

Example Presentation

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- As a student writing an empirical research paper, does writing a longer paper attain a higher grade?
- Simple OLS regression
- Sample data collected from previous classes with paper assignments
- Strong positive effect: for every marginal page written, grades improve by about 1-2 points
- Robust to different models

- Dilemma:
 1. Longer papers might imply students work hard and write a good paper
 2. But students might also put in low quality filler hoping to inflate their grades

- I collected data from 7 different classes at 2 different colleges where I assigned a longer term paper

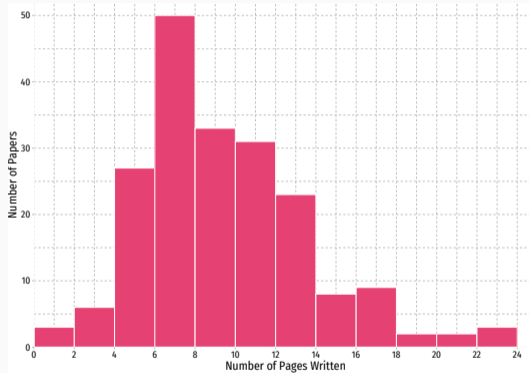
Descriptions of Variables

Variable	Description
Grade	Grade on paper assignment (0-100)
Pages	Number of pages written
Final	Final course grade for student
Gender	Gender of student
Class	Class in which paper was assigned
School	School of class taught
Year	Year of class
Time	Time of day class met
Covid	Course during Covid?

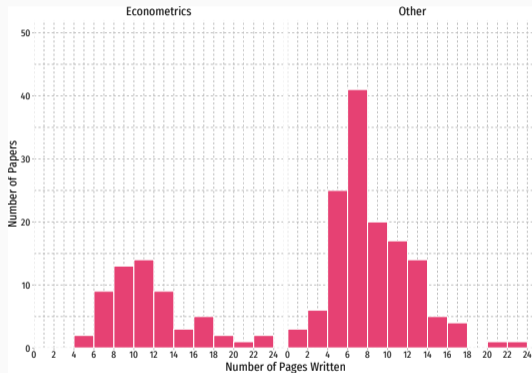
Summary Statistics

Variable	Obs	Min	Q1	Median	Q3	Max	Mean	Std. Dev.
Covid	197	0.0	0	0.00	0	1.00	0.13	0.33
Econometrics	197	0.0	0	0.00	1	1.00	0.30	0.46
Female	197	0.0	0	0.00	1	1.00	0.40	0.49
Final	197	8.5	83	87.35	94	109.09	86.74	11.34
Grade	197	0.0	84	87.00	92	100.00	85.86	12.67
Hood	197	0.0	0	1.00	1	1.00	0.74	0.44
Morning	197	0.0	0	1.00	1	1.00	0.63	0.48
Pages	197	0.0	7	9.00	12	24.00	9.95	4.17
Year	197	2014.0	2014	2017.00	2019	2020.00	2016.80	2.09

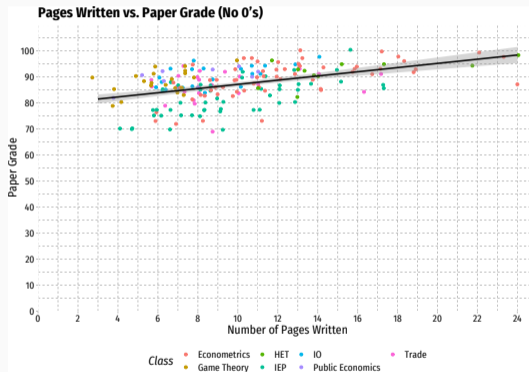
Data: Histogram of X

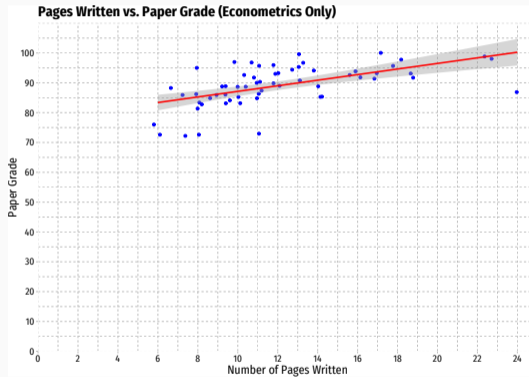


Data: Histogram of X by Econometrics



Data: Scatterplot





$$\begin{aligned}\text{Paper Grade}_i &= \beta_0 + \beta_1 \text{Paper Length}_i + \beta_2 \text{Course Grade}_i \\ &\quad + \beta_3 \text{Gender}_i + \beta_4 \text{School}_i + \beta_5 \text{Covid}_i \\ &\quad + \beta_6 \text{Course}_i + u_i\end{aligned}$$

Results

	Baseline	No Os	Econometrics Only	With Controls	Hood Only	Econometrics Only
Constant	70.97*** (2.04)	79.05*** (1.18)	77.77*** (2.26)	50.57*** (3.08)	43.83*** (3.40)	40.66*** (4.29)
Length	1.50*** (0.19)	0.81*** (0.11)	0.94*** (0.18)	0.59*** (0.10)	0.33*** (0.09)	0.41** (0.13)
Course Grade				0.29*** (0.04)	0.47*** (0.04)	0.50*** (0.05)
Female				-0.38 (0.75)	-0.28 (0.72)	-1.02 (1.06)
Hood College				6.17*** (0.97)		
MetricsOther				1.48+ (0.86)	0.42 (0.71)	
During Covid				-1.64 (1.08)	-1.72+ (0.89)	-2.72+ (1.54)
N	197	194	60	194	146	60
R ²	0.24	0.22	0.33	0.57	0.61	0.75
Adj. R ²	0.24	0.22	0.32	0.55	0.59	0.73
SER	11.05	6.03	5.61	4.57	3.66	3.53

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

- For every additional page written, we can expect a paper's grade to increase by about a point or less.
- For econometrics only, marginal effect is even smaller, only less than half of a point increase for every additional page written.
- Likely endogeneity of length due to unobserved factors such as topic and quality of writing
- *It would be poor advice to recommend students simply to write long papers to earn a higher grade.*