

# Return to higher education in Russia: universities' effect

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## Some facts about economic return to education in Russia

1. Income is determined by regional factors, industry, specificity of organization rather than by education
2. Significant positive return is registered only to higher education in Russia
3. The highest return is to economic, legal and engineering education
4. Returns to education of women is two percentage points higher than men
5. Absence of higher education is considered as a negative signal by employers i. e. higher education is a social norm in Russia

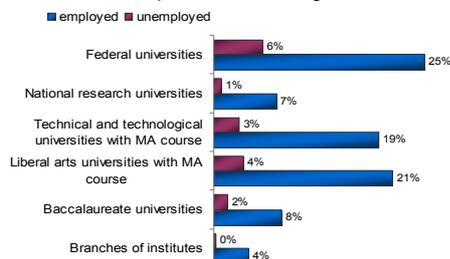
## Is a system of higher education homogeneous in terms of economic returns?

Higher education has become an imperative for the Russian youth: in 2008 69,7% of high school graduates entered institutions of higher education right after school.

According to Rosstat's (Russian Federal State Statistics Service) data the average return to higher education is 64% in 2009 i. e. higher education graduates' earnings were 64% higher than wages of employees who graduated only high school.

The question is if there is any difference between earnings of graduates of various universities? Our assumption is that characteristics of higher education institutions may affect salary of their graduates. So the primary goal was to quantify the impact of university types on earnings of their graduates. In our analysis we use an analog to Carnegie classification applied to Russian higher education institutions.

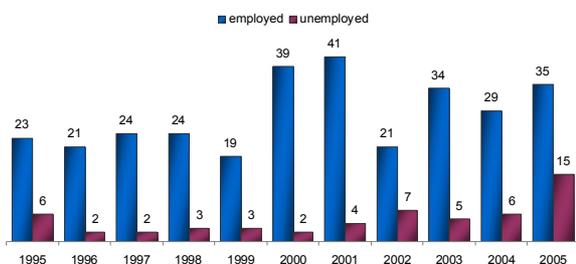
Figure 1. Distribution of respondents according to universities' types



## Methodology and data

The analysis was based on RLMS (Russian Longitudinal Monitoring Survey) data. RLMS is a nationally representative panel survey of households. We used subsample of respondents who graduated institutions of higher education in 1995 – 2005 (total of 365 observations).

Figure 2. Distribution of respondents according to year of graduation



To estimate the effects of university type on earnings of graduates we used traditional Mincerian approach. In particular we worked with Mincer-Heckman equation with additional variables that captured wage-differentials due to universities. We controlled for effects of experience, sex, industry, type of university, position, occupation, region and other factors on earnings of graduates.

## Results

The main hypothesis was confirmed: depending on particular university types it is possible to specify significant effects on graduates' earnings. Type of university is included into equation as a set of dummy-variables. Then regarding the classification, types were constructed into larger groups: federal, national research, main technical and technological belong to one group, other – to the second group.

But tested equation has lost form of traditional Mincer's equation. It was found that age and squared age had insignificant coefficients, i.e. age is not significantly related to hourly earnings. It seems to connect with short time interval we used.

Also we verified sample selection hypothesis by using Heckman's procedure. Selection equation took exogenous variables including size of household (number of family members), number of children at different ages, marital status of an employee. However, it becomes clear that selection bias hypothesis was not confirmed.

Special attention was given to the effect of different regions, industries and positions of respondents. It is important to note that Moscow leads to positive input to earnings, on the contrary the Amurskaya Region – negative.

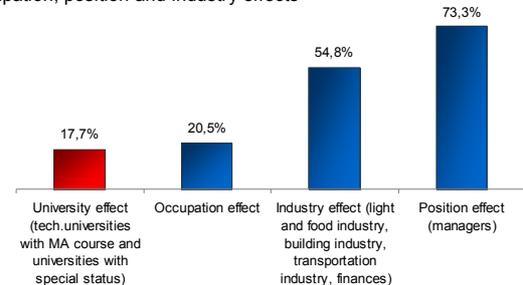
Table 1. Estimates of model's parameters

Variables	Coefficients' estimates	Standard errors
Constant	3,30	0,10
Sex	0,25	0,07
Officials, managers	0,56	0,16
Professionals with high and higher education	0,21	0,09
Industry effect	0,44	0,07
Region effect (Moscow)	0,60	0,10
Region effect (the Amurskaya Region)	-0,76	0,27
Universities effect	0,15	0,07
R-Square	0,51	

## Conclusions

Earnings of graduates of National and Master degree's universities (except Liberal arts colleges) are 17% higher than earnings of employees who graduated from other universities. However, factor of education is lower compared to other factors such as industry (55% dispersion of wage), position (73%) and occupation (21%). Actually, these results are similar to ones of other research projects.

Figure 3. Universities' influence on return to education: comparison with occupation, position and industry effects



In our further research we would like to focus on the topic of equality of access to different types of universities and socio-economic background of university applicants. That would give us an opportunity to find out if higher education reduces or increases income inequality.

## Acknowledgments

Gregory Androushchak (research advisor)