What will economics teach me?

Mikołaj Czajkowski

czaj.org

Congratulations!

University of Warsaw – the best higher education institution in Poland

2016	Nazwa uczelni	'15	'14	'13	'12	WSK	Prestiż 27%	Innowa-cyjność 9%	Potencjał nauk. 15%	Efektywność nauk. 25%	Warunki kształcenia 9%	Umiędzynarodowienie 15%
1	Uniwersytet Warszawski	1	1	2	2	**100**	95.30	48.29	96.35	100	84.06	54.29
2	Uniwersytet Jagielloński	1	2	1	1	**98.20**	100	30.48	100	85.11	100	53.44
3	Uniwersytet im. Adama Mickiewicza w Poznaniu	3	3	3	3	**82.30**	62.95	46.84	92.36	81.70	79.53	58.98
4	Politechnika Warszawska	4	4	4	4	**81.70**	71.53	44.40	87.92	79.74	47.94	63.65
5	Politechnika Wrocławska	4	5	6	5	**77.30**	55.77	89.79	84.27	64.87	90.60	57.63
6	Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie	6	6	5	6	**77.20**	59.89	68.75	86.58	82.52	67.15	35.34
7	Uniwersytet Wrocławski	7	7	7	7	**72.10**	52.79	11.05	91.91	81.76	50.47	51.18
8	Warszawski Uniwersytet Medyczny	8	8	11	14	**65.00**	45.02	15.24	73.61	76.63	84.03	33.71
9	Gdański Uniwersytet Medyczny	10	11	12	18	**63.50**	27.24	3.69	82.98	85.51	80.41	48.91
10	Uniwersytet Mikołaja Kopernika w Toruniu	9	9	9	9	**62.40**	44.73	19.97	88.79	71.94	64.22	13.68
11	Szkoła Główna Handlowa w Warszawie	12	13	10	12	**62.20**	49.49	3.33	94.64	55.61	41.05	45.26

Perspektywy, http://www.perspektywy.pl/RSW2016/ranking-uczelni-akademickich

Congratulations!
WNE UW – the best economics department in Poland

Rank	W.Rank	Institution	Score	Authors	Author shares
1	[1]	Wydział Nauk Ekonomicznych, Uniwersytet Warszawski Warszawa, Poland	1.09	86	75
2	[2]	Szkoła Główna Handlowa w Warszawie Warszawa, Poland	2.16	98	79.86
3	[3]	Narodowy Bank Polski Warszawa, Poland	3.32	49	31.04
4	[4]	Wydział Informatyki i Zarządzania, Politechnika Wrocławska Wrocław, Poland	3.89	17	14.68
5	[5]	Uniwersytet Ekonomiczny w Krakowie Kraków, Poland	5.4	27	26.65
---	[---]	Katedra Ekonomii Ilościowej, Szkoła Główna Handlowa w Warszawie Warszawa, Poland	6.03	9	5.15
6	[6]	Hugo Steinhaus Center for Stochastic Methods, Politechnika Wrocławska Wrocław, Poland	8.89	13	11.1
7	[8]	Wydział Biznesu i Stosunków Międzynarodowych, Akademia Finansów i Biznesu Vistula Warszawa, Poland	9.1	7	6.6
8	[7]	CASE-Center for Social and Economic Research Warszawa, Poland	9.3	26	13.82
9	[13]	Wydział Matematyki, Informatyki i Ekonometrii, Uniwersytet Zielonogórski Zielona Góra, Poland	11.03	9	9
10	[9]	Wydział Zarządzania, Akademia Górniczo-Hutnicza Kraków, Poland	11.66	4	4

RePEc, https://ideas.repec.org/top/top.poland.html

Do students care about the quality of higher education?

- Czajkowski, M., Gajderowicz, T., Giergiczny, M., Grotkowska, G., and Sztandar-Sztanderska, U., 2017, Choosing the future: economic preferences for higher education using discrete choice experiment method. University of Warsaw, Department of Economics Working Paper 16(245).
  - Preferences towards higher education programs
  - Sample of 20,000 respondents aged 18-30
  - Utility function parameters estimated using respondents stated choices

	Wariant A	Wariant B
Koszt za semestr	0 zł	3 000 zł
Średnie wynagrodzenie absolwentów (5 lat po ukończeniu studiów)	3 000 zł	5 000 zł
Jakość uczelni (miejsce w rankingu)	4-10 miejsce	1-3 miejsce
Odległość od miejsca zamieszkania	0-30 km	31-80 km
Pana(i) wybór:	□	□

Table 3. Respondents' marginal willingness to pay (WTP) for attribute levels – the results of the random parameters conditional mixed logit model in WTP-space (relative to tuition fee in 1,000 EUR per semester)

Utility function of those who:	Never went to university		Currently consider university		Students		Graduates	
Parameters / Attributes	Means	St. Dev.	Means	St. Dev.	Means	St. Dev.	Means	St. Dev.
Mean salary five years after graduation (1,000 EUR)	0.8971***	1.2799***	0.8700***	1.0738***	0.9797***	1.3137***	0.8886***	1.0344***
	(0.0257)	(0.1007)	(0.0574)	(0.1442)	(0.0426)	(0.1327)	(0.0298)	(0.0763)
Stipend (250 EUR)	-0.1556***	0.3309***	-0.1458***	0.4048***	-0.2416***	0.3727***	-0.2490***	0.3535***
	(0.0142)	(0.0105)	(0.0430)	(0.0367)	(0.0271)	(0.0246)	(0.0223)	(0.0201)
Stipend (750 EUR)	0.0321*	0.5571***	0.0827	0.6894***	0.0442	0.6134***	0.0487*	0.5677***
	(0.0186)	(0.0139)	(0.0547)	(0.0425)	(0.0351)	(0.0310)	(0.0275)	(0.0253)
Compliance with personal interests (medium vs. low)	0.4000***	0.4295***	0.5776***	0.5264***	0.7398***	0.7239***	0.6355***	0.6569***
	(0.0120)	(0.0112)	(0.0321)	(0.0374)	(0.0276)	(0.0284)	(0.0210)	(0.0221)
Compliance with personal interests (high vs. low)	0.5154***	0.6980***	0.7582***	0.8907***	0.9208***	1.2265***	0.8026***	1.0323***
	(0.0150)	(0.0139)	(0.0426)	(0.0453)	(0.0360)	(0.0355)	(0.0256)	(0.0263)
Prestige of the HEI (program ranked 4-10 vs. 11-30)	0.0366***	0.0679***	0.1819***	0.2223***	0.0939***	0.0792***	0.0615***	0.0544***
	(0.0082)	(0.0109)	(0.0309)	(0.0316)	(0.0201)	(0.0234)	(0.0141)	(0.0202)
Prestige of the HEI (program ranked 1-3 vs. 11-30)	0.0444***	0.0426***	0.1435***	0.2337***	0.0969***	0.1961***	0.0808***	0.1061***
	(0.0084)	(0.0093)	(0.0311)	(0.0298)	(0.0212)	(0.0345)	(0.0150)	(0.0184)
Distance from home (100 km)	-0.2087***	0.2753***	-0.1984***	0.2589***	-0.2150***	0.3239***	-0.2169***	0.2799***
	(0.0069)	(0.0056)	(0.0188)	(0.0180)	(0.0126)	(0.0119)	(0.0101)	(0.0102)
Mode of study (full time vs. part time)	-0.3527***	0.5167***	-0.2359***	0.8916***	-0.0826***	0.9468***	-0.2554***	0.8009***
	(0.0128)	(0.0117)	(0.0475)	(0.0431)	(0.0290)	(0.0271)	(0.0221)	(0.0203)
Model Diagnostics								
LL at convergence	-113,094.39		-12,268.60		-37,215.64		-46,444.05	
LL at constant(s) only	-144,150.54		-15,384.29		-46,143.71		-57,941.94	
McFadden's pseudo-R^2	0.2154		0.2025		0.1935		0.1984	
Ben-Akiva-Lerman's pseudo-R^2	0.4380		0.4289		0.4242		0.4266	
AIC/*n*	1.7246		1.7614		1.7748		1.7633	
BIC/*n*	1.7294		1.7965		1.7881		1.7742	
n (observations)	131,232		14,004		42,012		52,752	
r (respondents)	10,936		1,167		3,501		4,396	
k (parameters)	65		65		65		65	

Note: *, **, *** indicate significance at 10%, 5%, and 1% level, respectively. Standard errors given in parentheses.

Do students care about the quality of higher education?

- For “average” respondents – quality of HEI is of secondary importance
  - Higher expected effort?
  - Higher drop-out probability?
- But not for the best students because:
  - Better diploma appreciated in the job market
  - Better possibilities to gain in-depth understanding
  - Makes it possible to get closer to the state-of-the-art

- Warning: smartest ≠ top achievers
  - *Results = f* (*brains*, *effort*, …)

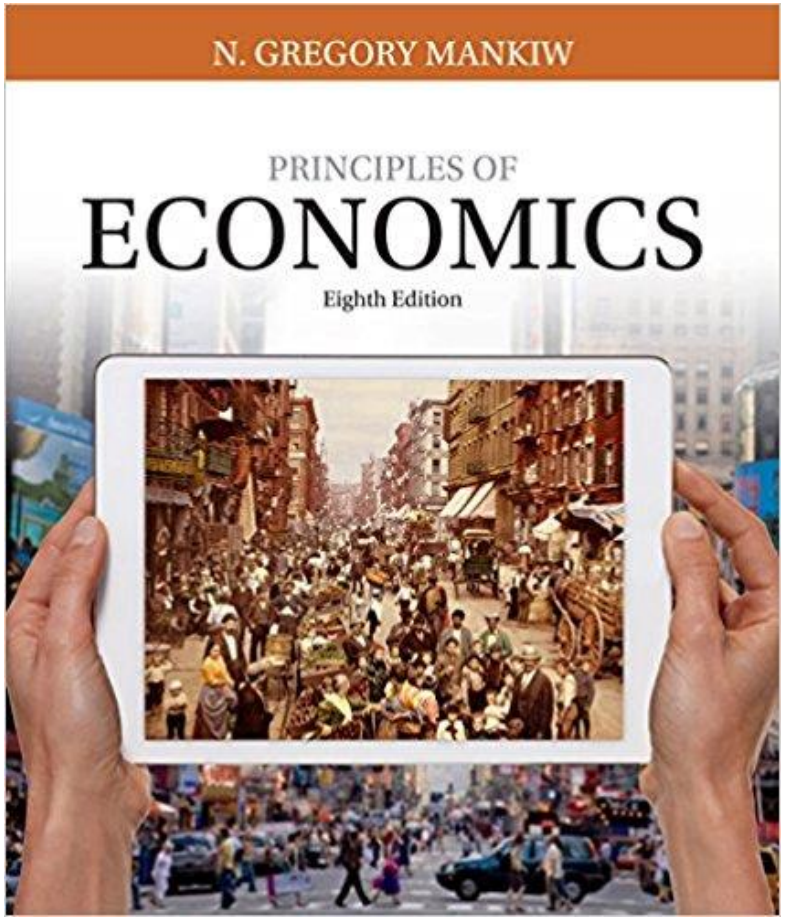
$$results = A \cdot \left(brains\right)^{\alpha} \cdot \left(effort\right)^{\beta}$$

Congratulations!
WNE UW – the best candidates

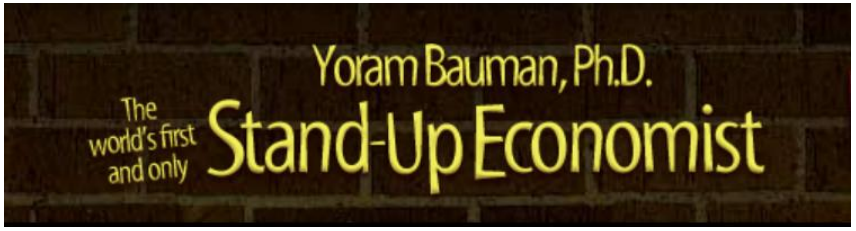
Liczba kandydatów na jedno miejsce na studia stacjonarne I stopnia i jednolite magisterskie na rok akademicki 2016/2017	
Kierunek studiów	**Liczba kandydatów na 1 miejsce**
Dziennikarstwo i medioznawstwo, specjalność public relations i marketing medialny	21,80
Orientalistyka, japonistyka	20,86
Międzykierunkowe studia ekonomiczno-menedżerskie	19,94
Orientalistyka, sinologia	14,65
Filologia angielska	12,62
Psychologia	11,78
Ekonomia; Finanse, inwestycje i rachunkowość; Informatyka i ekonometria	11,72
Logistyka mediów, specjalność: logistyka i marketing w mediach	11,06
Międzykierunkowe studia ekonomiczno-matematyczne	10,44
Biotechnologia	9,27
Biologia	9,24

http://rekrutacja.uw.edu.pl/index.php/statystyki-rekrutacyjne/

10 principles of economics



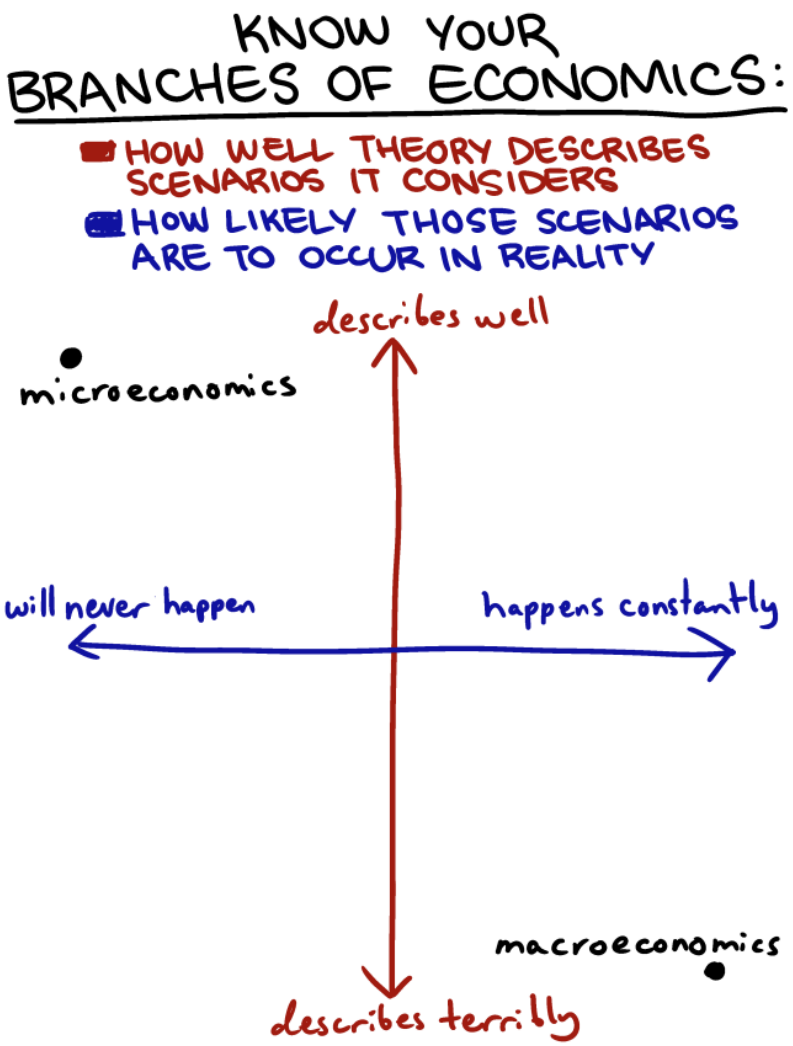
– Translation by:



10 principles of economics

1. People face trade-offs
2. The cost of something is what you give up to get it
3. Rational people think at the margin
4. People respond to incentives
5. Trade can make everyone better-off
6. Markets are usually a good way to organize economic activity
7. Governments can sometimes improve market outcomes
8. A country's standard of living depends on its ability to produce goods and services
9. Prices rise when the government prints too much money
10. Society faces short-run trade-off between inflation and unemployment

Microeconomics vs. macroeconomics



http://www.smbc-comics.com

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incentive

/ɪnˈsɛntɪv/

noun

a thing that motivates or encourages someone to do something.

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Principle 5 – proof

1. Compare the following two statements:

   A: Trade *can* make everyone better-off

   B: Trade *will* make everyone better-off

2. Claim B is better. So why is claim A used?
3. Claim B must be false
4. In other words: Trade can make some people worse-off
5. “By induction”: Trade can make everyone worse-off

10 podstawowych zasad ekonomii

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But seriously, what will economics teach me?

Economics is all about economic decision making

1. What is the objective function?
2. What are the alternatives?
3. What are the costs of these alternatives?
4. Optimization

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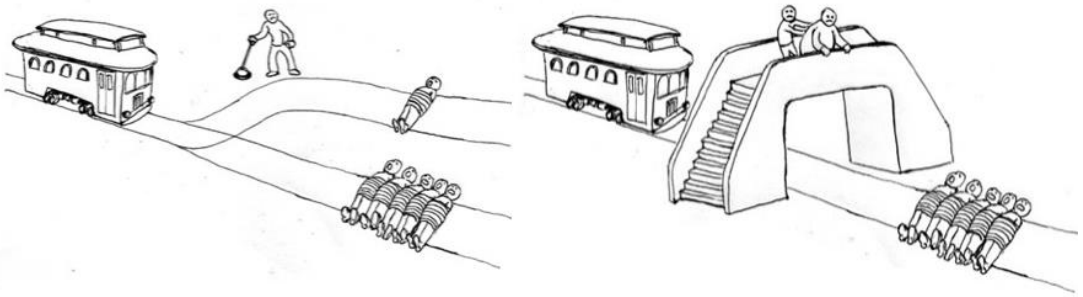

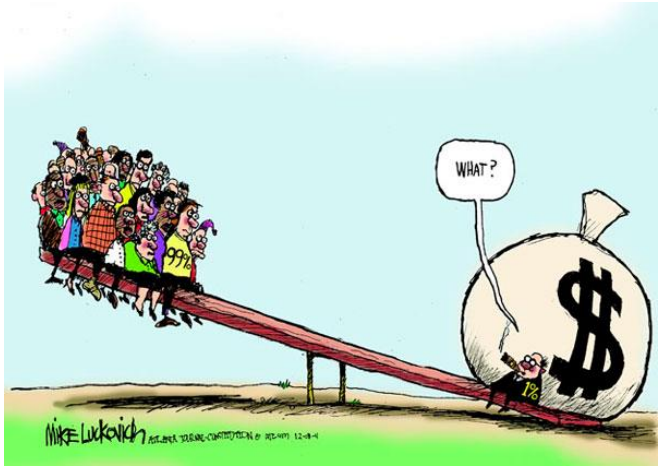

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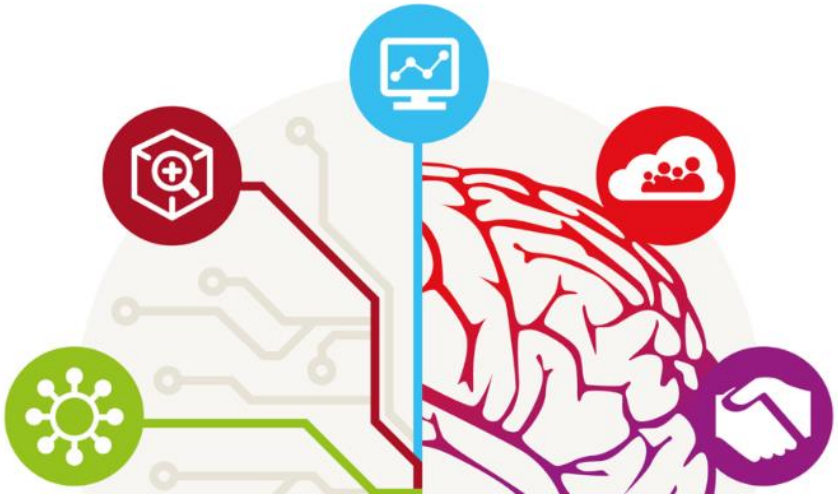

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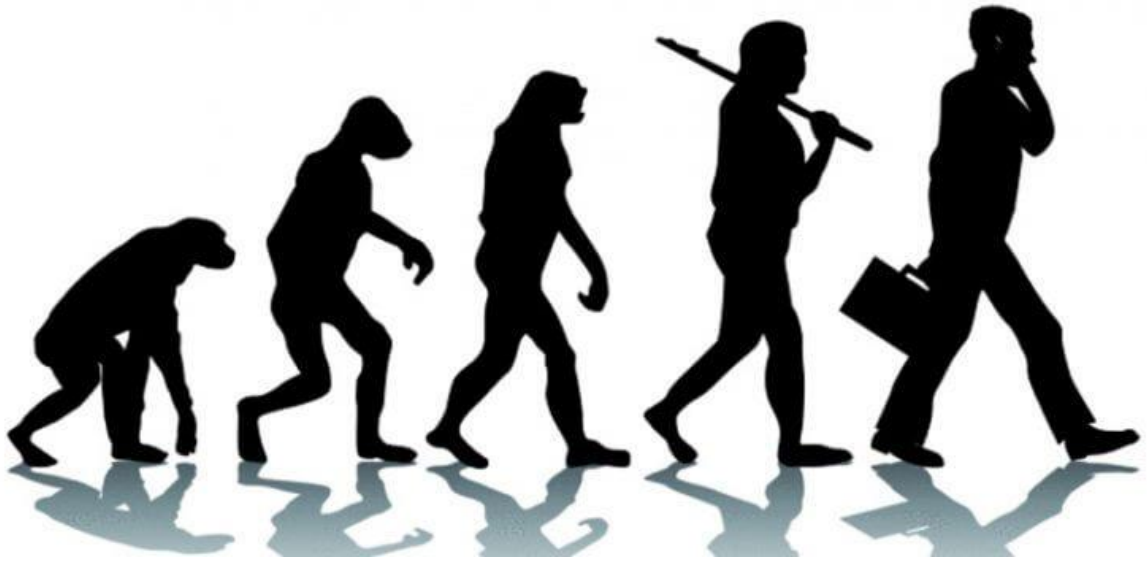

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3. What are the costs of these alternatives?
4. **Optimization**

Economics is everywhere!

- Freakonomics
- E.g., crime, games, information, family & children, mating, cheating at tests and many more
- Many 'Nobel' prizes in economics for such issues as:
  - Asymmetric information
  - Decisions under risk and uncertainty
  - Transaction costs
  - Evolutionary game theory
  - Contracts
  - …