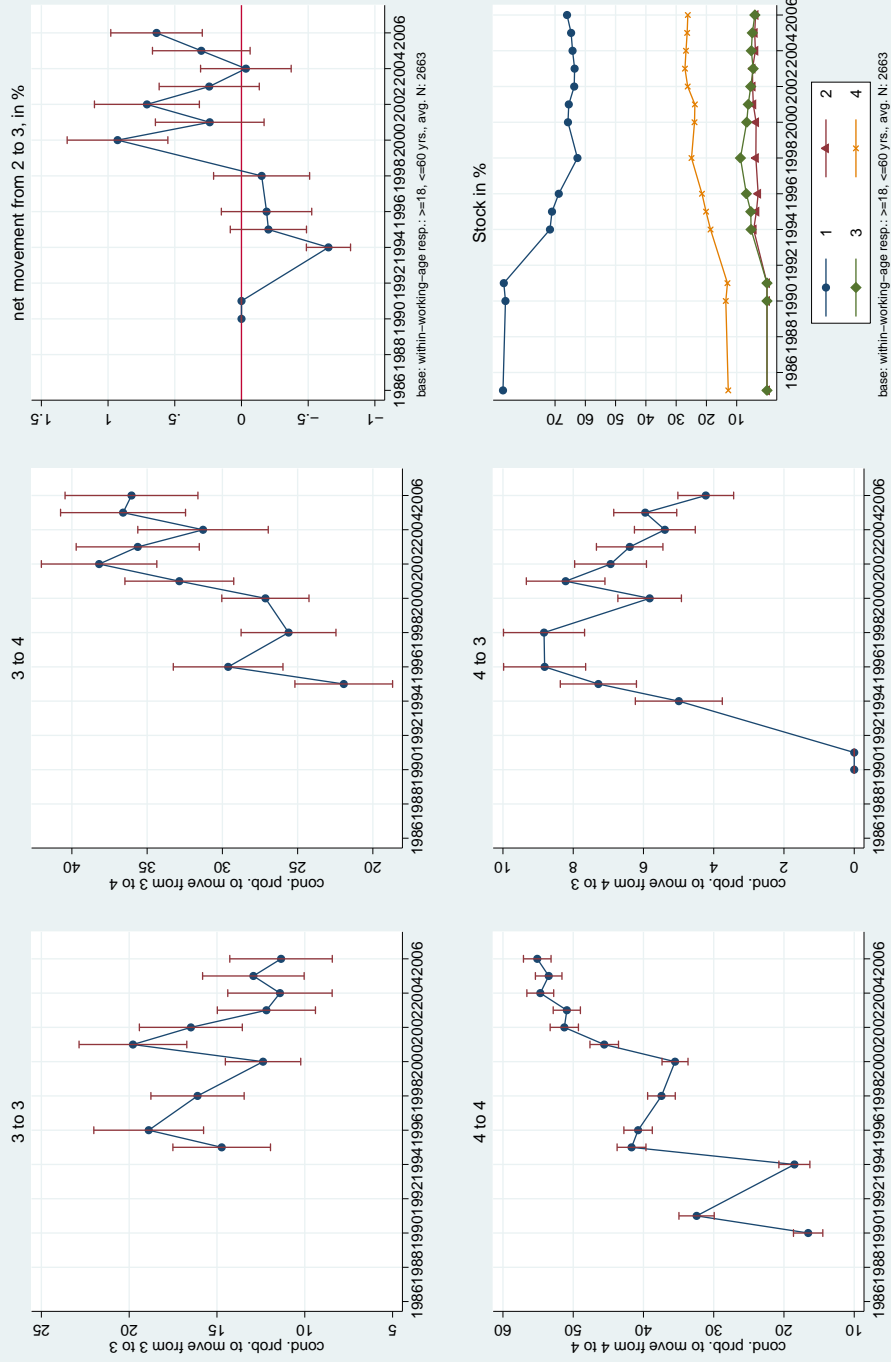
labor market flows between 2 and 4, country: Russia, gender: female



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 25: Flows between unemployment and out of labor force, males

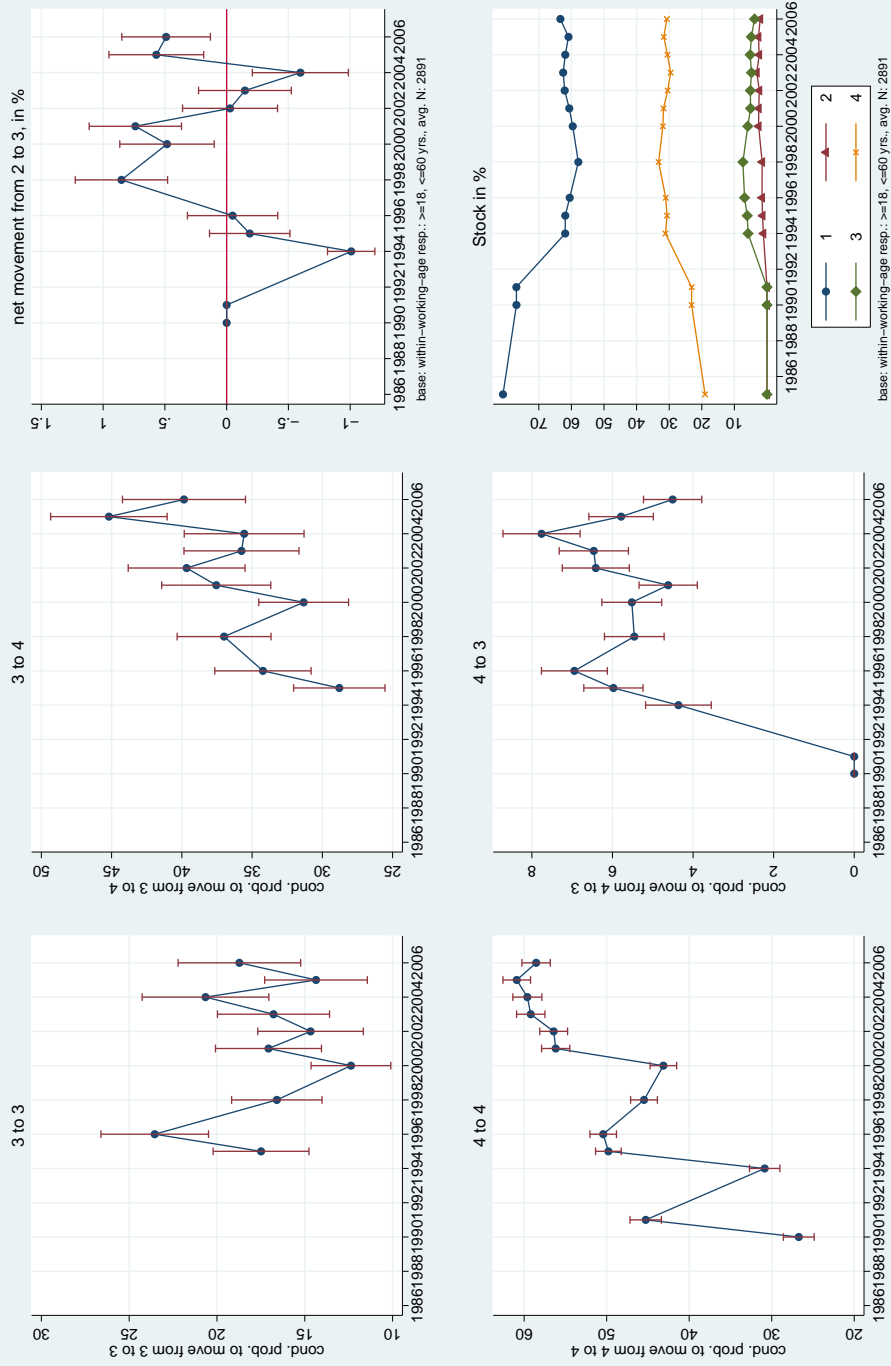
labor market flows between 3 and 4, country: Russia, gender: male



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 26: Flows between unemployment and out of labor force, females

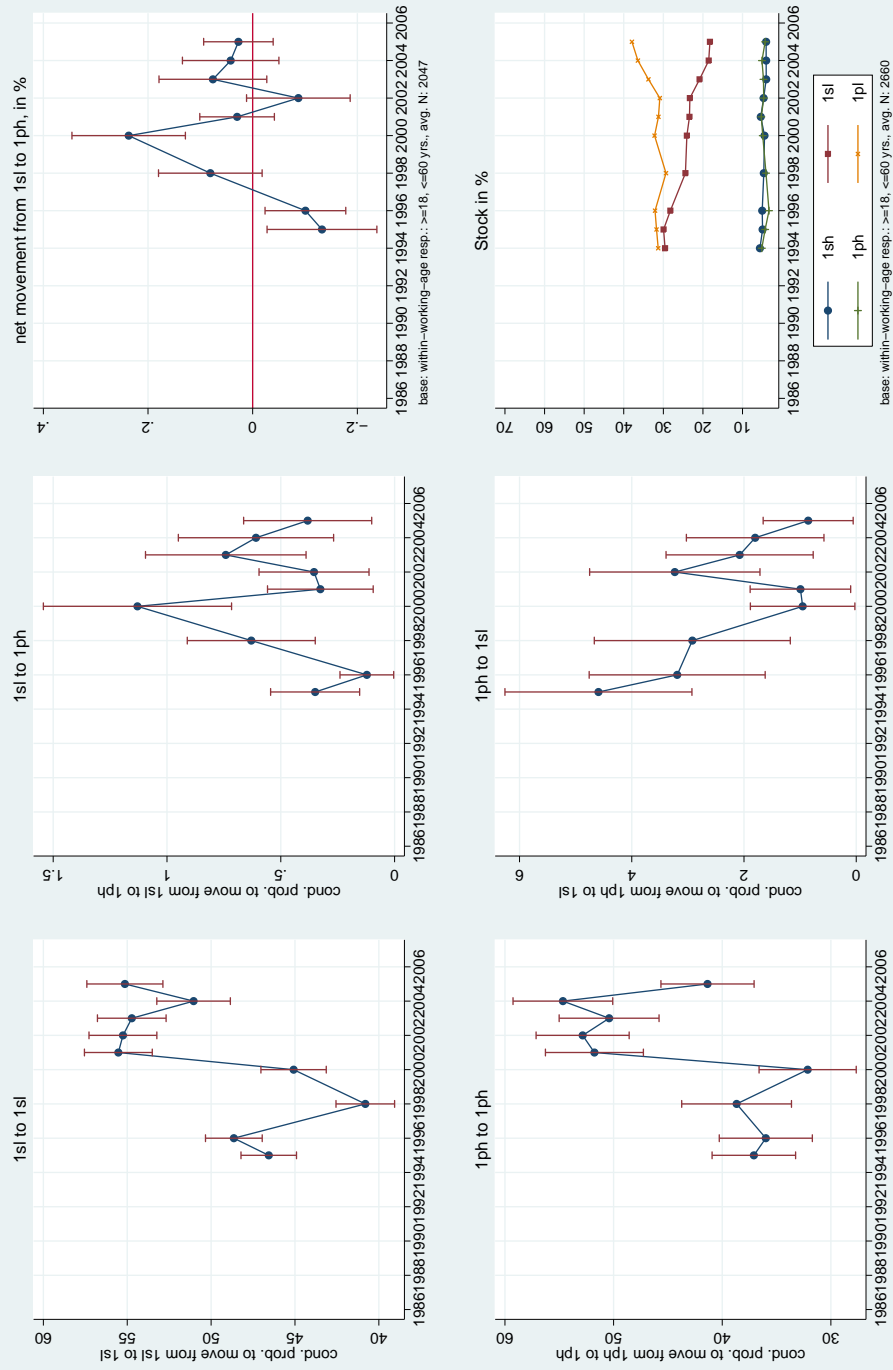
labor market flows between 3 and 4, country: Russia, gender: female



1...worked for wages, 2...worked as self-employed, 3...unemployed 4 ...out of labor force (18<=age<=60)

Figure 27: Flows between work in state sector in low occupations work in private sector in high occupations, males

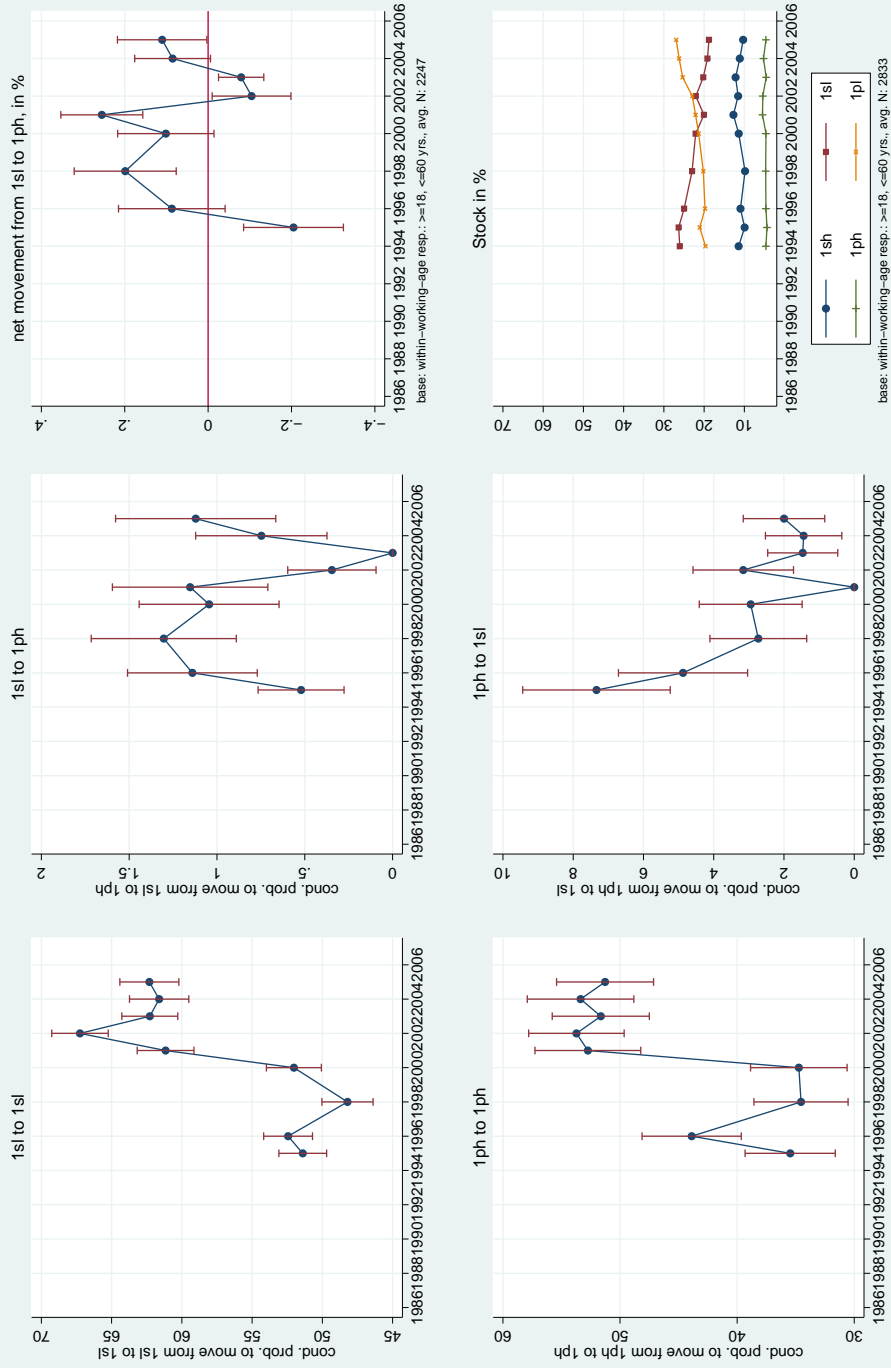
labor market flows between 1sl and 1ph, country: Russia, gender: male



1sl...worked for wages (state sector, low qualification), 1ph...worked for wages (private sector, high qualification), 2...unemployed, 3...unemployed, 4...out of labor force (18

Figure 28: Flows between work in state sector in low occupations and work in private sector in high occupations, females

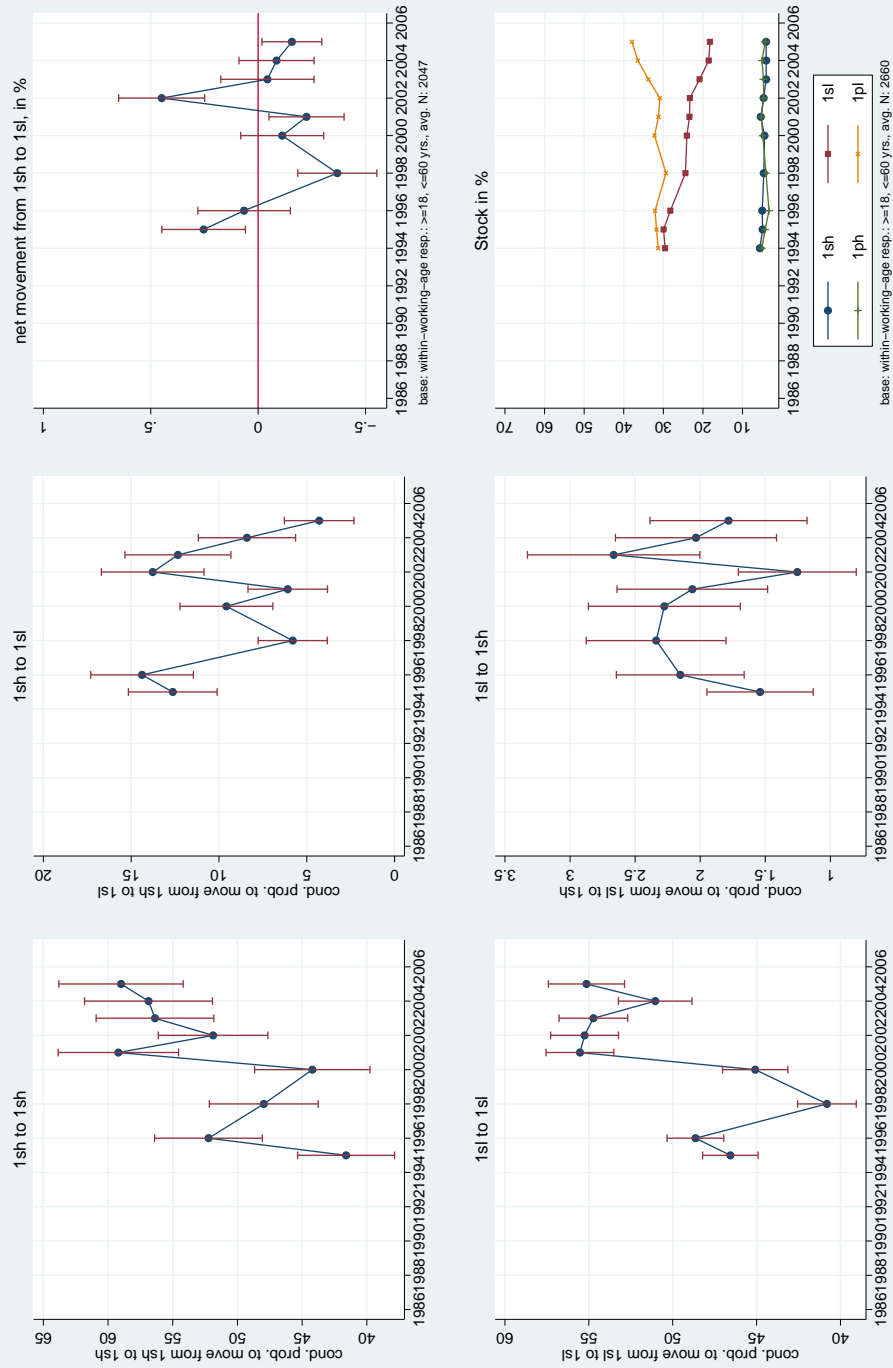
labor market flows between 1sl and 1ph, country: Russia, gender: female



1sl...worked for wages (state sector, low qualification), 1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18

Figure 29: Flows between work in state sector in high occupations and work in state sector in low occupations, males

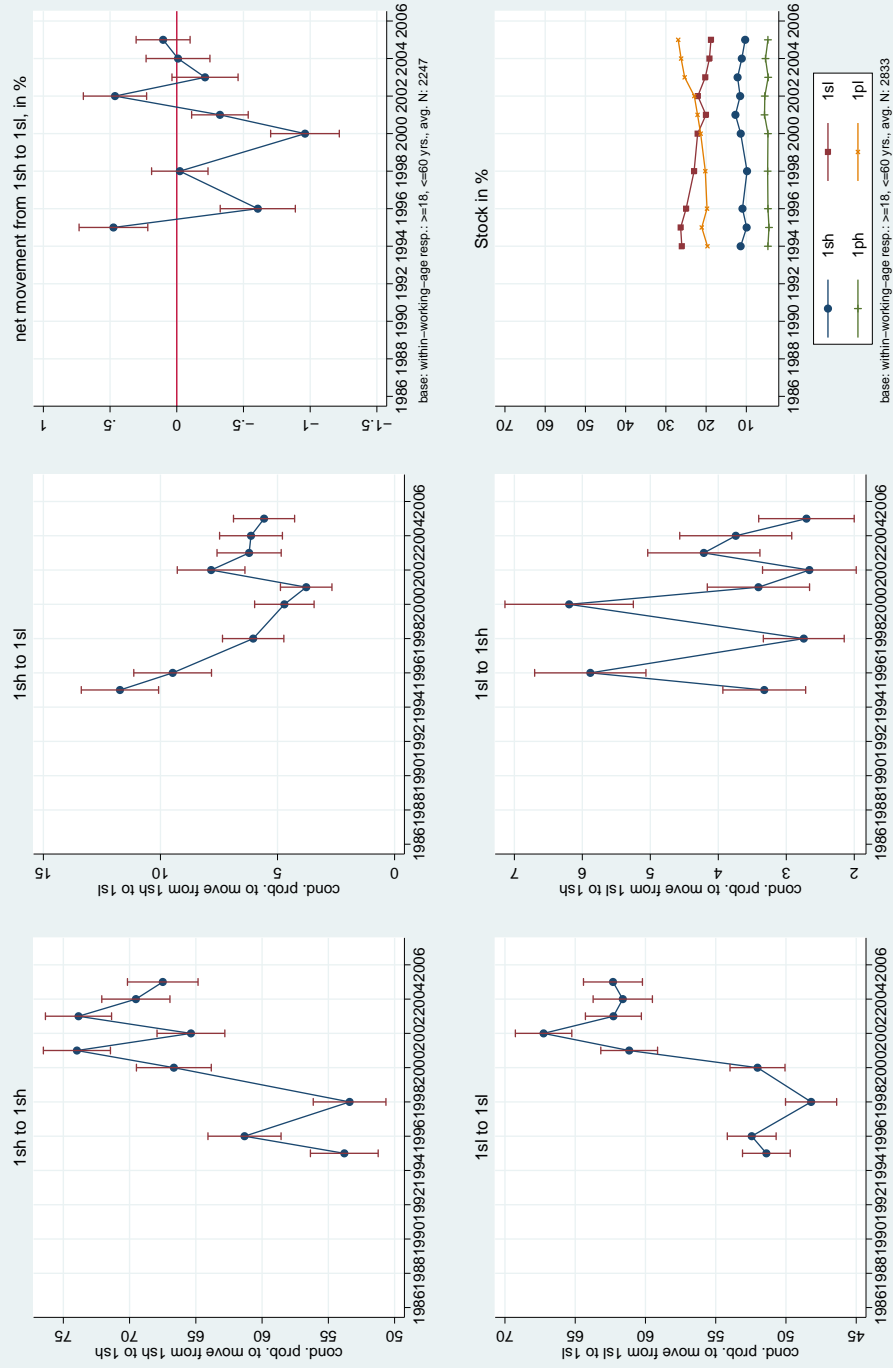
labor market flows between 1sh and 1sl, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<

Figure 30: Flows between work in state sector in high occupations and work in state sector in low occupations, females

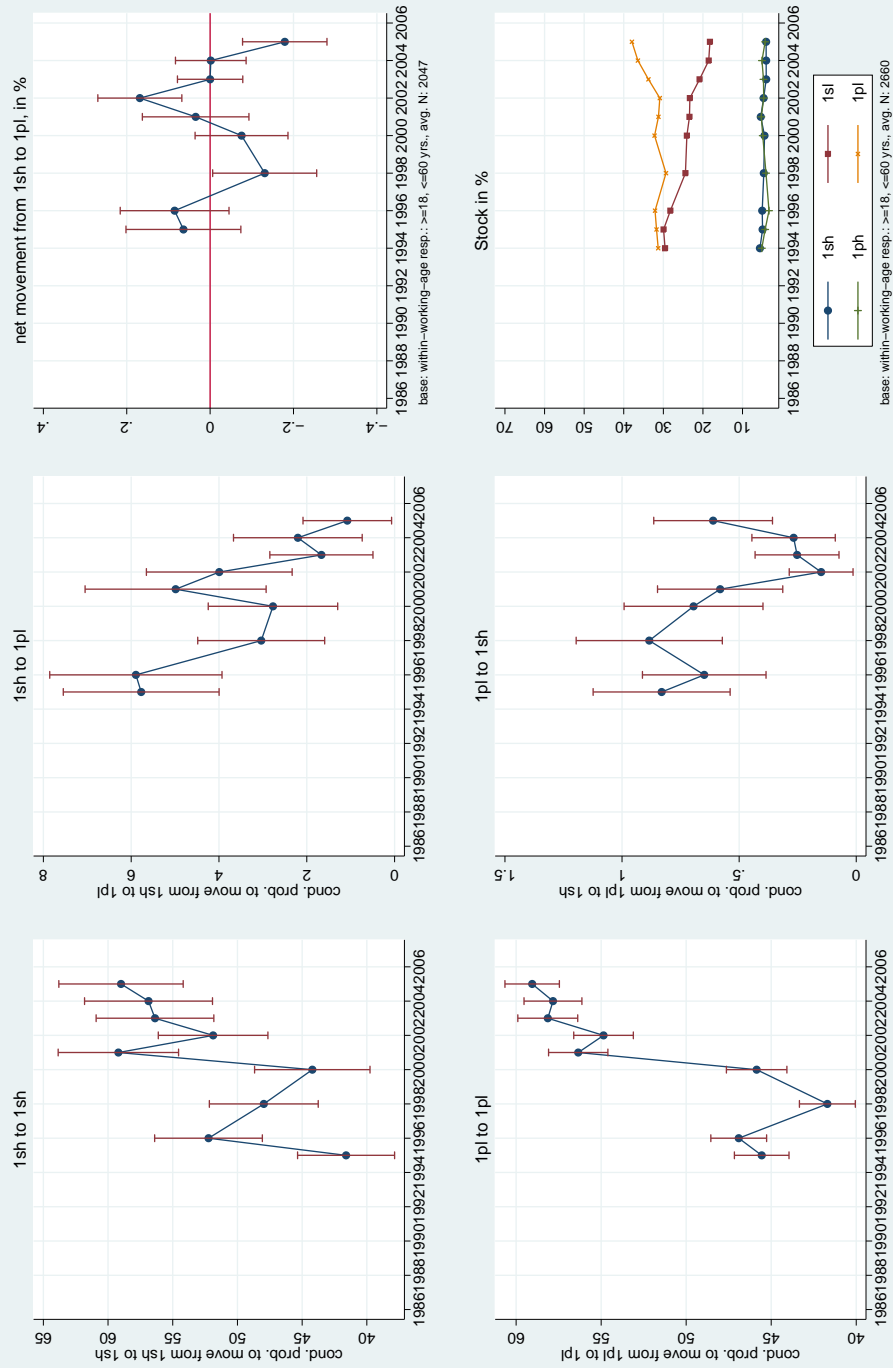
labor market flows between 1sh and 1sl, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<

Figure 31: Flows between work in state sector in high occupations and work in private sector in low occupations, males

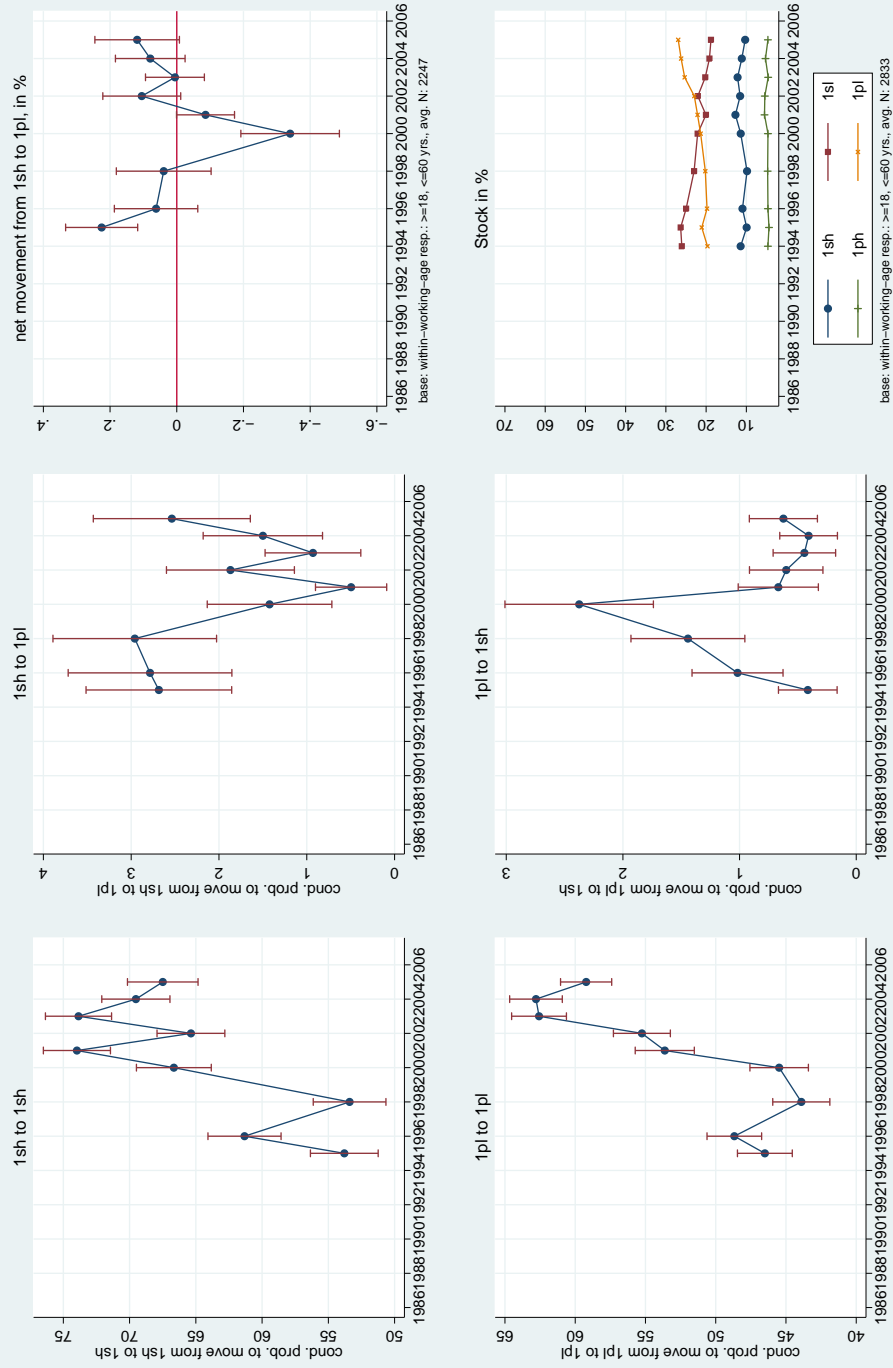
labor market flows between 1sh and 1pl, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18

Figure 32: Flows between work in state sector in high occupations and work in private sector in low occupations, females

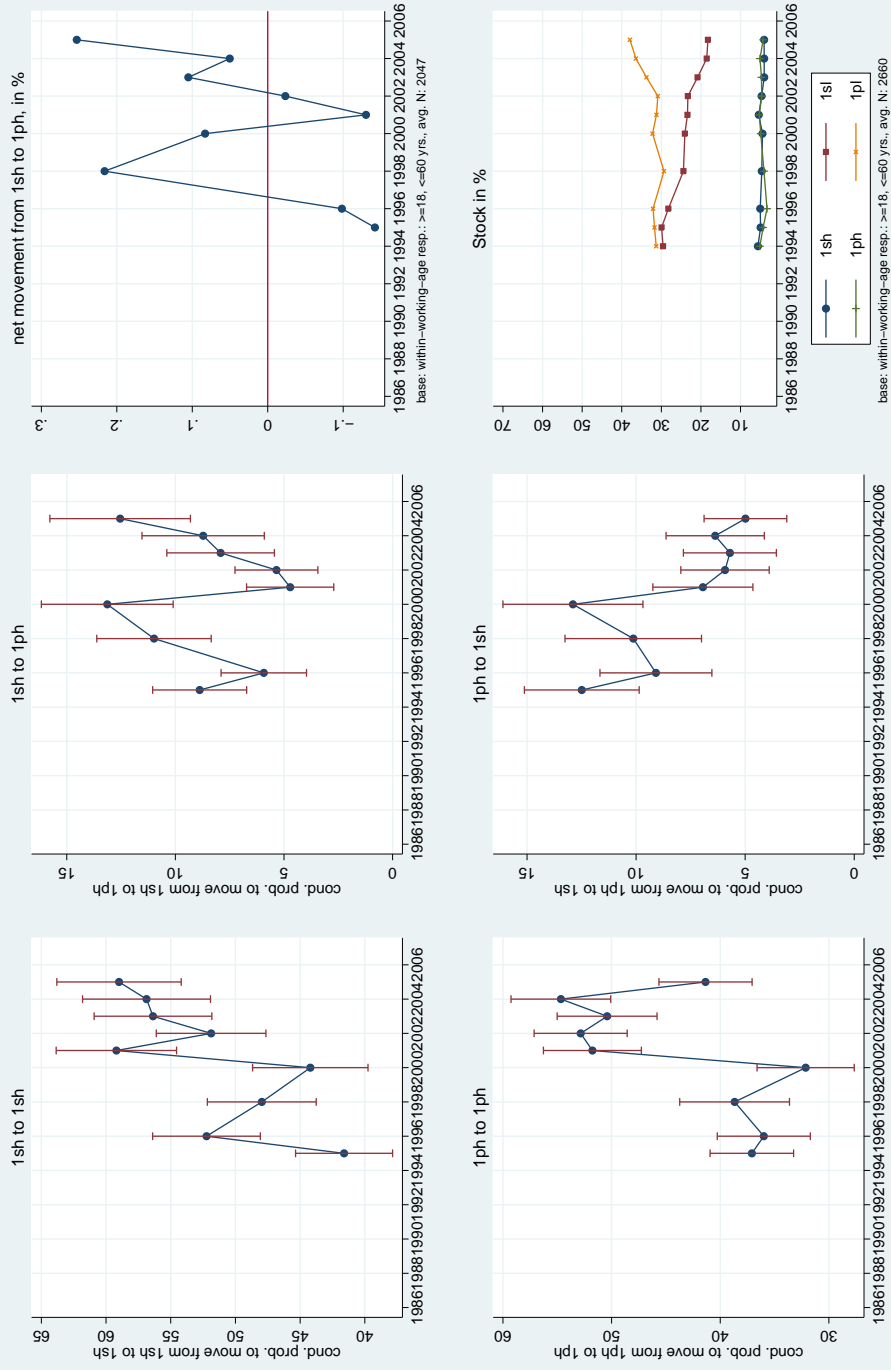
labor market flows between 1sh and 1pl, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18

Figure 33: Flows between work in state sector in high occupations and work in private sector in high occupations, males

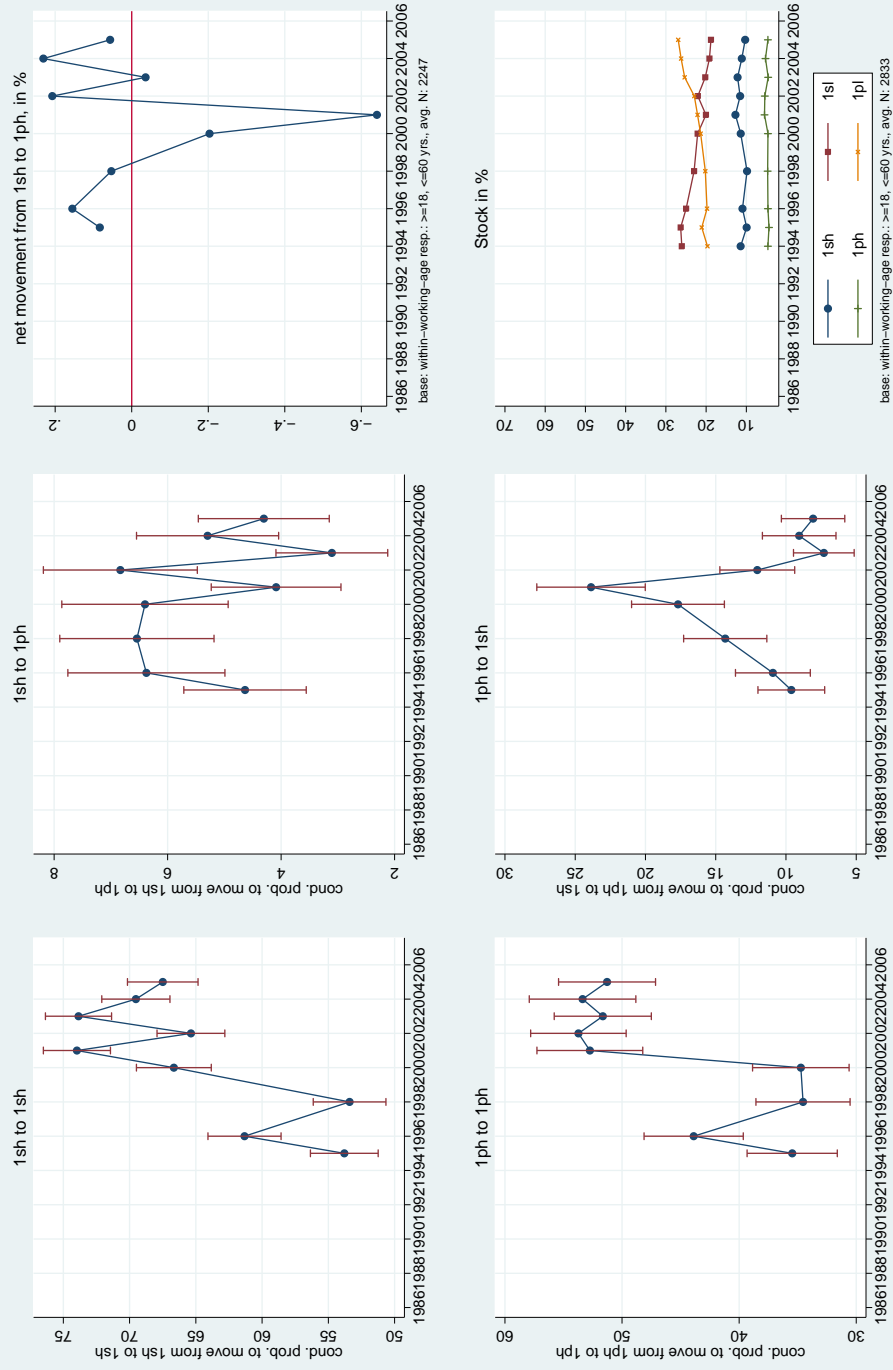
labor market flows between 1sh and 1ph, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (1

Figure 34: Flows between work in state sector in high occupations and work in private sector in high occupations, females

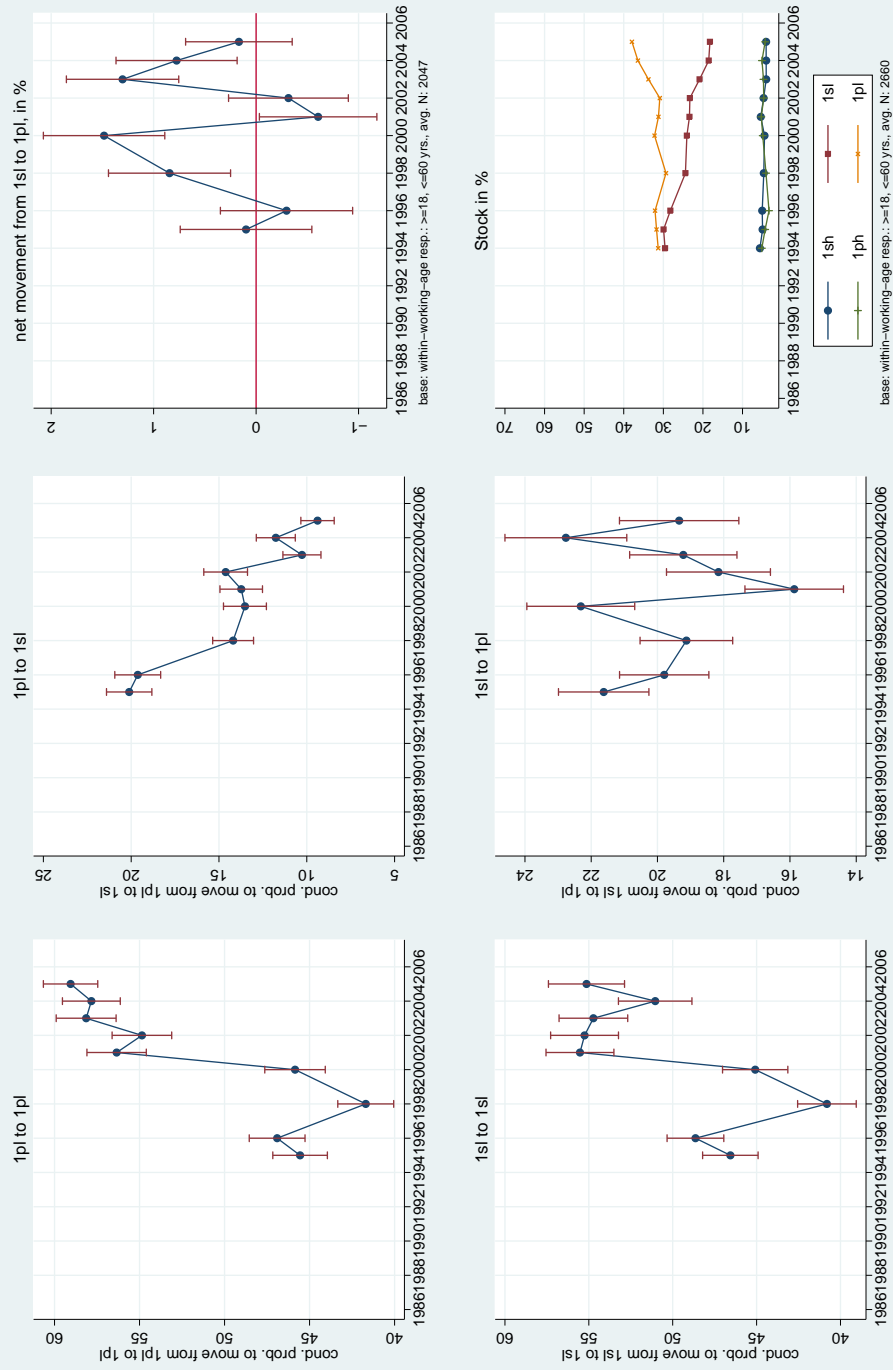
labor market flows between 1sh and 1ph, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (1

Figure 35: Flows between work in private sector in low occupations and work in state sector in low occupations, males

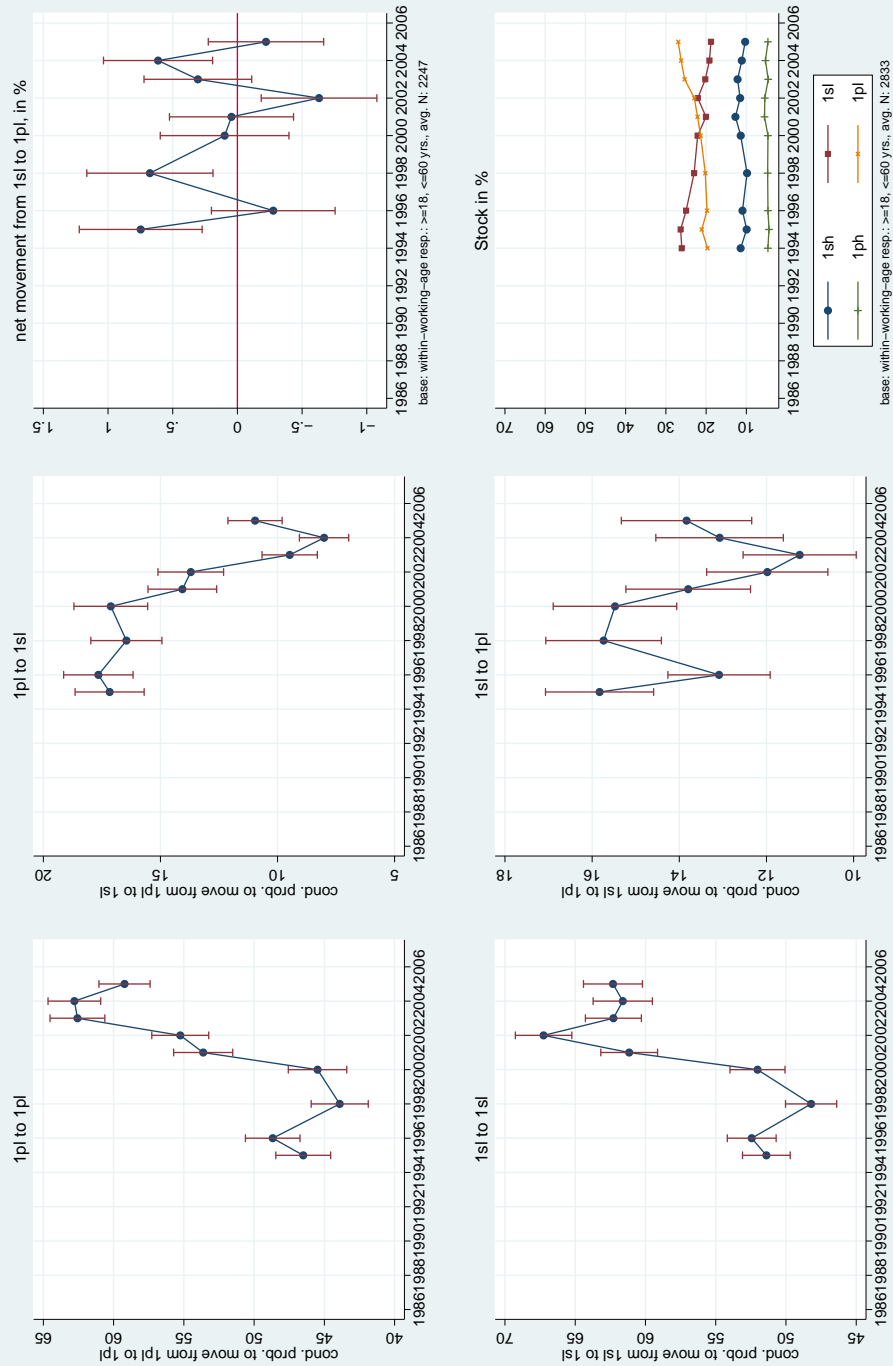
labor market flows between 1pl and 1sl, country: Russia, gender: male



1pl...worked for wages (private sector, low qualification), 1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18...

Figure 36: Flows between work in private sector in low occupations and work in state sector in low occupations, females

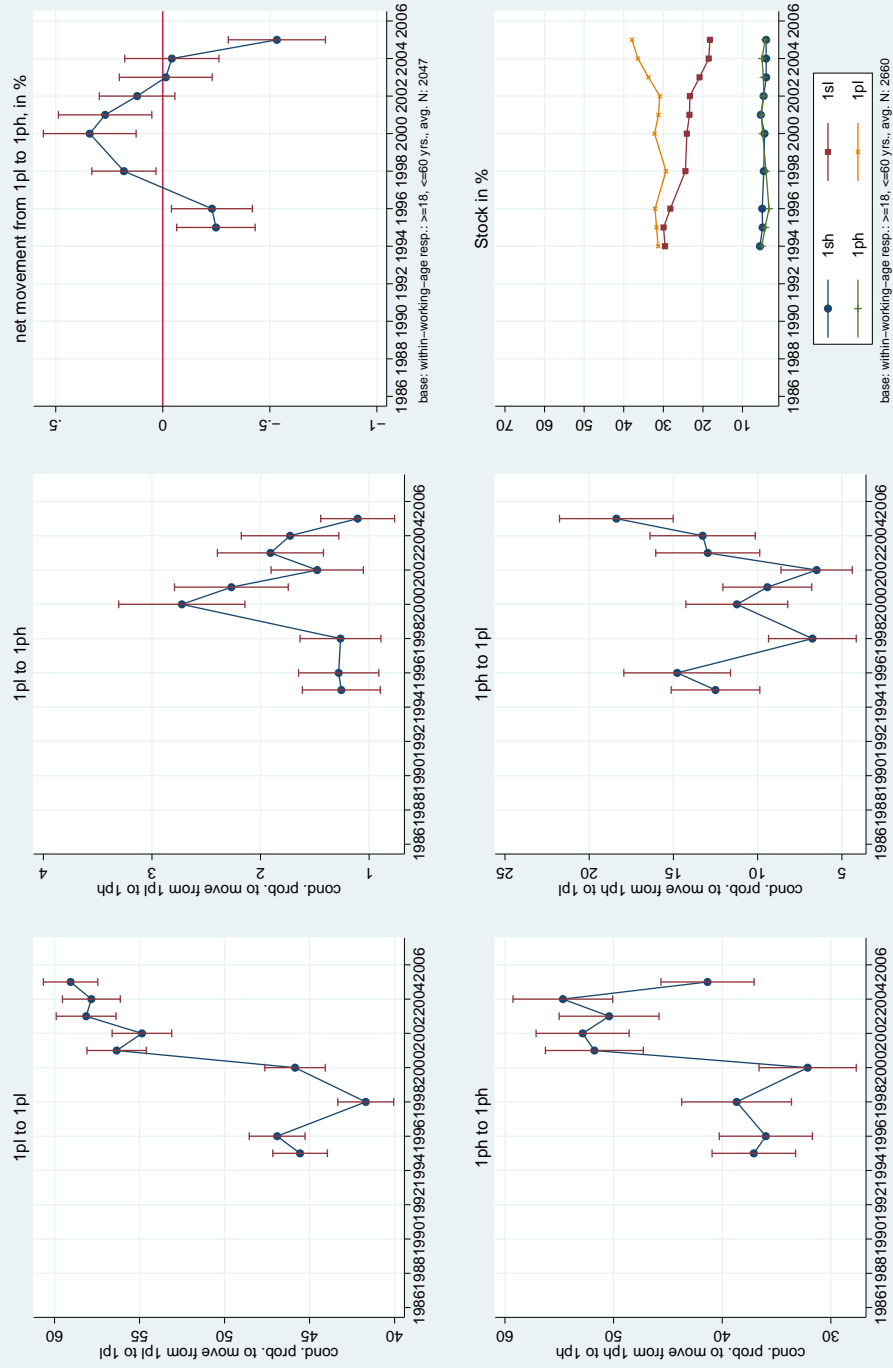
labor market flows between 1pl and 1sl, country: Russia, gender: female



1pl...worked for wages (private sector, low qualification), 1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18...

Figure 37: Flows between work in private sector in low occupations and work in private sector in high occupations, males

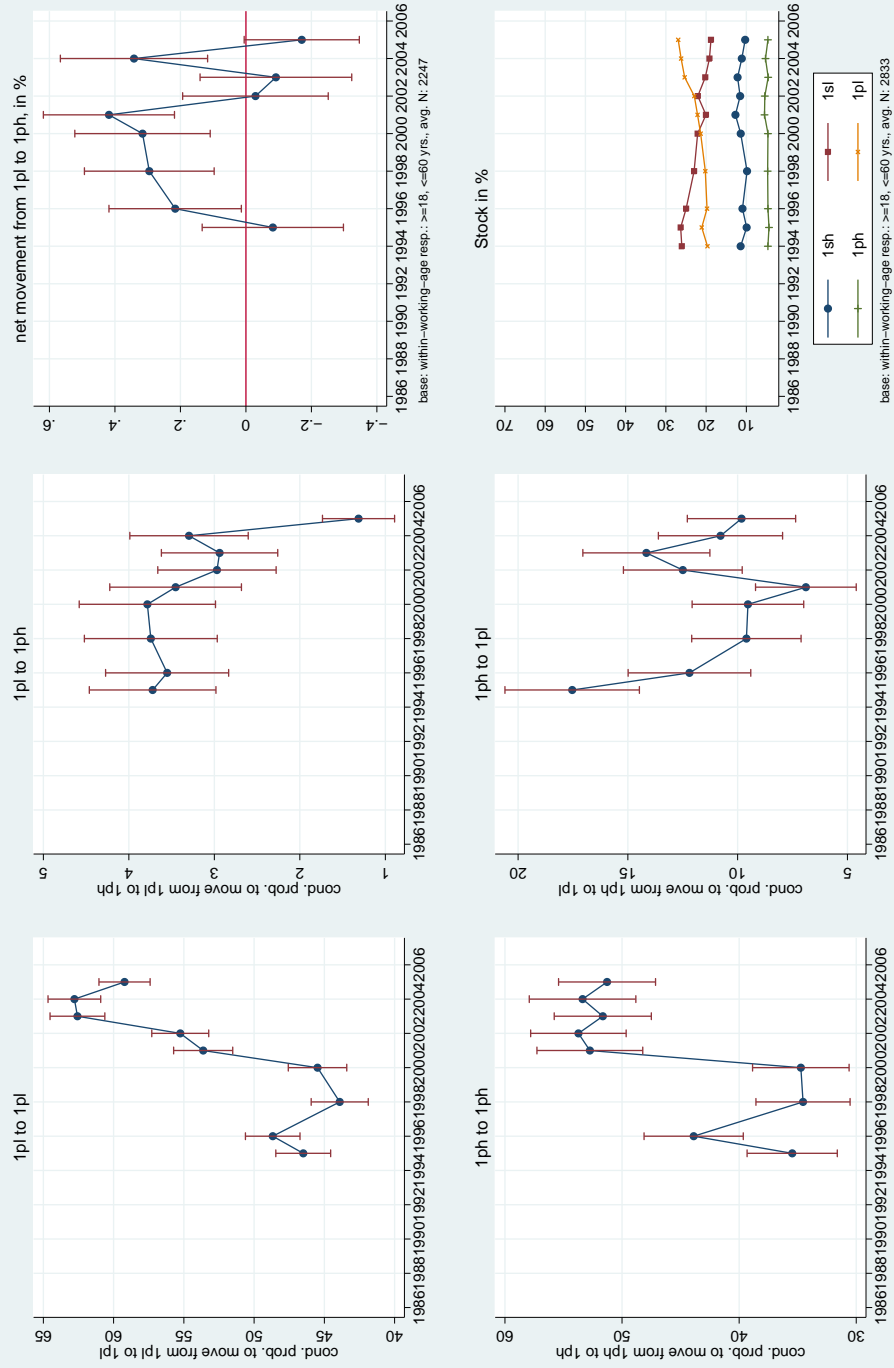
labor market flows between 1pl and 1ph, country: Russia, gender: male



1pl...worked for wages (private sector, low qualification), 1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force

Figure 38: Flows between work in private sector in low occupations and work in private sector in high occupations, females

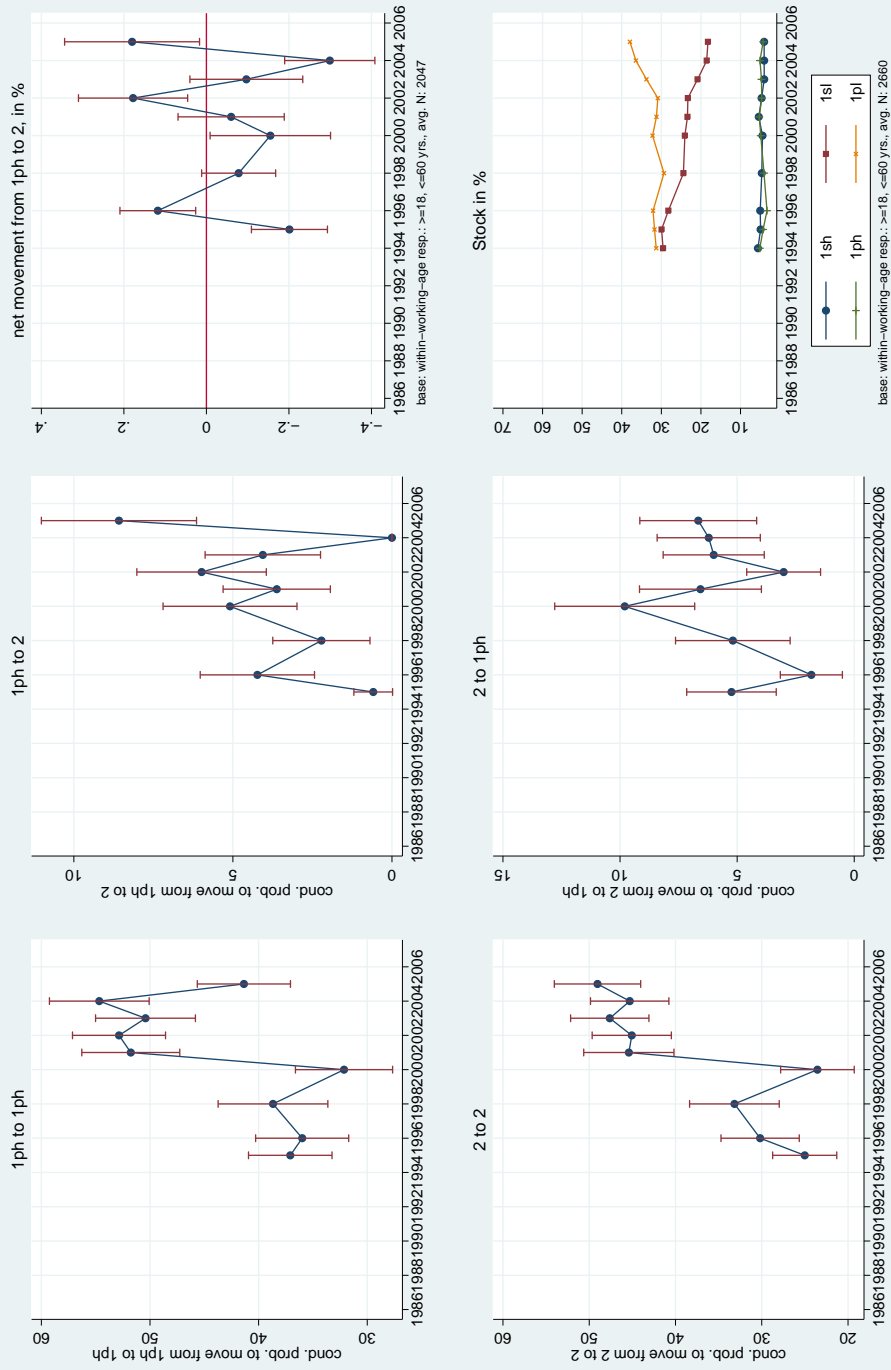
labor market flows between 1pl and 1ph, country: Russia, gender: female



1pl...worked for wages (private sector, low qualification), 1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force

Figure 39: Flows between work in private sector in high occupations and self-employment, males

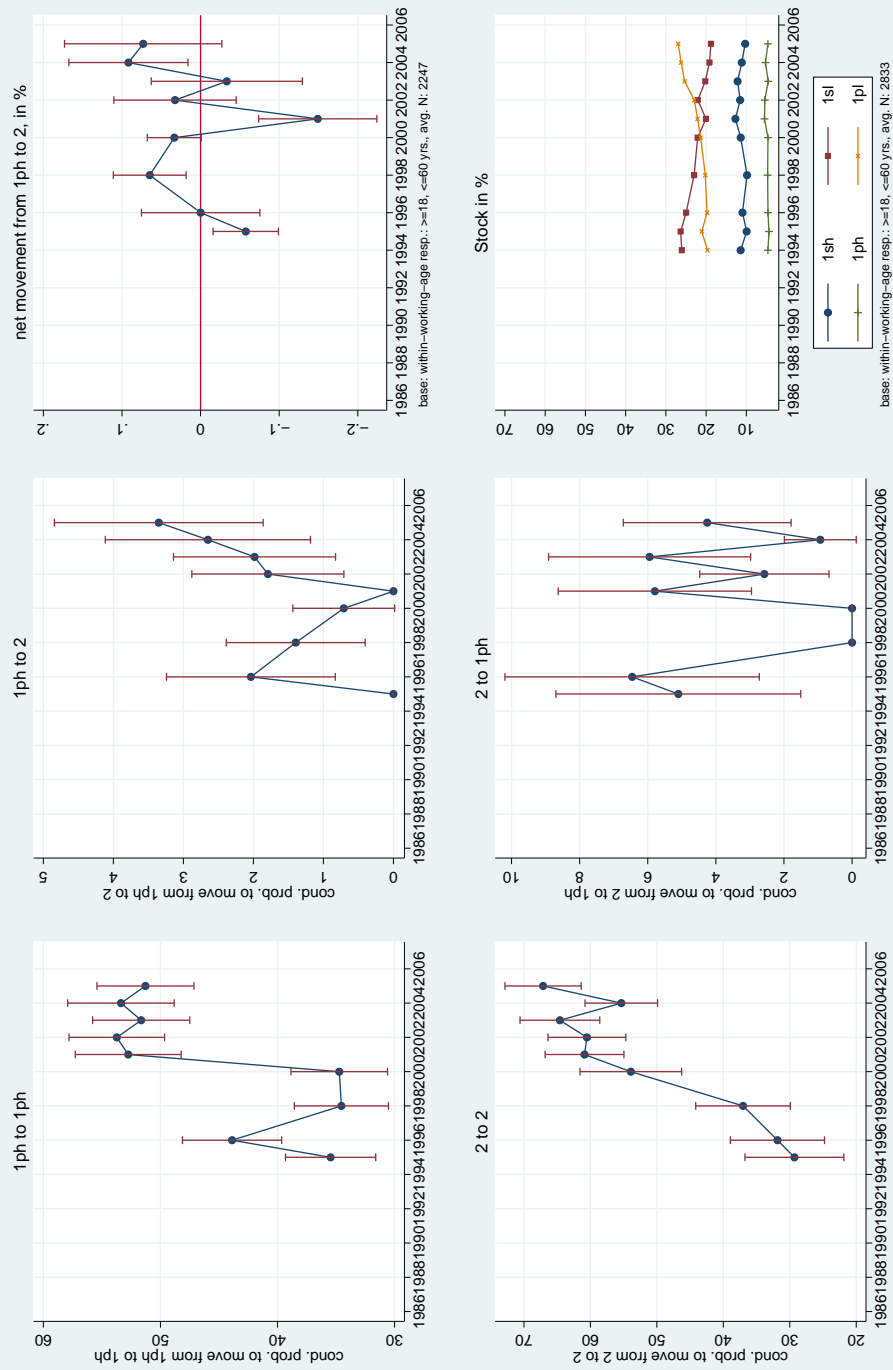
labor market flows between 1ph and 2, country: Russia, gender: male



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 40: Flows between work in private sector in high occupations and self-employment, females

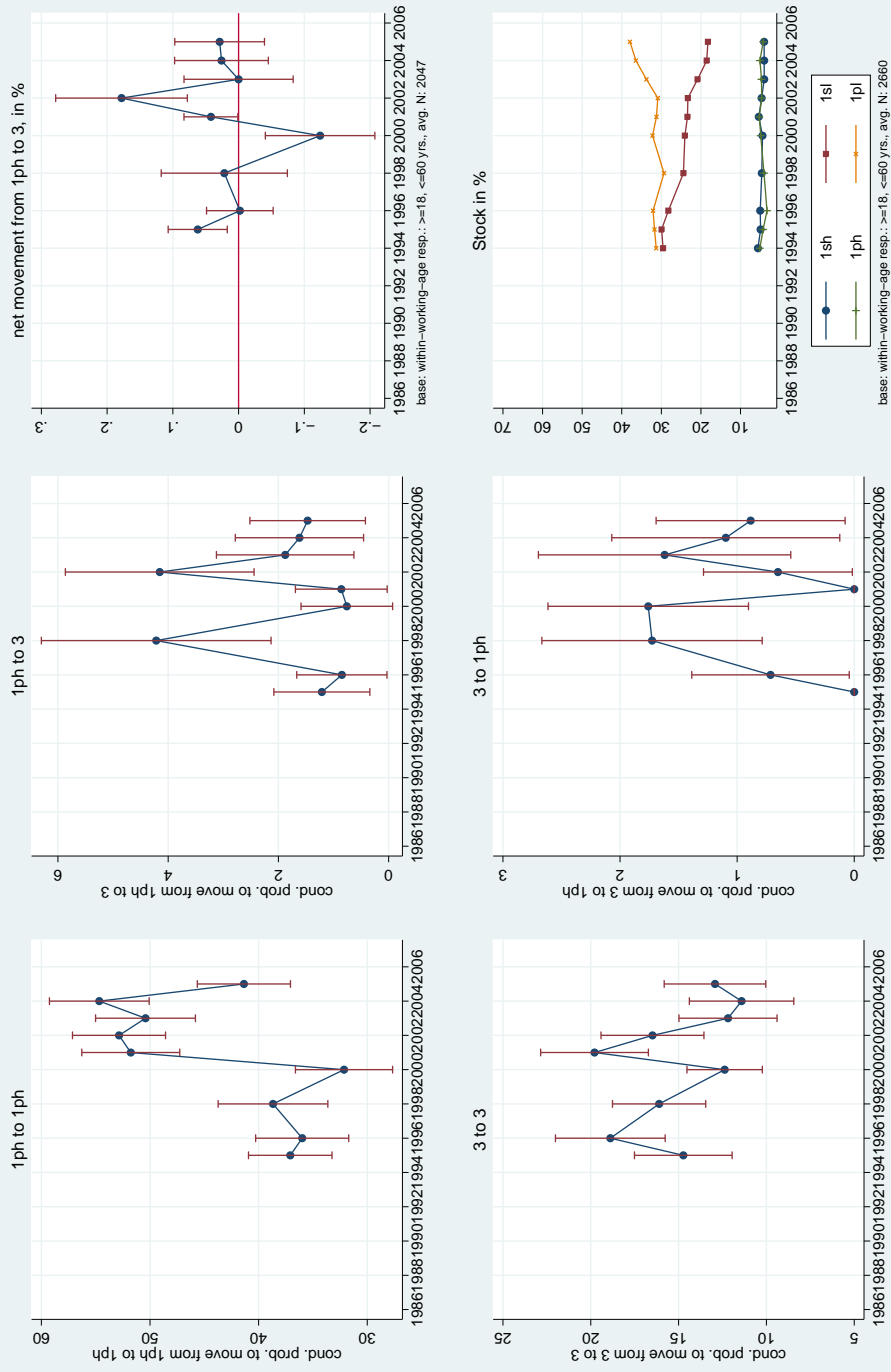
labor market flows between 1ph and 2, country: Russia, gender: female



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 41: Flows between work in private sector in high occupations and unemployment, males

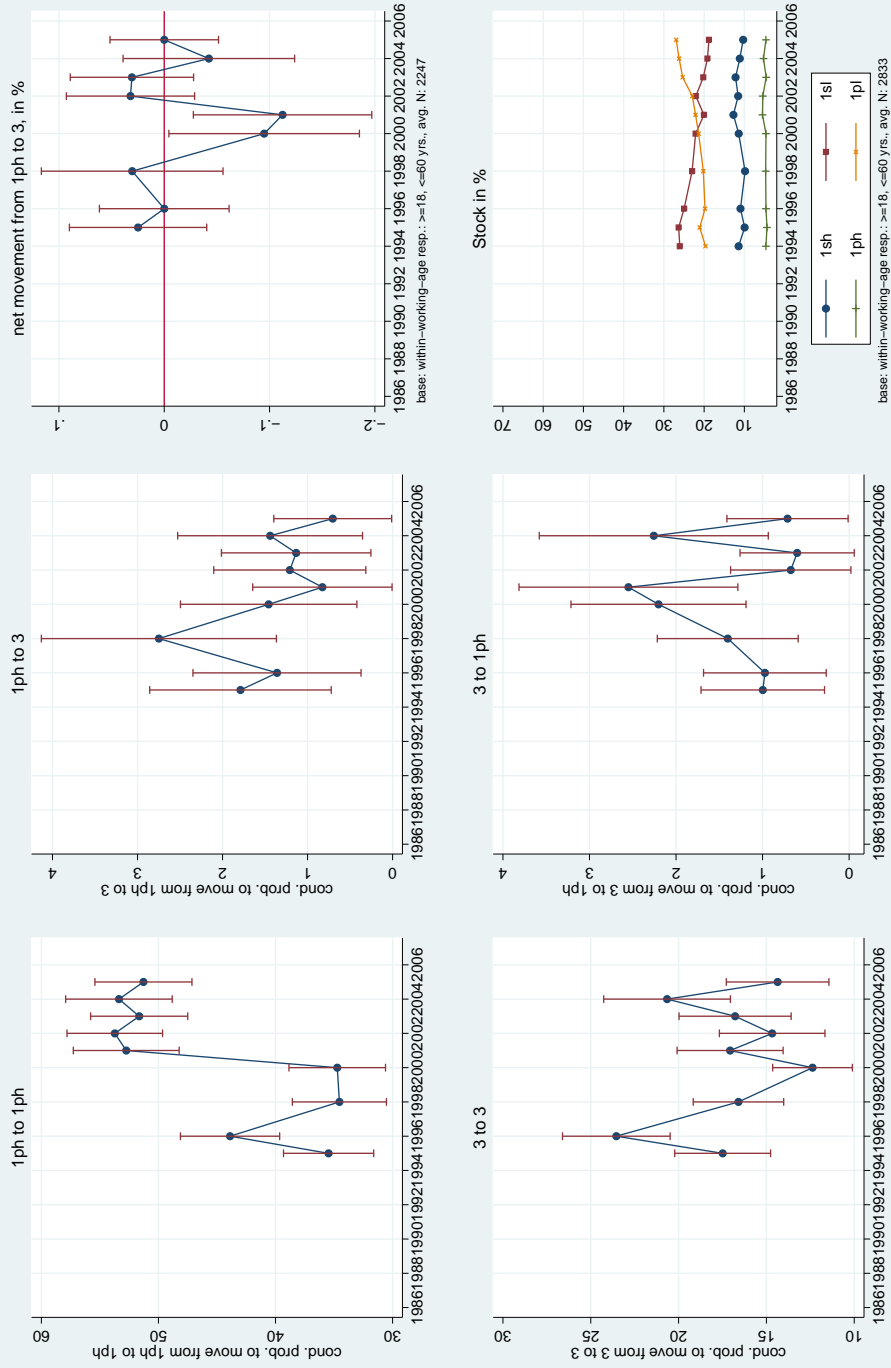
labor market flows between 1ph and 3, country: Russia, gender: male



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 42: Flows between work in private sector in high occupations and unemployment, females

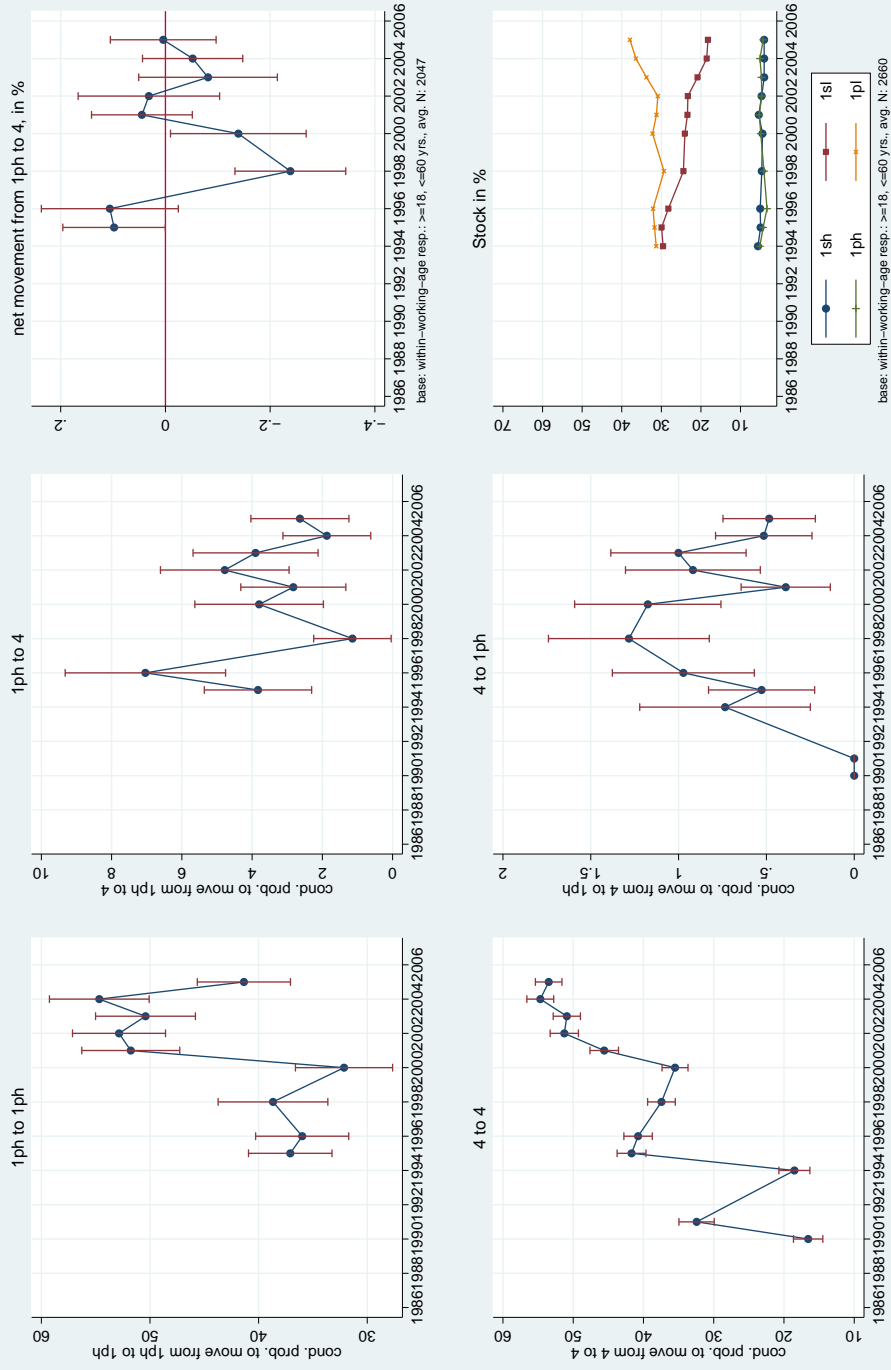
labor market flows between 1ph and 3, country: Russia, gender: female



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 43: Flows between work in private sector in high occupations and out of labor force, males

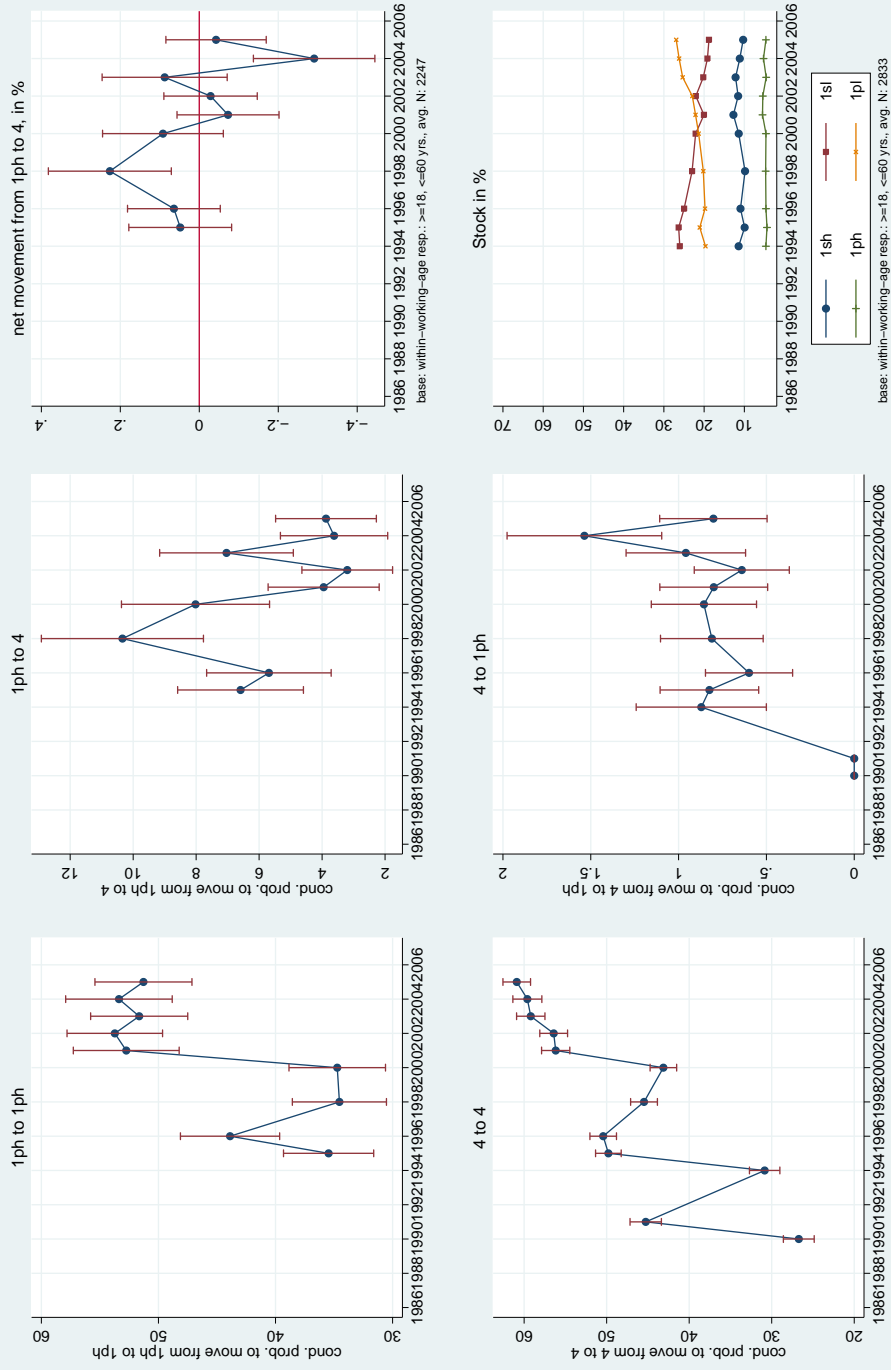
labor market flows between 1ph and 4, country: Russia, gender: male



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 44: Flows between work in private sector in high occupations and out of labor force, females

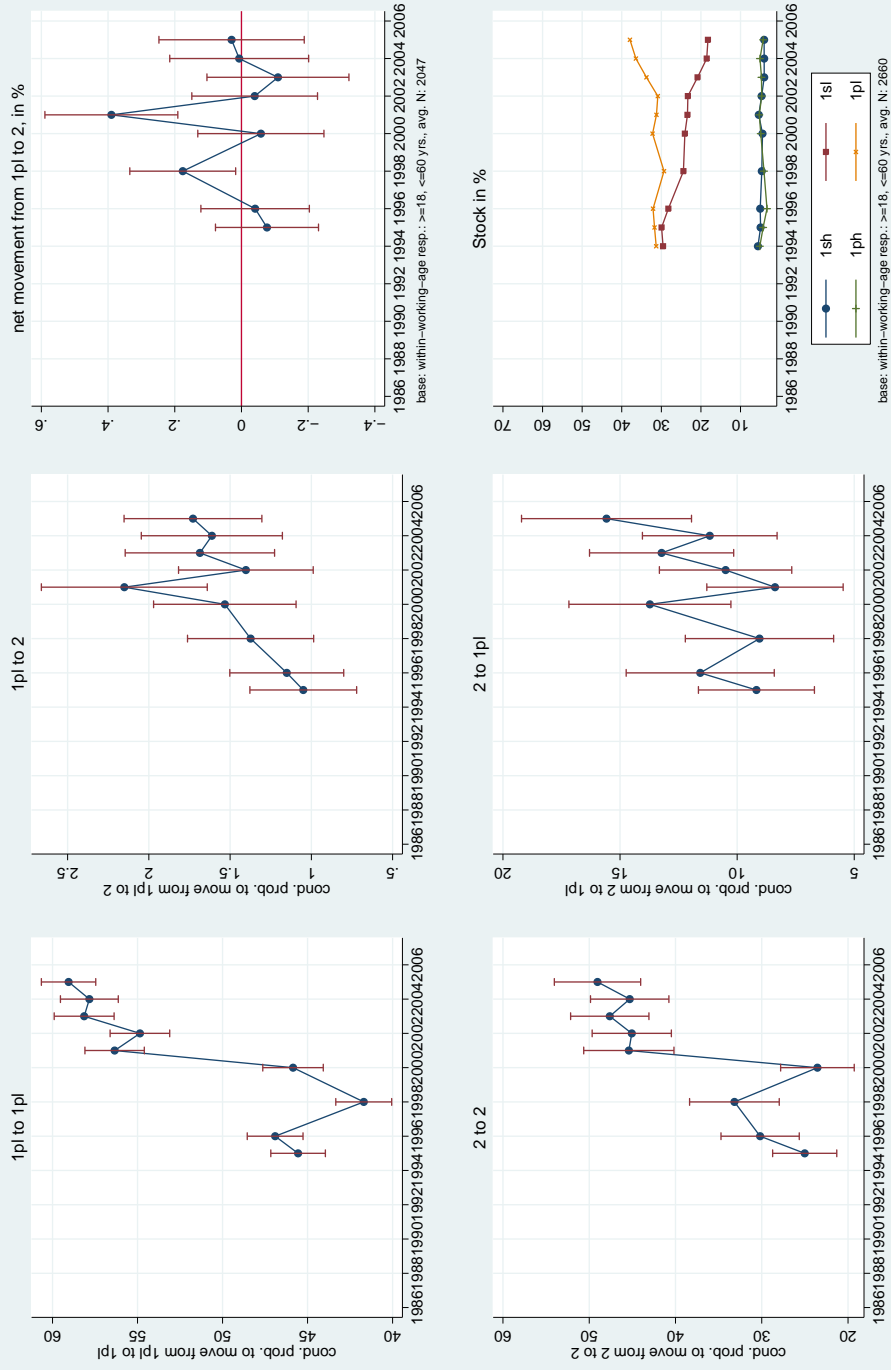
labor market flows between 1ph and 4, country: Russia, gender: female



1ph...worked for wages (private sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 45. Flows between work in private sector in low occupations and self-employment, males

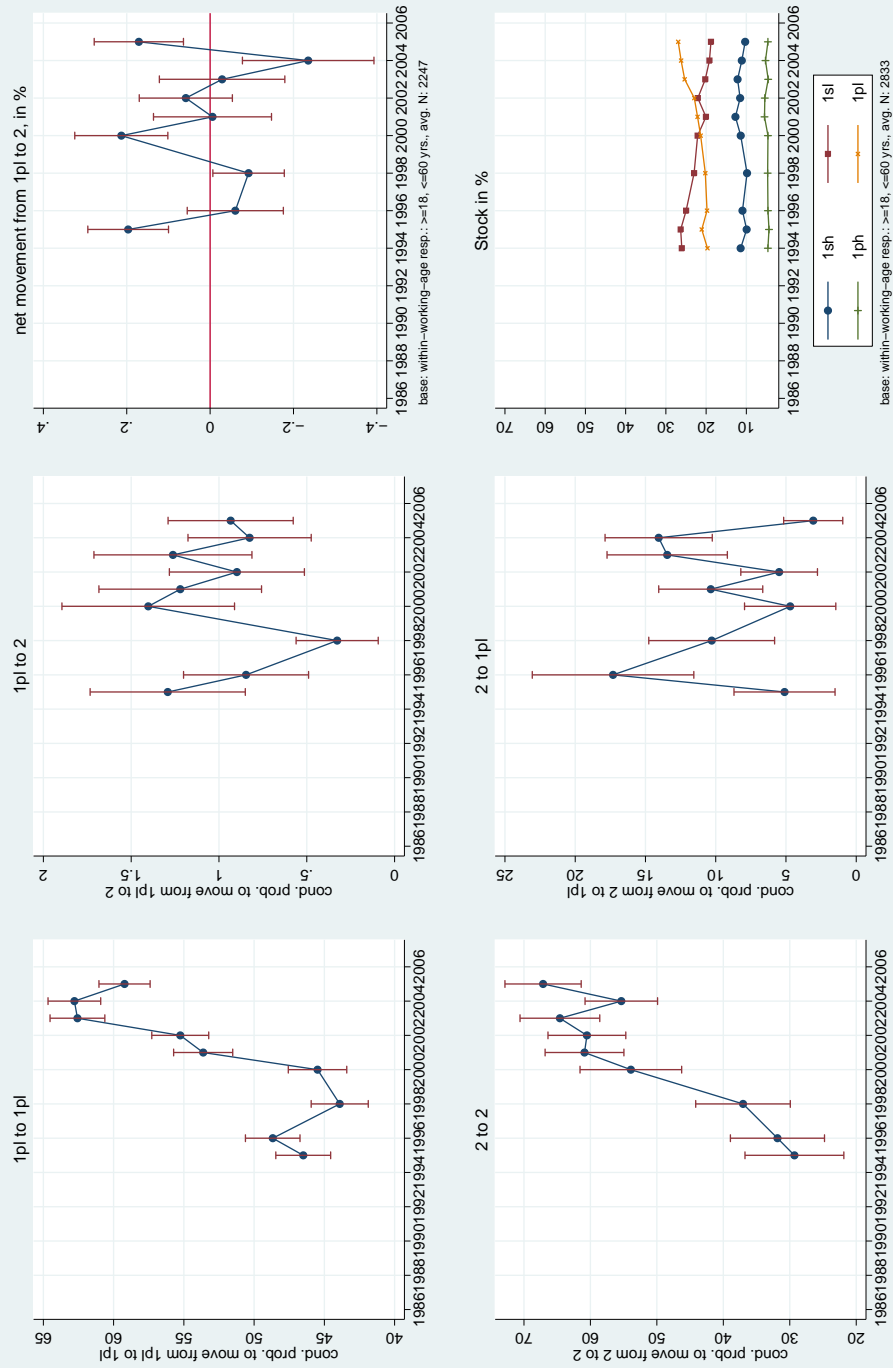
labor market flows between 1pl and 2, country: Russia, gender: male



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 46: Flows between work in private sector in low occupations and self-employment, females

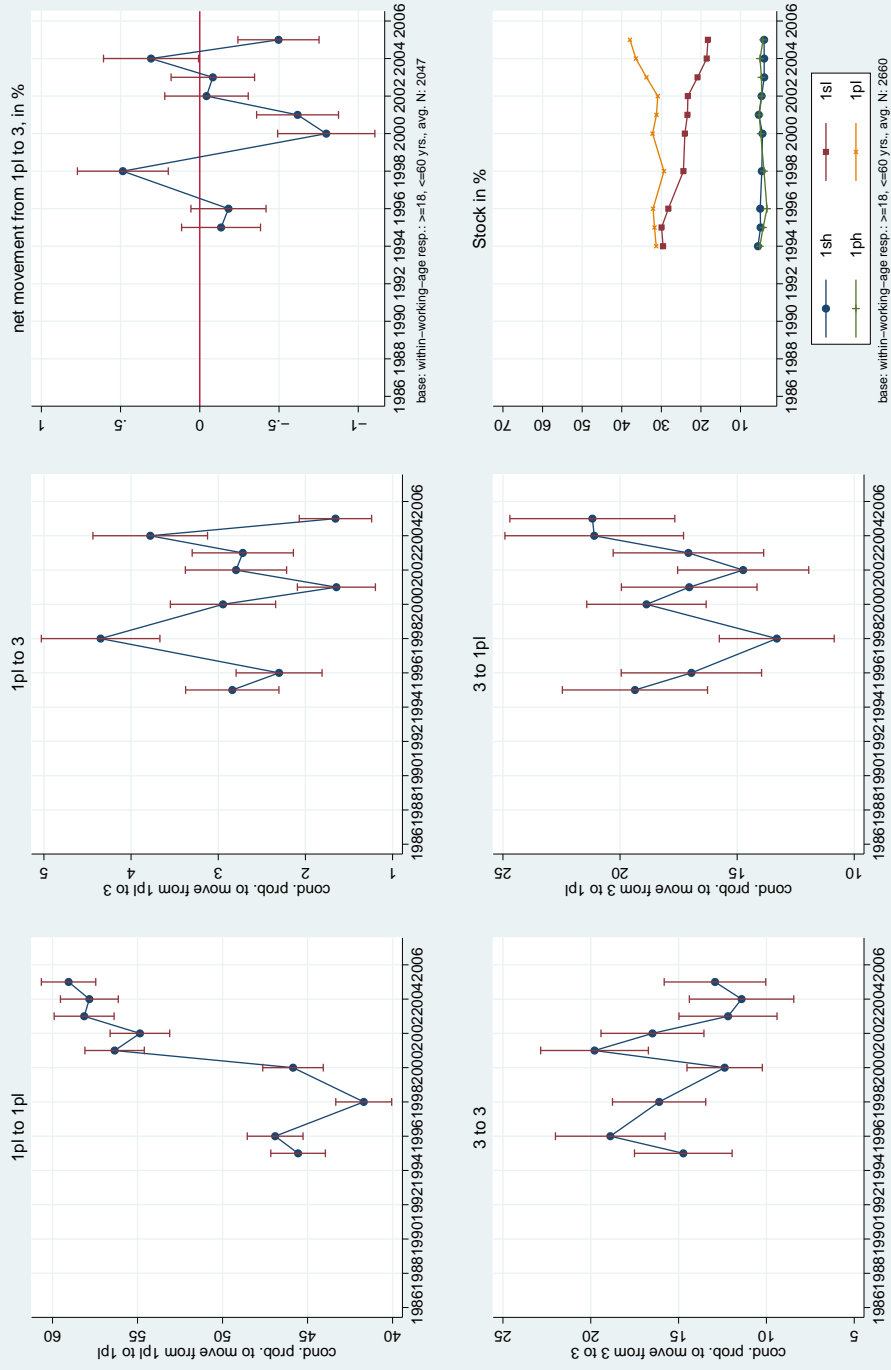
labor market flows between 1pl and 2, country: Russia, gender: female



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 47: Flows between work in private sector in low occupations and unemployment, males

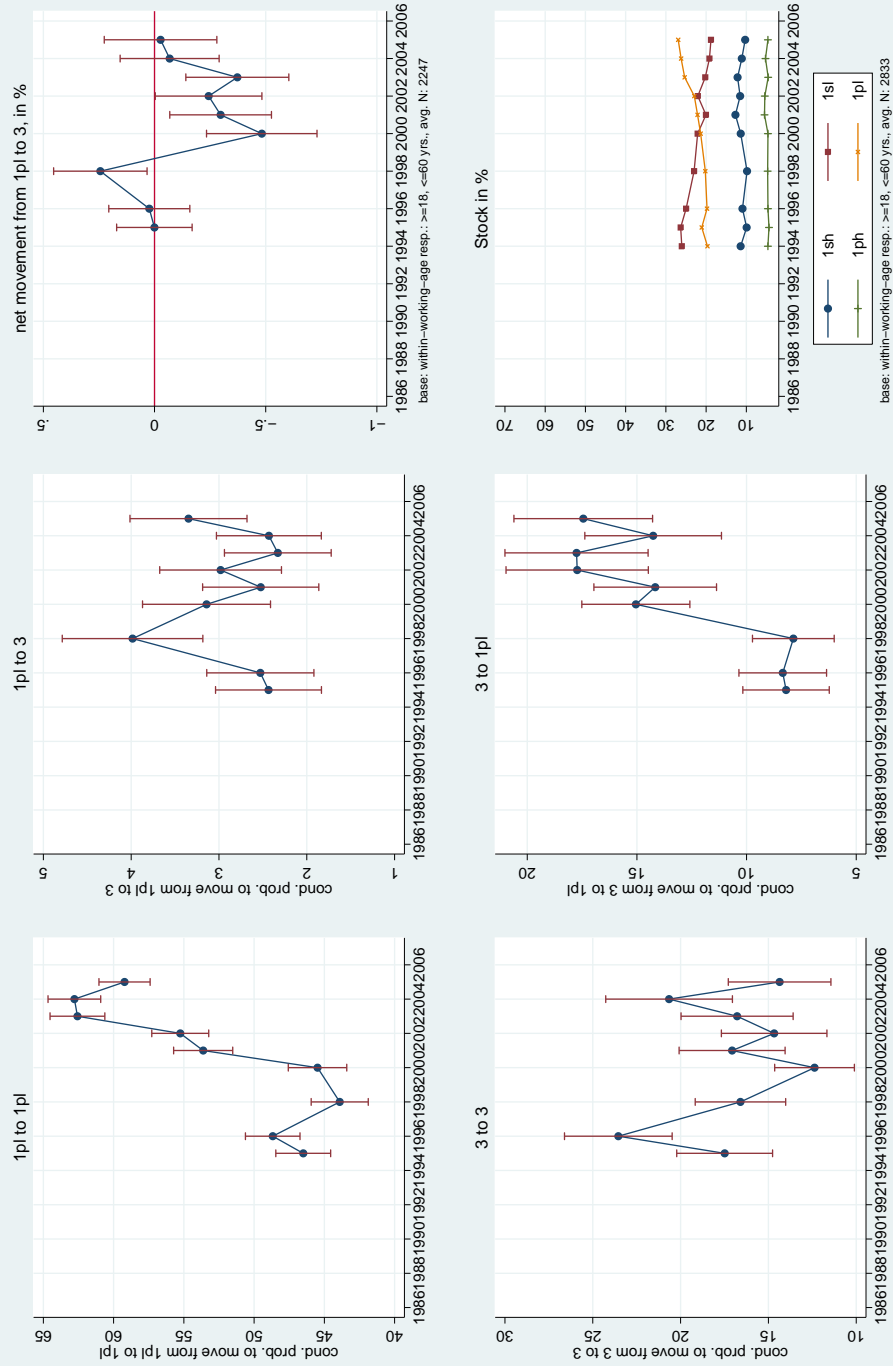
labor market flows between 1pl and 3, country: Russia, gender: male



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 48: Flows between work in private sector in low occupations and unemployment, females

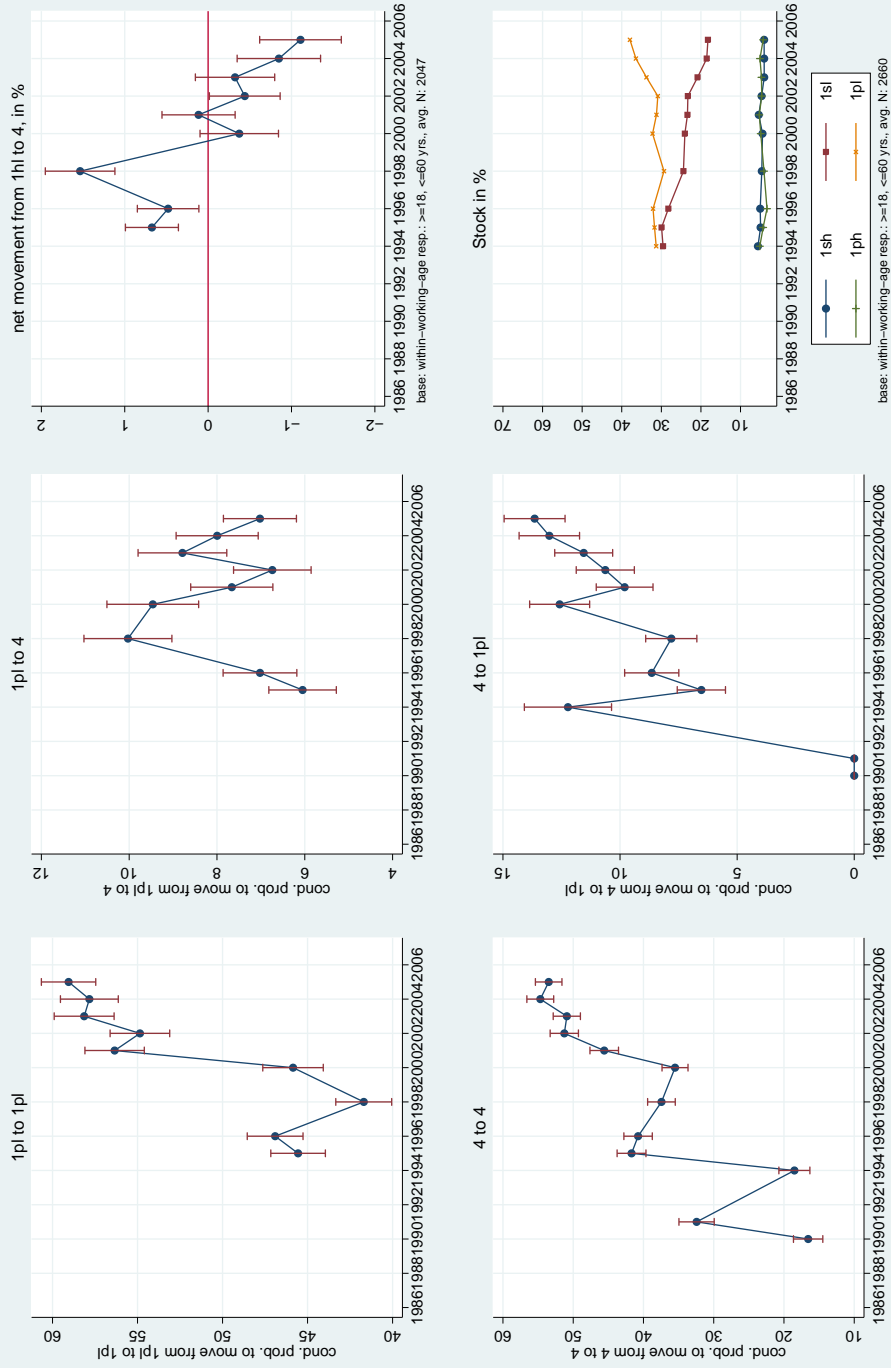
labor market flows between 1pl and 3, country: Russia, gender: female



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 49: Flows between work in private sector in low occupations and out of labor force, males

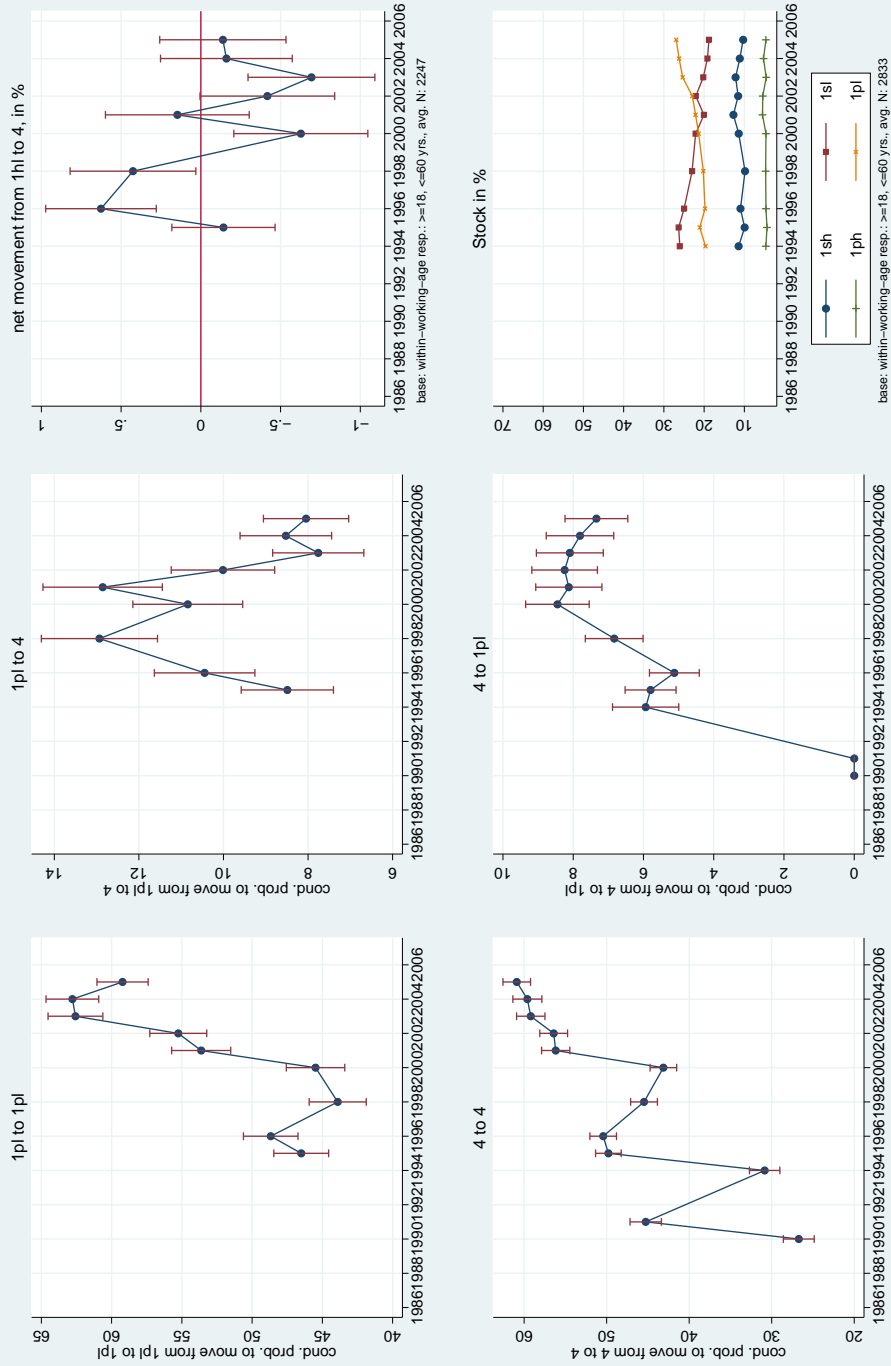
labor market flows between 1pl and 4, country: Russia, gender: male



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 50: Flows between work in private sector in low occupations and out of labor force, females

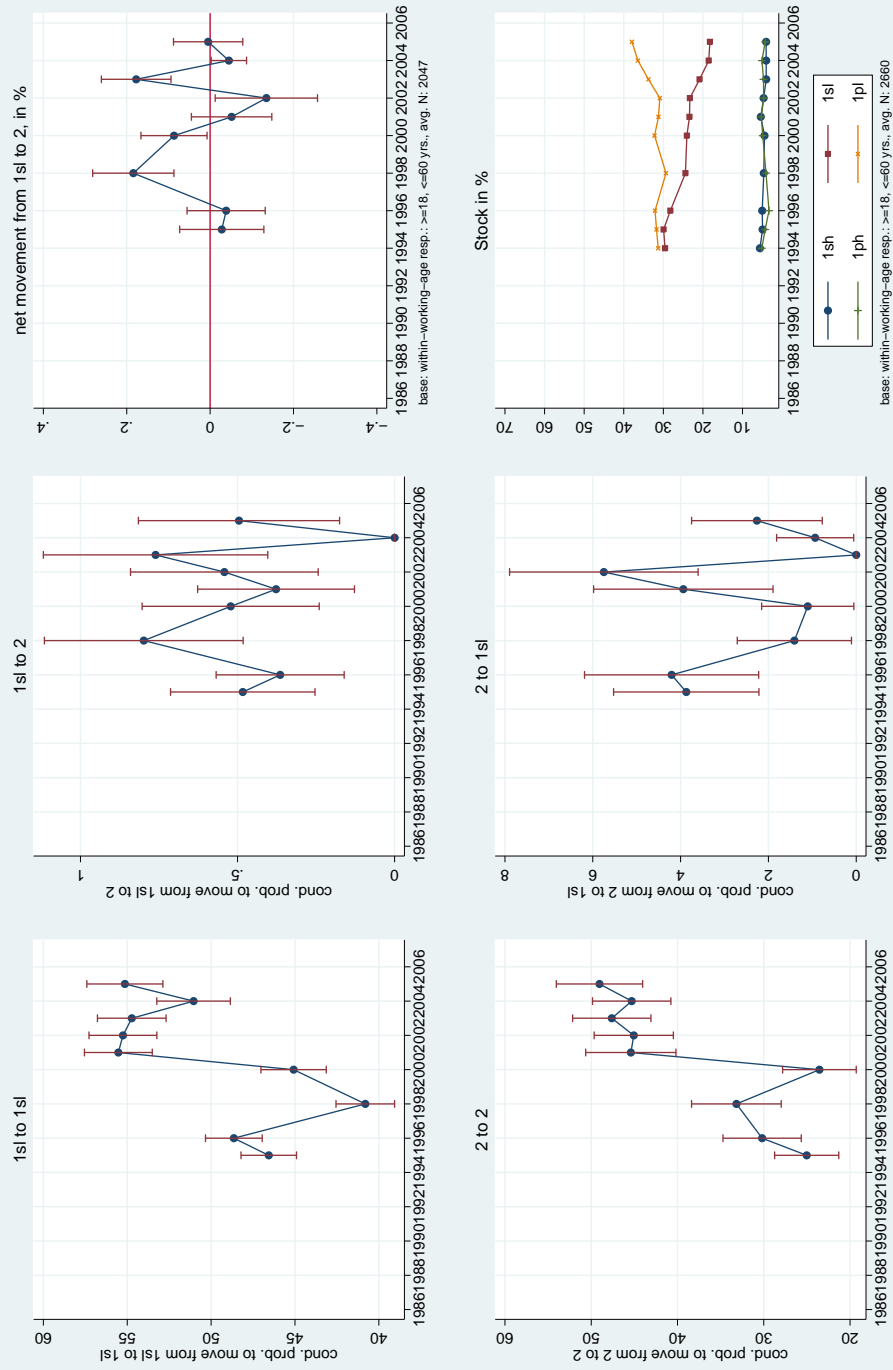
labor market flows between 1pl and 4, country: Russia, gender: female



1pl...worked for wages (private sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 51: Flows between work in state sector in low occupations and self-employment, males

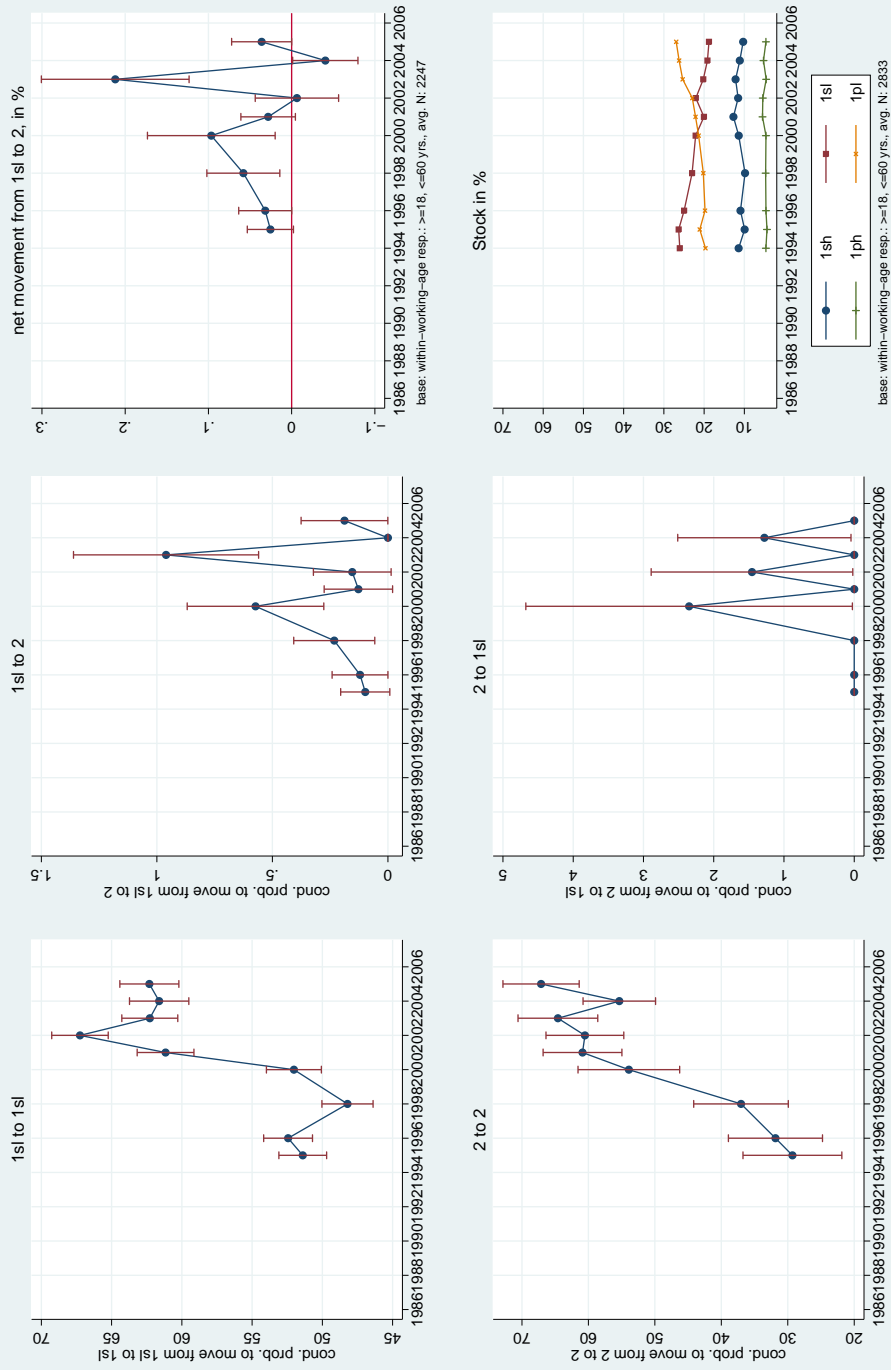
labor market flows between 1sl and 2, country: Russia, gender: male



1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 52: Flows between work in state sector in low occupations and self-employment, females

labor market flows between 1sl and 2, country: Russia, gender: female



1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 53: Flows between work in state sector in low occupations and unemployment, males

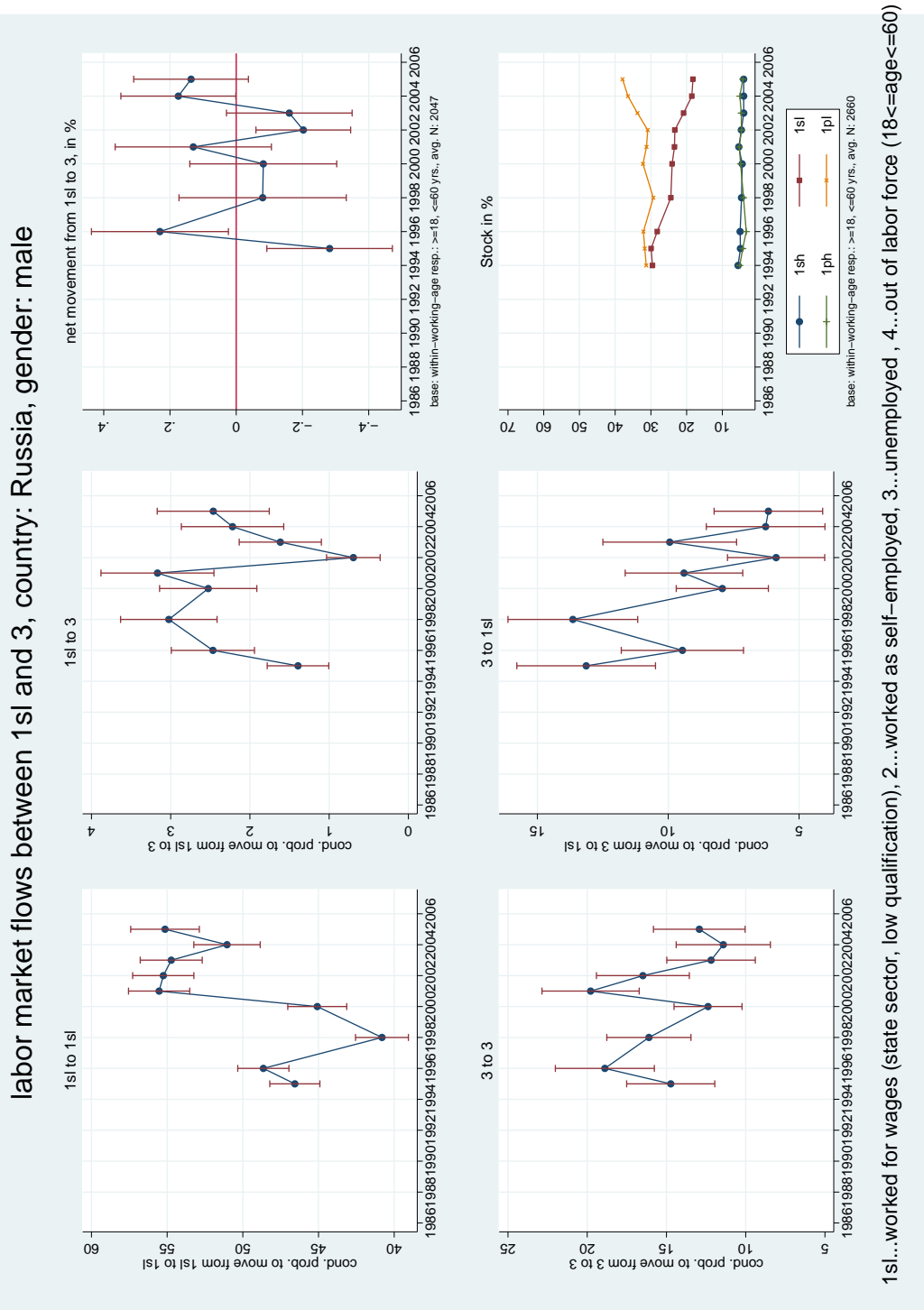
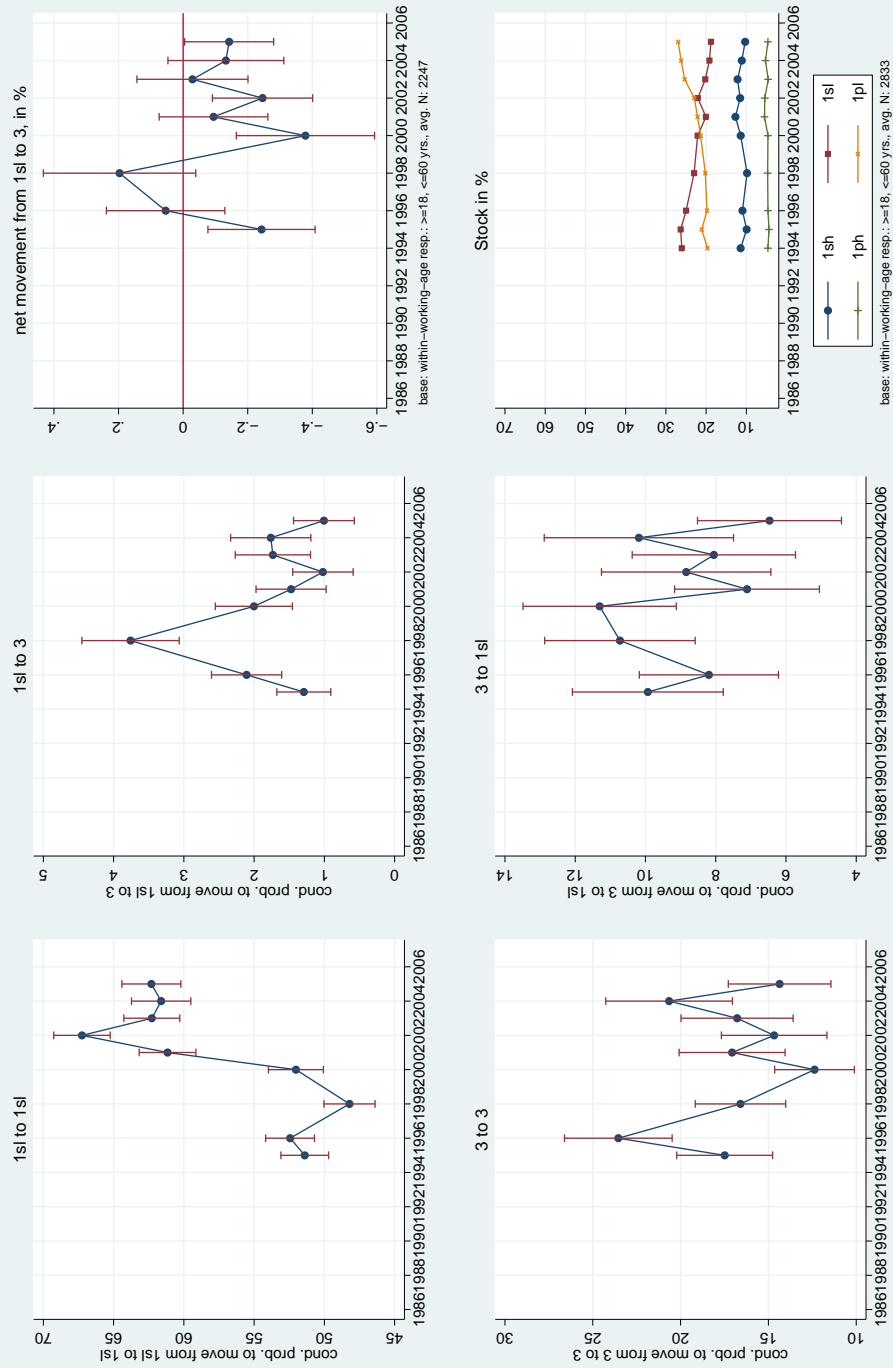


Figure 54: Flows between work in state sector in low occupations and unemployment, and females

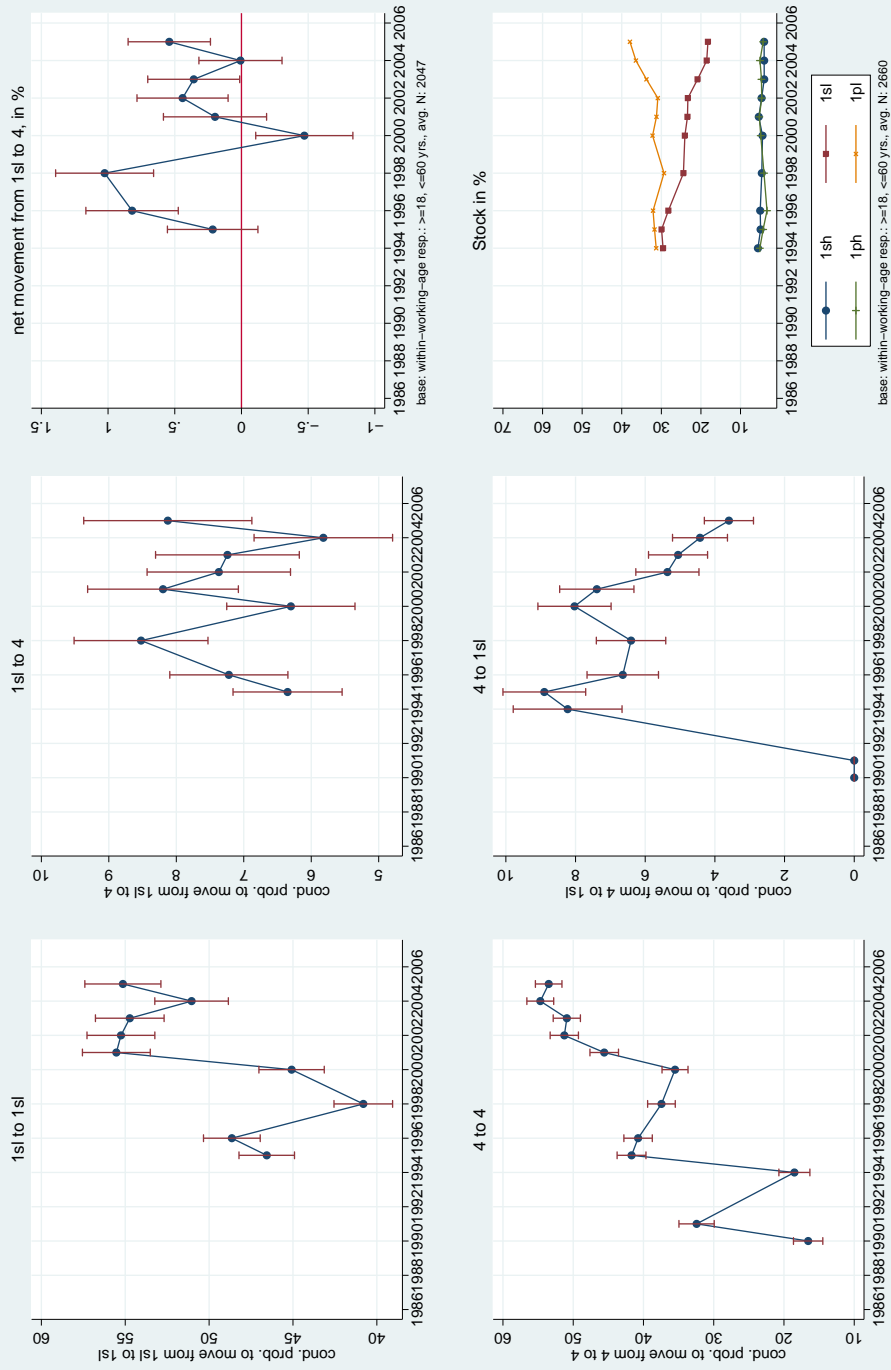
labor market flows between 1sl and 3, country: Russia, gender: female



1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 55: Flows between work in state sector in low occupations and out of labor force, males

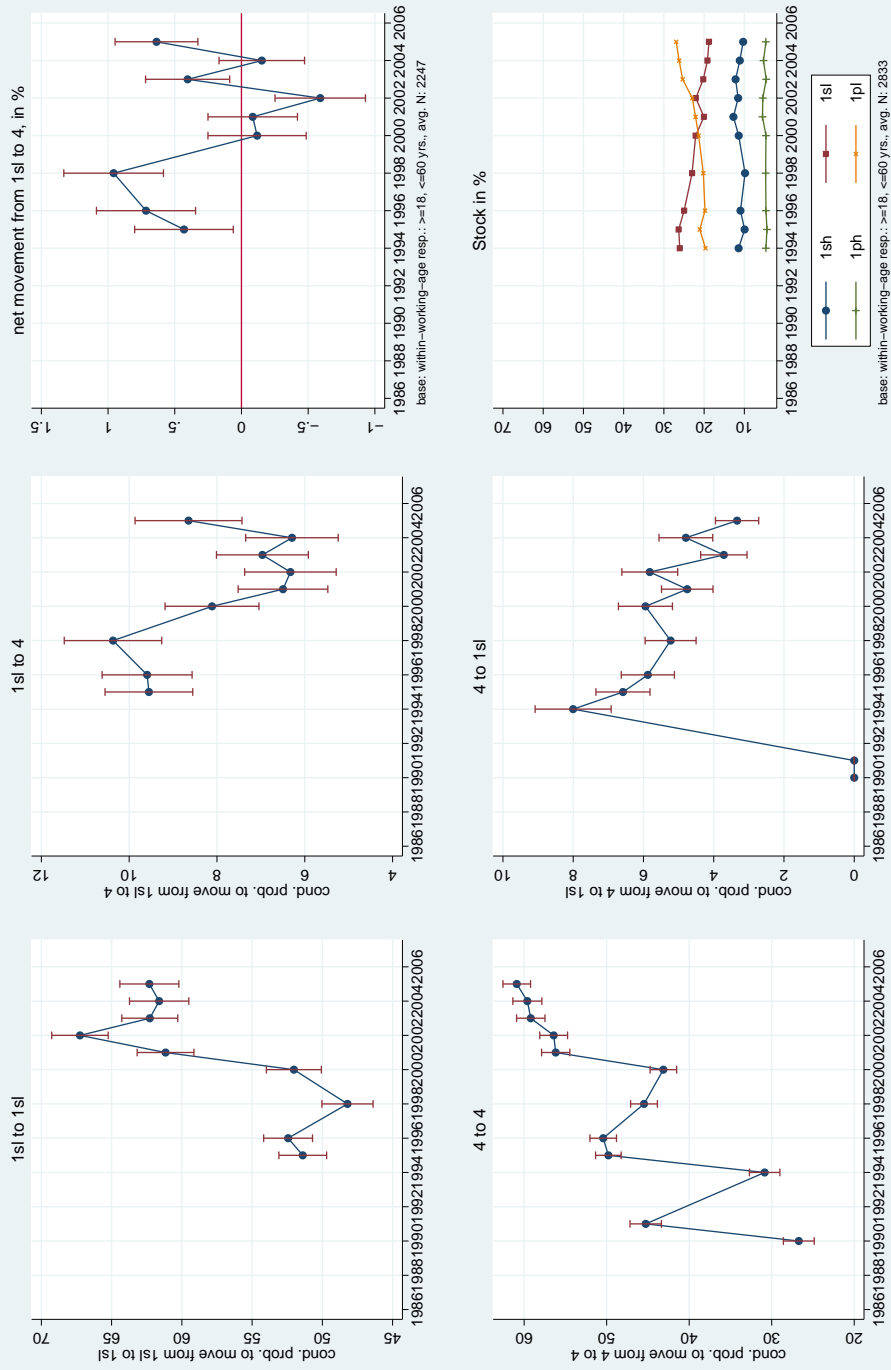
labor market flows between 1sl and 4, country: Russia, gender: male



1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 56: Flows between work in state sector in low occupations and out of labor force, females

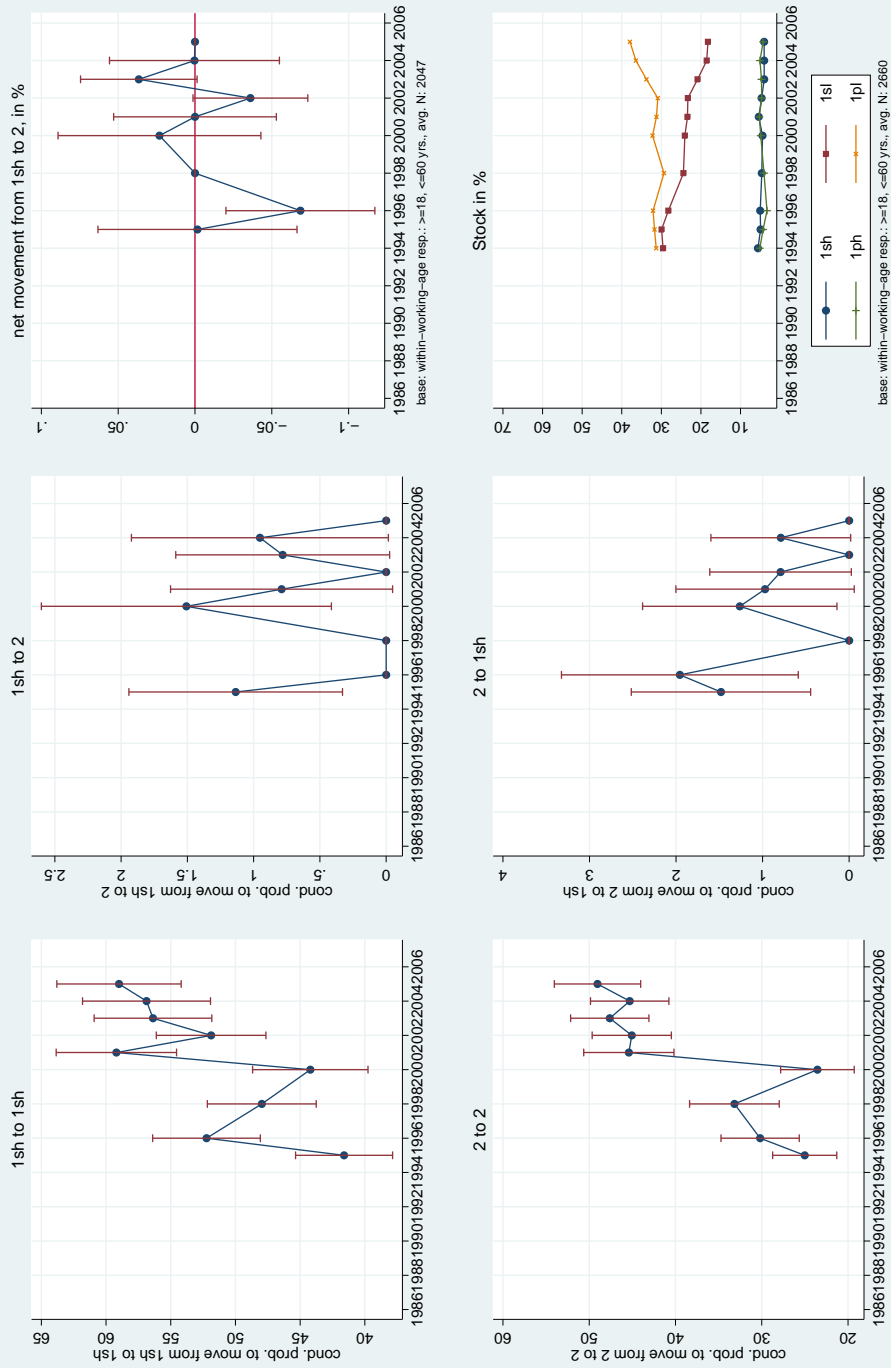
labor market flows between 1sl and 4, country: Russia, gender: female



1sl...worked for wages (state sector, low qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 57: Flows between work in state sector in high occupations and self-employment, males

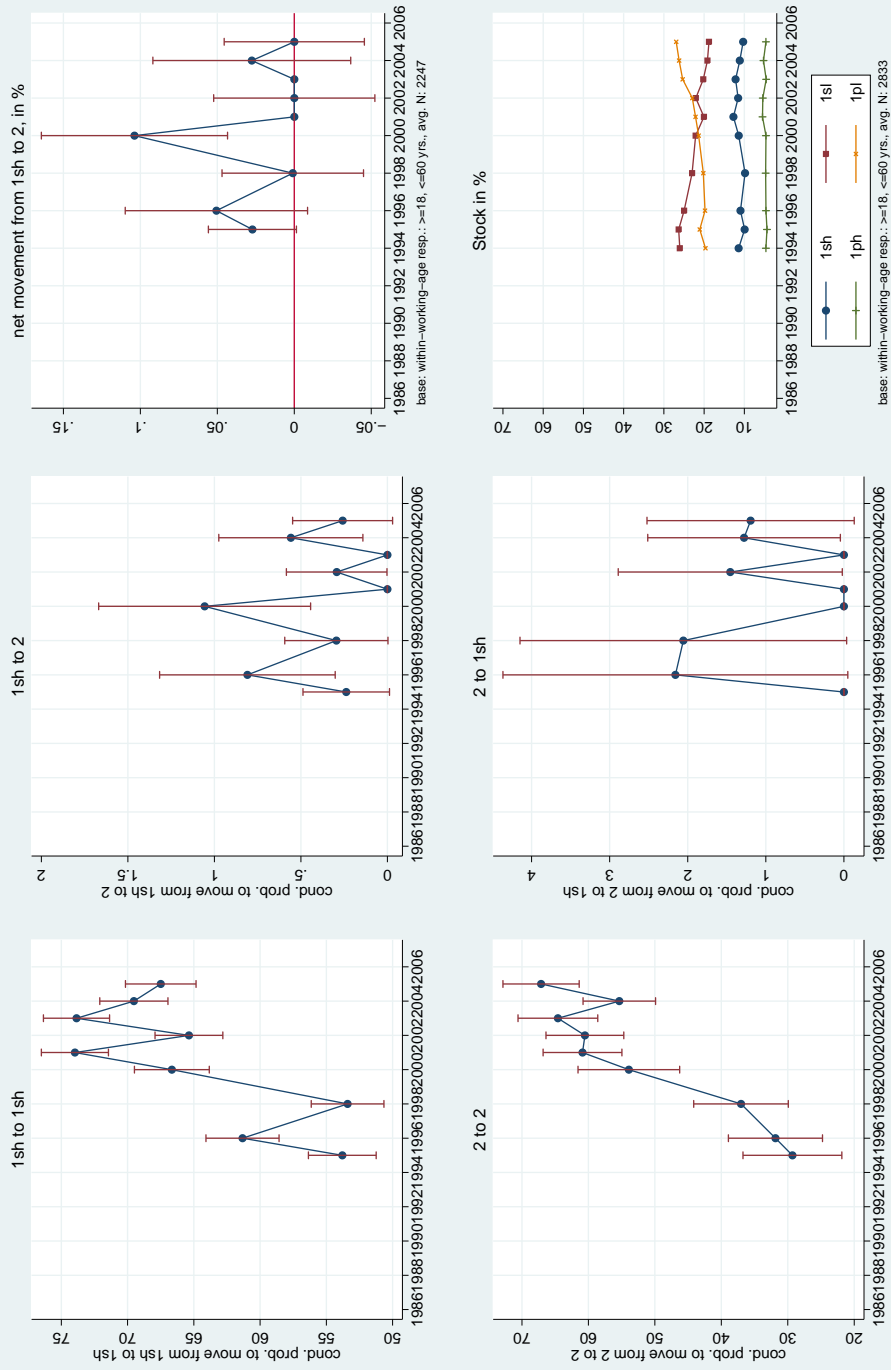
labor market flows between 1sh and 2, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 58: Flows between work in state sector in high occupations and self-employment, females

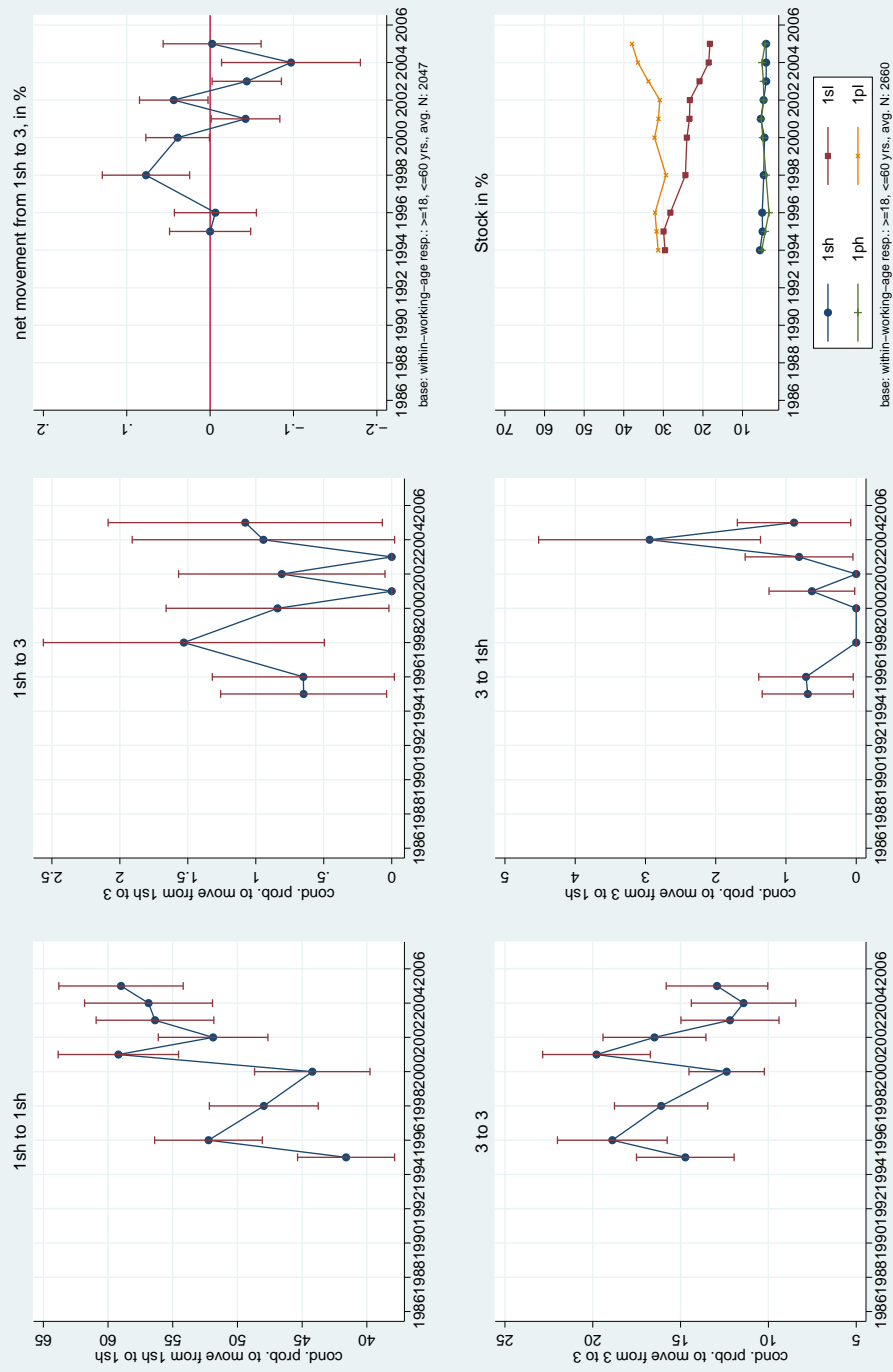
labor market flows between 1sh and 2, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 59: Flows between work in high occupations and unemployment, males

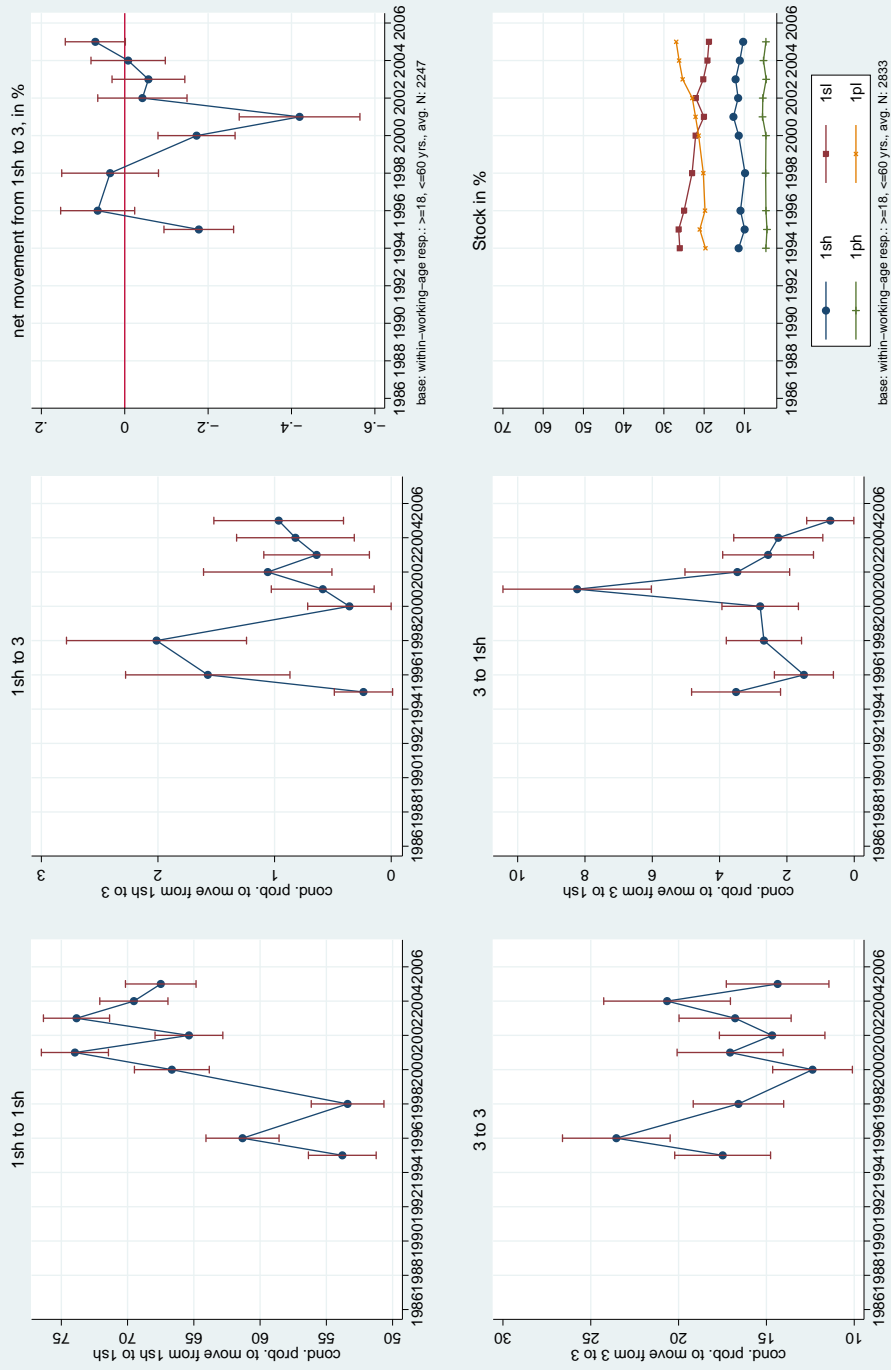
labor market flows between 1sh and 3, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 60: Flows between work in state sector in high occupations and unemployment, females

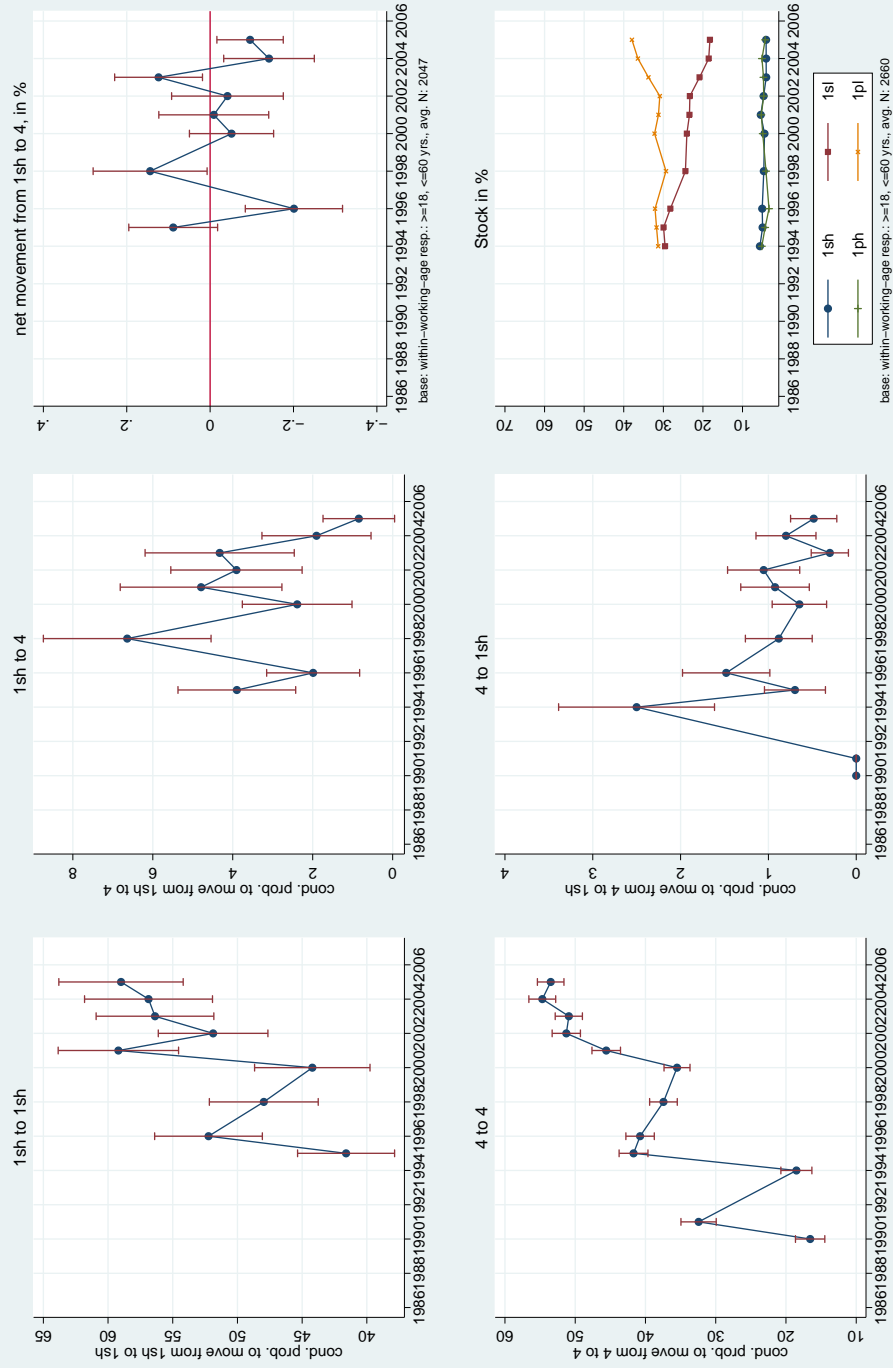
labor market flows between 1sh and 3, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 61: Flows between work in state sector in high occupations and out of labor force, males

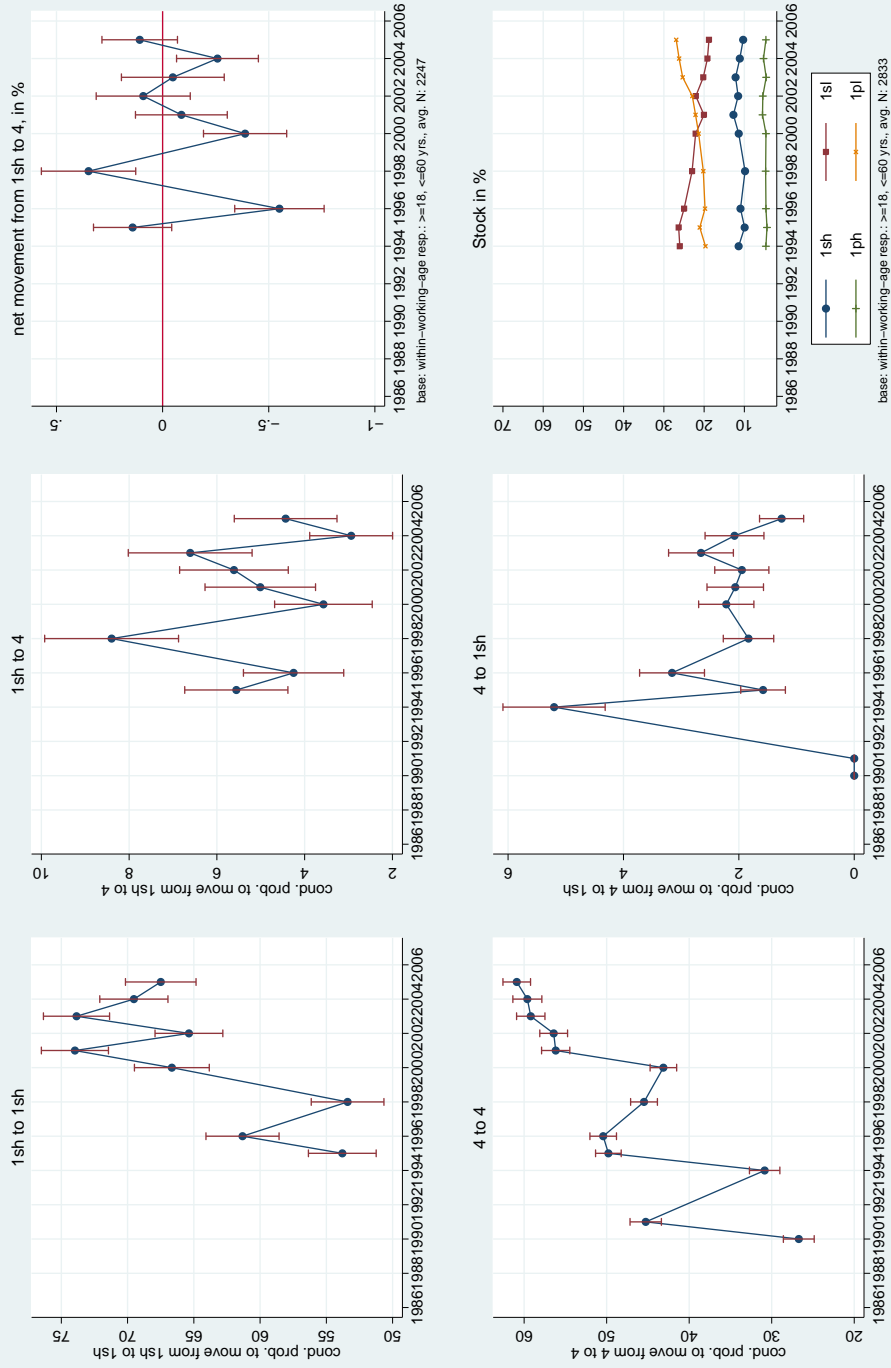
labor market flows between 1sh and 4, country: Russia, gender: male



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)

Figure 62: Flows between work in state sector in high occupations and out of labor force, females

labor market flows between 1sh and 4, country: Russia, gender: female



1sh...worked for wages (state sector, high qualification), 2...worked as self-employed, 3...unemployed, 4...out of labor force (18<=age<=60)