What determines (perceived) wages?

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November 16, 2013

Abstract

Here is a really great abstract.
JEL J01, J24, J3

1 Introduction

2 Conceptual Framework

Would-be labor force participants need knowledge about what various occupations pay–and will pay in the future—to plan their careers and make wise human capital decisions.

Numerous studies have documented that simply providing information can have strong effects on behavior (for example, [2] for the returns to education and [1] to the benefits of changed sexual behavior).

These kinds of information interventions are predictated on some kind of incomplete information that can be remedied.

This was the justification for including the Knowledge of the World of Work (KWW) test in the NLSY. The original KWW consisted of matching job descriptions to job titles and a section of relative comparisons of wages. The KWW was predictive of positive future economic success and was correlated with higher wages, greater tenure etc [3]. It is unclear whether KWW was just measuring intelligence of ability—KWW is sometimes used as an instrument for IQ to deal with measurement error.

This study does a number of things. It examines the correlates of

Presumably would-be labor market participants learn about wages from media sources, friends and family and, perhaps, official government statistics.

Corrective informational interventions

Perhaps more knowledgeable

Identifying deficiencies

[2]

The short time taken to answer questions suggests that workers are not doing research.

The wisdom of crowds hypotheses suggests that combining

Estimates of the mean hourly wages for a selection of BLS occupations by workers on Mechanical Turk explains over 70% of the variation in wages according to the OES (Occupational Employment Statistics).

Error rates are decreasing the total employment in that occupation. The more people workers know with that occupation, the more

[5] [**?**] [1]

-Test whether social knowledge is mediated by the total employment -Correct perception errors -Test whether workers are clustered in their wage perceptions

For each of the top 99 BLS occupations—as measured by total occupation—I asked workers on Mechanical Turk several questions:

- Did they know approximately what this job consists of?

- How many people did they know with that job?

- What was their estimate of the hourly wage for that job

- What was their estimate of wages for this job in the future.

- What was their estimate of the future employer for this job.

How important is it to know someone who has this job? Do various correlations exist in this population?

It is not difficult to assess this knowledge.

[4] had some great ideas!

3   Results

	OES	MTSO
1	Min. :0.0000	Min. :18.05
2	1st Qu.:0.5000	1st Qu.:28.54
3	Median :0.7000	Median :32.14
4	Mean :0.7152	Mean :34.29
5	3rd Qu.:0.9000	3rd Qu.:39.77
6	Max. :1.4000	Max. :60.57

Table 1: RSE for Hourly Wages in OES and MTSO datasets (all obs.)

	OES	MTSO
1	Min. :0.0000	Min. :15.01
2	1st Qu.:0.5000	1st Qu.:25.82
3	Median :0.7000	Median :30.96
4	Mean :0.7173	Mean :32.69
5	3rd Qu.:0.9000	3rd Qu.:40.00
6	Max. :1.4000	Max. :65.93
7		NA's :2

Table 2: RSE for Hourly Wages in OES and MTSO datasets (filtered)
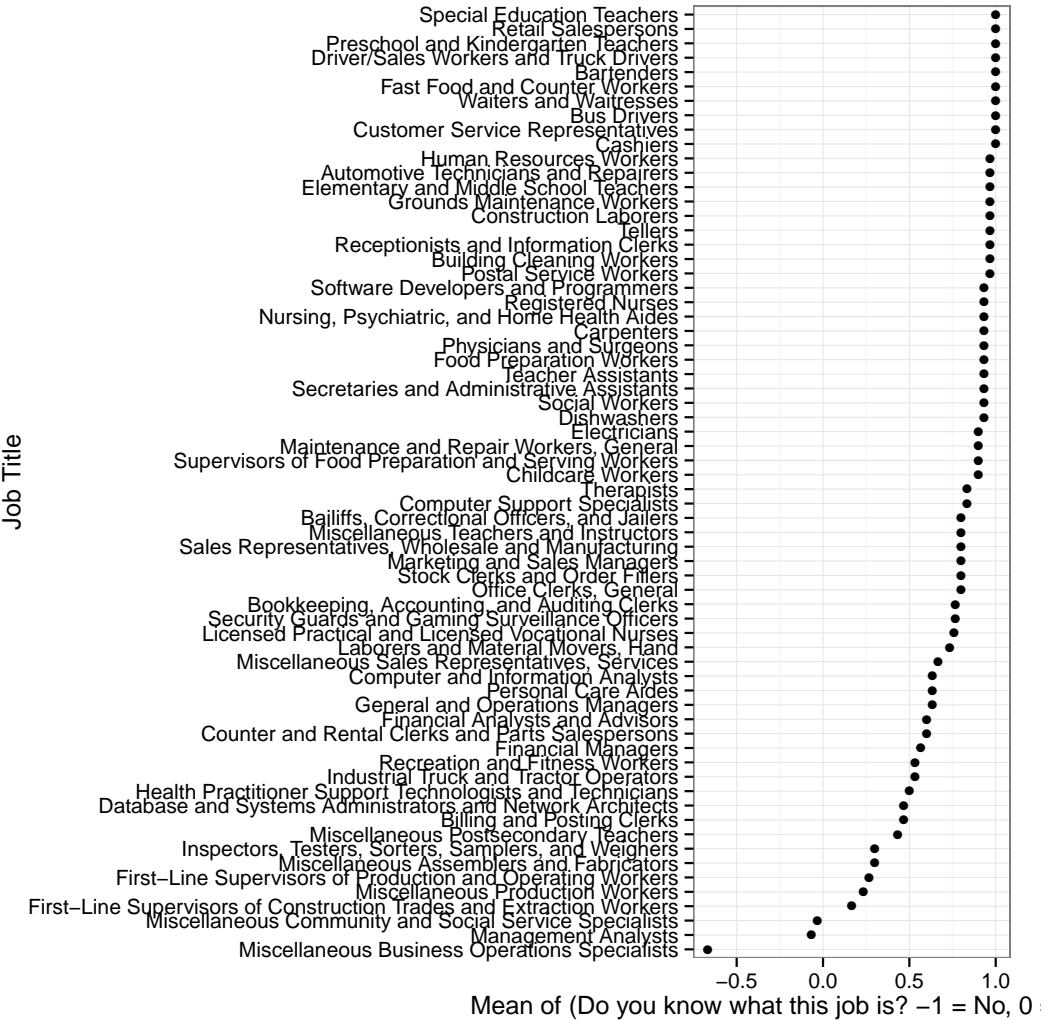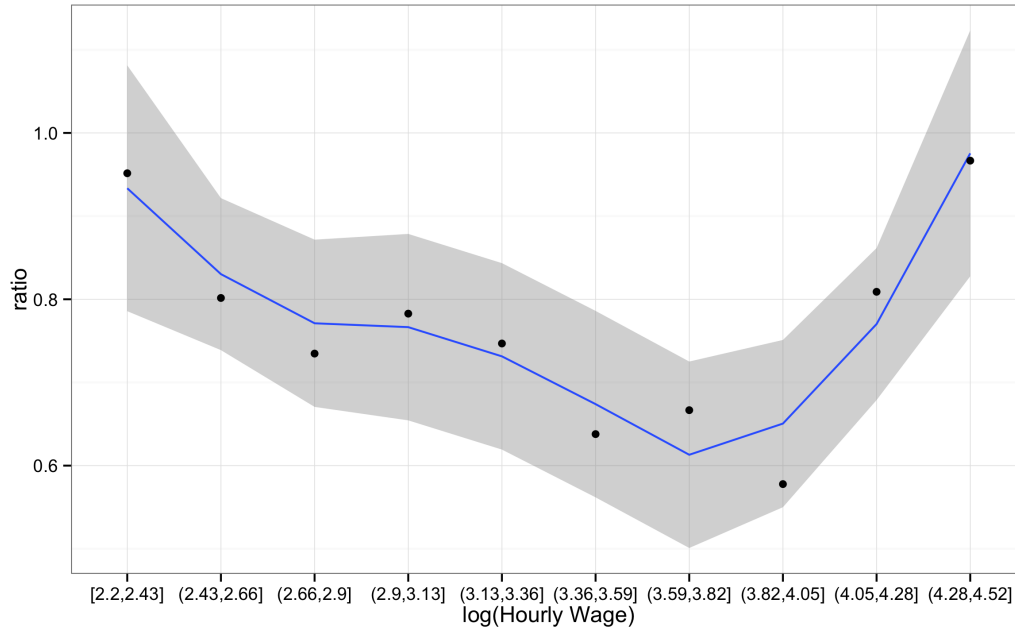
Figure 1: Knowledge by occupation title

Mean of (Do you know what this job is? −1 = No, 0

Figure 2: Wage and self-reported knowledge of what job consists of

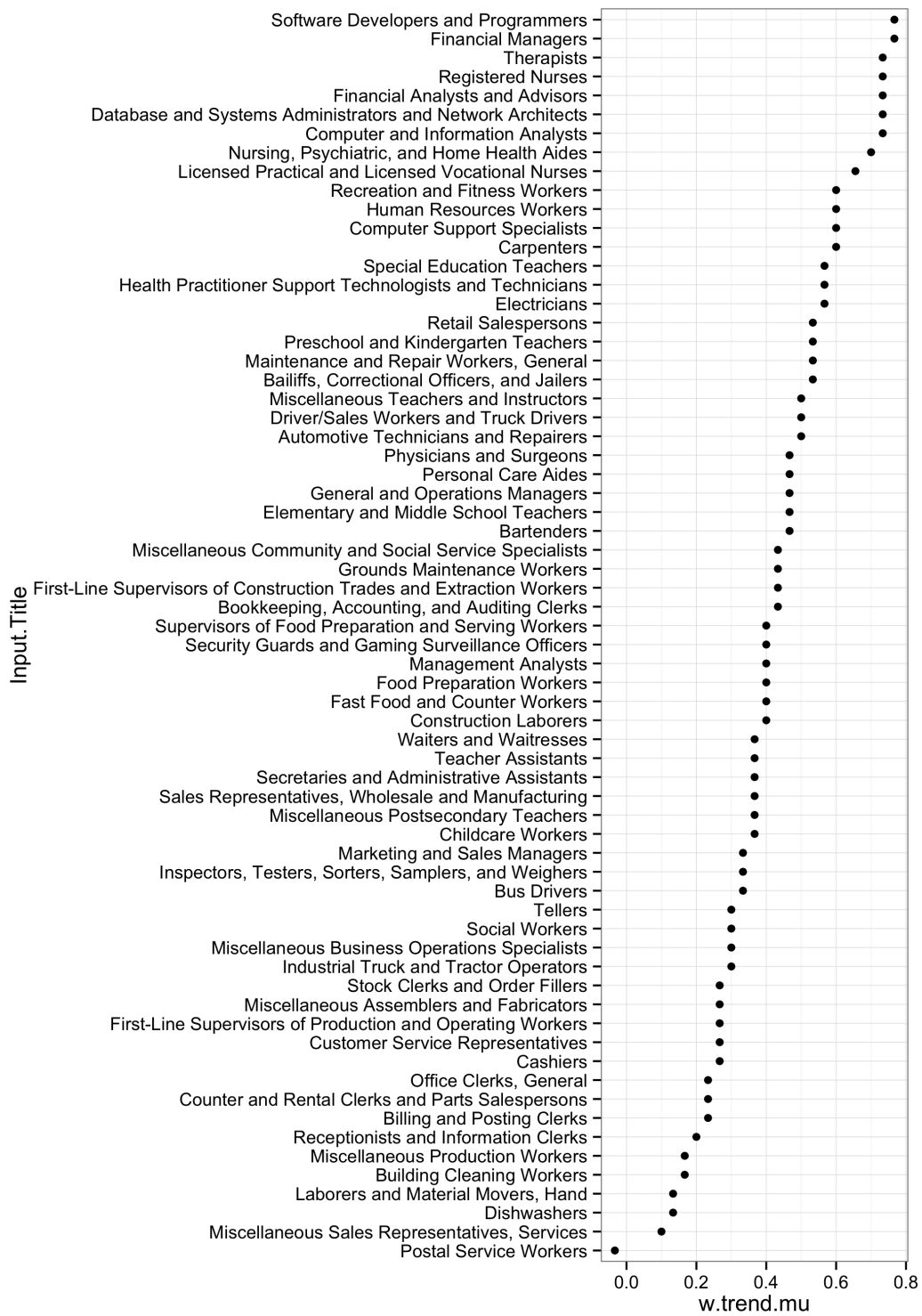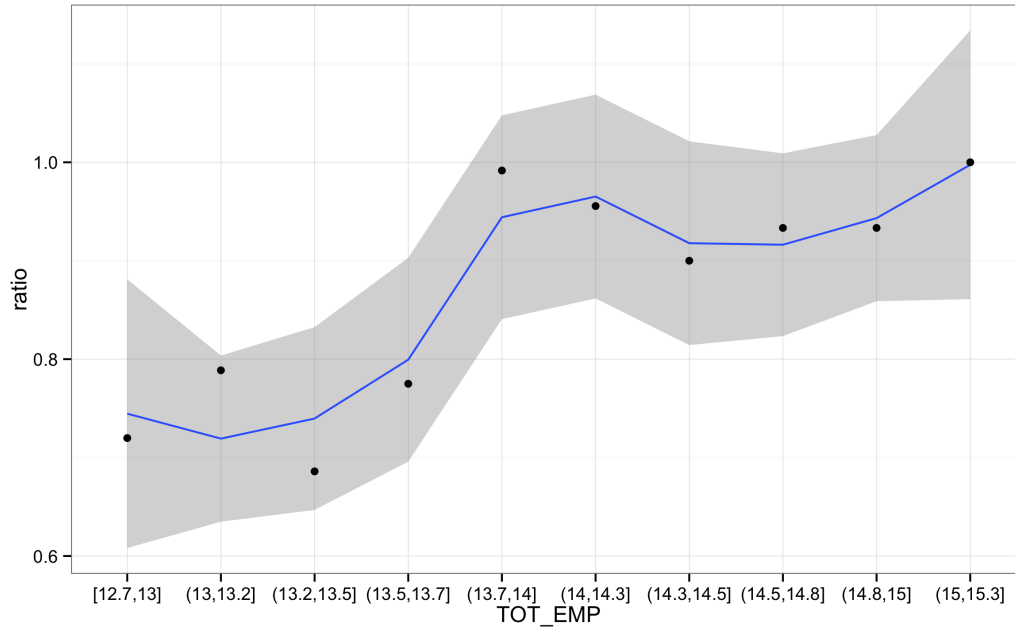|	1	2	3	4	5
(Intercept)	−0.058	0.137***	0.004	−0.025	0.034
	(0.121)	(0.038)	(0.117)	(0.274)	(0.116)
know	0.043	0.046		0.035	0.048
	(0.038)	(0.038)		(0.035)	(0.036)
social	−0.042*	−0.041*	−0.013*	−0.033	−0.037*
	(0.019)	(0.019)	(0.006)	(0.018)	(0.018)
$\log(\text{TOT}_E MP)$	0.014		0.013	0.012	0.007
	(0.008)		(0.008)	(0.020)	(0.008)
$H_W AGE$	0.008***	0.007***	0.008***	0.008***	0.010***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
know × social	0.036	0.037		0.025	0.037*
	(0.020)	(0.020)		(0.018)	(0.019)
Var((Intercept)|Input.Title)				0.014	
Var(|Residual)				0.062	
I(log(Answer.wage) > 3)					−0.198***
					(0.013)
Aldrich-Nelson R-sq.	0.011	0.011	0.011		0.017
McFadden R-sq.	0.133	0.132	0.129		0.201
Cox-Snell R-sq.	0.011	0.011	0.011		0.017
Nagelkerke R-sq.	0.138	0.137	0.134		0.208
phi	0.075	0.075	0.075		0.069
Likelihood-ratio	30.588	30.374	29.807		46.063
p	0.000	0.000	0.000		0.000
Log-likelihood	−326.545	−327.977	−333.184	−184.475	−218.938
Deviance	199.028	199.242	200.475	368.950	183.553
AIC	667.091	667.955	676.367	384.950	453.877
BIC	708.291	703.269	705.811	432.036	500.962
N	2659	2659	2667	2659	2659

Figure 3: Wage trends

Figure 3: Wage trends

Y-axis (Input.Title), top to bottom:
Software Developers and Programmers
Financial Managers
Therapists
Registered Nurses
Financial Analysts and Advisors
Database and Systems Administrators and Network Architects
Computer and Information Analysts
Nursing, Psychiatric, and Home Health Aides
Licensed Practical and Licensed Vocational Nurses
Recreation and Fitness Workers
Human Resources Workers
Computer Support Specialists
Carpenters
Special Education Teachers
Health Practitioner Support Technologists and Technicians
Electricians
Retail Salespersons
Preschool and Kindergarten Teachers
Maintenance and Repair Workers, General
Bailiffs, Correctional Officers, and Jailers
Miscellaneous Teachers and Instructors
Driver/Sales Workers and Truck Drivers
Automotive Technicians and Repairers
Physicians and Surgeons
Personal Care Aides
General and Operations Managers
Elementary and Middle School Teachers
Bartenders
Miscellaneous Community and Social Service Specialists
Grounds Maintenance Workers
First-Line Supervisors of Construction Trades and Extraction Workers
Bookkeeping, Accounting, and Auditing Clerks
Supervisors of Food Preparation and Serving Workers
Security Guards and Gaming Surveillance Officers
Management Analysts
Food Preparation Workers
Fast Food and Counter Workers
Construction Laborers
Waiters and Waitresses
Teacher Assistants
Secretaries and Administrative Assistants
Sales Representatives, Wholesale and Manufacturing
Miscellaneous Postsecondary Teachers
Childcare Workers
Marketing and Sales Managers
Inspectors, Testers, Sorters, Samplers, and Weighers
Bus Drivers
Tellers
Social Workers
Miscellaneous Business Operations Specialists
Industrial Truck and Tractor Operators
Stock Clerks and Order Fillers
Miscellaneous Assemblers and Fabricators
First-Line Supervisors of Production and Operating Workers
Customer Service Representatives
Cashiers
Office Clerks, General
Counter and Rental Clerks and Parts Salespersons
Billing and Posting Clerks
Receptionists and Information Clerks
Miscellaneous Production Workers
Building Cleaning Workers
Laborers and Material Movers, Hand
Dishwashers
Miscellaneous Sales Representatives, Services
Postal Service Workers

X-axis (w.trend.mu): 0.0, 0.2, 0.4, 0.6, 0.8

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Figure 4: Knowledge by total employment

	1	2	3	4
(Intercept)	-6.916^{***}	0.423	-6.988^{***}	1.333
	(0.755)	(0.223)	(0.879)	(4.593)
$\log(\text{TOT}_E MP)$	0.502^{***}		0.505^{***}	-0.110
	(0.056)		(0.058)	(0.338)
$\log(\text{H}_W AGE)$		-0.177^{*}	0.012	-2.913
		(0.073)	(0.077)	(1.590)
$\log(\text{H}_W AGE) \times \log(\text{TOT}_E MP)$				0.217
				(0.118)

Know anyone		1	2	3	4
	Aldrich-Nelson R-sq.	0.028	0.002	0.028	0.029
	McFadden R-sq.	0.020	0.001	0.020	0.021
	Cox-Snell R-sq.	0.028	0.002	0.028	0.029
	Nagelkerke R-sq.	0.037	0.003	0.037	0.039
	phi	1.000	1.000	1.000	1.000
	Likelihood-ratio	84.108	5.950	84.133	87.543
	p	0.000	0.015	0.000	0.000
	Log-likelihood	-2011.313	-2050.392	-2011.300	-2009.595
	Deviance	4022.626	4100.784	4022.601	4019.191
	AIC	4026.626	4104.784	4028.601	4027.191
	BIC	4038.618	4116.776	4046.589	4051.175
	N	2969	2969	2969	2969

References

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[4] A. Smith. *Wealth of nations*. Wiley Online Library, 1999.

[5] Erik Snowberg, Justin Wolfers, and Eric Zitzewitz. How prediction markets can save event studies. Technical report, National Bureau of Economic Research, 2011.