

# Do Students Expect Any Returns on Effort Applied to Studying?

## An Econometric Analysis of Determinants of the Amount of Expected Wage after Graduation

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# Relevance

Age,  
Gender  
[3, 4]  
↘

Family  
income  
[1, 7]  
↘

Working  
experience  
[8, 7]  
↓

University  
quality  
↙

Effort  
↙

Students' wage expectations  
[5, 6, 9]

↙  
Specialization  
choice

↓  
Effort choice

↘  
Work during  
studies

# Data

- Russian bachelor students' questionnaire, 2012
- Monitor of Economics of Education (NRU HSE, the analytical center of Yuriy Levada, Ministry of Education of Russia)
- 553 observations

# Variables description

- *ln\_w* - *logarithm of expected wage (dependent variable)*
- *t\_self* - time to self-education (hours in a week) - **effort**
- *share\_oregion* - share of students of other regions - **university quality**
- *female*
- *year\_of\_study*
- *yd* - family's monthly income (dummy)
- *techn, ped, med* - specialty binary variables
- *Moscow* - region binary variable
- *w1* - wage of working students (rubbles) - **working experience**
- *ege\_av* - average exam score - **abilities**

# IV estimates

Dependent variable $\ln\_w$	
t_self	0.00004
t_self <sup>2</sup>	0.0001
share_oregion	0.003*
female	-0.118**
year_of_study	-0.068***
yd	0.056***
techn	0.084
ped	-0.163
med	-0.112
Moscow	0.432***
$w1 \times 10^{-5}$	0.826***
ege_av	0.008***
const	8.961***
*-15%, **-10%, ***-5% level of significance	

# Quantile regressions

Dependent variable $\ln\_w$		
	20% quantile	80% quantile
t_self	-0.029***	0.003
t_self <sup>2</sup>	0.0007***	-0.00006
share_oregion	0.002	0.002
female	-0.159***	-0.168***
year_of_study	-0.109***	-0.118***
yd	0.055***	0.022**
techn	0.128*	0.133**
ped	-0.212	-0.304***
med	-0.136	0.005
Moscow	0.474***	0.457***
$w1 \times 10^{-5}$	0.717**	1.400***
ege_av	0.008***	0.002
const	8.976***	10.111***

# Stochastic frontier approach

"Individual inefficiency"[2]:

- incorrect knowledge about "law" of wage formation
- wrong assumptions about value of particular skills and knowledge
- errors in estimates etc.

$$y_i = \alpha + X_i' \beta + \nu_i + u_i$$

$i = 1, \dots, n$ ;  $\nu_i \sim N(0, \sigma_\nu^2)$ ,  $u_i \sim N_+(0, \sigma_u^2)$  or  $u_i \sim \text{exponential}$

# Stochastic frontier approach

Dependent variable $\ln\_w$	
t_self	-0.017***
t_self <sup>2</sup>	0.0004***
share_oregion	0.02**
female	-0.147***
year_of_study	-0.094***
yd	0.047***
techn	0.109**
ped	-0.305***
med	-0.048
Moscow	0.479***
$w1 \times 10^{-5}$	0.637***
ege_av	0.005***
const	9.279***



# Shocks

*Fixed factors:* gender, abilities

*Conditionally fixed factors:* specialty, region, university quality

*Variable factors:*

- year of study
- wage offered to working students
- family's disposal income
- effort



- **labor market shocks**
- **fiscal shocks**
- **individual shocks**

# Conclusion

- Role of effort, university quality, abilities and working experience in formation of wage expectations
- 20% with the lowest wage expectations: recognize the decisive role of abilities and effort applied to study on labor market
- 20% with the highest wage expectations: base wage predictions on wage they get; do not consider abilities and effort valuable on labor market
- An average student expects his/her effort positively affects the amount of wage he will be offered after graduation

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Thank you for your attention!