

# What is this course about?

**ECON 3640–001**

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# Defining Statistics

# Trigger warning

Learning this course's material may **irreversibly** change the way you approach your own interests, and this fact may make it impossible to maintain your *current beliefs*.

The learning journey may be very *stressful*, especially if you are not used to being *frustrated*.

# Defining Statistics

Statistics embodies the practice of **collecting** and **analyzing** data, either *quantitative* or *qualitative*.

Its purpose is to **describe**, **measure**, and **infer** relevant information from any data one has available.

But data are *fuzzy*.

# Data are fuzzy

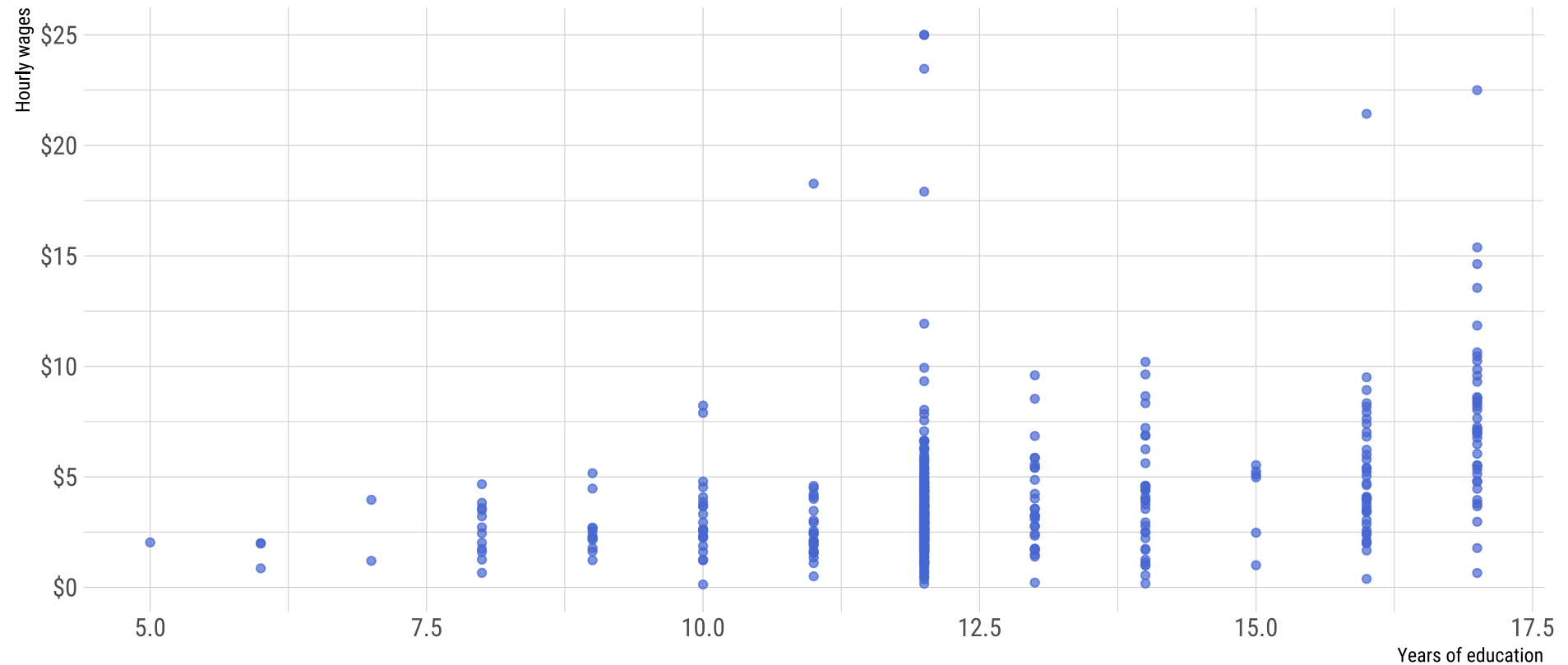
Some data from **Mroz (1987)**:

```
#> # A tibble: 15 × 9
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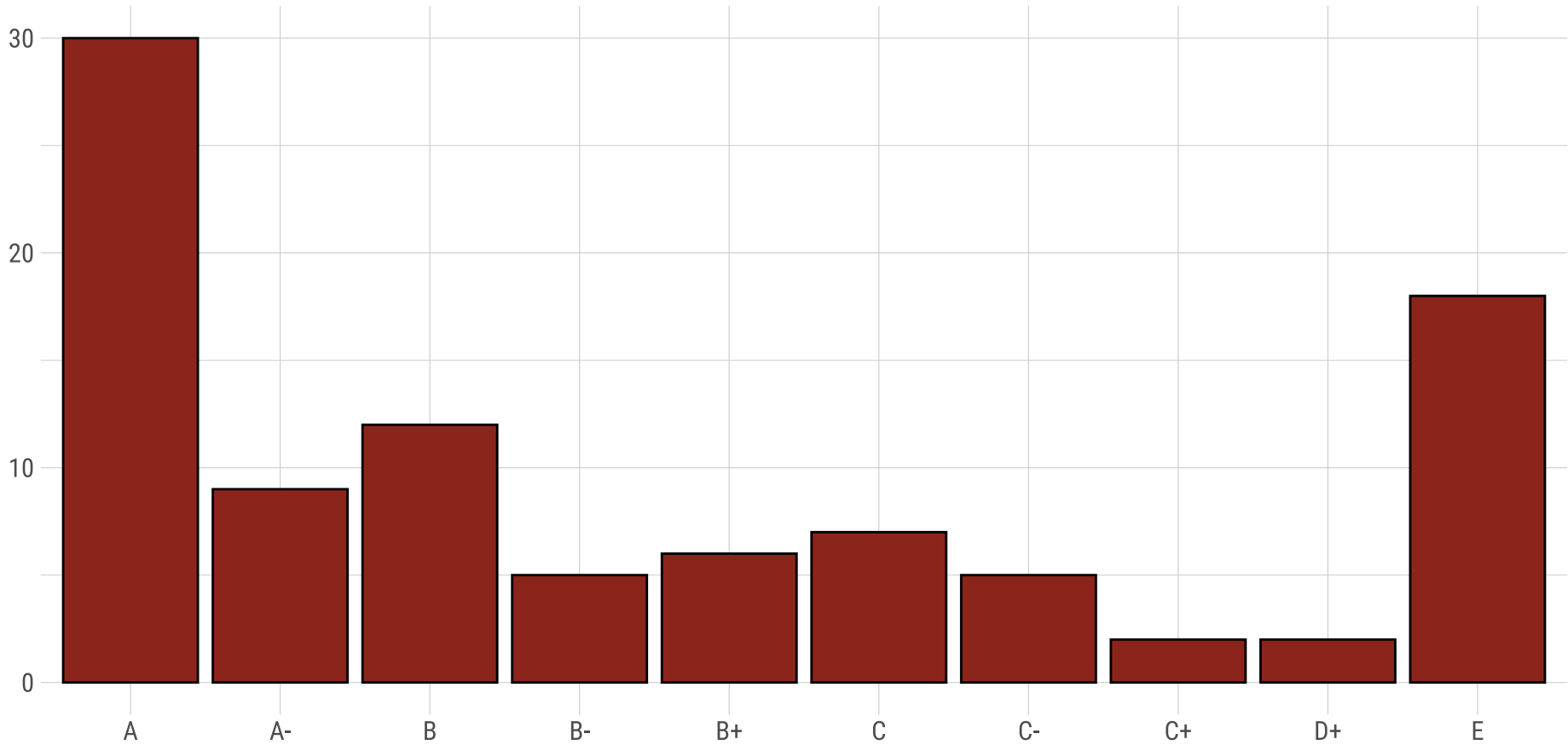
#>	hours	educ	wage	inlf	exper	motheduc	fatheduc	huswage	husage
#>	<int>	<int>	<dbl>	<int>	<int>	<int>	<int>	<dbl>	<int>
#> 1	1610	12	3.35	1	14	12	7	4.03	34
#> 2	1656	12	1.39	1	5	7	7	8.44	30
#> 3	1980	12	4.55	1	15	12	7	3.58	40
#> 4	456	12	1.10	1	6	7	7	3.54	53
#> 5	1568	14	4.59	1	7	12	14	10	32
#> 6	2032	12	4.74	1	33	14	7	6.71	57
#> 7	1440	16	8.33	1	11	14	7	3.43	37
#> 8	1020	12	7.84	1	35	3	3	2.55	53
#> 9	1458	12	2.13	1	24	7	7	4.22	52
#> 10	1600	12	4.69	1	21	7	7	5.71	43
#> 11	1969	12	4.06	1	15	12	3	9.80	34
#> 12	1960	11	4.59	1	14	14	7	8	47
#> 13	240	12	2.08	1	0	16	16	5.30	33
#> 14	997	12	2.27	1	14	10	10	4.34	46
#> 15	1848	10	3.68	1	6	7	7	10.9	45

# Data are fuzzy

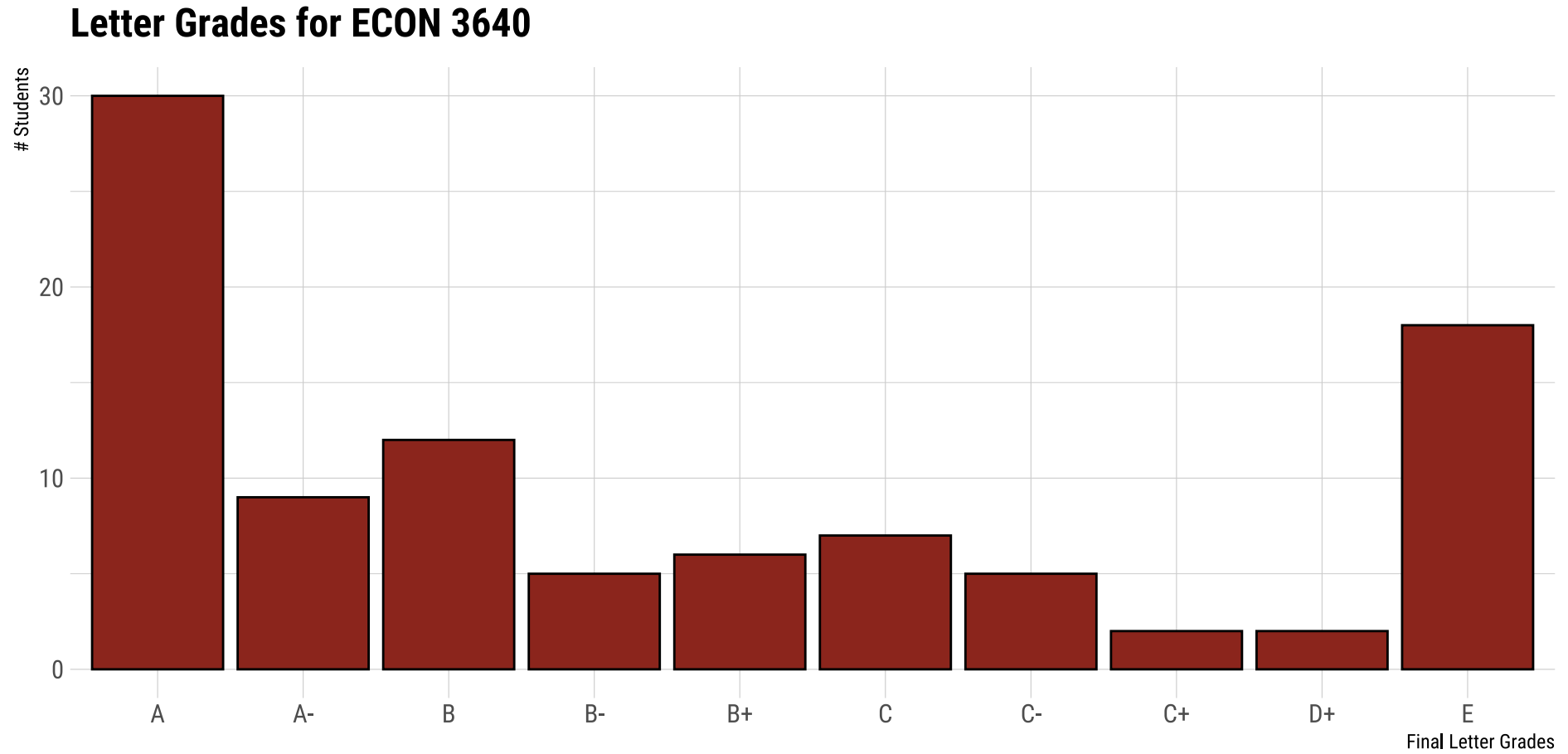
Some data from [Mroz \(1987\)](#):



# Data are fuzzy

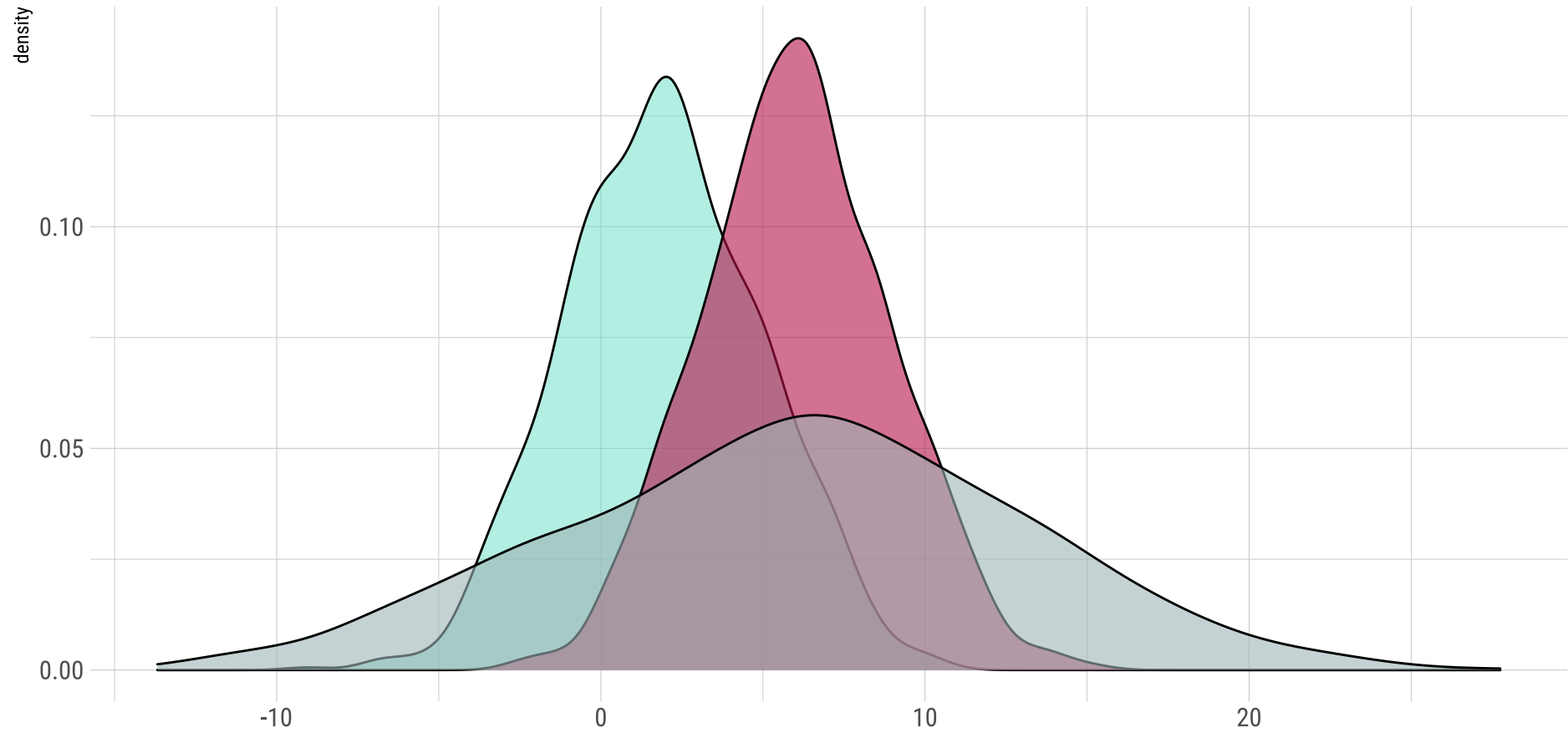


# Data are fuzzy





# Data are fuzzy



Some practical tips

# Is this class hard?

- What does an Economist always have as a **standard answer**?
  - It **depends**!
- Learning Statistics is quite a **journey**
  - But well worth it!
  - Will not be exhausted with this course
  - Here, a nicer challenge (theory and practice)
  - The instructor is here to **help** you

# Is this class hard?

- In summary:
  - Take this class *seriously*
  - Come to class *in time* and with an *open mind*
  - Ask *questions*
  - Do the *assignments*
  - *Exams* will reflect what assignments (esp. *Problem Sets*) have asked you
- About R
  - It may take some *time* to feel comfortable with it
  - But after a few weeks, it will become a *good friend*
  - Feed it well and it will be fine!

# A friend's advice

- Create a **folder** in your computer for this course.
  - **Please.**
- We will use **hundreds** of different files throughout the semester.
  - **Organization** is key!
  - Even better: create folders for **each week**. It will make your life easier.

Next time: Descriptive Statistics