

14-72  
AP-9/23/14  
Senate Info 10/7/14

## Undergraduate Distance Education Review Form

(Required for all courses taught by distance education for more than one-third of teaching contact hours.)

### Existing and Special Topics Course

Course: ECON 330: Labor Economics

Instructor(s) of Record: Brandon Vick, PhD

Phone: 724.357.4827

Email: brandon.vick@iup.edu

#### Step Two: Departmental/Dean Approval

Recommendation:  Positive (The objectives of this course can be met via distance education)

Negative

[Signature]  
Signature of Department Designee

9/18/14  
Date

Endorsed:

[Signature]  
Signature of College Dean

9/19/14  
Date

Forward form and supporting materials to Liberal Studies Office for consideration by the University-wide Undergraduate Curriculum Committee. Dual-level courses also require review by the University-wide Graduate Committee for graduate-level section.

#### Step Three: University-wide Undergraduate Curriculum Committee Approval

Recommendation:  Positive (The objectives of this course can be met via distance education)

Negative

[Signature]  
Signature of Committee Co-Chair

9/24/14  
Date

Forward form and supporting materials to the Provost within 30 calendar days after received by committee.

#### Step Four: Provost Approval

Approved as distance education course

Rejected as distance education course

[Signature]  
Signature of Provost

9/29/14  
Date

Forward form and supporting materials to Associate Provost.



Received

SEP 19 2014

Liberal Studies

# Distance Education Proposal for ECON 330: Labor Economics

Brandon Vick, PhD

*Department of Economics, Indiana University of Pennsylvania*

September 18, 2014

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## **A1. How is/are the instructor(s) qualified in the distance education delivery method as well as the discipline?**

I hold a Ph.D. in Economics from Fordham University and have been a professor in the Economics department at IUP since 2013. Labor economics is one of my primary research interests: my dissertation work focused on the gender earnings gap; one current research project analyzes Veterans' wages and a second project analyzes data related to the Pennsylvania health workforce, funded by the Center for Rural Pennsylvania. I have taught economics since 2008, including four sections of ECON 330 during my time at IUP.

With regard to distance education, I have implemented a number of online tools in my face-to-face courses, including several "reverse-the-classroom" strategies. Course websites present the course syllabus, calendar, lecture outlines, readings, and review questions for students to access. In ECON 122: Principals of Microeconomics, I utilize an online learning management system (Sapling) to challenge and test students. For both ECON 122 and ECON 330, I require students to work with a number of online platforms, all of which can be successfully integrated with a distance-learning course:

- Khan Academy videos to prepare students for problems and case studies,
- Prezi.com slides with voice-overs to introduce topics and present material,
- Turnitin.com to turn in writing assignments, and
- Pinterest.com to direct students toward topic-related readings and initiate discussion.

Additionally, I previously worked in information technology performing user support and software testing. I have taught non-traditional students elementary computing skills. I have rich experience working with students (or computer users) to avoid and solve technical problems.

Finally, I participated in a semester-long graduate seminar focused on implementing experiential, reflective, and action-oriented pedagogy in today's educational system utilizing new technologies. I have participated in discussion panels on the same subject.

## **A2. How will each objective in the course be met using distance education technologies?**

The course utilizes tools on two levels:

1. Public content and communication: content (syllabus, lectures, articles, concepts, assignment information) will be delivered via a **course website**, which I have been utilizing and revising for over one year. Students are encouraged to utilize the discussion board for general questions and comments. For example, 31 comments have been posted to the discussion board for the first assignment of my Fall 2014 course. The website is password protected.
2. Private content and communication: grade information will be communicated through the **D2L** Grade Tool. Quizzes and exams will be delivered via **D2L**. Official communications will be delivered via student IUP emails.

*Objective 1: Describe, apply, and utilize economic modeling to predict the effects of labor-related practices, policies, and events. Core labor models include labor supply, labor demand, the determination of wages, human capital, job search, and labor monopoly and monopsony.*

The course website is the starting point for delivering content regarding the theoretical components of the course. Each topic has a web page serving as an outline and additional subpages that branch off the main page. For each theoretical topic, the subpages consist of three steps the student must go through toward understanding: "Concept", "Case", and "Cerebrate". These pages present the content that I have been developing through eight years of teaching economics and have been honing for delivery via the web.

The first subpage ("Concept") gives details of the topic, with lecture videos embedded in the page. The videos are 10-15 minute lectures that detail the mechanistic and technical aspects of a given theory (i.e. labor supply and demand) and ask students questions relating to these aspects. Students are encouraged to try to answer these questions since they will be asked similar questions in quizzes and exams. Key points are reinforced by diagrams on the website and text explanations (i.e. diagrams that I would put on the chalkboard in a classroom). The webpage text also links to outside websites (news articles, journal articles, or other sites) to emphasize the importance of key terms and concepts. The second subpage ("Case") presents case studies that apply a given theory to labor practice and/or policy. Case studies include diagrams that apply the theory to the case and links to articles (news and academic) that illustrate the theory and describe the case. Students are prompted to follow a set of questions that require them to gather information, apply economic methods, and link theory to the case. A third subpage ("Cerebrate") outlines a number of things the student should think about in preparation for the midterm or final exam. This page also directs students to the topic quiz on D2L. Comments are enabled at the bottom of each subpage, allowing student to ask questions and read my answers (or answer each other).

*Objective 2: Read, understand, and analyze labor force data. Identify and utilize current labor data sources and economic studies and increase familiarity with economic research methods.*

In addition to the theoretical piece of the course, students must consider applied topics related to labor policy and communication. In doing so, they must gain a familiarity of the data and research methods used in research and policy. Again, these topics have three subpages: “Motivation”, “How-to”, and “Lab”.

The “Motivation” page contextualizes the topic and lays out the key terminology and definitions, either on the webpage itself or through an embedded Prezi.com slideshow with voice-over. The “How-To” page explains the data analysis methods and presents embedded videos that show students how to use these methods in MS Excel. The “Lab” page communicates the goals of the Data-analysis Labs and the requirements for the Lab Write-up, to be submitted through D2L/Turnitin.com.<sup>1</sup> Again, comments are enabled at the bottom of each subpage, allowing student to ask questions and read my answers (or answer each other).

*Objective 3: Employ economic communication skills. Form economic questions, identify key labor-force related outcomes, and communicate such economic research findings.*

Through Objectives 1 and 2, students are exposed to the approach and methods that help social scientists learn more about labor market issues. The website will have a “Projects” page which explains the goals, assignments, and grading for a Double-entry journal.

Each student will receive a different prompt from me related to one of the topics covered in the course. An example is “effects of the Chinese Hukou system on internal migrants and their families, regional labor markets, and employers in various industries”. Given this prompt, students must begin a web search to find some basic information on this subject. I present strategies for doing this on various search/database platforms in a video embedded on the projects page. They are required to find at least five academic papers related to the specific subject and create a reference list. For each reference, students must identify and comment on the following:

- The primary research question,
- the importance of the question,
- the researchers approaches to answer the question (population, data, method),
- the variables the researchers collect data on,
- the outcomes the researchers measure,
- and, the research findings, conclusions, and weaknesses.

Students present this information in MS Word with a Double-entry journal – on the left side, students quote passages from each paper; on the right side, students restate this information to a non-technical audience that might be reading an economics blog or news article. The written assignment will be turned in through D2L/Turnitin.com.

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<sup>1</sup> The IT Support Center explains this integration here: <http://www.iup.edu/itsupportcenter/howto.aspx?id=139570>.

*Objective 4: Describe how labor economics informs important issues, including education, discrimination, and inequality. Explain the strengths and weaknesses of the use of economic research in policy and in communication with the public.*

Each student will receive a second prompt, different from the previous one, and focused on some debate currently being held between groups of policymakers and researchers.<sup>2</sup> In this project, students must create a Pinterest Board by collecting news articles, researcher blogs/podcasts, video, or other online content that relates to the topic. They must comment on each Pin and write a larger description that links the various Pins on the Board. Students will be graded on their creativity in linking various sources; their presentation of both sides of the argument; their clarity in communicating about the topic, and whether they combine at least 20 pins. Students have the option to make their Boards either public or private.

### **A3. How will instructor-student and student-student, if applicable, interaction take place?**

Instructor-student interaction will take place through Skype and IUP email. I will be available for video/audio chat via Skype at pre-determined days and times. In these sessions, I can talk directly to students and/or share my computer screen to show students how to accomplish tasks related to course assignments or to review material. I will also respond to student emails and communicate a daily time that they can expect responses. The “virtual office hours” where student can contact me via Skype and the more frequent times where students can expect a quick email turnaround will be posted on the course website and may vary by semester.

Specific grade information will be communicated via the D2L Gradebook. Instructor feedback and grades for written assignments will be accessible through Turnitin.com.

Students will be encouraged to ask questions related to material or assignments by making comments on the course website, where other students can see these questions and replies from me. A successful strategy has been to simply ask students to post public comments about content or assignments on the message board, rather than through email. Each topic page on the course website (containing outlines, videos, and assignment descriptions) will have commenting enabled, allowing students to ask questions, see others’ questions, or engage in a conversation about the material. Inappropriate comments or those of a private nature are discouraged and can be deleted by me.

### **A4. How will student achievement be evaluated?**

Ten topic quizzes (20%) and the midterm and final exams (20% each) will be administered through D2L. Four 1-2 page lab write-ups will test the students ability to work with economic data and use MS Excel; these will be turned in via D2L/Turnitin.com and count toward 20% of the overall grade.

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<sup>2</sup> For example, the *Intelligence Squared Debates* recently discussed whether the minimum wage should be abolished: <http://intelligencesquaredus.org/debates/past-debates/item/853-abolish-the-minimum-wage>.

Student ability to research and communicate the latest understanding of a labor issue will be tested through two projects. First, the double-entry journal requires students find research on a specific labor economic topic and to communicate technical methods and results writing into language a non-technical reader might understand (10%). Students will be required to collect at least five academic sources, identify where the authors' describe the goal, methods, variables, outcomes, and implications of the paper, restate these in a professional, non-technical manner, and create a reference list. A second project, the Pinterest Board, requires students to search news websites, blogs, podcasts, and other sources of current events communication for information related to a second topic in labor economics. They will create a Pinterest Board that puts these sources together in one spot (10%). They must write a description of each Pin and an overall description that summarizes and links the Pins together.

To summarize, the grade breakdown follows:

10 Topic Quizzes:	20%
Midterm Exam:	20%
Final Exam:	20%
4 Lab Write-ups:	20%
Double-entry Journal:	10%
Pinterest Board:	10%

The following grading scale will be used:

A: 90% and over; B: 80-89%; C: 70-79%; D: 60-69%; F: Below 60%.

#### **A5. How will academic honesty for tests and assignments be addressed?**

The midterm and final exams will be timed, and each question on the exams and objective quizzes will be pulled from one of a pool of very-similar questions associated with the problem. This will make it highly unlikely that two students will have the same exam, but all exams will be similar and have the same level of difficulty.

For writing assignments, I will use *Turnitin.com* to check for plagiarism. For the Pinterest Project, students will have access to each other's Boards. Students will have an opportunity to make sure their boards do not overlap (by more than 5 pins) to avoid a penalty for the student who posted the pin later (Pinterest tells when articles are posted).

# Course Syllabus

## ECON 330: Labor Economics

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The course syllabus takes advantage of the website medium in a number of ways:

- **Interaction:** students can immediately begin to click on various topics or look over the course calendar, which allows them to set up email reminders before an assignment's due date. The website is designed to scale to any device the student is using at the time... it is as easily readable on an iPhone as it is on a desktop.
- **Images:** Links to the topics/labs/syllabus are embedded in the photos used on the website. Students can begin to relate to topics (sometimes theoretical and abstract) by seeing images that relate to the topic. Many of these photos have a story that explains the link, and this story will be clickable via a link underneath the photo. For example, the picture of the man bowing to the robot links to stories on computerization of various occupations, something that is discussed in the course.
- **Instructions:** Students are instructed to open accounts with Khan Academy and Youtube, so that I can track their views of video lectures. The website links to these sites, making it easier for them to get started. Any questions can be asked via the Comments at the bottom of the syllabus... students can answer each other, give tips, or see my answers.

Included:

1. Proposed Syllabus of Record for ECON 330 (none previously on file).
2. Proposed ECON 330: Labor Economics Distance Education Syllabus, as presented on the course website;
3. My current ECON 330: Labor Economics Homepage: with Thumbnail links to the Syllabus, Calendar, 12 Topics, four Labs, and Projects; and,
4. The Course Calendar, which will link to topic and lab pages.

**COURSE SYLLABUS OF RECORD**  
**ECON 330 LABOR ECONOMICS**

**I. Catalog Description**

**ECON 330 Labor Economics 3c-0l-3cr**

**Prerequisites:** ECON 121, 122

History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

**II. Course Outcomes**

At the end of the course, students will be able to:

Objective 1: Describe, apply, and utilize economic modeling to predict the effects of labor-related practices, policies, and events. Core labor models include labor supply, labor demand, the determination of wages, human capital, job search, and labor monopoly and monopsony.

Objective 2: Read, understand, and analyze labor force data. Identify and utilize current labor data sources and economic studies and increase familiarity with economic research methods.

Objective 3: Employ economic communication skills. Form economic questions, identify key labor-force related outcomes, and communicate such economic research findings.

Objective 4: Describe how labor economics informs important issues, including education, discrimination, and inequality. Explain the strengths and weaknesses of the use of economic research in policy and in communication with the public.



### III. Detailed Course Outline

Topic	Class Hours (running total)	Course Objective
Using Labor Force Statistics	3 (3)	2,3
Labor Supply	6 (9)	1,4
Labor Demand	3 (12)	1,4
Market Equilibrium	4 (16)	1,3,4
Immigration	2 (18)	1,4
Unemployment and Job Search	4 (22)	1,4
Midterm Exam	1 (23)	1,2,3,4
Human Capital	4 (27)	1,2,4
The Structure of Wages	5 (32)	1,3,4
Discrimination	3 (35)	2,3,4
Job-to-Job Mobility & Monopsony	3 (38)	3,4
Unions	3 (42)	3,4
Final Exam	Finals Week	1,2,3,4

### IV. Evaluation Methods

There will be two in-class exams (including the final exam) that include multiple-choice and short-answer questions, as well as ten other assignments, which will be a combination of in-class quizzes and take-home assignments

Exam #1:	20%
Final Exam:	30%
Quizzes:	30%
Take-Home Assignments:	20%
Total:	100%

### V. Example Grading Scale

- A: 90%-100%
- B: 80%-89%
- C: 70%-79%
- D: 60%-69%
- F: Below 60%

## VI. Course Attendance Policy

The attendance policy for this course is consistent with the Undergraduate Attendance Policy outlined in IUP's Undergraduate Catalog.

## VII. Required Textbook(s), Supplemental Books, and Readings

Bruce Kaufman and Julie Hotchkiss, *The Economics of Labor Markets* (7<sup>th</sup> ed.). Thomson/South-Western, 2006.

Supplemental articles will be assigned through the semester and either distributed in class or made available on-line

## VIII. Bibliography

### *Textbooks*

George Borjas, *Labor Economics* (6<sup>th</sup> ed.), McGraw-Hill, 2013.

Francine Blau, Marianne Ferber, and Anne Winkler, *The Economics of Women, Men, and Work* (7<sup>th</sup> ed.). Pearson Education, 2014.

R. G. Ehrenberg and R. S. Smith, *Modern Labor Economics: Theory and Public Policy* (11<sup>th</sup> ed.). Pearson Education, Limited, 2014.

Bruce Kaufman and Julie Hotchkiss, *The Economics of Labor Markets* (7<sup>th</sup> ed.). Thomson/South-Western, 2006.

### *General Readings*

Daron Acemoglu, David H. Autor, and David Lyle, "Women, War and Wages: The Effect of Female Labor Supply on the Wage Structure at Midcentury," *Journal of Political Economy* 112 (June 2004): 497– 551.

D. Angrist, "Short- Run Demand for Palestinian Labor," *Journal of Labor Economics* 14 (July 1996): 425– 453 .

Orley C. Ashenfelter, Henry Farber, and Michael R. Ransom, "Labor Market Monopsony," *Journal of Labor Economics* 28 (April 2010): 203– 210.

David H. Autor, "Outsourcing at Will: The Contribution of Unjust Dismissal Doctrine to the Growth of Employment Outsourcing," *Journal of Labor Economics* 21 (January 2003): 1– 42.

David H. Autor and Mark G. Duggan, "The Rise in the Disability Rolls and the Decline in Unemployment," *Quarterly Journal of Economics* 118 (February 2003): 157– 205.

Gary S. Becker, "A Theory of the Allocation of Time," *Economic Journal* 75 (September 1965): 493– 517.

Ariel R. Belasen and Solomon W. Polachek, "How Disasters Affect Local Labor Markets: The Effects of Hurricanes in Florida," *Journal of Human Resources* 44 (Winter 2009): 251– 276.

Marianne Bertrand and Sendhil Mullainathan. *Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination*. No. w9873. National Bureau of Economic Research, (2003).

Olivier Jean Blanchard and Lawrence F. Katz, "Regional Evolutions," *Brookings Papers on Economic Activity* 1 (1992): 1– 61.

George J. Borjas, "The Economic Benefits from Immigration," *Journal of Economic Perspectives* 9 (Spring 1995): 3– 22.

George J. Borjas, "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration in the Labor Market," *Quarterly Journal of Economics* 118 (November 2003): 1335– 1374.

David Card, "The Impact of the Mariel Boatlift on the Miami Labor Market," *Industrial and Labor Relations Review* 43 (January 1990): 245– 257.

David Card, "Is the New Immigration Really So Bad?" *Economic Journal* 115 (November 2005): F300– F323.

David Card and Alan B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast- Food Industry in New Jersey and Pennsylvania," *American Economic Review* 84 (September 1994): 772– 793.

Alida J. Castillo-Freeman and Richard B. Freeman, "When the Minimum Wage Really Bites: The Effect of the U. S.- Level Minimum on Puerto Rico," *Immigration and the Work Force: Economic Consequences for the United States and Source Areas* (1992): 177– 211.

Bruno Crépon and Francis Kramarz, "Employed 40 Hours or Not Employed 39: Lessons from the 1982 Mandatory Reduction of the Workweek," *Journal of Political Economy* 110 (December 2002): 1355– 1389.

Stacy Dickert-Conlin and Amitabh Chandra, "Taxes and the Timing of Births," *Journal of Political Economy* 107 (February 1999): 161– 177.

Nada Eissa and Jeffrey B. Liebman, "Labor Supply Response to the Earned Income Tax Credit," *Quarterly Journal of Economics* 111 (May 1996): 605– 637.

Philipp Geiler and Luc Renneboog. *Are Female Top Managers Really Paid Less?* No. 2014-004. Tilburg University, Center for Economic Research, (2014).

Claudia Goldin and Lawrence F. Katz, "The Origins of Technology- Skill Complementarity," *Quarterly Journal of Economics* 113 (August 1998): 693– 732.

Jeffrey Grogger and Charles Michalopoulos, "Welfare Dynamics under Time Limits," *Journal of Political Economy* 111 (June 2003): 530– 554.

Jonathan Gruber, "The Incidence of Payroll Taxation: Evidence from Chile," *Journal of Labor Economics* 15 (July 1997, Part 2): S102– S135.

Daniel S. Hamermesh and Stephen J. Trejo, "The Demand for Hours of Labor: Direct Estimates from California," *Review of Economics and Statistics* 82 (February 2000): 38– 47.

James J. Heckman, "Life Cycle Consumption and Labor Supply: An Explanation of the Relationship between Income and Consumption over the Life Cycle," *American Economic Review* 64 (March 1974): 188– 194.

Andrea Ichino and Regina T. Riphahn, "The Effect of Employment Protection on Worker Effort: Absenteeism during and after Probation," *Journal of the European Economic Association* 3 (March 2005): 120–143.

Thomas E. MaCurdy, "An Empirical Model of Labor Supply in a Life- Cycle Setting," *Journal of Political Economy* 89 (December 1981): 1059–1085.

Alan Manning, "Imperfect competition in the labor market," *Handbook of labor economics* 4 (2011): 973–1041.

Jordan D. Matsudaira, "Monopsony in the low-wage labor market? Evidence from minimum nurse staffing regulations," *Review of Economics and Statistics* 96.1 (2014): 92-102.

Jacob Mincer, "Labor Force Participation of Married Women," *Aspects of Labor Economics* (1962): 63–97.

Prachi Mishra, "Emigration and Wages in Source Countries: Evidence from Mexico," *Journal of Development Economics* 82 (January 2007): 180– 199.

Robert A. Moffitt, "Welfare Programs and Labor Supply," *Handbook of Public Economics* 4 (2002): 2393-2430.

David Neumark and William Wascher, "Minimum Wages and Employment," *Foundations and Trends in Microeconomics* 3 (2007): 1– 182.

John Schmitt. "Why does the minimum wage have no discernible effect on employment?" *Center for Economic and Policy Research* (2013): 22.

Douglas O. Staiger, Joanne Spetz, and Ciaran S. Phibbs, "Is There Monopsony in the Labor Market? Evidence from a Natural Experiment," *Journal of Labor Economics* 28 (April 2010): 211– 236.

# WEIRD ECONOMICS

We're All Weird

Microeconomics I

Labor Economics

101

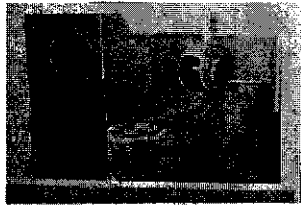
## ECON 330: Labor Economics

### Distance Ed. Syllabus

Dr. Brandon Vick

#### Contact Information

Skype hours, MTW 9:15 to 11am



Will the Robots take your job? Will they let you keep your political voice?

#### Course Description

##### Catalog Description:

**ECON 330 Labor Economics 3c-01-3cr; Prerequisites:** ECON 121, 122

History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

##### Introduction

Does the minimum wage help or hurt workers? Does international trade and immigration take away U.S. jobs? Is inequality increasing in the U.S.? Why do women consistently get paid less than men in most countries around the world?

#### Course Objectives

**Objective 1:** Describe, apply, and utilize economic modeling to predict the effects of labor-related practices, policies, and events. Core labor models include labor supply, labor demand, the determination of wages, human capital, job search, and labor monopoly and monopsony.

**Objective 2:** Read, understand, and analyze labor force data. Identify and utilize current labor data sources and economic studies and increase familiarity with economic research methods.

**Objective 3:** Employ economic communication skills. Form economic questions, identify key labor-force related outcomes, and

communicate such economic research findings. **Objective 4:** Describe how labor economics informs important issues, including education, discrimination, and inequality. Explain the strengths and weaknesses of the use of economic research in policy and in communication with the public.

People have strong opinions about these issues. Many times these opinions are not informed by what is really going on in the labor market. This class will help you utilize economic tools to better understand the workings of modern labor markets. We will explore theoretical models that allow us to make testable hypotheses about these questions. We will also learn about the data sources and methods that economists use to test their labor market predictions. The first half of the course will provide a broad structure and context to look at labor markets. In the second half, we will look more closely at important economic and policy issues concerning wages, discrimination, immigration, and trade.

communicate such economic research findings.

**Objective 4:** Describe how labor economics informs important issues, including education, discrimination, and inequality. Explain the strengths and weaknesses of the use of economic research in policy and in communication with the public.

#### Required & Suggested Materials

##### Required:

  
**KHANACADEMY**  
Click "About Us" Open an account and add my Coach ID to your Profile: V6KFRM.

  
**turnitin**  
and iLearn. Open a Free Turnitin.com Account (ID XXXX)

##### Suggested

No textbook is required for this course. Content and links to required readings/podcasts/videos are given in the Topic modules on this website. However, I suggest that students interested in the study of Labor Economics beyond this course purchase a Labor Econ textbook. I recommend the following:

- Bruce Kaufman and Julie Hotchkiss. *The Economics of Labor Markets* (7th ed.). Thomson/South-Western, 2006.
- Francine Blau, Marianne Ferber, and Anne Winkler. *The Economics of Women, Men, and Work* (7th ed.). Pearson Education, 2014.

## Course Plan

The main page of the course website gives details of each topic, lab, and project and the calendar can be set up to send reminders well before the due date.

### Twelve Topics

For each Topic on the Labor Economics Website, you will...

1. Read through the material and follow the links to articles/videos/audio files as directed. Questions highlight points that you should take notes on.
2. Complete the quiz aligned with that Topic Module in D2L.

### Four Labs

You will work with labor statistics and data using MS Excel. Four lab write-ups will require you to perform tasks using the knowledge you get from working through modules, watching instruction videos, and practicing the techniques. Four 2-3 page write-ups will be turned in via Turnitin.com.

### Ten Quizzes and Two Exams

Ten quizzes and two Exams will be taken via D2L. The final exam is not cumulative.

### Two Projects

Specific instructions will be given for each writing assignment, along the requirements for your deliverables and the rubric I will use to grade your work. Feedback will be posted on the Turnitin.com and grades posted on D2L.

## Grading

Sixty percent of your grade comes from quizzes and exams on D2L. Four labor data labs will be due through Turnitin.com. Two additional projects will require you to research a labor economics topic and clearly communicate economic jargon to a non-technical audience.

The grade breakdown follows:

- 10 Topic Quizzes: 200
- Midterm Exam: 200
- Final Exam: 200
- 4 Lab Write-ups: 200
- Double-entry Journal: 100
- Pinterest Board: 100

### Scale

The following grading scale will be used:

A: 900 and over; B: 800-899; C: 700-799; D: 600-699; F: Below 600.

### Academic Integrity

Violations of Academic Integrity will not be tolerated. Please see the Academic Integrity article on the website for explanations of the full list and possible consequences of these actions.

You will turn in a number of writing assignments. Students agree that by taking this course all required papers are submitted to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Terms and Conditions of Use posted on the Turnitin.com site. The papers you turn in are your own... you must work hard to differentiate your work from your peers (especially if you are sharing notes). If you do not differentiate your work from others (i.e. same language, tables, graphs), no points will be awarded for that assignment.

Much of your grade is based on answers submitted through D2L. By taking this course you agree that all responses are yours and that you will not enter a response for another student. Should you break this agreement on a given assignment, no points will be awarded to your grade.

### Disclaimer

Any grading changes will be announced via IUP student email and on this site.

# WEIRD ECONOMICS

We're All Weird

LINKS & CONTACT

LABOR ECONOMICS

ABOUT

## ECON 330: Labor Economics

### Course Homepage

Labor Economics looks at the dynamics of workers and employers: our decisions to work or hire someone, the outcomes of pay, the barriers to moving to a better job.

The Calendar gives links to assignment and due-dates. Personal reminders can be setup by following the links.



Syllabus: You'll be busy.

< September 2014 >

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

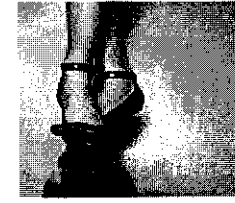
Click on the Calendar to set up Reminders

### Topics

Click on the photos below to learn about each topic: notes, video, news articles, case studies, and questions to review. Each topic ends in a short quiz to reinforce key ideas.



Topic 1: Labor Introduction



Topic 5: Equilibrium & Discussions



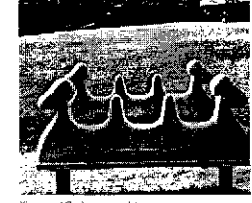
Topic 9: Discrimination



Topic 2: Labor Stats and Figures



Topic 6: Job Search



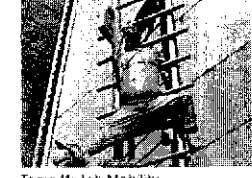
Topic 10: Inequality



Topic 3: Labor Supply



Topic 7: Compensating Differentials & Incentive Pay



Topic 11: Job Mobility



Topic 4: Labor Demand



Topic 8: Human Capital, Networking, and Signaling



Topic 12: Unions

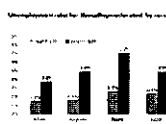


## Labs

Click on each for the motivation, how-to videos, and assignments. The calendar gives the due date for each lab write-up.



Lab 1: Working with Labor Data



Lab 2: Labor Gaps



Lab 3: Cost-Benefit Analysis of Grad School



Lab 4: Regression and Earnings Gaps

## Projects

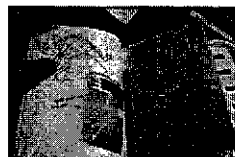
Click below for general tips on the technical writing skills that go with communicating statistical results with clarity and precision. Projects for the writing-intensive section are below.



Best Practices for Economic Writing



Make Your Own Pinterest Board



Double-Entry Journal



# WEIRD ECONOMICS

We're All Weird

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## ECON 330: Labor Economics Calendar

August 25  
to Aug 31

### Topic 1: Labor Introduction

Monday, August 25, 2014 – Sunday, August 31, 2014

3:00pm

September 1  
to Sep 7

### Topic 2: Statistics Review

Monday, September 1, 2014 – Sunday, September 7, 2014

3:00pm

September 8  
to Sep 15

### Lab 1: Presenting Data on Unemployment and Job Search

TBD

Monday, September 8, 2014 – Monday, September 15, 2014

2:00pm

September 8  
to Sep 21

### Topic 3: Labor Supply

Monday, September 8, 2014 – Sunday, September 21, 2014

3:00pm

September 22  
to Sep 28

## **Topic 4: Labor Demand**

**Monday, September 22, 2014 – Sunday, September 28, 2014**  
3:00pm

September 29  
to Oct 6

## **Lab 2: Comparing Labor Outcomes**

TBD

**Monday, September 29, 2014 – Monday, October 6, 2014**  
2:30pm

September 29  
to Oct 12

## **Topic 5: Equilibrium & Discussions**

**Monday, September 29, 2014 – Sunday, October 12, 2014**  
3:00pm

October 13  
to Oct 19

## **Topic 6: Job Search & Unemployment**

**Monday, October 13, 2014 – Sunday, October 19, 2014**  
3:00pm

October 19  
to Oct 20

## **Pinterest Board Due**

**Sunday, October 19, 2014 – Monday, October 20, 2014**  
11:30pm

October 20  
10:30 PM

## **Midterm Exam**

TBD

**Monday, October 20, 2014**  
10:30pm – 11:30pm

- October 22  
to Nov 2
- Topic 7: Compensating Differentials & Incentive Pay**
- Wednesday, October 22, 2014 – Sunday, November 2, 2014  
3:00pm
- October 27  
to Nov 3
- Lab 3: Calculating the Costs and Benefits of Education**
- TBD
- Monday, October 27, 2014 – Monday, November 3, 2014  
2:30pm
- November 3  
to Nov 9
- Topic 8: Human Capital**
- Monday, November 3, 2014 – Sunday, November 9, 2014  
3:00pm
- November 10  
to Nov 16
- Topic 9: Discrimination**
- Monday, November 10, 2014 – Sunday, November 16, 2014  
3:00pm
- November 16  
to Nov 17
- Double-Entry Journal Due**
- Sunday, November 16, 2014 – Monday, November 17, 2014  
11:30pm
- November 17  
to Nov 23
- Topic 10: Inequality**
- Monday, November 17, 2014 – Sunday, November 23, 2014  
3:00pm

November 18  
to Nov 25

## Lab 4: Regression Earnings Gaps

Follow the Instructions here.

**Tuesday, November 18, 2014 – Tuesday, November 25, 2014**  
4:30pm

December 1  
to Dec 8

## Topics 11 & 12: Mobility and Unions

**Monday, December 1, 2014 – Monday, December 8, 2014**  
3:00pm

December 8  
10:30 PM

## Final Exam

**Monday, December 8, 2014**  
10:30pm – 11:30pm

=====



# Sample Module

## Lab 4: Regression and Earnings Gaps

---

This module is targeted to help students meet Course *Objective 2: Read, understand, and analyze labor force data. Identify and utilize current labor data sources and economic studies and increase familiarity with economic research methods.*

Included:

1. The Module webpage and the three subpages:
  - a. Motivation: including the Prezi slides that lay out the motivation, terms, and techniques (this Prezi has a voice-over that helps students get the nuances of the presentation);
  - b. How-To: including the embedded YouTube video that I created to take students step-by-step how to view the labor data, perform the regression analysis, and read the results;
  - c. Lab: including links to the Excel data they are to use, the instructions they must follow, the questions they must answer, and the form their written assignment must take.
2. The Pinterest Board related to this module on gender earnings differences. Each Pin links to a news or research article that relates to earnings differences or discrimination.

# WEIRD ECONOMICS

We're All Weird

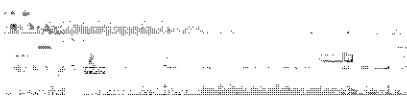
HOME MICROECONOMICS LABOR ECONOMICS ABOUT CONTACT

## Lab Module: Regression & Workforce Outcome Gaps

### Deliverable: Lab Write-up #4



Regression Motivation



Help Me.

This Hurts.

How Do I

Regression How-To



Lab 4: Regression and Gaps



# WEIRD ECONOMICS

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## Lab Module: Regression & Workforce Outcome Gaps

### Deliverable: Lab Write-up #4

#### Motivation: Gaps in Labor Outcomes and Regression as the Method to Calculate

This module gives a brief overview of the need, terms, and uses of regression analysis in estimating gender and racial differences in labor outcomes. View and listen to the Prezi and voice-over comments.

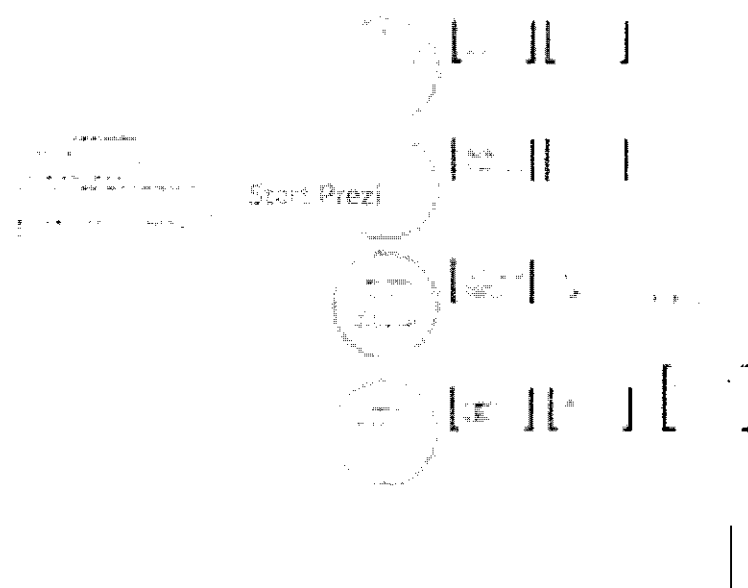


Note: Prezi Embed on Website Looks Blurry Here, but not online. This bug will be fixed.

## Regression to Measure Labor Gaps

By Brandon Vick

### are Labor Gaps



Take note of the following ideas and relate them to the *Reasons and Outcomes* of our regressions:

- Spurious correlation
  - Read the short article on the Theory of the Stork by Höfer et al (2004)
- What do we mean by:
  - Outcomes, Dependent Variables, and Left-hand side Variables
  - Determinants, Independent Variables, and Right-hand Variables
- What is meant by Outcome Gaps?
  - In Earnings
  - Of Becoming a Manager
  - Raw vs. Adjusted Gaps
- Know the Following about our Three Regressions:
  - The Type of Each
  - The Outcome of Each
  - The Determinants of Each
  - What the Coefficients of Each Mean
  - Why the *Female* and *Black* Coefficients are Particularly Important

- What is means for the 95% Confidence Interval of these Coefficients to **contain or not contain zero**.

0 Comments

Weird Economics



Sort by Best \*

Share to Facebook



Start the discussion...

Be the first to comment.

[Back to Regression and Labor Gaps](#)

[prev / next](#)



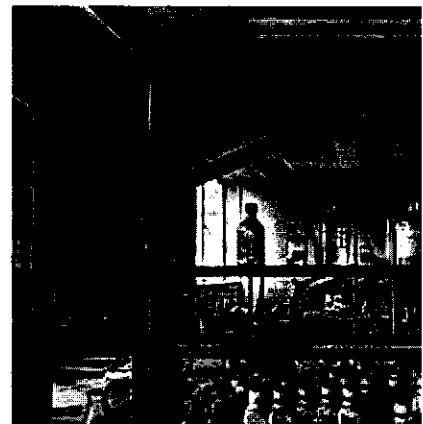
Regression Motivation



Help Me.

This Hurts.

Regression How-To



Lab 4: Regression and Gaps

### **Note on Prezi Presentations:**

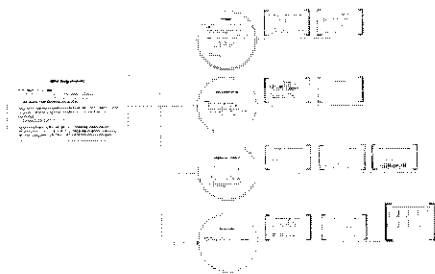
I design my Prezi presentation to be watched on the computer rather than read off of paper for two reasons. First, they offer a dynamic, zooming transition interface rather than a slide-by-slide one. Second, they are accompanied by voice-over commentary.

Prezi transitions allow for zooming further into a slide for emphasis. For example, Slide 6 discusses True vs. Spurious Correlation; Slide 7 zooms closer in to the slide to give an example of the timing of babies born and nesting storks: it looks as if part of the slide is cut off, however, the portion being emphasized is zoomed into focus and centered. In other words, the overall slide encompasses some overlying concept, and a portion of the slide gives a specific example. Prezi allows me to present this visually... starting high from the concept then zooming in to the example.

Additionally, the presentations are accompanied with voice-overs... i.e. much elaboration and explanation comes from the voice-over and is missed in the paper presentation for this proposal.

Please Note: Prezi is experienced much differently on the computer with voice-overs.

## Regression to Measure Labor Gaps



## Regression to Measure Labor Gaps



### Why Regression?

To compare APPLES with ORANGES

- Bob has 10 years experience and a master's degree
- Jane is new to the job market and has a BA degree
- Bob makes more than Jane, but *so what?*

Regression allows us to isolate the effects of **ONE CHARACTERISTIC** (such as *gender*) while holding others constant (such as *education and experience*)

- Do females like Bob make less?

Ex: how much less do females get paid, controlling for education?  
 Ex: what are the returns to education, controlling for gender and ability?  
 Ex.: how does gender affect the likelihood of becoming a manager?

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### Variables

We want to see the correlation between 2 variables

- A *True Correlation* holds after considering other possible factors
- A *Spurious Correlation* is one that goes away after considering other possible factors

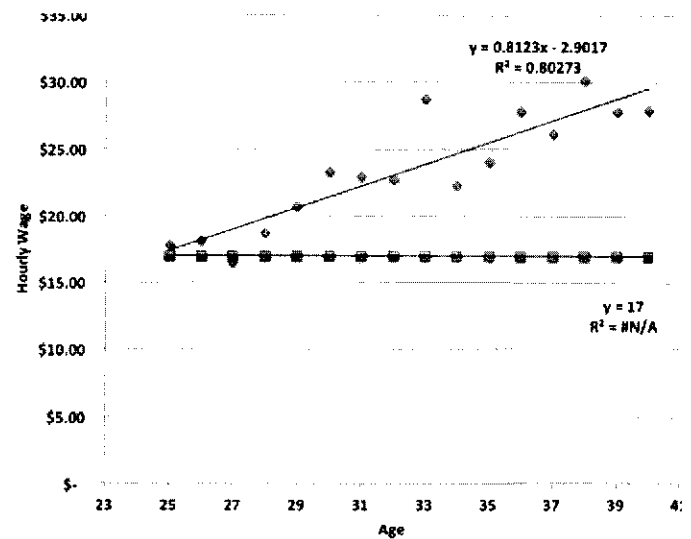
Example 1: The correlation of Nesting Storks and Babies born goes away when accounting for the *Time of the Year* (Höfer et al., 2004)



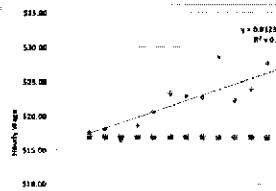
A true correlation holds after all other possible factors

- A *Spurious Correlation* is one that after considering other possible

Example 1: The correlation of Nesting Storks and Babies born goes away when accounting for the *Time of the Year* (Höfer et al., 2004)



### Example 2: Age and Wage



### Outcomes --> Dependent Variables

- Ex: Does gender/race affect earnings?
- Ex: Does gender/race affect becoming a manager?

Our dependent variables are:

1. Earnings - hourly wage and the logarithm of wage
2. Manager Dummy - is the worker a manager

### Determinants --> Independent Variables

- Ex: Does gender/race affect earnings?
- Ex: Does age affect earnings?
- Ex: Does education affect earnings?
- Ex: Do children affect earnings?

Our independent variables are

1. Dummies for female, disability, black, education, family
2. Continuous Variables for age

### Labor Outcome Gaps

- Gaps represent the differences in labor outcomes between two groups
- The gender wage gap is the difference between male and female wages
  - A race gap may be the difference between white and black workers wages

### Raw Gaps

A raw gap measures the difference in average wages between two groups of workers

- Not controlling for other factors of wages
- Does not check for spurious correlation

You will create *Pivot Tables* to look at these

- Dependent Variables (Outcomes) are in the middle
- Independent Variables are the Rows/Column

## Adjusted Gaps

An adjusted gap measures the difference in average wages between two groups of workers, controlling for other factors

- Gender difference for workers with same education/age/etc...

You will run regressions to calculate these

- Dependent Variables (Outcomes) are on the left of the regression equation
- Independent Variables are on the right

## Regression Equations

Outcomes (Dependent) are on the Left (LHS variable)  
Determinants (Independent) are on the Right (RHS variables)

You will run three regressions:

1. Linear regression on hourly wages
2. Log-transformed regression on log(wages)
3. Linear probability model regression on being a manager

## Regression 1: On Hourly Wages

$$\begin{aligned} \text{HourlyWage} &= \alpha_1 \text{female} + \alpha_2 \text{black} + \alpha_3 \text{age} + \alpha_4 \text{age}^2 \\ &+ \alpha_5 \text{married} + \alpha_6 \text{Some College} + \alpha_7 \text{Assoc} \\ &+ \alpha_8 \text{Bachelors} + \alpha_9 \text{Graduate} + \alpha_{10} \text{ChildUnder5} \\ &+ \alpha_{11} \text{ChildUnder17} + \alpha_{12} \text{OtherWorkers} \\ &+ \alpha_{13} \text{Disability} \end{aligned}$$

Example: if you calculate Alpha1 to be -\$4, that means being female correlates to a \$4/hour lower wage (on average, controlling for the other factors)

- This is a **linear regression**
- You calculate the alphas (coefficients) in Excel
- The Alphas show how a change in the variable relates to  **$\alpha$  \$ change in the wage**
- Alpha1 is the Adjusted (Male-Female) Gap
- Alpha2 is the Adjusted (Non-Black - Black) Gap

## Regression 1: On

HourlyWage

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## Hourly Wages

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) in Excel

Please Note: Prezi is experienced much differently on the computer with voice-overs.

## Regression 2: On Log Hourly Wages

$$\ln(\text{Wage}) = \beta_1 \text{female} + \beta_2 \text{black} + \beta_3 \text{age} + \beta_4 \text{age}^2 + \beta_5 \text{married} + \beta_6 \text{Some College} + \beta_7 \text{Assoc} + \beta_8 \text{Bachelors} + \beta_9 \text{Graduate} + \beta_{10} \text{ChildUnder5} + \beta_{11} \text{ChildUnder17} + \beta_{12} \text{OtherWorkers} + \beta_{13} \text{Disability}$$

Example: if you calculate Beta1 to be -0.17, that means being female correlates to earning 17 percent less than men (on average, controlling for the other factors)

- This is a **linear regression, log transformed**
- You calculate the Betas
- The Betas show how a change in the variable relates to a **percent change in wages**
- Beta1 is the Adjusted (Male-Female) **Percent Gap**
- Beta2 is the Adjusted (Non-Black - Black) **Percent Gap**

## Regression 2: On Log

$$\ln(\text{Wage}) = \beta_1 \text{female} + \beta_2 \text{black} + \beta_3 \text{age} + \beta_4 \text{age}^2 + \beta_5 \text{married} + \beta_6 \text{Some College} + \beta_7 \text{Assoc} + \beta_8 \text{Bachelors} + \beta_9 \text{Graduate} + \beta_{10} \text{ChildUnder} + \beta_{11} \text{ChildUnder17} + \beta_{12} \text{OtherWorkers} + \beta_{13} \text{Disability}$$

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## Hourly Wages

Example: if you calculate Beta1 to be -0.17, that means being female correlates to earning 17 percent less than men (on average, controlling for the other factors)

ormed

## Regression 3: On Being a Manager

$$\text{Pr}(\text{Manager}) = \gamma_1 \text{female} + \gamma_2 \text{black} + \gamma_3 \text{age} + \gamma_4 \text{age}^2 + \gamma_5 \text{married} + \gamma_6 \text{Some College} + \gamma_7 \text{Assoc} + \gamma_8 \text{Assoc} + \gamma_9 \text{Graduate} + \gamma_{10} \text{ChildUnder5} + \gamma_{11} \text{ChildUnder17} + \gamma_{12} \text{OtherWorkers} + \gamma_{13} \text{Disability}$$

Example: if you calculate Gamma1 to be -0.17, that means being female correlates to having a 17 percentage-point lower probability of becoming a manager

- This is a **linear probability model**
  - The dependent variable is a dummy
- You calculate the Gammas
- The Gammas show how a change in the variable relates to a change in **the probability of becoming a manager**
- Gamma1 is the Adjusted (Male-Female) **Probability Gap**
- Gamma2 is the Adjusted (Non-Black - Black) **Probability Gap**

## Regression 3: On B

$$\text{Pr}(\text{Manager})$$

$$= \gamma_1 \text{female} + \gamma_2 \text{black} + \gamma_3 \text{age} + \gamma_4 \text{age}^2 + \gamma_5 \text{marr} + \gamma_6 \text{Some College} + \gamma_7 \text{Assoc} + \gamma_8 \text{Assoc} + \gamma_9 \text{Graduate} + \gamma_{10} \text{ChildUnder5} + \gamma_{11} \text{ChildUnder17} + \gamma_{12} \text{OtherWorkers} + \gamma_{13} \text{Disability}$$

- This is a **linear probability mode**
  - The dependent variable is a c
- You calculate the Gammas

Please Note: Prezi is experienced much differently on the computer with voice-overs.

# ing a manager

(Manager)

$$= \gamma_1 \text{female} + \gamma_2 \text{black} + \gamma_3 \text{age} + \gamma_4 \text{age}^2 + \gamma_5 \text{married} + \gamma_6 \text{Some College} + \gamma_7 \text{Assoc} + \gamma_8 \text{Assoc} + \gamma_9 \text{Graduate} + \gamma_{10} \text{ChildUnder5} + \gamma_{11} \text{ChildUnder17} + \gamma_{12} \text{OtherWorkers} + \gamma_{13} \text{Disability}$$

Example: if you calculate Gamma1 to be -0.1 that means being female correlates to having 17 percentage-point lower probability of becoming a manager

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Example: if you calculate Gamma1 to be -0.17, that means being female correlates to having a 17 percentage-point lower probability of becoming a manager

## Excel Output

- Understand the coefficients
- Determine whether they can be said to be **statistically significant from zero**

## Excel Output: On Log Wage

Source	SS	df	MS	Number of obs	1000
Model	96.9112468	11	7.3870236	F(11, 988)	18.8
Residual	252.904613	986	0.25649551	R-squared	0.2752
Total	349.81590	999	0.349214945	Adj R-squared	0.2657

Variable	Coeff	Std. Err.	t	P	[95% Conf. Interval]
female	-0.205	0.095	-2.16	0.033	-0.395 -0.014
black	0.153	0.055	2.75	0.007	0.043 0.263
somecolleg	0.193	0.050	3.87	0.000	0.094 0.290
assoccolleg	0.117	0.061	1.90	0.060	0.018 0.216
graduate	0.122	0.047	2.59	0.010	0.029 0.214
presenrthandw	0.057	0.055	1.03	0.303	-0.052 0.166
age	0.038	0.017	2.23	0.026	0.004 0.072
age squared	-0.001	0.001	-0.07	0.945	-0.002 0.001
married	0.201	0.047	4.27	0.000	0.108 0.294
childunder5	0.008	0.017	0.46	0.643	-0.026 0.041
childunder17	-0.046	0.019	-2.42	0.015	-0.083 -0.009
otherworkers	0.138	0.015	9.00	0.000	0.108 0.168
disability	-0.095	0.100	-0.95	0.335	-0.293 0.103
_cons	1.529	0.119	12.85	0.000	1.292 1.766

R-square is ok.

Female Gap is negative. The CI suggests that Females make 14% to 27% less than Males.

Children and Disability can NOT be said to have an effect on wages.

Having a Disability may be related to 26% LOWER pay ranging to 13% HIGHER pay (or ZERO relation to pay)

## Keys to Reading Excel Output

- Low R-Square (near 0) suggests the overall model has a poor fit (low predictive value)
- High R-Square (near 1) suggests you did something wrong
- Coefficients must be **statistically significant**
  - |T-stat| > 2
  - P-value < 0.05
  - Confidence Interval (Lower 95% to Upper 95%) does not include zero
- Coefficients must be economically significant
  - Are they far enough from zero to mean anything?

## Excel Output: On Log Wage

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somecolleg	0.193	0.050	3.87	0.000	0.094 0.290
assoccolleg	0.117	0.061	1.90	0.060	0.018 0.216
graduate	0.122	0.047	2.59	0.010	0.029 0.214
presenrthandw	0.057	0.055	1.03	0.303	-0.052 0.166
age	0.038	0.017	2.23	0.026	0.004 0.072
age squared	-0.001	0.001	-0.07	0.945	-0.002 0.001
married	0.201	0.047	4.27	0.000	0.108 0.294
childunder5	0.008	0.017	0.46	0.643	-0.026 0.041
childunder17	-0.046	0.019	-2.42	0.015	-0.083 -0.009
otherworkers	0.138	0.015	9.00	0.000	0.108 0.168
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Having a Disability may be related to 26% LOWER pay ranging to 13% HIGHER pay (or ZERO relation to pay)



# Regression to Measure Labor Gaps



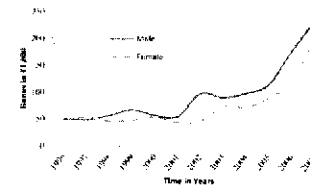
# Are Female Top Managers Really Paid Less?

Philipp Geiler  
 EMLYON Business School  
 and  
 Luc Renneboog

Tilburg University and European Corporate Governance Institute (ECGI)

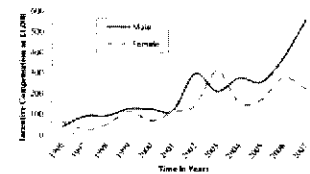
**Abstract:** Are female top managers paid less than their male counterparts? Is the gender gap higher in male-dominated industries? What effect on pay do female non-executive directors and remuneration consultants exert? While we find no pay gap for the figure-head (CEO), there is strong pay discrimination at the level of the other top managers. These female executive directors earn over a five-year tenure period £1.3 million less than male directors, and this pay gap is visible for all components of pay. The pay gap is lower for executives in firms with one or more female non-executives. Female executives in 'male' industries receive less remuneration than male executives but the gender pay gap is smaller. The advice of top remuneration consultants does not reduce the pay gap.

Figure 3 Average Bonus Evolution of Top Managers in Listed UK Companies.



This figure shows the evolution of the total bonus from 1990 until 2007 for both male and female top managers who are members of the board of directors of listed UK companies. The average bonus is given in £1,000. Source: Boardex, Datastream, and Mantra.

Figure 4 Average Long-Term Incentive Compensation Evolution of Top Managers in Listed UK Companies.



# Example: Are Female Top Managers Paid Less?

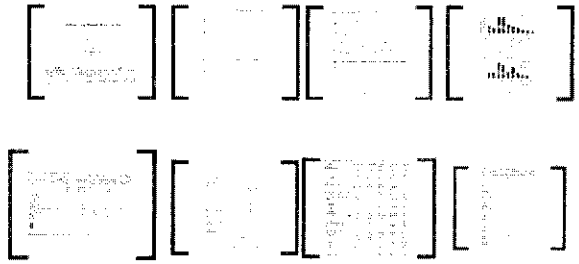
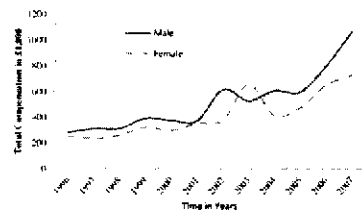


Figure 1 Average Total Compensation Evolution of Top Managers in Listed UK Companies.



This figure shows the evolution of the average total compensation over time for both male and female top managers who are members of the board of directors of listed UK companies. The numbers are given in £1,000. Source: Boardex, Datastream, and Mantra.

Figure 2 Average Basic Salary Evolution of Top Managers in Listed UK Companies.

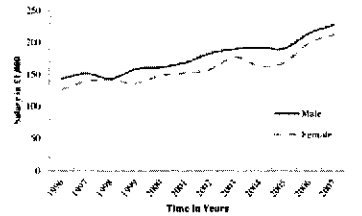
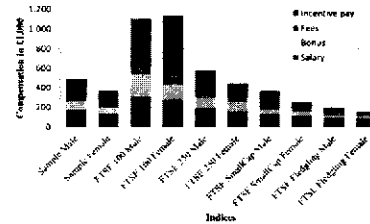
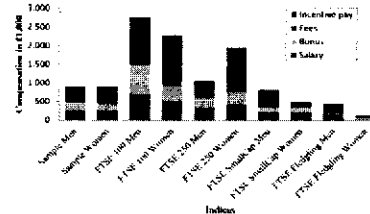


Figure 5 Executive Directors Level: CEOs: Average Total Pay by Index and Gender.



The figure illustrates the average pay gap between male and female executive directors level CEOs for the sample and by index membership: FTSE 100, FTSE 250, FTSE Small Cap, FTSE Floating. Source: Own calculations based on Boardex, Datastream, and Mantra.

Figure 6 CEOs: Average Total Pay by Index and Gender.





# WEIRD ECONOMICS

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## Lab Module: Regression & Workforce Outcome Gaps

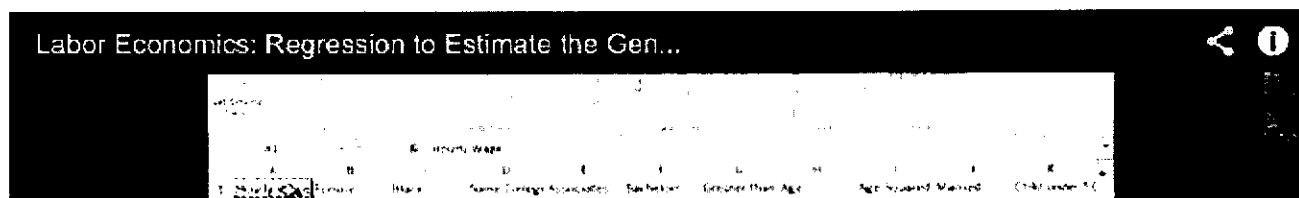
### Deliverable: Lab Write-up #4

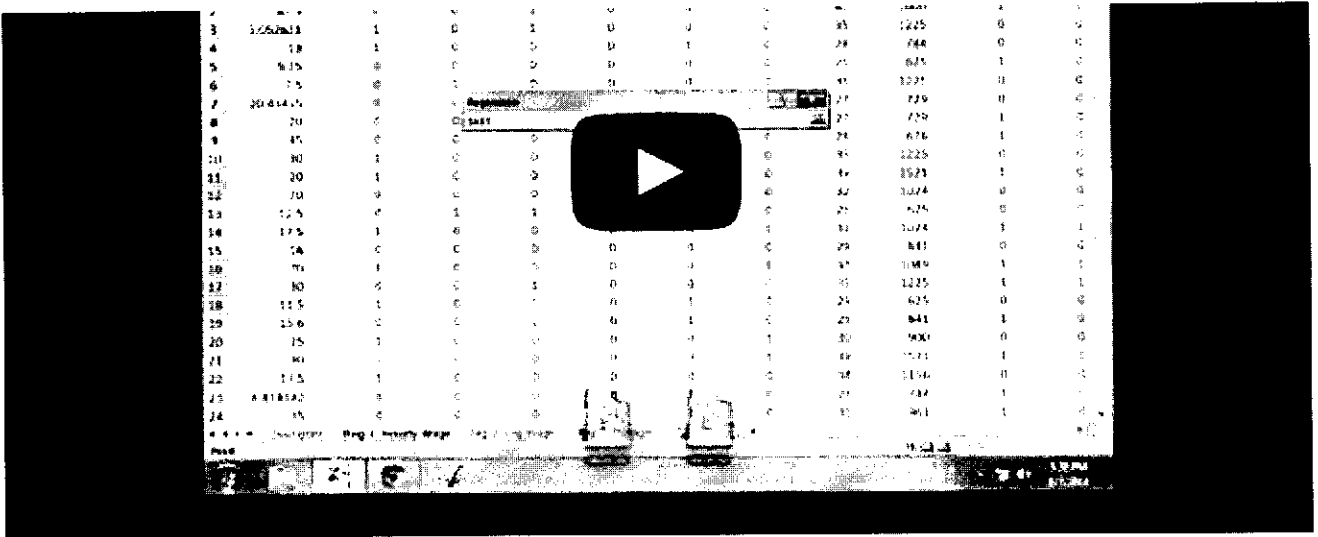
### How-To: MS Excel to Estimate Regression Coefficients for Hourly Earnings

Open the Regression Lab Spreadsheet and Save to a place you can access later. Follow along with the Video Below.

Remember:

- For Regression 1 on Hourly Wages, the coefficients that Excel gives in the output are interpreted as \$ differences in hourly wage.
- For Regression 2 on Log Wages, the coefficients that Excel gives in the output are interpreted as percentage differences in hourly wage.
- For Regression 3 on Being a Manager, the coefficients that Excel gives in the output are interpreted as percentage-point differences in the probability of being a manager.





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REGRESSION LABS: LAB 1: THE LABOR MARKET, LAB 2: THE LABOR MARKET, LAB 3: THE LABOR MARKET, LAB 4: THE LABOR MARKET, LAB 5: THE LABOR MARKET, LAB 6: THE LABOR MARKET, LAB 7: THE LABOR MARKET, LAB 8: THE LABOR MARKET, LAB 9: THE LABOR MARKET, LAB 10: THE LABOR MARKET

## Lab Module: Regression & Workforce Outcome Gaps

### Deliverable: Lab Write-up #4

### Lab-Write Up #4: Using MS Excel for Regression and Interpreting Coefficients

This lab is due on Turnitin.com as one MS Word File (Use the Standard Lab Template).

#### Part 1:

1. Open the Regression Lab Spreadsheet and Save to a place you can access later.
2. Add the Data Analysis Add-in.
  1. File – Options – Add-ins – Analysis Toolpack – Go – Check the “Analysis Toolpack” Box – Ok.
3. Run 3 regressions; Make sure to include the labels; Create a new worksheet for the output of each.
  1. Reg 1. On hourly wage: Controlling for Female, Black, Education Categories, Age and Age-squared, Marriage, Children (under 5 and 17), Other Workers, and Disability (Columns B-N). Coefficients represent \$ differences.

2. Reg 2. On Log wage: Controlling for Female, Black, Education Categories, Age and Age-squared (Columns B-I). Coefficients represent % differences.
3. Reg 3. On Being a Manager: Controlling for only Female and Black (Columns B-C). Coefficients represent percentage-point differences.
4. **COPY THE RESULTS TABLE OF REG 3** and add the Table to your MS Word Document – Present it Professionally and within the Margins.
5. Copy the following Layout to your MS Word Doc and Fill in the Answers for the 95% Confidence Intervals, the Coefficients, and :

**Regression Output 1.**

LOWER 95% ----- COEFFICIENT ----- UPPER 95%

Female: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

Black: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

Child Under 17: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

**Regression Output 2.**

LOWER 95% ----- COEFFICIENT ----- UPPER 95%

Female: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

Bachelors: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

### Regression Output 3.

LOWER 95% ----- COEFFICIENT ----- UPPER 95%

Female: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

Black: \_\_\_\_\_

Yes/No: Is the Coefficient statistically significant and different from zero? \_\_\_\_\_

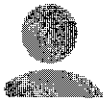
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