

**Flipping burgers or flipping pages?**

**Student employment and academic attainment in post-Soviet Latvia.**

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## **Abstract**

Higher education, along with most aspects of Latvian economic and social life, has made a dramatic transition since Latvia regained independence from the Soviet Union in 1991. One particular feature has been the increase in the number of students who are working while studying in a higher educational institution. This study employs a survey of nearly 1000 students studying in 13 different – public and private – institutions across the major regions of Latvia. The study focuses on the disciplines of law and the social sciences. Evidence indicates employment has a strong and significant negative impact on school performance. Further, the negative impact increases as weekly hours worked increases. The negative effect of work on school performance appears to manifest itself through reduced class attendance and reduced time spent in independent study. We further examine reasons for student employment. In Latvia, the probability of student employment is most significantly affected by the availability of financial aid (such as scholarships), gender, ethnicity, and age.

**JEL Classification:** I21, I22, J22

**Keywords:** educational finance; human capital; student financial aid.

Having snatched independence from the crumbling Soviet Union in August 1991, the Latvian state undertook the triple transition of economic and political reform, and (in contrast to the established nation-states in east-central Europe) state-building. Higher education, particularly in the social sciences, was seen as key to the success of the transition. Suitably trained managers, lawyers, and economists were needed for both the public and private sectors. By 2004 the initial transition had been completed. Latvia has established a market economy and largely consolidated its democracy, as accession to both NATO and the European Union implied.

This paper considers the transition of higher education in Latvia. Specifically, it focuses on the work and study habits of social science students in thirteen public and private higher education institutions in Latvia. It considers the impact of part- and full-time employment on student academic performance. The paper is structured as follows. The first part illustrates the evolution and rapid growth of the post-Soviet higher education sector in Latvia. The second part reviews the contemporary scholarly debate on student employment and academic attainment. The third part discusses the methodology of the survey. The final part analyzes the empirical evidence, and implications, from our survey of Latvian social science students.

### **Higher education in post-Soviet Latvia**

Higher education in Latvia was monopolized by the state between the end of the Second World War and the regaining of independence in August 1991. The social sciences were particularly politicized in the Soviet era. Economics teaching ignored micro- and macro-

economics, the pencil and paper of modern economics. Political science was subsumed under departments of Marxism-Leninism. Both teaching and research were censored, and rote learning was the standard pedagogical approach. Indeed, the social sciences were marginalized both in terms of funding, and in terms of a 'brain drain' of the brightest academic minds into the natural sciences where they could work largely free from ideological control. However, following the collapse of the Soviet Union in 1991, the social sciences assumed a central role in the triple transition.

The Latvian higher education sector rapidly changed and expanded after 1991. This was caused by three factors. First, an increase in demand for qualifications in the core social science disciplines relevant to the systemic transition: economics / business; law, political science / public administration, journalism etc. Second, reforms to the higher education system allowed for the creation of private tertiary institutions to compete with the state sector (see Tables 1 and 2). As profit-making organizations, these new private institutions overwhelmingly focused on meeting the demand for degrees in law and the social sciences. Thus student numbers in these fields grew almost threefold, from 46,000 in the last academic year of the Soviet regime (1990/1991) to 130,693 in the 2004/2005 academic year (Latvian Ministry of Education 2006).

Third, the Soviet era radically changed the demographics of Latvia. By the 1989 Soviet census, ethnic Latvians made up just 52% of the population of the Soviet Republic of Latvia (Lieven 1993, p.433). As a result, post-1991 Latvian policy-makers sought to marginalize the influence of the Russian language in Latvia. Thus the higher education

law passed on November 1<sup>st</sup> 1995 only allowed teaching in the Latvian language in state-financed higher education institutions. The shortfall in Russian-language teaching institutions was swiftly filled by new private institutions not only providing an increased number of study places in the social sciences, but also teaching in Russian. This inevitably pushed many Russian-speakers with a weak knowledge of Latvian towards private education, with the additional costs this implies.

This rapid rise in student numbers coincided with the severe budgetary crisis that kicked in as the Latvian economy was liberalized, privatized, and re-directed westwards. Student stipends were hit particularly hard. Thus, as total student numbers grew, the proportion of 'budget' students (whose fees were covered by the state, and also received a living expenses stipend) declined (Table 2). Moreover, the stipend no longer covered real living costs. However, this did not lead to a rapid increase in the number of part-time or correspondence programs. Rather, a growing number of students combined employment with full-time study.

### **Student employment: The academic debate**

The impact of student employment on academic achievement has been an issue of growing interest in the scholarly literature in recent decades. Indeed, growth in the number of working students has been seen in both Western Europe and North America. Working students are now the majority, not the minority, in American college campuses (Fjortoff, 1995). And nearly three-quarters of those working worked at least ten hours a week (Pascarella, Edison, Nora, Hagedorn & Terenzini, 1998).

A key issue is the relationship between employment and student attainment. There have been two main, contrasting, theoretical approaches. The *zero-sum* model argues that academic goals are subverted by student employment (Hunt, Lincoln and Walker 2004). However, the second *developmental* model emphasizes the positive impact that employment can have on character- and skills-building, and thus academic achievement (Marsh, 1991).

In terms of the *zero-sum model*, Hunt, Lincoln and Walker (2004) concluded that employed students are drawn disproportionately from less privileged backgrounds and that many students see employment as a means to keep borrowing down. Moreover, students themselves indicated that employment had a negative impact on their studies.<sup>1</sup> However, the authors did note that the potential loss in future earnings as a consequence of lower academic attainment could be partially offset if students acquired skills from term-time employment. However, most students worked in spheres unrelated to their career aspirations.

In contrast, Fjortoff (1995) argued that working students performed as well as nonworking students in terms of academic achievement. Moreover, working students developed characteristics that fostered academic achievement, and less intensive employment had no detrimental effects on studies. Aper (1994) examined the effect of student work experience on college outcomes, surveying a sample of students at two U.S.

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<sup>1</sup> Similarly, most students in a UK survey also perceived work as having an adverse impact on their academic performance (Davies 1999).

higher education institutions – a small liberal arts college and a large public university. Aperi found that students who worked in academic or career-related jobs on campus showed higher college gains than students working under other circumstances.

In addition to the type of work undertaken, another key part of the debate has concerned the amount of working hours that are beneficial to students. A Canadian study of high-school students found that 'light' jobs of 15 or fewer hours per week did not appear to drastically change the time high school students spend on their studies. However, a more demanding job reduced sleep and cut down leisure time (Franke, 2003). An earlier study of high-school students found that most students who worked more than 15 or 20 hours per week were more absent from school, had a lower grade point average and spent less time on homework (Lillydahl, 1990). In terms of higher education students, on-campus work in excess of 15 hours per week, or off-campus work in excess of 20 hours per week had a negative impact (Pascarella et al, 1998). Moreover, a British survey showed that students who work more than 15 hours per week spend less time on homework and exhibit lower academic attainment (Davies 1999).

Domestic arrangements also have an impact on student employment. An Australian paper found that students who were primary income earners and primary carers in their household were more motivated, more interested in lectures, and spent more time preparing for, and attending, scheduled teaching activities. They also derived greater satisfaction from studying than working students with lesser or no family obligations (Zimitat, 2003).

There has only been one significant piece of research on student employment in Latvia (Latvian Student's Association 2003). However, this study was concerned with measuring student living standards in Latvia rather than considering the impact of work on the education process. Nevertheless, it did find that 54% of all undergraduate students in Latvia were employed (although it did not identify the type of work or number of hours). The research also found that the average monthly undergraduate student stipend was just 12.97 Lats (~20 euro), roughly 1/5 of the minimum subsistence level in 2003.

Thus empirical evidence from a number of studies has found that employment does have an impact on academic attainment. However, this is largely dependent on the type of employment and the number of working hours. Thus employment in a field relevant to a student's major can be beneficial, but only if the employment is part-time (fifteen or less hours per week). Second, social background and family commitments are important variables influencing students' study and work choice.

### **Methodology**

This paper is based on the results of a field questionnaire undertaken in spring 2005. Ethnic Latvians only make up just over 50% of the population, and a number of private institutions only teach in Russian, thus questionnaires were produced in both Latvian and Russian. Three key issues were addressed in the planning of the study. First, how to define social science? Second, which institutions should be included in the survey? And third, the size of the sample and where to 'catch' the students..



First, the standard United Nations Educational, Scientific and Cultural Organization (UNESCO) definition is very broad, including library sciences, psychology and a host of other disciplines (UNESCO 1997). However, we decided to focus on three core social science disciplines: political science, economics (and business administration<sup>2</sup>) and law. Not only are these three disciplines central to the transition to a democratic market-based economy, they are also the most in-demand disciplines in Latvia. They are taught not just in the larger state universities in Riga, but also in smaller private institutions and outside the capital city of Riga.

Second, we focused on institutions which were fully accredited and offered full-time, academic 4-year undergraduate degrees that had been running for at least 4 years (see Table 3 for a list of institutions). We also chose to focus on second to fourth year students, excluding first year students who are unlikely to be employed full-time at the start of their studies. This left us with fifteen institutions. However, at the data-gathering stage we encountered a number of expected, and unexpected, problems. First, the *Economics and Culture Institute*, and “*Turība*” *Business Institute* would not allow us to interview their students in a timely manner, and had to be discarded. Thus our sample contracted to thirteen institutions. Second, the sample of fourth year students was rather lower than that of second and third year students because there are few classes for fourth

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<sup>2</sup> Most Latvian programs combine business administration and economics.

year students in the spring semester (students are expected to write their Bachelors thesis).<sup>3</sup>

Third, we found our target group by surveying students either before or after lectures or seminars whose attendance was compulsory. This had the advantage of easing the process of data-gathering by ‘capturing’ large groups of students in one place. The total number of survey respondents was 989.

## **Empirical Results**

### *Who is Working?*

Table 4 provides definitions of relevant variables and Table 5 presents some descriptive statistics for the sample.

As Table 5 indicates, about 44 percent of the overall sample is working. The working sample is fairly evenly split between full-time and part-time workers. Table 5 suggests certain characteristics influence the likelihood of being a working student. Working students tend to be older, more advanced in their studies, and are far less likely to be receiving direct government aid in the form of a scholarship and living stipend. While women make up a large majority of the overall sample, they are relatively underrepresented in the working sample. Further the descriptive statistics are somewhat suggestive of differences in work behavior across study disciplines and ethnic groups.

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<sup>3</sup> While it would have been more straightforward to carry out the survey at the start of the academic year, in September, this was not possible due to the nature of the grant.

Table 6 presents ordered logit results examining how various factors affect a student's work status. The results indicate primary factors in determining work status are gender, year of study, state scholarship status, marital status, as well as certain differences based on major (though this is sensitive to model specification) and ethnicity.

While student age is marginally significant, the results indicate that year of study plays a major role in determining working status. The marginal effects presented in Table 6 indicate a two-year age difference will affect work probability by over five percent. However, controlling for age, the results predict a second year student is more than 24 percent less likely to be working than a fourth year student.

Gender plays a statistically strong and practically large role in determining work status. Given existing controls, women are about 17 percent less likely to work than men and over 10 percent less likely to be working full-time. Working women are almost evenly split between full and part-time work while about 55 percent of working men work full-time. Marital status also appears to play a role in employment status. Married individuals are about 10% more likely to work with married workers also more predisposed towards full-time work.

Field of study appears to play a limited role with respect to work behavior. While there is no statistically significant difference in work status between students studying political science, law, and management, economics students are significantly less likely to be

working both part and, particularly, full-time relative to management students in the absence of controls for school attended.<sup>4</sup> When school dummies are added however, there are no significant differences in work behavior across fields of study.

Ethnicity also plays a role in work behavior. The results provide strong evidence that ethnic Russian students are relatively unlikely to work – about 12.6 percent less likely than ethnic Latvians. Again the strongest effect appears to be on the likelihood of full-time work. Additionally there is statistically weak evidence that the second largest minority group, ethnic Belarussians, are less likely to work than ethnic Latvians.<sup>5</sup> Though only marginally significant, the Belarussian result is highly suggestive. The statistical weakness is likely related to the fact that the Belarussian sample is quite small.

Finally, school dummies also indicate substantial differences in employment among institutions. These differences are likely explained by regional effects that exist within the Latvian economy. Schools that have low employment rates tend to be located in relatively depressed rural regions and the eastern portion of Latvia near the Russian border. Eastern Latvia has been relatively depressed suffering from high unemployment, low investment and relatively low wages since independence was regained in 1991.

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<sup>4</sup> The difference between economics and law students is marginally significant.

<sup>5</sup> There is no statistically significant difference between Russians, Belarussians, Ukrainians, and the mix of other ethnic groups.

### *How Does Work Influence Academic Performance?*

Table 5 indicates that working lowers mean grades, class attendance, and independent study time. Further, grades and class attendance are lower for full-time workers than for part-time workers.

Table 7 presents ordered logit results examining determinants of GPA. The initial results (column 2 of Table 7) indicate that age, year of study, gender, area of study (to some extent – economics students have relatively low grades), and working status all have a major impact on academic performance. In fact, work status appears to have the most dramatic impact on academic performance as measured by GPA. Full-time working students, in particular, have significantly lower grades than nonworking students. Part-time work has a less dramatic effect. This is particularly true when school dummies are in place (column 3 of Table 7).

However when controls are put in place for state scholarship status, class attendance, and independent study time, the negative effects of work, per se, on grades is largely diminished for full-time workers and disappears for part-time workers. Additionally the last two columns of Table 7 imply that the reasons working students perform more poorly than nonworking students is split between a lower incidence of scholarships among working students (final column) and reduced class attendance and study time (column 5).

State scholarships in Latvia are based on merit as indicated by performance in school – secondary school for first-year students and college performance thereafter. Thus we take

the presence of a state scholarship as an indication of aptitude for study. Further, the presence of a scholarship (that includes a modest living stipend as well as covering tuition and fees) obviously reduces the need to work. Therefore the initial estimation would tend to be biased in the sense that students without scholarships are far more likely to work and also have less natural ability with respect to schoolwork.

Work-for-pay clearly will also affect the opportunity cost of class attendance and independent study. Thus the initial ordered logit results are likely biased in the sense that it is not necessarily time spent working that reduces grades, but rather that work detracts from time spent in class and in study.

Table 8 presents ordered logit results concerning determinants of class attendance and independent study time. With respect to attendance, younger students (regardless of year of study), women, and students on scholarship are significantly more likely to have 'good' class attendance.<sup>6</sup> The results indicate that an extra year of age decreases the probability of good attendance by about four percent. Women are about 14 percent more likely to have good attendance than are men, and students with scholarships are over 18 percent more likely to have good attendance than are students without scholarships.

Conversely, the key determinants of study time (aside from work) appear to be major field and there is also some evidence of an ethnic effect. Political science students tend to study more hours than counterparts in all other examined major fields. In all cases the difference is statistically significant. Political science students are nearly 10 percent less

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<sup>6</sup> 'Good' in this case is defined as attending more than  $\frac{3}{4}$  of classes.

likely to be ‘light’ studiers than are management students.<sup>7</sup> Further, political science students are about 15 percent less likely than economics students and about seven percent less likely than law students to be light studiers. In terms of ethnic groups, Russians are more likely to assume a heavier load than ethnic Latvians though this result is sensitive to the presence of school controls.<sup>8</sup>

Not surprisingly, evidence indicates work has a profound effect on both class attendance and time spent studying. Nonworking students are nearly 22 percent more likely to have good attendance than are students working part-time. Nonworking students are over 38 percent more likely to have good attendance than are students working full-time. The difference between part-time and full-time workers is also quite stark. Part-time workers are about 17 percent more likely to have good attendance than full-time workers and the result is statistically significant. The evidence also strongly suggests reduced study time for working students. However, the effect of work on study time seems relatively similar for both part and full-time workers.

As mentioned, past studies have found evidence that part-time work of less than 15 hours per week, work that is relevant to the field of study, and marital status potentially play a role in employment’s effect on academic performance. Though not directly reported, we have examined these effects on GPA.

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<sup>7</sup> “Light” is defined here as less than four hours per week of independent study.

<sup>8</sup> The difference between ethnic Russians and the other ethnic groups is not statistically significant.

As noted, full-time work has a far more profound effect on academic performance than part-time work. However, in our sample, even those who work 0-10 hours experience a significant negative impact on grades. In general, the negative impact of work on grades does increase as time spent working increases. Further, while adding a dummy for relevance of work field to study field does consistently yield the expected sign – indicating relevance does positively influence grades if working – the result is never statistically significant and never impacts coefficients on other variables.

The results for marriage are interesting and consistent with results for Australian students found by Zimitat (2003). Interacting marriage and gender indicates married males have significantly higher grades than do single males while there is no difference in grades between married and single females. Zimitat noted that primary earners are likely to be more motivated students. Though the data do not allow us to specifically check this, it is likely that most of the married males are their households' primary earners while married females are less likely to be their households' primary earner. In fact all married males in our sample are working with 77 percent working full-time. Conversely only about 47 percent of the married female sample is working with only about 20 percent working full-time. While the results for the effect of marriage, gender, and their interaction on GPA are statistically significant and robust to model specification, we do not wish to overstate the practical significance of the result as there are only 13 married males in our sample.



## **Conclusions**

Opportunity cost appears to play a significant role in determining student choice regarding work. Students who are most likely to be working and generally more likely to be working full time include: students who are not on scholarship and responsible for private financing of their education; men, ethnic Latvians, older students, and more advanced students who are likely to have the best work opportunities and highest wages available. Surprisingly, a student's family financial status had little impact on work behavior.

In turn, evidence indicates that work involves a significant opportunity cost in terms of academic performance making our results most consistent with the *zero-sum model*. Working students tend to have worse grades than their nonworking peers. However evidence also indicates hours spent working have little direct effect on grades if working part-time. Work rather tends to reduce grades primarily by reducing class attendance and study time. The presence of financial aid in the Latvian higher educational system tends to be in the form of merit-based scholarships. These scholarships do tend to reduce the likelihood of work and reduce time worked if a student is working. Thus financial aid tends to protect the best students from the need to work.

In 2006 Latvia was, by any measure, the poorest of the 25 current EU members. To the extent Latvia wishes to use higher education as a developmental tool, and given the fact financial aid appears to decrease work while studying, Latvia may wish to target some aid to more need-based as opposed to strictly merit-based scholarships. This may well

allow a broader range of students to devote more time to study and perhaps afford students from the more depressed regions of Latvia the opportunity to study in the more prestigious urban universities of Latvia.

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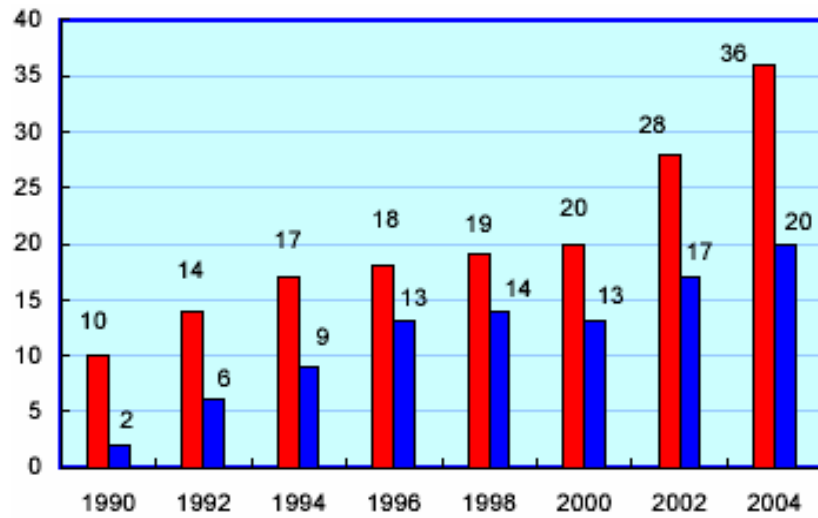
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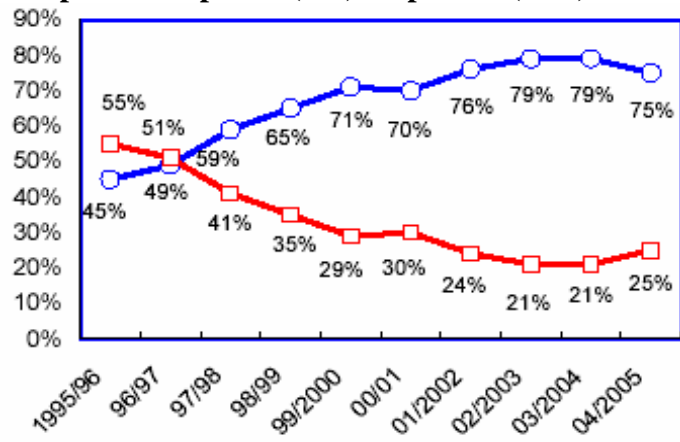
**Table 1: Growth of public (red) and private (blue) HE institutions in Latvia. 1990-2004**



source: Latvian Ministry of Higher Education and Science, 2006

note: Public students are defined as “budget students” or those receiving state scholarships.

**Table 2: Proportion of public (red) vs. private (blue) students in HE**



source: Latvian Ministry of Higher Education and Science, 2006

**Table 3: Institutions Surveyed**

<b>State HE Institutions</b>	<b>Private HE institutions</b>
Banking Institute of Higher Education	Baltic Russian Institute
Daugavpils University	Information Systems Management Institute
Latvian Agricultural University	Riga International School of Economic and Business Administration
Liepaja Academy of Pedagogy	
Rezekne Higher Education Institute	
Riga Stradins University	
Riga Technical University	
University of Latvia	
Ventspils University College	
Vidzeme University College	

**Table 4: Variable Definitions**

Variable	Definition
Age	Age in years
Gender	1 if male and 2 if female
Year	Year of study – most students are in second to fourth year of study
State Scholarship	1 if receiving a state scholarship and 2 if not receiving a state scholarship
Married	1 if married and 0 if not married
Econ	1 if an economics major and 0 if not
Poli. Sci.	1 if a political science/public administration major and 0 if not
Law	1 if a law major and 0 if not
Mgmt.	1 if a management major and 0 if not
Latvian	1 if ethnic Latvian and 0 if not
Russian	1 if ethnic Russian and 0 if not
Belarussian	1 if ethnic Belarussian and 0 if not
Ukrainian	1 if ethnic Ukrainian and 0 if not
Other ethnicity	1 if ethnicity other than groups listed above
Not working	1 if not working and 0 if working
Part-time	1 if working 0-30 hrs. per week and 0 otherwise
Full-time	1 if working 30+ hrs. per week and 0 otherwise
Class Attendance	1 if attending 0-25% of classes, 2 if attending 26-50% of classes, 3 if attending 51-76% of classes, 4 if attending 76+% of classes
Study time	Amount of time spent on independent study = 1 if 0-3 hrs. per week, 2 if 4-6 hrs. per week, 3 if 7-9 hrs. per week, 4 if 10-15 hrs. per week, 5 if 16-20 hrs. per week, 6 if 21+ hrs. per week
GPA	Grade point average on a 10-point scale = 1 if GPA<4, 2 if GPA between 4 and 5, 3 if GPA between 5 and 6, 4 if GPA between 6 and 7, 5 if GPA between 7 and 8, 6 if GPA between 8 and 9, 7 if GPA between 9 and 10
N	Sample size



**Table 5: Descriptive Statistics**  
Mean Values (standard deviations in parentheses)

Variable	Full sample	Male	Female	Not working	Part-time	Full-time
Age	21.08 (1.34)	21.09 (1.19)	21.08 (1.39)	20.89 (1.16)	21.02 (1.36)	21.62 (1.58)
Gender (% female)	74.2%	--	--	80.22%	68.75%	64.44%
Year	1.89 (.82)	1.86 (.83)	1.90 (.81)	1.75 (.77)	1.92 (.85)	2.23 (.81)
State Scholarship (% with)	29.17%	24.61%	30.74%	37.66%	19.81%	16.67%
Married	11.45%	5.24%	13.59%	9.54%	14.43%	13.45%
Econ	41.05%	36.08%	42.78%	45.86%	41.35%	28.89%
Poli. Sci.	6.57%	7.84%	6.13%	7.01%	2.88%	8.89%
Law	16.68%	22.75%	14.58%	15.11%	17.31%	20.00%
Mgmt.	35.29%	33.33%	35.97%	31.65%	38.46%	41.33%
Latvian	65.62%	68.24%	64.71%	64.03%	63.46%	71.56%
Russian	26.90%	22.35%	28.47%	29.50%	26.92%	20.44%
Belarussian	2.02%	1.96%	2.04%	2.34%	2.40%	0.89%
Ukrainian	1.62%	2.75%	1.23%	1.26%	1.44%	2.67%
Other ethnicity	3.84%	4.71%	3.54%	2.88%	5.77%	4.44%
Not working	56.22%	43.14%	60.76%	--	--	--
Part-time	21.03%	25.49%	19.48%	--	--	--
Full-time	22.75%	31.37%	19.75%	--	--	--
Class Attendance	3.45 (.78)	3.21 (.90)	3.53 (.72)	3.66 (.65)	3.36 (.81)	3.00 (.86)
Study time	2.52 (1.30)	2.38 (1.33)	2.57 (1.28)	2.74 (1.30)	2.21 (1.31)	2.30 (1.16)
GPA	4.74 (.99)	4.46 (1.04)	4.83 (.96)	4.93 (1.00)	4.64 (.95)	4.36 (.89)
N	989	255	734	556	208	225

**Table 6: Ordered Logit Results**

Independent variable	Dependent variable		Marginal effects		
	Work Status		Not working	Part-time employment	Full-time employment
Age	.104* (.059)	.113* (.059)	-.027* (.014)	.010* (.005)	.018* (.009)
Gender	-.660*** (.150)	-.695*** (.156)	.170*** (.038)	-.061*** (.015)	-.109*** (.024)
Year	.466*** (.099)	.499*** (.105)	-.122*** (.026)	.044*** (.010)	.078*** (.017)
State Scholarship	.982*** (.160)	.742*** (.195)	-.181*** (.048)	.065*** (.018)	.116*** (.031)
Married	.418** (.204)	.387* (.214)	-.096* (.053)	.030** (.014)	.066* (.039)
Econ	-.459*** (.149)	-.225 (.214)	.055 (.046)	-.020 (.017)	-.035 (.029)
Poli. Sci.	-.372 (.307)	-.015 (.360)	.004 (.088)	-.001 (.032)	-.002 (.056)
Law	-.126 (.196)	.052 (.243)	-.013 (.059)	.005 (.020)	.008 (.039)
Russian	-.429*** (.156)	-.530*** (.168)	.126*** (.039)	-.049*** (.017)	-.077*** (.023)
Belarussian	-.818 (.575)	-.899 (.603)	.194* (.108)	-.088 (.058)	-.106** (.051)
Ukrainian	.391 (.558)	.266 (.577)	-.066 (.144)	.021 (.040)	.045 (.105)
Other ethnicity	-.040 (.338)	-.081 (.359)	.020 (.086)	-.007 (.033)	-.012 (.054)
School Controls	No	Yes	Yes	Yes	Yes
Chi-squared	129.43***	157.2***	--	--	--
N	960	960	--	--	--

Notes: Here and in subsequent tables:

- \* denotes significance at the 10% level, \*\* denotes significance at the 5% level, and \*\*\* denotes significance at the 1% level.
- Here and in subsequent tables, robust standard errors are in parentheses.
- Latvians are the reference ethnic group and management is the reference major field of study.

**Table 7: Ordered Logit Results**

Independent variable	Dependent Variable: GPA				
Age	-161** (.079)	-158* (.082)	-.058 (.082)	-.096 (.085)	-.115 (.079)
Gender	.518*** (.145)	.489*** (.148)	.256 (.159)	.229 (.157)	.482*** (.145)
Year	.263*** (.100)	.248** (.103)	.171 (.104)	.202* (.107)	.206** (.103)
State Scholarship	No control	No Control	-1.949*** (.188)	No control	-1.981*** (.169)
Econ	-.448*** (.137)	-.922*** (.198)	-1.199*** (.222)	-1.109*** (.218)	-.977*** (.201)
Poli. Sci.	.004 (.273)	.131 (.350)	-.479 (.356)	.014 (.383)	-.367 (.311)
Law	-.241 (.172)	-.431** (.210)	-.678*** (.225)	-.536** (.222)	-.575*** (.205)
Russian	-.189 (.145)	-.014 (.161)	-.048 (.179)	-.012 (.173)	-.047 (.166)
Belarussian	.324 (.508)	.426 (.484)	.924 (.583)	1.074* (.602)	.274 (.466)
Ukrainian	.735 (.542)	.821 (.526)	.952 (.623)	1.183* (.626)	.596 (.510)
Other ethnicity	.207 (.328)	.261 (.346)	.209 (.421)	.185 (.414)	.290 (.378)
Part-time	-.530*** (.149)	-.386** (.157)	.005 (.164)	-.044 (.169)	-.304* (.165)
Full-time	-1.113*** (.154)	-1.053*** (.160)	-.382** (.185)	-.492*** (.179)	-.890*** (.158)
Class Attendance	No control	No Control	.990*** (.116)	1.031*** (.113)	No Control
Study time	No control	No Control	.163*** (.059)	.165*** (.059)	No control
School Controls	No	Yes	Yes	Yes	Yes
Chi-squared	88.56***	151.25***	364.27***	240.21***	291.14***
N	976	976	866	871	971

**Table 8: Ordered Logit Results**

Independent variable	Dependent variable		Marginal effect	Dependent variable		Marginal effect
	Class Attendance			Att.>75%	Independent Study	
Age	-.165*** (.054)	-.173*** (.057)	-.041*** (.013)	.138* (.072)	.146** (.072)	-.025** (.012)
Gender	.561*** (.150)	.595*** (.151)	.141*** (.036)	.219 (.150)	.222 (.150)	-.038 (.026)
Year	.099 (.104)	.161 (.108)	.038 (.026)	.124 (.103)	.105 (.106)	-.018 (.018)
State Scholarship	-.458*** (.164)	-.769*** (.207)	-.182*** (.049)	-.129 (.136)	-.217 (.158)	.037 (.027)
Econ	-.146 (.156)	-.095 (.194)	-.023 (.046)	-.079 (.145)	-.324* (.180)	.057* (.032)
Poli. Sci.	.342 (.282)	.041 (.351)	.010 (.082)	.900*** (.210)	.660** (.266)	-.096*** (.032)
Law	.027 (.209)	-.025 (.243)	-.006 (.058)	.325* (.176)	.170 (.212)	-.028 (.035)
Russian	-.073 (.164)	-.226 (.172)	-.054 (.042)	.297** (.146)	.206 (.159)	-.034 (.026)
Belarussian	-.321 (.522)	-.464 (.538)	-.114 (.134)	-.337 (.390)	-.470 (.398)	.091 (.085)
Ukrainian	-.174 (.582)	-.435 (.585)	-.106 (.146)	-.051 (.534)	-.307 (.535)	.057 (.067)
Other ethnicity	.400 (.407)	.319 (.423)	.072 (.091)	.417 (.390)	.160 (.424)	-.026 (.067)
Part-time	-.765*** (.187)	-.897*** (.193)	-.218*** (.047)	-.887*** (.183)	-.837*** (.178)	.162*** (.038)
Full-time	-1.564*** (.174)	-1.632*** (.178)	-.387*** (.038)	-.773*** (.164)	-.793*** (.170)	.153*** (.035)
School Controls	No	Yes	Yes	No	Yes	Yes
Chi-squared	169.98***	185.16	--	75.08***	104.47***	--
N	969	969	--	874	874	--