Dear Dr. Nelson,

I did my best to combat senioritis by writing my paper using 20/10s, 20 minutes working, then a 10-minute break. I’m still skeptical of my results, but I am excited that I found a positive correlation; possibly even more so, as my results did not exactly match my hypothesis. I would say the most important thing this drafting process taught me is an understanding of why academics specialise in such incredibly narrow fields, and it’s because there are so many factors to consider and control for even in the most trivial experiments. The lack of econometrics training leaves my paper barren of equations. I’ve cultivated a passion for not just research but sharing my findings (its influence has bled into my work lately).

I do wish that one of my friends were available to do technical editing for this last revision of my paper because it can be difficult to see your own work in a new light. This made peer feedback –especially the Week 9 assignment- very helpful in improving my paper. I’m not sure if it would work in practice, but I think it might be interesting to peer review other parts of research papers with the same scope, ‘how strong is this literature review section anyway?’ That said, I have to thank my wife for saving me from some embarrassing formatting.

Anyway, thank you for teaching this quarter. I feel like the process was rewarding, and I’m sure I couldn’t have done this well without the added structure.

Best,

Justin Peacock

Crime and Recession in the U.S. and Greece

Justin Peacock

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# 1 Introduction

As Greece makes a slow recovery after 5 years of falling GDP (OECD, 2015) and with unemployment rising to just over 25% (Eurostat, 2015), how are people surviving? In the face of economic pressures, some may resort to property crimes. The United States is recovering from its own, shorter, recession of about two years (OECD, 2015).

Do recessions cause an increase in crimes of opportunity? That is, property crimes such as theft, burglary, and motor vehicle theft. These crimes could improve an individual’s economic status at the possibility of facing fines and jail time. I also investigate violent crimes that do not involve property: robbery, assault, rape, and homicide. The literature has had mixed conclusions. For example, Kollias & Paleologou (2012, p. 995-997) have found correlations between unemployment and vehicle thefts, contraband, smuggling, and robbery in Greece. While Tsouvelas et al found significant links between some of the years of the Greek recession [2008-2011] and “homicide, fraud, extortion, illegal weapon possession, theft/burglary and robbery” (2015, p. 1363). In the United States, Fallahi & Rodríguez (2014, p. 33) only found a significant relationship between unemployment and motor vehicle theft in the United States.

I’ve gathered data from the Bureau of Labor Statistics (BLS) and Eurostat to compare unemployment rates between Greece and the U.S (BLS, 2015). To compare GDP growth rates, I’ve used data from the Organization for Economic Co-operation and Development (OECD). For crime rates themselves, I’ve used figures from United Nations Office on Drugs and Crime (UNODC). The United Nations notes that crime rates between countries cannot be compared directly, as countries measure and prosecute crime differently (UNODC, 2015). For each country, crime rates can be easily compared against GDP, where I found the most significant results. I compare these results with current literature and give context for how my data fits.

In Section II, I examine prior research in detail, noting previous associations with crime, and where such associations have not been found. I also provide historical information on the Greek and American recessions, contrasting them, which provides a staging ground to see why crime correlations may differ between countries. To conclude Section II, I cover this paper’s limitations as a correlational study. In Section III, I cover my actual findings, a full review of the current literature, and an analysis of my hypothesis. Section IV concludes and includes policy recommendations, should future research confirm causality of my hypothesis.

# 2 Prior Research and Considerations

There have been numerous papers on the topic of crime and recession. Nikolaos and Alexandros provide a good summary of theoretical current approaches to the link between crime and recession. The effects are reminiscent of income and substitution effects when looking at the labour market. First, the motivation effect says that higher unemployment causes economic problems that promote crime (p. 53, 2009). A negative relationship is explained by the opportunity effect, where a “decrease in median family income [...] discourages a person from the decision to commit a crime”. Finally, there’s an association between crime and income, the ‘routine-activity’ effect. This effect refers to an increase in time spent outdoors coupled with more potential victims of crime.

Then there’s the data. In the United States, Millett et al (2011, pp. 1280, 1282-1284) examined seven U.S. states across a number of economic criteria: unemployment, food stamps and labor force participation in relation to child abuse and neglect. The results found no relationship between abuse and neglect, and the economic factors studied. Christina Laspa’s “Do the economic factors affect criminality?” found similarly underwhelming results, not finding a statistically significant relationship between economic trends and any crime except blackmail (2013, p. 107). However, the literature is still mixed.

Nikolaos and Alexandros found an increase in crime in Greece after a rise in wages is explained by the opportunity effect discussed above. They also found a case for the motivation effect as unemployment increases (2009, p. 60). Meanwhile

Robynn Cox’s paper in Review of Black Political Economy Robynn Cox’s paper in Review of Black Political Economy attributes increases in incarceration to longer prison sentences, parole offences and the ever-increasing number of criminal statutes (2010, p. 284). These could explain suppressed crime rates, if you lock people up for a long time on their first offence, they may never have a chance to reoffend. That comes with its own complications that, although outside the scope of this paper, may make for interesting follow-up research.

# Provide Historical Context. How do these recessions differ?

Greece’s most recent recession was based in government spending. When the government failed to pay its debt to bondholders, jobs were lost, spending ceased and it was difficult to get out of the situation. Greece’s adoption of the Euro increased creditor confidence in Greek debt repayments because they could no longer print their way out of debt (seignorage). Europe forced Greece to adopt austerity measures, metering its lavish funding during a bailout that still left many creditors without bond repayments.

The U.S.’s recession was multi-faceted, but came down to the indulgence of OTC derivatives and a housing bubble (“The Warning”, 2009). Banks used OTC Derivatives to insure each other’s mortgages in a way that was very difficult to audit. As former Fed chairman Ben Bernanke recalls,

[I]f you had asked a big bank in 2006, you know, “Hypothetically, suppose that house prices were to drop 30%, what would happen to your balance sheet?  How much would you lose?”  They would have had a lot of trouble giving you a plausible answer.  Because they were exposed not just through the mortgages they held but also through various kinds of derivative contracts, through off-balance sheet investments that they had made, through their investments in other companies — very complicated, lots of different businesses.  And they just didn’t have enough of a grip (Bernanke, 2015).

When one investment bank began to fail, derivatives were these hidden strings that linked failing banks to ones on the margin and finally even healthy banks,

Well, financial panic is a self-reinforcing thing. And people get afraid; if they get afraid, they won’t lend; if they won’t lend, then in order to get cash, banks have to sell their assets; that pushes down the prices of their assets; that makes people even more afraid.  So, a financial panic can get its own dynamic going (Bernanke, 2015).

The U.S.’s recession was met by economic stimulus in contrast to Greece’s austerity measures. Although both the Greek and American recessions share some similarities: time of onset and driven in part by self-fulfilling prophecies; their differences are what makes them of interest. The United States has had falling crime rates (Donohue III & Levitt, 2000) while Greece’s crime has increased over time (Nikolaos & Alexandros, p. 52, 2009). However, the American incarceration rate has increased (Cox, 2010) while Greek conviction rates fall (Nikolaos & Alexandros, p. 52, 2009).

# Paper Limitations

I’m only comparing figures between the U.S. and Greece, and only in their most recent recessions. Adding more countries to the mix is of course possible, but I think more interesting results could be obtained by a rigorous econometric analysis coupled with data from more Greek and American recessions, while comparing crimes that are not ‘officially’ recorded.

The National Bureau of Economic Research (NBER) defines a recession as, “[A] period of falling economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales” (2010). This paper simply examines GDP growth rates and unemployment levels. It also looks at “official” unemployment levels; figures that do not take into account discouraged workers or the underemployed.

# 3 Analysis of Crime-Recession Correlation

With so many other possible factors weighing in, I’ve paid extra attention to ensuring that my data is uniformly collected, so comparisons between GDP and unemployment and crime can be made accurately. Eurostat publishes *Statistics in Focus*, where Kiiver & Remko (2010) directly compared unemployment data from Bureau of Labor Statistics’ (BLS) Current Population Survey (CPS) and the European Labour Force Survey (ELFS). I did some additional research, and the Household survey conducted by the BLS is very similar to Eurostat’s collection.

The age brackets are similar with 15-74 for Eurostat and 16+ for BLS (2015) (Eurostat, 2015, p. 2). These similarities extend to whether someone has been actively seeking work in the past four weeks. Greece’s unemployment rate of more than 25% clearly indicates economic difficulties. It’s also interesting that this hasn’t recovered alongside GDP.

Figure 1. Source: BLS CPS Data, 2015. Eurostat Indicators, 2015.

I found much more interesting results in comparing GDP and crime rates, though. Again, this is correlation, but note the low point in Greece’s GDP growth in 2011, a decline of 9.1% GDP growth. At the same time, we see robbery, motor vehicle theft, burglary and theft all peak in Greece.

Figure 2. Source: OECD, 2015.

Figure 3. Source: UNODC, 2015.

Notice how assaults and robberies change places in Greece several times. It would be interesting to see if there’s some effect here turning crimes of passion into crimes of opportunity.

Figure 4. Source: UNODC, 2015. \*Motor Vehicle Theft data not available for 2003.

Meanwhile, the U.S. simply presents declining crime rates, regardless of GDP or unemployment numbers. If there were an effect here related to economic turmoil, it would simply be slowing the decrease in crime.

Figure 5. Source: UNODC, 2015.

Figure 6. Source: UNODC, 2015.

# 4 Conclusions and Policy Recommendations Suggestions for Future Research

Greece and the U.S. do not appear to share crime correlations; it’d be good to add more countries to the mix and see if there are any international trends. It’s also possible that crime is not related to recessions at all in the United States, why would that be?

Crime in the United States is also just continually falling. Greece has not been so fortunate. Although I don’t have the statistics skills yet, I would like to see p-values for GDP and the crimes that peaked with Greece’s most recent recession.

# Direct Conclusions

There appears to be a link between crimes that enrich the criminal and recessions in Greece. In this context, those crimes are robbery, theft, burglary and motor vehicle theft. This does not precisely fit my original hypothesis that only property crimes would have a positive correlation with recessions. This finding was not found in the American dataset. Why do we see this trend in Greece alone? Would other countries be more likely to reflect the American or Greek data?

# Policy Recommendations

There may still be reasons to increase police staffing or other crime prevention and victim aid during recessions even if the hypotheses do not hold. After all, victims may be more vulnerable in economic hard times, among other possibilities.

If crime is a product of economic difficulties, then policymakers can prepare for recessions –which are somewhat cyclic- in part by preparing for increases in crime. Perhaps subtle security systems should be subsidised, for example. Overt protections such as locks only really protect the person who uses the property, but it’d be reasonable to create positive externalities by providing for the ‘right’ kinds of security measures, those that promote security in the community. To be fair, this suggestion is grossly oversimplified. Still, a causal relationship opens the possibility for many incentives that could pay off once a recession is underway.

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