Recreation of Temperature and Decisions: Evidence from 207,000 Court Cases

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December 6, 2021

Abstract

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Keywords: xxx; xyz; zyx.

1 Introduction

introduce the topic and state the aim of your work, stating clearly the research questions and the methodology used, give a brief overview of the results and the limitations of your analysis. a what my paper does, b what underlying aper does (and why relevant?), c what i can confirm reject
This paper examines the robustness of the results in the article "Temperature and Decisions: Evidence from 207,000" by Heyes and Saberian in 2018. Using the same dataset, this paper recreates the main findings. The aim of this paper is to either empirically confirm the results of Heyes and Saberian or to disprove them and illuminate the reasons for that. I reimplement the entire analysis in Python and add a few more model specifications to further increase the validity of the results.
Heyes and Saberian use a dataset of 207,000 court cases in the U.S. for a holistic regression analysis to evluate the influence of climate on professionally made decisions (Heyes and Saberian (2019)). The authors use a holistic set of explanatory variables including various fixed effects - over time, across judges and locations, etc - to control for heterogeneity in the regression of court case outcome on temperature. In this analysis they find a significant relation between temperature and case outcome.
I am able to replicate the paper's main finding. In my analysis, estimated coefficients differ in values but not in direction and significance. The added specifications omitted by the original paper further confirm the underlying relation between climate and decisions. Moreover, I contribute a more accessible technical infrastructure in Python for other researchers to also replicate these results.

2 Literature review

summarize the current state of knowledge on the topic of your paper (including the latest relevant publications). paper: see paper notes I: (all post 2019) MORGEN MIT GIT CITAVI FIXEN!!!!!!
Heyes and Saberian already give an exhaustive overview in their paper from 2019. Their work is in line with numerous publications showing that temperature - both indoors and outside - does have a significant effect and human decisions and rationality. More recently, in this branch of temperature x decisions literature Gavresi Gavresi et al. (2021) shows that higher outdoor temperature incrases risk appetite in (optimist) financial decisions. Chen Chen et al. (2020) find that people perform worse in neurobehavioral cognitive tests when exposed to higher temperature indoors and Hadi Hadi and Block (2019) shows that extreme heat makes consumers less rational (ie affectual). Even more temperature effects are shown by Stevens Stevens et al. (2021) on agression on social media and by Ryan Ryan (2020) on law officials behaviour.
There is also a group of researchers who disprove the link between temperature and decisions, which Heyes and Saberian already acknowledge in their paper (DOUBELCHECK THAT). More recent conributions in this branch are Stroom (Stroom et al. (2021)), who finds no relation between indoor temperatur and cognitive rationality, and Liu (Liu et al. (2020)), who observes no effect of heat on fraudulent behaiour.
Concerning temperature effects on juridical outcomes specifically, DOUBLECHECK- Heyes and Saberian are the first to conduct a full empirical analysis. This motivated Evans (Evans.2021) to do his own empirical analysis about criminal court cases in Australia, which resulst in no significant effect between weather variables and decision making. Also, as direct response to the underyling paper Spaman (Holger Spamann (2020)) recalculates its results withing a larger timeframe (1990 - 2019) and finds no significant effects.

temp - courtcases: Heyes and Saberian (2019) underlying paper

temp xx courcases: Evans and Siminski (2021) folgepaper! findet keinen outdoor temp effekt für Holger Spamann (2020)

direktes folgepaper: von 1990 bis 2019 keine wettereffekte!!!

misc - courtcases:

temp - decisions allg: Chen et al. (2020) people worse in neurobehavioral cognitive tests when higher temperature indoors Hadi and Block (2019) extreme temps (indoor?) make consumers less rational (ie affectual) Gavresi et al. (2021) higher outdoor temp incrases risk appetite in (optimist) financial decisions Stevens et al. (2021) higher outdoor temp, more agression in social media Ryan (2020) outdoor temp positive effect on traffic citations

temp xx courtcases: Stroom et al. (2021) We find that heat exposure did not lead to a difference in decision quality ??? zweimal gleiches? Stroom et al. (2021) find no significance indoor temp effect on cognitive rationality. These results cast doubt on the validity of self-report as a proxy for performance under different indoor climate condition (men self-report effect but show none) Liu et al. (2020) no effect indoor temp on fraud

3 Data

: Describe the main sources of your data, the data cleaning and merging process, include a table(s) of summary statistics and a brief description of these.

The main dataset is constructed out of several sources. The first source, asylumlaw.org, contains the law variables case outcome, case type and nationality of applicant structured along the dimensions judge, city and date. For the environment data, the National Oceanic and Atmospheric Administration yields air temperature, dew point, air pressure, precipitation and wind speed sorted hourly by datetime and location. The variable cloud cover is available at the Northeast Regional Climate Center. the pollution variables quantity of micro particles, carbon monoxide and ozone are delivered by United States Environmental Protection Agency. Some of the environment data is collected hourly and some daily. As the law variables are in a daily format, hourly data is averaged daily form 6AM to 4PM. Each environment observation is at maxium 32 kilometers away from the respective court. All variables are joined by date (daily) and city in the dataset machet.dta, thus that in the dataset every rows represents one case outcome marked by a respective date and location containing values for case and environment variables.

Once matched.dta is created, the (stata) code puts certain temperature variables into promils and creates variables for all relevant dimensions (city,judge,year,month,day), averages of some characteristics across various dimensions, dummies and interactions between variables and/or dummies.

	Mean	Std. Dev.
res	0.162965	0.369334
tempmean	61.439452	14.859341
heat	57.398058	16.094140
airpressure0	29.661536	0.751446
avgdewpt	49.392714	16.657781
precip0	0.003891	0.034818
windspeed0	6.518397	4.402740
skycover	0.546602	0.280155
ozone	0.021916	0.012003
co	0.930650	0.504708
pm25	14.869682	11.204614

4 Empirical strategy

describe the empirical method used and its appropriateness in this context, state the main hypotheses to be tested.

5 Results

present and comment on your results.

	(1)	(2)	(3)	(4)
	Preferred	1-Day	lag	1-Day
Temperaturet/1000	-1.363***	1.108***	-2.21***	-0.278
	[0.155]	[0.211]	[0.262]	[0.352]
Temperaturet-1/1000	-	-2.17***	-	-1.866***
	-	[0.174]	-	[0.228]
Temperaturet+1/1000	-	-	0.818***	1.022***
	-	-	-	-
F-statistic of joint significance of weather variables	2417.651	2268.988	2257.756	2121.681
P-value	0.000	0.000	0.000	0.000
Observations	169006	169006	169006	169006

6 Discussion

reflect on the meaning and policy implications of your results, think of potential limitations to your work and avenues for future research.

7 Conclusion

7.1 Title of subsection

afasdasfasfasd. summarize your main work and conclude. 1. Select a paper that uses one of the empirical methods reviewed in class 2. Get the raw data 3. Replicate the data analysis 4. Write a report summarizing your work. 5. Include a literature review section in your report that summarizes the current state of knowledge on your topic.

Appendix

DLETE THIS LATER use it for additional material that might support your analysis + (in the

nal version) include a separate paragraph that provides a response to the referee's comments and mentions where, how, why, why not the paper has changed.

A Summary statistics

References

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