

EDUCATION AND THE TRANSITION FROM COMMUNISM¹

BY

Ksenia Iliasova
Department of Economics
Royal Holloway College
University of London
Egham, Surrey TW20 0EX
UK
K.Iliasova@rhul.ac.uk

Michael Spagat
Department of Economics
Royal Holloway College
University of London
Egham, Surrey TW20 0EX
UK
M.Spagat@rhul.ac.uk

CEPR
Davidson Institute

“All happy families are alike.
Unhappy families are unhappy in their own way.”
Tolstoy

¹ This paper was prepared for NCEEER grant “Taking Stock of Human Capital in the Post-Communist World: Education Issues in Transition Economies.” It was also supported by a fellowship from the Leverhulme Trust on the project “Economic Growth in Transition Economies.” We thank Michael Kaganovich and Andrew Seltzer for useful advice. Of course, all errors are our own.

Abstract

We use OECD-PISA data on a standardized international reading test to evaluate the performance of 15-year olds in five countries in transition from communism: Hungary, the Czech Republic, Poland, Latvia and Russia. Parental education contributes strongly to performance as do other indicators of parental quality such as books in the household and interacting with children. Wealth effects are mixed; possessions associated with intellectual activity such as calculators help while pure conveniences such as dishwashers actually harm performance. Hungary, the Czech Republic and Poland outperform Latvia and Russia with the differences largely due to the relative performance of the students with the most favorable backgrounds.

Keywords: Transition, Education, Parental Effects

JEL Codes: P2, I2

1. Introduction

The long-run future of any society depends crucially on the education of its children. For countries in transition from communism this issue looms especially large. Compared to other countries at similar levels of economic development these countries have unusually high educational standards (Gros and Suhrcke, 2000). Spagat (2003, 2004) has argued that this is an unstable arrangement that will be resolved differently in different transition economies. In some, according to this view, living standards will rise rapidly to meet educational levels while in others educational standards will fall to meet living standards.

Sandberg (1979) and Williamson and O'Rourke (1997) lends support to the optimistic scenario of educationally based rapid convergence to West European income levels. They studied the spectacular catch-up of Scandinavian countries to the core of Europe in the four decades before World War I and attribute it mostly to a starting point of high education to income ratios.² Of course, transition countries would like to repeat this experience.

A prerequisite for following the Scandinavian path is to maintain, and improve, educational standards. Unfortunately, the educational performance of transition economies has been rather uneven. UNICEF (2004) provides figures on enrolment rates in various categories and educational expenditures across the transition world. They show Central Europe and the Baltic States holding up reasonably well, sharp deterioration in the Caucasus and Central Asia, and the rest of European transition economies somewhere in between. Moreover, there is substantial within-country variation including large urban-rural differences (Micklewright, 1999).

In this paper we analyze the sources of variation in educational performance of students in the Czech Republic, Hungary, Poland, Latvia and Russia using the PISA exam of the OECD

² Prior to their catch-up phase these countries significantly advanced their educational achievements due to religious reasons.

(<http://www.pisa.oecd.org/index.htm>). We find that Russia and Latvia clearly lag behind the other transition countries in the sample. Broadly, we find that the gap for Russia-Latvia relative to the others is largely a problem at the top; students with favorable family background characteristics in these countries did significantly worse than similar students from the Czech Republic, Hungary and Poland. Aside from this general comparison we isolate many particular factors that are associated with strong test performance.

Ammermueller, Heijke and Woessmann (2003) also studied student test performance, using different data (TMSS 1995) and a similar pool of transition countries from Central and Eastern Europe. They find that the Czech and Slovak Republics, Hungary and Slovenia are reaching and exceeding West European educational standards whereas Lithuania, Latvia and Romania are lagging behind. They also find strong family background effects, particularly for parental education, consistent with the finding of Hazans, Rastrigina and Trapeznikova (2005) for the three Baltic countries. Our results confirm these strong parental affect using different data and for different countries. An additional contribution of our work is to tie cross-country differences in performance to the students with the most favorable backgrounds.

We hope this work will further our understanding of the long-run future of transition economics and aid policy development for educational, and hence economic, improvement. We hope that our results also will illuminate the bigger question posed above about whether the world in transition from communism might be splitting into two groups, developing and industrialized. The PISA sample is not wide enough for us to fully address this issue, since it does not include countries of the Caucasus and Central Asia but we can still make a partial approach to the subject using the information at hand. As already mentioned, Russia and Latvia did worse than the other transition countries in the study. Nevertheless, they were still well in contact with the scores of the world's richest countries. Therefore, on the evidence of the PISA exam they are not heading toward developing country status. However, our results do yield a basic question that can guide future

research. Assuming that the countries of the Caucasus and Central Asia lag even further behind the leading-edge transition countries than do Russia and Latvia, is this gap traceable primarily to underperformance of relatively advantaged students? In other words are the problems of these countries similar qualitatively to those of Latvia and Russia?

The plan of the paper is as follows. We describe the dataset in section 2. The main analysis is in sections 3 and 4. Section 5 is a conclusion.

2. The Dataset

Our work is based on the reading portion of the PISA 2000 dataset of the OECD (<http://www.pisa.oecd.org/index.htm>). Under this program 15-year-olds in 31 countries took a standardized reading examination. Students also answered a questionnaire covering personal and family background and school principals answered questions about their schools. The background information is tied to the test scores in the database, enabling analysis of the relationship between the two.

A special feature of the PISA exam is that it extends beyond just textbook mastery. Rather, it strives to measure students' ability to apply their knowledge to practical situations. The crucial interpretive point is that the PISA test differs from the more academically-oriented examinations that typically regulate college entry in most countries. Moreover, students do not prepare specifically for the PISA exam since it counts for nothing in children's life progression. Therefore, it should be a rather good measure of real cognitive skills since the results are not contaminated by a test preparation industry.

In this paper we use just the PISA data on countries in transition from communism: the Czech Republic, Hungary, Poland, Latvia and Russia. PISA also conducted mathematics and science tests but in this paper we work only with the reading scores since the sample sizes are much higher for reading than they are for mathematics and science.

We do not take on the huge task of systematically comparing the transition countries with the non-transition countries. Nevertheless, it is still worthwhile to know how the transition countries fit into the larger sample. The test is calibrated so that the average score is 500. The average reading scores for the transition economies were 492 for the Czech Republic, 480 for Hungary, 479 for Poland, 462 for Russia and 458 for Latvia. Of the 31 countries where the reading test was administered the transition countries ranked 19th, 23rd, 24th, 27th, and 28th respectively. Country averages ranged from 546 for Finland to 396 for Brazil (OECD, 2003, p. 76). In short, the transition countries performed below the average but not out of the mainstream for wealthy countries.

3. Results

The results in this section are based on a regression analysis performed country-by-country for the Czech Republic, Hungary, Latvia, Poland and Russia. These exercises are all designed to predict a student's score on the PISA 2000 reading exam as a function of a large number of explanatory variables. The explanatory variables include the students' gender, family characteristics, including parental education, employment information, physical possessions, family activities and location, and school characteristics. Appendix 1 gives all the variables we used in the regressions together with their means for country by country.

We realise that variables such as education level of the parents and number of books in the household, cultural possessions could be highly correlated. In Table 5 we provide correlation coefficients between selected variables, and can confirm that the highest correlation coefficient is 0.3.

The following are the most interesting results. Children in households with many books tend to perform much better on the PISA 2000 exam than other children. Having more books is always better. Children in households with more than 500 books score higher than children in households with fewer than 50 books on average by almost 15% in the Czech Republic and Hungary, by about

10% in Russia and by 6-7% in Latvia and Poland. In addition, having classical literature, textbooks and dictionaries is associated with higher test scores. The combined premium for having all three is roughly 14-15% for the Czech Republic, Russia and Hungary and approximately 10-11-12% for Latvia and Poland. Since a strong majority of households has all of these it is best to think of this result in terms of a big penalty to households without these things. Of course, this does not mean that a government program of giving books to households with few of them would necessarily boost the school performance of the children in these households. Rather, book possession is probably an indicator of parental quality, i.e., parents who have already accumulated many books tend to raise their children in ways that are beneficial for their school performance.

Being female gives a premium of 4-5% in the Czech Republic, Hungary, 6-7% in Poland and Russia and more than 8% in Latvia. This is an important difference but about what should be expected since females generally tend to score better than males on reading tests.

More education for either parent is generally associated with higher test scores, although these effects are not always strong. Due to difference in the education systems in Former Soviet Union republics and other socialist countries, there are virtually no parents in Russia and Latvia, who attained educational level 3B. With this in mind, the reference category for parental education in the regressions on Russian and Latvian sample has been selected as education level 3A. In regressions on Czech, Hungarian and Polish sample, the reference category has been selected as 3B. There is a clear penalty on having a mother in the lowest category that ranges from 8.9% in Russia all the way up to 19.8% in Poland. However, this category, completion only of primary school, applies to only 1% of the sample. Having a father in this category is significant only for Latvia where the penalty is nearly 10%. For the Czech Republic the coefficients behave very well: all are significant except the lowest category for fathers and increase monotonically with the exception of MISC2 vs. MISC3A. Hungary's coefficients are completely monotonic, although MISC2 and FISClow are insignificant.

The effect of Polish mothers is as expected except for the insignificance of the MISC2 category. Fathers, on the other hand, have no significant effect other than a strong positive one for higher education, FISC56. Latvia and Russia are very different. Latvia has significant coefficients only for the (almost empty) lowest category for both fathers and mothers. Russian fathers have significant positive effect only at the highest level FISC56 and mothers are significant only for the lowest two categories. To summarize, in Latvia and Russia once one controls for other factors parental education exerts only a weak effect. In the Czech Republic and Hungary these effects are strong while they are moderately strong in Poland.

Children interacting more with parents is associated with higher test scores. Discussing politics and school progress and having dinner together have a cumulative impact of 15.5% in Russia, 14.9% in Poland, 16.7% in the Czech Republic, 8.2% in Latvia and 1.7% in Hungary.

Urban-rural differences are important but the effects vary significantly from country to country. Villages are the worst places to live in all cases. The center of a big city is the best place to live in Poland, Hungary and Latvia, yielding premia over the village of 7.3%, 6.2% and 4.4% respectively. Medium cities are the best place to live in Russia given a premium of 8.4% over the village. Towns give the highest premium, 3.8% in the Czech Republic with all the other categories not significantly differing from villages.

The information on family possessions can be largely understood in terms of the following principle; items indicative purely of family wealth are associated with bad test scores while items associated with intellectual activity are associated with good test scores. Thus, dishwashers, more than two televisions and mobile telephones are negative factors while calculators, computers and musical instruments are positive factors. The cumulative effects of pure wealth categories are - 12.7% in Poland, -9.9% in Hungary, -8.7% in Latvia, -4.7% in Russia and -2.7% in the Czech Republic. We were originally expecting all wealth effects to be positive and were surprised by these

results. However, in retrospect they make sense, since, given the standard of living in these countries, expenditure on these items is an indication of not prioritizing child development. The cumulative impact of the positive factors is 15.2% in Hungary, 11.4% in Latvia, 10.9% in Poland, and 9.4% in the Czech Republic and 8.9% in Russia.

The offspring of families that engage in what might be called “high culture activities” tend to slightly outperform others on the exam on average. However, these effects are fairly small; going to operas, plays and galleries combined gives a cumulative effect of 7.0% in the Czech Republic, 4.9% in Poland, 2.6% in Latvia.

The employment status of parents matters a bit. Having a mother searching for work is associated with roughly a 3-4% lower test score. There also is an approximate 3.5% penalty for having a father in part-time work in Hungary, Latvia and Russia while the results are insignificant for Poland and the Czech Republic.

Finally, we can report that we ran a robustness check of our results by removing all the parental education variables and replacing them with occupational variables meant to range from high-skill occupations down to low-skill ones.³ The result is that there is remarkably little variation from the results reported above. This indicates that our numbers are rather reliable.

4. Good and Bad Combinations of Characteristics

In section 3 we discussed quite a large number of variables. Since it is difficult to grasp all the details when there are so many variable at play we offer the following exercise for clarification. We assemble a set of household characteristics that satisfy two criteria. First they are good for test scores as indicated by the regressions. Second, a fairly high percentage of the students in each country satisfy the criteria. The motivation for the second criterion is that there would be little illumination in identifying a tiny group of students who are predicted to do extremely well on the

³ We will provide these results upon request.

exam. Rather, we wish to find good characteristics actually present within a large group of people.

Here is our list:

1. There are 100 or more books in the household;
2. Students discuss books, films and TV programs with their parents at least sometimes;
3. Students eat their main meal with parents at least several times a week;
4. Students discuss school progress with their parents at least once a month;
5. Both mother and father are in full time employment;
6. Both mother and father have either education level ISC3A or ISC56 (i.e. they are not MISC_{low}/FISC_{low}, MISC2/FISC2, MISC3B/FISC3B or education level unknown);
7. Students do not live in a village;
8. Students have textbooks.

Table 1 gives information on the performance of students with the above characteristics as well as the average performance for the country as a whole. We note first that there are substantial numbers of students meeting the criteria for each country. The percentages are rather similar with the exception of Poland which is definitely lower than the others. This is clearly a good combination of characteristics since for every country the mean score of the students with the combination is much higher than the overall mean. Note that the premium on this combination is lower for Russia and Latvia, 10.4% and 10.7% respectively, compared to the other countries where it is 12-13%. Recall that Russian and Latvian students had lower average scores to begin with than those in the Czech Republic, Hungary and Poland. Therefore, the average scores for the good-combination students in Russia and Latvia are quite a bit lower than the average scores of the good-combination students in the other countries. In other words, the good-combination students in Russia and Latvia account for more than their share of the performance shortfall of the former pair compared to the latter group.

Table 1. Performance of students with the good combination of characteristics

	Czech Republic	Hungary	Poland	Latvia	Russian Federation
% of country's sample	19.7	16.3	10.0	17.6	16.7
Average	555	538	541	505	511

score					
Min score	269	95	235	30	89
Max score	788	810	788	881	791
St. Dev	76	78	84	86	85
Average score for the whole country	492	480	479	458	462

We now consider a bad combination of characteristics defined by the following criteria:

1. There are less than 100 books in the household;
2. Students rarely communicate with their parents, i.e. either they never discuss books, films, TV programmes with their parents or the main meal is not eaten together or school progress is not discussed;
3. Both mother and father have an education level other than ISC3a or ISC56;
4. Student lives in a village or small town.

The bad combination draws a good number of students everywhere but Latvia. The performance of bad-combination students in Russia and Latvia is strikingly close to those of bad-combination students in the Czech Republic, Hungary and Poland. The joint effect of the two tables is to suggest that the underperformance of the former Soviet countries relative to the Central European ones derives more from the former's inability to capitalize more fully on favorable background factors rather than the conspicuous failure of the bad-background students in Latvia and Russia.

Table 2. Performance of students with a bad combination of characteristics

	Czech Republic	Hungary	Poland	Latvia	Russian Federation
% of country's sample	11.7	9.1	14.5	4.7	15.5
Average score	441	417	451	430	425
Min score	131	107	174	207	29
Max score	678	671	788	713	674
St. Dev	84	81	88	88	84
Average score for the whole	492	480	479	458	462

country					
---------	--	--	--	--	--

5. Conclusion

With apologies to Tolstoy, we conclude that all bad families are alike but that the good families are good in their own way. That is, disadvantaged Russian and Latvian students seem very similar to their counterparts in the Czech Republic, Hungary and Poland. However, advantages translate into results more decisively in Central Europe than in the former Soviet Union. Of course, these findings have a positive side for Russia and Latvia in terms of equality of opportunity. However, one would like to see Russia and Latvia achieving high average scores together with equality of opportunity rather than the one without the other.

Our findings can point the way for future work on a fuller range of transition countries including those of the Caucasus and Central Asia. We would like to know if educational underperformance in these countries, if it exists, is explained more by these region's relatively advantaged students or by their relatively disadvantaged students. We hope this basic research will point the way toward policy improvement and a brighter future for the younger generation in these countries.

Bibliography

Ammermueller, Andreas, Hans Heijke and Ludger Woessmann, "Schooling Quality in Eastern Europe: Educational Production During Transition," IZA Discussion Paper 746, 2003.

Gros, Daniel and Marc Suhrcke, "Ten Years After: What is Special About Transition Countries," CESifo working paper number 327, 2000.

Hazans, Mihails, Olga Rastrigina and Ija Trapeznikova, "Family Background and Scholling Outcomes Before and During the Transition: Evidence from the Baltic Countries," working paper, BICEPS, Riga, 2003-03.

Micklewright, John, "Education, Inequality and Transition", *Economics of Transition*, 7, 343-376, 1999.

OECD, (2003), *Literacy Skills for the World of Tomorrow - Further Results from PISA 2000*, OECD, Paris.

Sandberg, Lars, "The Case of the Impoverished Sophisticate: Human Capital and Swedish Economic Growth before World War I", *Journal of Economic History*, 39, 225-241, 1979.

Spagat, Michael, (2003), "Human Capital, Growth and Inequality in Transition Economies," in Nauro Campos and Jan Fidrmuc (eds.), "Political Economy of Transition and Development: Institutions, Politics and Policies." ZEI Studies in European Economics and Law, Kluwer Academic Publishers, Boston/Dordrecht/London.

Spagat, Michael, "Human Capital and the Future of Transition Economies," *Journal of Comparative Economics*, 34, 1, pp. 44-56, 2006.

Williamson, Jeffrey and Kevin O'Rourke, "Around the European Periphery 1870-1913: Globalization, Schooling and Growth", *European Review of Economic History*, 1, 153-90, 1997.

UNESCO, (1997), "International Standard Classification of Education," http://www.unesco.org/education/information/nfsunesco/doc/iscled_1997.htm.

UNICEF, (2004) *Innocenti Social Monitor 2004*, UNICEF, Florence.

Appendix

1. Data Description

Table 3. Dependent variable

Dependent Variable	Definition	Mean	Number obs.
Logwleread (Czech)	Log of reading score Czech Republic	6.19	5348
Logwleread (Hungary)	Log of reading score Hungary	6.16	4848
Logwleread (Latvia)	Log of reading score Latvia	6.11	3846
Logwleread (Poland)	Log of reading score Poland	6.12	3653
Logwleread (Russia)	Log of reading score Russia	6.11	6685

Table 4. Variable definition and arithmetic mean

Variable	Definition	Czech Republic	Hungary	Poland	Latvia	Russia
Male	=1, if respondent is male	.464	.508	.525	.478	.497
Bookmore500	=1, if there are more than 500 books in the household	.216	.192	.123	.196	.144
Book500	=1, if there 250 to 500 books in the household	.007	.200	.124	.205	.187
Book0to250*	=1, if there 0 to 250 books in the household	.770	.586	.704	.581	.653
Booknone	=1, if there are no books in the household	.007	.022	.049	.018	.016
Literature	=1, if there are classical literature books in the household	.767	.787	.787	.857	.877
Textbook	=1, if respondent has textbooks	.892	.990	.853	.879	.961

Dictionary	=1, if there is a dictionary in the household	.939	.943	.951	.945	.850
Parpolitics	=1, if respondent discusses politics with parents at least sometimes	.575	.769	.621	.694	.581
Parschool	=1, if respondent discusses school progress with parents at least once a month	.903	.957	.891	.919	.910
Pardiner	=1, if respondent eats the main meal with parents around the table several times a week	.866	.908	.872	.921	.913
Town	=1, if respondent's school is located in town with 15,000 to 100,000 people	.386	.388	.298	.283	.193
City	=1, if respondent's school is located in town with 100,000 to 1,000,000 people	.179	.264	.211	.276	.250
Citycentre	=1, if respondent's school is located close to the centre of a city with over 1,000,000 people	.027	.061	.085	.068	.089
Cityouter	=1, if respondent's school is located elsewhere in a city with over 1,000,000 people	.106	.053	.082	.023	.057
Smtownvillage*	=1, if respondent's school is located in community with less than 15,000	.302	.232	.277	.203	.411
Citydot	=1, if the information on respondents' school is missing	0	.002	.047	.147	0
Dishwasher	=1, if there is a dishwasher in the household	.154	.475	.151	.068	.052
TV	=1, if respondent's family owns two or more TV sets	.744	.745	.677	.556	.616
Mobile	=1, if respondent's family has at least one mobile phone	.568	.506	.407	.435	.073
Calculator	=1, if respondent has a calculator	.985	.975	.926	.959	.916
Computer	=1, if there is a computer in the household	.553	.502	.402	.261	.166
Piano	=1, if there is a musical instrument in the household	.628	.392	.398	.353	.326
Opera	=1, if respondent attended an opera, ballet or classical concert at least once a year	.268	.316	.207	.353	.197
Theatre	=1, if respondent watched live theatre at least once a year	.749	.712	.536	.661	.429
Gallery	=1, if respondent attends art gallery (museum) at least once a year	.755	.835	.579	.750	.582
Wfullmam*	=1, if respondent's mother	.776	.612	.508	.588	.673

	is in full-time employment					
Wpartmam	=1, if respondent's mother is in part-time employment	.043	.086	.074	.113	.084
Wlookmam	=1, if respondent's mother is searching for employment	.061	.064	.106	.105	.091
Wothdotmam	=1, if information on respondent's mother employment status is missing, or she is retired, or staying at home	.120	.238	.312	.194	.152
Wfullpap*	=1, if respondent's father is in full-time employment	.849	.694	.581	.587	.665
Wpartpap	=1, if respondent's father is in part-time employment	.033	.072	.074	.099	.064
Wlookpap	=1, if respondent's father is searching for employment	.032	.061	.056	.099	.069
Wothdotpap	=1, if information on respondent's father employment status is missing, or she is retired, or staying at home	.086	.173	.289	.215	.202
Privateschool	=1, if respondent's school is managed by non-government organization	.060	.055	.014	.001	0
MISC1ow	=1, if respondent's mother completed only primary school	.016	.009	.002	.012	.008
MISC2	=1, if respondent's mother started but did not finish secondary school	.043	.152	.076	.063	.058
MISC3B**	=1, if respondents' mother finished secondary school leading to vocational training but has no higher education degree (ISCED3B)^	.350	.269	.259	.039	.026
MISC3A**	=1, if respondent's mother finished secondary school aimed at entry to tertiary education but has no higher education degree (ISCED3A)	.431	.356	.418	.506	.522
MISC56	=1, if respondent's mother has a higher education degree (ISCED5 or ISCED6)	.144	.197	.142	.356	.340
MISCdot	=1, if no information on respondent's mother education is available	.016	.017	.103	.024	.046
FISC1ow	=1, if respondent's father completed only primary school	.011	.006	.004	.019	.012
FISC2	=1, if respondent's father started but did not finish secondary school	.026	.081	.060	.076	.074
FISC3B**	=1, if respondents' father	.431	.418	.349	.062	.039

	finished secondary school leading to vocational training but has no higher education degree (ISCED3B)^					
FISC3A**	=1, if respondent's father finished secondary school aimed at entry to tertiary education but has no higher education degree (ISCED3A)	.304	.262	.318	.469	.451
FISC56	=1, if respondent's father has a higher education degree (ISCED5 or ISCED6)	.186	.186	.125	.282	.280
FISCdot	=1, if no information on respondent's father education is available	.042	.047	.144	.092	.144

Note.

* marked are the omitted reference categories

** Misc3B and Fisc3B are reference categories for regressions on Czech Rep., Hungary and Poland. Misc3A and Fisc3A are reference categories on regression on Latvia and Russia.

^ International Standard Classification of Education (UNESCO, 1997)

Table 5. Correlation coefficients between mother's education level and the possession of books in the household (pooled across the sample of five countries)

	MISC1ow	MISC2	MISC3A	MISC56	Book500	Book more500	Literature	Text book	Dictionary
Booknone	.00	.00	-.04	-.02					
Book500	-.03	-.08	.04	.08	1.00				
Book more500	-.02	-.02	-.08	-.03		1.00			
Literature	-.08	-.12	.09	.15	.14	.14	1.00		
Textbook	-.05	-.03	.05	.08	.08	.07	.30	1.00	
Dictionary	-.08	-.08	.03	.06	.09	.08	0.27	.22	1.00

2. Summary of regression results

Table 6. Regression including variables on parental education

Variable	Czech Republic	Hungary	Poland	Latvia	Russia
Male	-.050 (.005)	-.045 (.005)	-.065 (.007)	-.089 (.008)	-.068 (.005)
Bookmore500	.042 (.008)	.054 (.008)	.005 (.012)	.040 (.011)	.042 (.007)
Book500	.049	.049	.032	.048	.036

	(.007)	(.007)	(.011)	(.010)	(.006)
Booknone	-.034 (.031)	-.122 (.017)	-.129 (.018)	-.181 (.030)	-.103 (.019)
Literature	.014 (.007)	.087 (.007)	.088 (.010)	.047 (.013)	.048 (.008)
Textbook	.074 (.009)	-.020 (.025)	-.002 (.012)	.025 (.013)	.062 (.013)
Dictionary	.080 (.011)	.066 (.012)	.027 (.019)	.062 (.019)	.031 (.007)
Parpolitics	.030 (.005)	.017 (.006)	.026 (.008)	.049 (.009)	.056 (.005)
Parschool	.082 (.010)	.013 (.013)	.056 (.013)	.014 (.016)	.033 (.009)
Pardinner	.055 (.008)	.003 (.009)	.047 (.012)	.033 (.016)	.066 (.009)
Town	.038 (.006)	.030 (.007)	-.020 (.009)	.013 (.012)	.059 (.007)
City	.015 (.008)	.047 (.007)	.027 (.011)	.045 (.012)	.084 (.006)
Citycentre	.017 (.016)	.062 (.011)	.073 (.014)	.043 (.018)	.064 (.009)
Cityouter	.015 (.009)	.022 (.012)	.066 (.014)	-.016 (.027)	.063 (.011)
Dishwasher	-.013 (.007)	-.065 (.005)	-.078 (.010)	-.059 (.016)	-.047 (.011)
TV	-.014 (.006)	-.016 (.006)	.005 (.008)	-.001 (.008)	.006 (.005)
Mobile	-.013 (.005)	-.018 (.005)	-.049 (.008)	-.028 (.009)	-.015 (.010)
Calculator	.049 (.021)	.085 (.017)	.058 (.015)	.051 (.021)	.036 (.009)
Computer	.034 (.006)	.046 (.006)	.029 (.008)	.020 (.010)	.032 (.007)
Piano	.011 (.005)	.021 (.005)	.022 (.008)	.043 (.009)	.021 (.005)
Opera	.008 (.006)	.018 (.006)	-.010 (.009)	-.001 (.009)	.002 (.007)
Theatre	.028 (.006)	-.025 (.006)	.020 (.008)	-.001 (.009)	-.001 (.006)
Gallery	.042 (.007)	.004 (.007)	.029 (.008)	.026 (.010)	.010 (.005)
Wpartmam	-.011 (.013)	-.001 (.009)	-.017 (.014)	-.029 (.013)	-.026 (.009)
Wlookmam	-.045 (.011)	-.038 (.011)	-.043 (.012)	-.039 (.013)	-.017 (.008)
Wothdotmam	-.036 (.008)	-.017 (.006)	-.012 (.014)	-.021 (.011)	-.007 (.007)
Wpartpap	-.023 (.014)	-.037 (.010)	-.013 (.014)	-.037 (.014)	-.032 (.010)
Wlookpap	-.004 (.014)	-.030 (.011)	-.064 (.016)	-.023 (.014)	-.022 (.010)
Wothdotpap	-.014 (.010)	-.009 (.007)	-.009 (.009)	-.014 (.011)	.008 (.008)
Privateschool	.005 (.011)	.016 (.011)	.034 (.031)	-.051 (.110)	N/A
Misclow	-.107 (.021)	-.134 (.028)	-.198 (.082)	-.127 (.039)	-.085 (.027)

Misc2	.029 (.013)	.009 (.009)	-.004 (.015)	-.037 (.018)	-.036 (.011)
Misc3B	reference	reference	reference	-.005 (.021)	.000 (.014)
Misc3A	.024 (.006)	.037 (.007)	.021 (.010)	reference	reference
Misc56	.037 (.009)	.043 (.009)	.043 (.015)	.014 (.010)	-.002 (.014)
Miscdot	-.103 (.022)	-.068 (.021)	-.023 (.016)	-.075 (.027)	-.019 (.012)
FiscLow	-.047 (.026)	-.045 (.033)	.042 (.058)	-.108 (.031)	.006 (.022)
Fisc2	-.066 (.017)	-.036 (.010)	-.007 (.016)	-.033 (.016)	-.036 (.010)
Fisc3B	reference	reference	reference	-.014 (.017)	-.025 (.012)
Fisc3A	.028 (.006)	.021 (.007)	.012 (.009)	reference	reference
Fisc56	.060 (.008)	.046 (.009)	.073 (.015)	-.008 (.011)	.006 (.006)
Fiscdot	-.008 (.015)	-.037 (.013)	-.018 (.013)	-.034 (.016)	-.023 (.009)
R ²	0.340	0.347	0.288	0.169	0.232