Predictors of Innovative Consumption Practices: Computer and Internet Utilization in Russian Households

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Consumption: Between Symbols and $igns

Theoretical perspectives on consumption in

Sociology

- Consumer society
- Consumption of symbols
- Conspicuous consumption
- Consumption as an instrument of class distinction

"While economics is about how people make choice, sociology is about how they don't have any choice to make" Bertrand Russell

Economics

- Macroeconomics: aggregated consumption, consumption over the life cycle
- Microeconomics: effects of relative price changes and imperfect and asymmetric information
- Behavioral economics: explanations of irrational consumption behavior

Theories of Practice

- Neither individualist nor "wholist" (Schatzki 2001)
- Incorporate an appreciation of cultural phenomena and reject *homo economicus* and *homo sociologicus* models (Reckwitz 2002)
- "applications of the concept may deal equally with persistence and change in the forms of practices and their adherents" (Warde 2005)

"A practice is … a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood." (Reckwitz 2002)

Research Questions

Why some people adopt new consumption practices earlier than others?

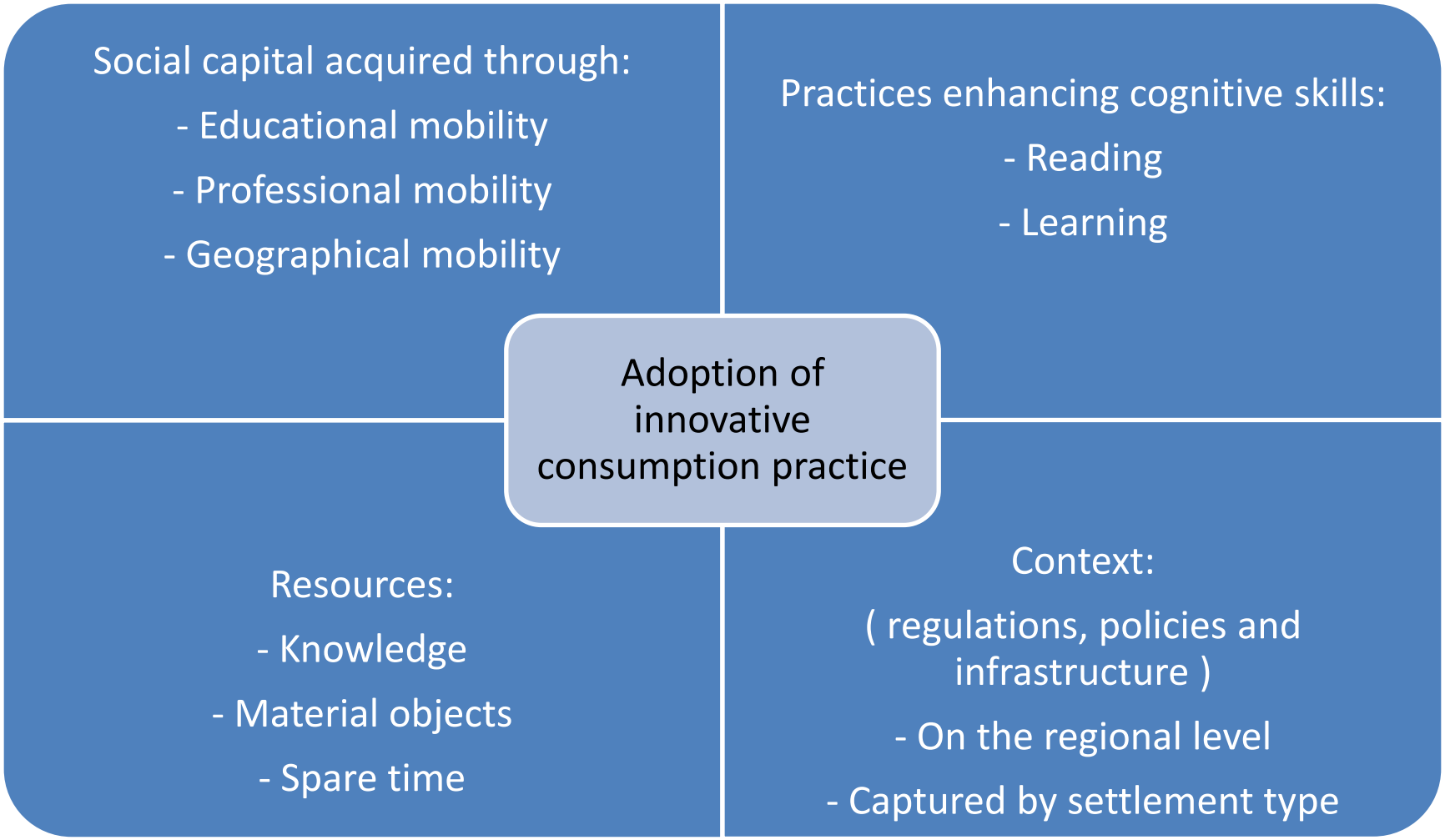
- Does social capital matter
- Do other practices of agent matter
- Do resources matter
- Does context matter

for the adoption of innovative Internet shopping?

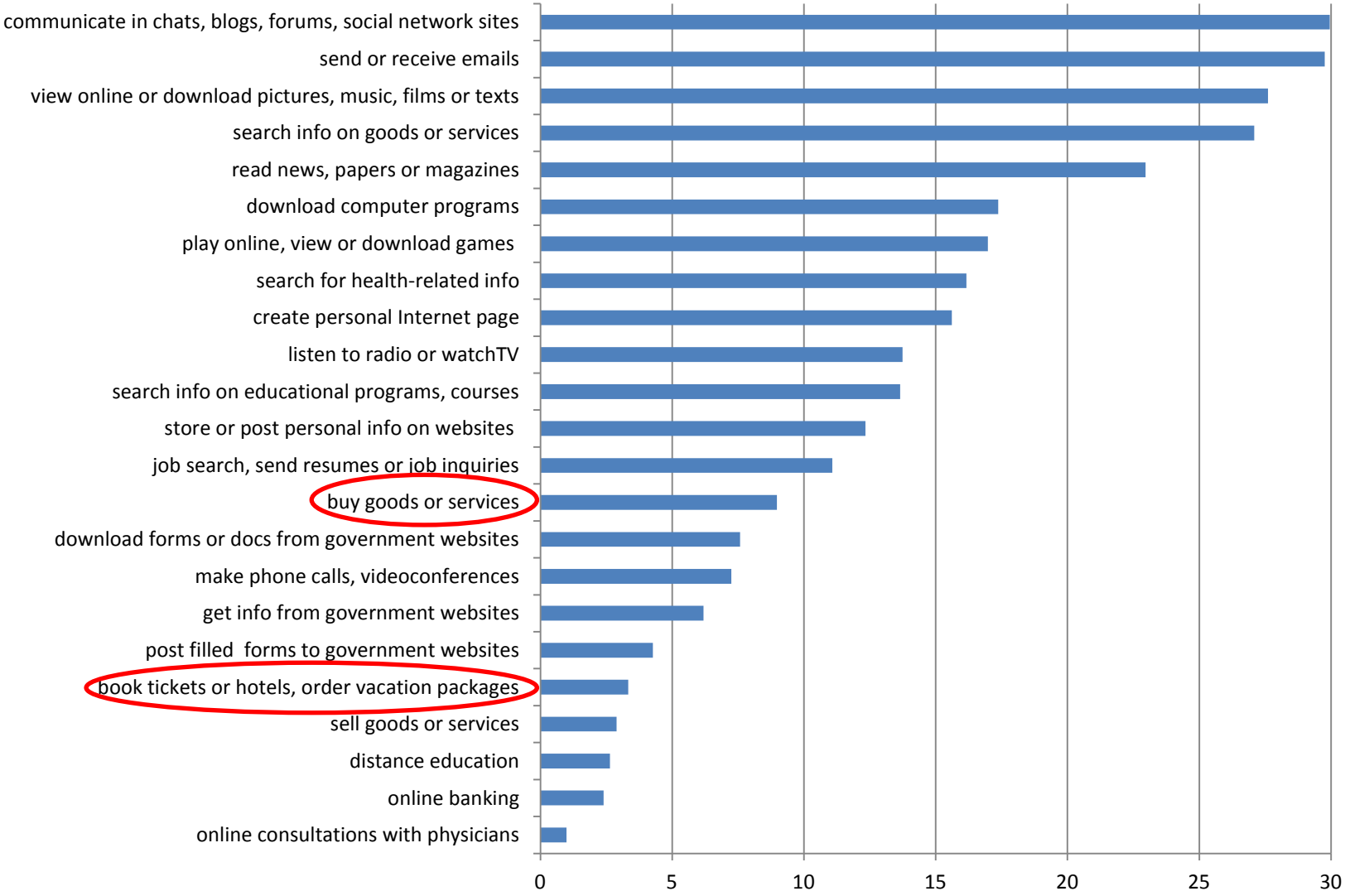
Specific Contribution

- To the diffusion of innovations literature this study introduces individual mobilities (in a broad sense, including educational, professional, and geographic mobility) as predictors of engaging in innovative consumption practices
- To the economic sociology – incorporates culture, brought by theories of practice perspective, into the study of changes in consumption
- To the sociology of consumption – draws on theories of practice to construct theoretical framework of a *quantitative* study of predictors of innovative consumption practices

Theoretical Framework



Internet Activities in Russia, RLMS-HSE 2009, % of population over 16 years old



Dependent Variable

- Innovative consumption practice – adoption of Internet shopping (cumulative of different varieties of goods and services purchased as well as online methods of payment used)

Reflects both innovative “consumption” of computer and Internet AND change in the practice of shopping: from travelling to shopping cites and stepping into public sphere to staying at home and letting the goods travel to you, while remaining in the private sphere of your home (feature shared with mail, catalogue and TVshop orders)

Explanatory Variables (tbc)

Social capital acquired through:

- Educational mobility – number of higher education institutions graduated from weighted by institution's level
- Professional mobility – number of professions changed
- Geographical mobility – number of settlements inhabited

Practices

- Learning – acquiring knowledge and skills as part of day-to-day activities or at work
- Reading – reading books on computer or e-reader

Explanatory Variables (continued)

Resources

- Knowledge – knowledge of foreign language
- Material objects – Internet connection at home
- Spare time – availability of spare time during weekends (or non-work and non-study days)

Context

- Captured on the regional level
- Captured by the settlement type

Hypotheses

- Number of professions held, settlements inhabited
- Engagement in practices enhancing cognitive skills
- Availability of material resources and relevant knowledge

is positively associated with the adoption of innovative consumption practices among *adult population* (over 16).

- Number of educational institutions attended

is positively associated with the adoption of innovative consumption practices among the *affluent stratum*.

- Availability of spare time

is positively associated with the adoption of innovative consumption practices among the *least affluent stratum*.

Controls: age, gender, marital status, household income per person, higher education, agency, student and employed status, computer in household

Data

Russian Longitudinal Monitoring Survey (RLMS-HSE)

- national representative survey of households and individuals designed for cross-section and panel data analysis
- carried out since 1992, comparable data available since 1994, 19 waves of data have been gathered
- contains data on employment, income, consumption, family structure, mobility, community, etc.
- 18th wave in 2009 included an additional "Innovations" block with focus on computer and Internet use
- "Innovations" block was delivered to a random sample of individuals (sample within sample, also national representative) and additional individuals from the upper income quintile

"Russia Longitudinal Monitoring survey, *RLMS-HSE*", conducted by Higher School of Economics and ZAO "Demoscope" together with Carolina Population Center, University of North Carolina at Chapel Hill and the Institute of Sociology RAS.

Internet Shopping Index, RLMS-HSE 2009

Internet Shopping Index	General Population N=1,604		Population from the Upper Income Quintile N=784	
	n	%	n	%
0	1,433	89	610	77
1	62	4	67	9
2	44	3	44	6
3	16	1	23	3
4	16	1	11	1
5	7	<1	5	<1
6	7	<1	10	1
7	7	<1	6	<1
8	3	<1	2	<1
9	0	0	0	0
10	2	<1	1	<1

Fixed-Effects Negative Binomial Regression: Adoption of Internet Shopping, RLMS-HSE 2009

	Model 1		Model 2 (upper income quintile)		Model 3 (4 bottom income qntls)	
	Coefficient	Robust S.E.	Coefficient	Robust S.E.	Coefficient	Robust S.E.
Intercept	-2.543*	1.340	-1.157	1.549	-4.327*	2.023
Age	-.032***	.009	-.023*	.012	-.062***	.009
Female	.028	.280	-.047	.153	-.335	.430
Marital status(=married, w/partner)	.374	.318	.036	.358	1.733***	.247
Higher education	.697*	.348	.538*	.220	1.104*	.667
# of educational institutions	-.015	.062	.046*	.024	-.162	.150
Learning	.175***	.048	.179***	.050	-.054	.084
Reading	.732***	.204	.919**	.344	.656*	.286
Foreign language	.710*	.373	.165	.262	1.027*	.511
# of professions changed	.219**	.075	.250**	.082	.339**	.131
Computer	.708	.844	-.039	.324	.532	.612
Internet	1.765***	.429	1.745***	.260	2.298***	.178
Spare time	-.083	.132	-.162	.184	.612***	.191
Upper income quintile	.599*	.324	-	-	-	-
# of relocations	-.134	.139	-	-	-	-
# of relocations*settlement type interaction						
Large city	-	-	-.282**	.098	-.037	.231
Medium city	-	-	-.034	.236	.227	.166
Town	-	-	-.581	.445	.769	.536
Village	-	-	-.053	.347	-1.640*	.836
Region (base=Moscow and St. Petersburg)						
Northern	-.003	.303	-.660*	.293	-.591	.652
Central	-.987**	.344	-.759*	.296	-2.375***	.635
Volga	-1.478***	.255	-1.040***	.185	-2.314***	.395
Southern	-1.062***	.246	-1.360***	.209	-2.264***	.423
Caucasus	-.915*	.420	- .619*	.337	-4.469***	.532
Ural	-1.144***	.262	-.914***	.188	-1.407*	.630
Western Siberia	-1.910***	.253	-1.500***	.221	-2.518***	.496
Far East	-1.344***	.202	-.969***	.207	-1.769***	.259
N	1136		622		827	
Log-likelihood	-489.73		-475.85		-221.45	
Pseudo R^2	.21		.17		.26	

Fixed-Effects Negative Binomial Regression: Adoption of Internet Shopping, RLMS-HSE 2009

	Model 4 (tbc)	
	Coefficient	Robust S.E.
Intercept	-5.575**	1.686
Age	-.032**	.012
Female	-.102	.270
Upper income quintile*Marital status(=married, w/partner)		
0 1	1.454***	.318
1 0	6.136*	2.885
1 1	5.725*	2.627
Higher education	.798*	.444
Upper income quintile*# of educational institutions		
0	-.138	.104
1	.020	.066
Learning	.133**	.043
Reading	.747**	.241
Upper income quintile*Foreign language		
0 1	1.082*	.502
1 0	-.513	.342
1 1	(omitted)	
# of professions changed	.216*	.090
Computer	.875	.773
Internet	1.783***	.365

	Model 4 (continued)	
	Coefficient	Robust S.E.
Upper income quintile*Spare time		
0	.478**	.173
1	-.352	.291
Settlement type *# of relocations		
Large city	-.297	.199
Medium city	.046	.183
Town	-.131	.589
Village	-.288	.207
Region (base=Moscow and St. Petersburg)		
Northern	-.468	.404
Central	-1.490**	.466
Volga	-1.759***	.390
Southern	-1.541***	.258
Caucasus	-1.915***	.412
Ural	-1.368***	.292
Western Siberia	-2.278***	.369
Far East	-1.990***	.228
N	1136	
Log-likelihood	-483.18	
Pseudo R^2	.22	

Notes: * p<.10; ** p<.01; *** p<.001

Controls included in regression: student, employed, agency.

Main Findings

- Number of occupations changed, practices of learning and e-reading, knowledge of foreign language, availability of Internet connection at home and residing in capitals are positively associated with innovative Internet shopping adoption among adults
- Number of educational institutions attended is positively associated with innovative Internet shopping adoption among affluent
- Availability of spare time is positively associated with innovative Internet shopping adoption among least affluent
- Geographical mobility is not significant / the need to test the same hypothesis with more precise measurement of mobility
- Internet shopping is gender neutral

Further Research: First Alternative

To initiate a discussion on the role of innovativeness: is it a manifestation of adopted innovations (Rogers 2003) or the inherent quality that facilitates the adoption

Measure of innovativeness as a propensity for innovative consumption was constructed as a formative index based on three questions:

Do you agree with following statement on a 1 to 5 points scale:

- You buy new products earlier, than most of your acquaintances
- You constantly watch out for the release of new products, gather information about them
- The most important consideration for you in order to make a purchase is that the product should be among the latest released on the market

Fixed-Effects Negative Binomial Regression: Adoption of Internet Shopping, RLMS-HSE 2009

	Model 5		Model 6 (upper income quintile)		Model 7 (4 bottom income qntls)	
	Coefficient	Robust S.E.	Coefficient	Robust S.E.	Coefficient	Robust S.E.
Intercept	-2.810*	1.237	-1.154	1.524	-4.327*	2.023
Age	-.035***	.011	-.024*	.012	-.065***	.011
Female	.036	.298	.085	.230	-.462	.407
Marital status(=married, w/partner)	.368	.384	.144	.346	1.426***	.238
Higher education	.718*	.311	.526*	.263	1.113*	.506
# of educational institutions	-.025	.055	.052*	.030	-.217*	.108
Learning	.183***	.039	.200***	.051	-.118	.084
Reading	.595**	.245	.919*	.389	.673*	.281
Foreign language	.717*	.362	.142	.389	1.116**	.400
# of professions changed	.192**	.068	.271***	.081	.319**	.113
Consumer innovativeness	.419**	.844	-.077	.105	.695***	.186
Internet	1.601***	.400	1.674***	.270	1.967***	.195
Spare time	-.064	.158	-.151	.194	.636***	.177
Upper income quintile	.553*	.335	-	-	-	-
# of relocations	-.057	.134	-	-	-	-
# of relocations*settlement type interaction						
Large city	-	-	-.284**	.101	.199	.228
Medium city	-	-	-.027	.248	.272	.217
Town	-	-	-.591	.469	.734	.659
Village	-	-	-.070	.306	-1.828*	.767
Region (base=Moscow and St. Petersburg)						
Northern	-.543*	.312	-.834**	.295	-1.133*	.543
Central	-.893*	.371	-.714*	.309	-2.186***	.623
Volga	-1.489***	.295	-1.082***	.242	-2.167***	.307
Southern	-1.182***	.242	-1.294***	.271	-2.303***	.395
Caucasus	-.676*	.392	- .501*	.307	-3.719***	.518
Ural	-1.204***	.199	-.896***	.208	-1.228**	.429
Western Siberia	-1.886***	.238	-1.489***	.214	-2.251***	.474
Far East	-1.114***	.188	-.926***	.241	-1.247***	.281
N	1112		603		811	
Log-likelihood	-471.95		-455.65		-213.80	
Pseudo R^2	.22		.18		.28	

Further Research: Second Alternative

To test hypotheses formulated for a single innovative consumption practice – online shopping – with a measure of adopted innovative consumption practices, related to computer and Internet utilization, as dependent variable

a step to a more generalizable results that fall in line with empowerment theory and provide evidence to a theory of human action

Index of Innovative Consumption Practices Adoption (tbc)

Do you personally use Internet on …

- Notebook, laptop - Palmtop - Mobile phone or smartphone

Did you use Internet at least once to:

- Buy goods or services online
- Book tickets, hotel, vacation packages, etc.
- Listen to radio or watch TV
- Play online, view or download games
- Store or post personal info on websites
- Pay for services or online banking

Index of Innovative Consumption Practices Adoption (continued)

Did you personally buy or order something for your family or yourself online at least once?

How do you usually pay for the purchases and orders placed online?

- Paid online by credit/debit card or by withdrawal from the bank account
- Paid online with e-money

Index of Innovative Consumption Practices Adoption, RLMS-HSE 2009

Innovative Consumption Index	General Population N=1,604		Population from the Upper Income Quintile N=784		Population from Four Bottom Income Quintiles N=1,229	
	n	%	n	%	N	%
0	1,115	70	411	53	956	78
1	153	10	122	16	87	7
2	121	8	101	13	66	5
3	96	6	52	7	60	5
4	53	3	39	5	28	2
5	33	2	30	4	17	1
6	15	1	18	2	7	<1
7	7	<1	5	<1	1	<1
8	1	<1	0	0	1	<1
9	1	<1	1	<1	0	0
10	1	<1	0	0	1	<1

Fixed-Effects Negative Binomial Regression: Innovative Consumption Practices, RLMS-HSE 2009

	Model 1		Model 2 (upper income quintile)		Model 3 (4 bottom income qntls)	
	Coefficient	Robust S.E.	Coefficient	Robust S.E.	Coefficient	Robust S.E.
Intercept	-.342	.611	-.032	.317	-1.069	.801
Age	-.048***	.005	-.035***	.003	-.059***	.006
Female	-.110	.119	-.040	.102	-.281	.178
Marital status(=married, w/partner)	.223	.167	.140	.128	.517**	.165
Higher education	.073	.187	.161*	.091	-.008	.263
# of educational institutions	.041	.026	.030*	.012	.029	.037
Learning	.155***	.045	.157***	.039	.098*	.057
Reading	.591***	.105	.584***	.067	.660***	.173
Foreign language	.230**	.088	.134	.096	.310**	.110
# of professions changed	.088	.063	.078*	.036	.133	.096
Computer	.235	.197	-.281*	.137	.239	.240
Internet	1.444***	.182	1.362***	.148	1.653***	.147
Spare time	.117	.071	.085	.054	.259*	.136
Upper income quintile	.335***	.097	-	-	-	-
# of relocations	-.067	.087	-	-	-	-
# of relocations*settlement type interaction						
Large city	-	-	-.228***	.042	-.033	.165
Medium city	-	-	.011	.080	-.154	.186
Town	-	-	.014	.200	.154	.190
Village	-	-	.029	.155	-.671***	.201
Region (base=Moscow and St. Petersburg)						
Northern	-.472***	.122	-.511***	.103	-.841***	.120
Central	-.753***	.115	-.665***	.072	-.915***	.126
Volga	-.931***	.105	-.877***	.034	-1.470***	.109
Southern	-.557***	.117	-.789***	.076	-.933***	.151
Caucasus	-.757**	.240	- .887***	.180	-1.328***	.208
Ural	-.553***	.067	-.689***	.026	-.604***	.164
Western Siberia	-.827***	.081	-.588***	.057	-1.112***	.134
Far East	-.803***	.083	-.783***	.081	-1.139***	.076
N	1137		623		828	
Log-likelihood	-907.69		-750.05		-509.32	
Pseudo R^2	.28		.21		.30	

Thank you for your attention!

Questions? Comments? Suggestions?

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