

## Research article Ερευνητική εργασία

# Criminality in Greece during the years of financial crisis: 2008–2014

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Psychiatriki 2018, 29:19–24

The link between poverty, unemployment and economic downturns and increases in crime rates has long been the subject of social science study. However, the relationships between these phenomena has not been studied sufficiently and through time in most European countries that suffered, or, like Greece, are still suffering the recent financial crisis. We examined if the recent financial crisis in Greece has coincided with an increase in crime, analyzing crime rates since the start of the financial crisis and over an extensive time period (7 years). Crime statistics were taken from the Greek Police. Repeated measures analyses of variance were performed to reveal potential differences in criminality for the years 2008, 2010, 2012 and 2014. There was a significant increase in global criminality rate per 100,000 residents (Wilks' Lambda=0.32,  $F(3,11)=7.93$ ,  $p=0.004$ ). There was a significant increase in illegal gun possession (Wilks' Lambda=0.16,  $F(3,11)=18.68$ ,  $p=0.001$ ), fraud (Wilks' Lambda=0.10,  $F(3,11)=32.35$ ,  $p=0.001$ ), extortion (Wilks' Lambda=0.38,  $F(3,11)=4.45$ ,  $p=0.040$ ), and beggary (Wilks' Lambda=0.33,  $F(3,11)=6.22$ ,  $p=0.014$ ). A reversed U shape was found for homicides, thefts and robberies, with rates peaking in 2010 and 2012 before dropping off in 2014. Narcotics and sexual exploitation crime rates remained unchanged. Surprisingly, the incidence of rape decreased (Wilks' Lambda=0.42,  $F(3,11)=5.14$ ,  $p=0.018$ ). Our results are in agreement with the results of previous broader studies as well as with criminological theories according to which in times of economic stress an increase in both property crimes and violent crimes is expected. As predicted, an increase in financial crime was observed (e.g. fraud and extortions) as well as petty crime related to financial hardship like beggary. Concerns regarding the escalation of white-collar crimes in times of economic downturns that have been raised in the literature warrant further investigation.

**Key words:** Criminality, financial crisis, poverty, unemployment, Greece.

## Introduction

Poverty, unemployment and economic downturns have been linked globally with increases in crime rates.<sup>1-5</sup> Violent crime and property crime are also associated with absolute and relative poverty, as well as economic inequality.<sup>6,7</sup> Living in poverty makes not only offending but also being the victim of crime more likely.<sup>5</sup> Furthermore, crises of unemployment during economic recessions polarize the poor into offenders and non-offenders, and this polarization is felt most severely by those with the least resources and the most structural constraints due to their criminal involvement.<sup>5,8,9</sup> According to Pridemore<sup>10</sup> the most striking and consistent relationship between poverty and crime across many different contexts is how powerfully poverty predicts homicide rates. Nevertheless, the relationships between these phenomena has not been studied sufficiently and through time in most European countries that suffered, or, like Greece, are still suffering the recent financial crisis.

The Greek financial crisis began in spring 2010, when rising interest rates on its sovereign debt forced the Greek government to resort to a domestically controversial bailout from an ad hoc support mechanism overseen by the European Union, the European Central Bank and International Monetary Fund.<sup>11</sup> In return for €110 billion in bailout money to service its debt the Greek government agreed to undertake painful spending cuts and tax hikes. The unemployment rate spiked from 9.6% in 2009 to 26.6% in 2014, real wages plummeted and property values collapsed, while state pensions were slashed.<sup>11,12</sup>

There is evidence that in the period leading up to the full-blown crisis crime rates in Greece had already started to creep up.<sup>13,14</sup> Divorces have also been dramatically spiked, and in tandem with soaring unemployment appear to be closely associated with violent crime, particularly homicides.<sup>15</sup>

According to Stuckler, Basu and Suhrcker<sup>16</sup> between 1970 and 2007 throughout Europe for every 1% of rise in unemployment rates there was a 0.79% rise in homicide. A study conducted in 26 European Union countries concluded that the recent econom-

ic downturn has had a multifaceted negative societal impact, including unemployment, early violent death, suicides, homicides and alcohol abuse.<sup>16</sup> Women in particular appear to be especially vulnerable to increased homicide during recessions.<sup>17</sup> These results are not confined to Europe. A study in Hong Kong found that roughly one out of three violent offenders were under financial pressure when committing homicide, and more than one out of four offenders appeared directly motivated by economic distress.<sup>18</sup>

Economic stress is also a major source of family tension and a leading cause of family breakup.<sup>17</sup> A survey of 630 domestic violence shelters in the USA reported a 75% increase in the number of requests for services since the onset of the crisis.<sup>19</sup> Even though abuse has become more severe women appear to stay longer in these abusive relationships.<sup>19</sup> Increased rates of domestic violence linked to the crisis have also been reported in Curacao, India, the Lao People's Democratic Republic and the UK, among others. According to Cooper<sup>20</sup> each financial recession will be followed by an increase in levels of domestic violence.

The aim of this study is to examine crime rates since the start of the current Greek financial crisis. This is the first study to examine the impact of the European financial crisis on crime over such an extensive time period (7 years). An increase in violent crime rates during the first years of the crises was predicted. We also predicted increases in financial crime like frauds and extortion, as well as petty poverty-related crime like beggary.

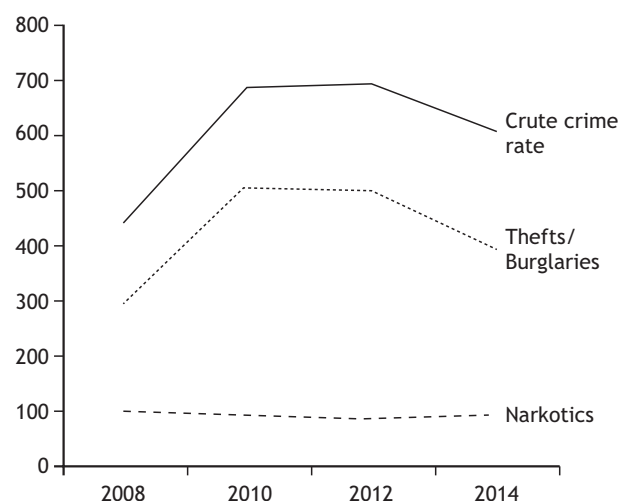
## Material and method

Regional crime data (Greece is divided into 14 police regional units) were taken from the Crime Analysis Section of the Public Security Department of the Hellenic Police Headquarters. Data for ten crime categories were taken: homicide, fraud, rape, extortion, narcotics, illegal gun possession, sexual exploitation, theft/burglary, beggary and robbery. Annual population data were taken from the Hellenic Statistical Authority (ELSTAT). Using these two datasets we were able to compute population-adjusted crime rates in the form of incidence

per 100,000 residents for each crime category separately, as well as a composite index of “global criminality” (crude crime rate) which was derived by summing the population adjusted crime rates from all ten categories per time point. In our analysis each region was treated as one case (N=14). Eleven repeated measures analyses of variance were therefore conducted to test for differences in criminality between 2008, 2010, 2012 and 2014 (table 1). SPSS version 20 was used for all statistical analyses.

**Results**

There was a significant increase in global criminality rate per 100,000 residents (Wilks’ Lambda=0.32, F (3,11)=7.93, p=0.004). The global criminality rate for the year 2014 was slightly lower, but the pairwise Bonferroni comparisons of 2014 with 2010 and 2012 were not significant (figure 1). There was a significant increase in illegal gun possession (Wilks’ Lambda=0.16, F (3,11)=18.68, p=0.001) (figure 2), fraud (Wilks’ Lambda=0.10, F (3,11)=32.35, p=0.001) (figure 2), extortion (Wilks’ Lambda=0.38, F (3,11)=4.45, p=0.040) (figure 3), and beggary (Wilks’ Lambda=0.33, F (3,11)=6.22, p=0.014) (fig-

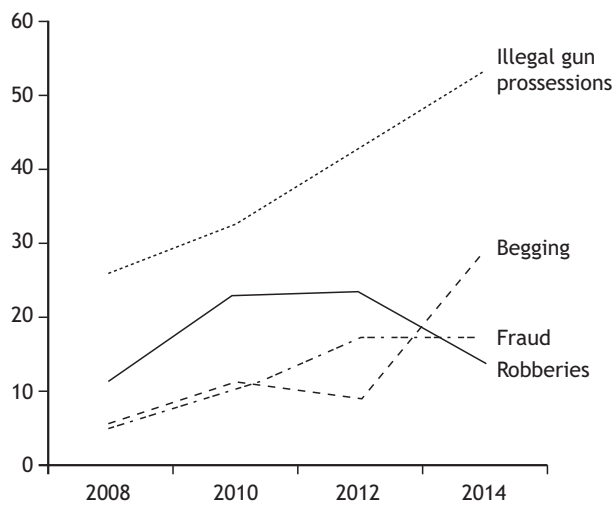


**Figure 1.** Incidence of thefts/ burglaries and narcotics per 100,000 residents. The incidence of the overall crude crime rate per 100,000 was derived by summing the incidence of the other ten crime categories.

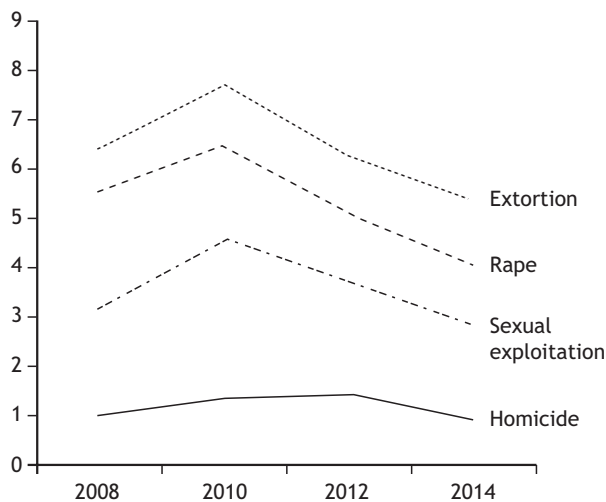
ure 2). There was a significant decrease in rape (Wilks’ Lambda=0.42, F (3,11)=5.14, p=0.018) (figure 3), whereas no differences were found for narcotics (Wilks’ Lambda=0.60, F (3,11)=2.48, p=0.115) (figure 1) and sexual exploitation (Wilks’ Lambda=0.65, F (3,11)=1.82, p=0.207) (figure 3). There was a ten-

**Table 1.** Means of the crime rates per region for years 2008, 2010, 2012, 2014.

	2008		2010		2012		2014		Wilks’ Lambda	F(1,12)	p	η²
	M	SD	M	SD	M	SD	M	SD				
Homicides	0.96	0.60	1.33	0.58	1.40	0.62	0.89	0.48	0.511	3.51	.053	0.50
Fraud	5.16	6.68	10.24	7.48	17.62	16.82	17.18	10.19	0.102	32.35	.001	0.90
Rape	2.41	2.14	1.94	1.29	1.46	0.99	1.26	1.29	0.416	5.14	.018	0.58
Extortion	0.86	0.68	1.25	0.82	1.16	0.87	1.32	0.43	0.375	4.45	.040	0.63
Narcotics	95.03	25.79	93.92	22.02	88.12	20.96	97.66	25.12	0.596	2.48	.115	0.40
Illegal gun possession	26.16	21.90	32.85	26.02	43.88	22.31	53.75	25.85	0.164	18.68	.001	0.84
Sexual exploitation	2.19	1.61	3.23	2.70	2.26	3.13	1.91	2.32	0.646	1.82	.207	0.35
Thefts/ burglaries	296.16	348.14	514.47	379.07	509.39	371.87	397.15	297.67	0.317	7.90	.004	0.68
Robberies	11.56	17.39	23.28	29.30	23.75	28.66	13.87	19.62	0.470	4.13	.035	0.53
Begging	5.78	7.02	11.46	10.77	9.24	9.88	28.98	21.89	0.325	6.22	.014	0.68
Crude crime rate	445.25	104.43	692.51	118.00	697.04	116.90	610.12	91.72	0.316	7.93	.004	0.68



**Figure 2.** Incidence of fraud, begging, robberies, and illegal gun possession per 100,000 residents.



**Figure 3.** Incidence of extortion, rape, sexual exploitation, and homicide per 100,000 residents.

dependency for a reversed U shape for homicide (Wilks' Lambda=0.51,  $F(3,11)=3.51$ ,  $p=0.053$ ), (figure 3), thefts (Wilks' Lambda=0.32,  $F(3,11)=7.90$ ,  $p=0.004$ ) (figure 1), and robbery (Wilks' Lambda=0.47,  $F(3,11)=4.13$ ,  $p=0.035$ ) (figure 2), with higher levels during 2010 and 2012 (table 1).

## Discussion

As the results of the analysis at the regional level show, criminality in Greece increased between 2008 and 2014. Our prediction of an increase in violent

crime (e.g. homicides and robberies) during the first years of the Greek financial crisis was therefore borne out. It should be noted though that after several years of recession, starting in 2014, a mild decrease in violent crime appeared to take place.

A study at the national level that explored the impact of the economic crisis on crime indicators for 2008–2009 showed that in 7 out of 11 countries affected by the crisis there was a systematic increase in at least one criminality rate.<sup>4</sup> Robbery increased the most, followed by homicide. The results of the present study are in agreement with these broader studies results as well as with criminological theories according to which in times of economic stress an increase in both property crimes and violent crimes is expected.<sup>21</sup>

As predicted, an increase in financial crime was observed (e.g. fraud and extortions) as well as petty crime related to financial hardship like beggary. Financial crime includes the so-called white-collar crime, i.e. economic crime committed by business and government professionals. Concerns regarding the escalation of white-collar crimes in times of economic down-turns have been previously raised in the literature and warrant further investigation.<sup>22,23</sup>

This is the first study that attempted to investigate patterns and changes in crime rates during this financial European crisis over a long time-period. It is plausible that the impact of a crisis is moderated by its depth and duration as well as a society's ability to develop protective mechanisms for its citizens.<sup>24</sup>

A limitation of this study involves the small sample of observations ( $N=14$ ). This is due to the fact that the Crime Analysis Section of the Public Security Department of the Hellenic Police Headquarters only aggregates data at the regional level. It is likely that data at the prefecture level ( $N=52$ ) would provide a clearer image of the variability and change of crime rates. Another limitation involves the barriers to self-reporting of certain crime categories to the Greek police.

**Acknowledgements:** We thank the Hellenic Statistical Authority (ELSTAT) and the Crime Analysis Section of the Public Security Department of the Hellenic Police Headquarters for the data that shared with us.

# Εγκληματικότητα στην Ελλάδα στα χρόνια της οικονομικής κρίσης: 2008–2014

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Ψυχιατρική 2018, 29:19–24

Η συσχέτιση της φτώχειας, της ανεργίας και των οικονομικών υφέσεων με την αύξηση του βαθμού εγκληματικότητας είναι εδώ και πολύ καιρό θέμα μελέτης των κοινωνικών επιστημών. Ωστόσο, οι σχέσεις μεταξύ αυτών των φαινομένων δεν έχουν μελετηθεί επαρκώς και σε βάθος χρόνου στις περισσότερες από τις ευρωπαϊκές χώρες, οι οποίες αντιμετώπισαν, ή, όπως συμβαίνει με την Ελλάδα, αντιμετωπίζουν ακόμη την πρόσφατη οικονομική κρίση. Εξετάσαμε κατά πόσον η πρόσφατη οικονομική κρίση στην Ελλάδα συνέπεσε με μία αύξηση στην εγκληματικότητα, αναλύοντας τον βαθμό εγκληματικότητας από την έναρξη της οικονομικής κρίσης και κατά τη διάρκεια μιας εκτεταμένης χρονικής περιόδου (7 χρόνια). Τα στατιστικά στοιχεία σχετικά με τα εγκλήματα ελήφθησαν από την Ελληνική Αστυνομία. Διενεργήθηκε ανάλυση διακύμανσης επαναληπτικών μετρήσεων για να εξεταστούν ενδεχόμενες διαφορές στην εγκληματικότητα μεταξύ των ετών 2008, 2010, 2012 και 2014. Υπήρξε μία σημαντική αύξηση της επίπτωσης της συνολικής εγκληματικότητας ανά 100.000 κατοίκους (Wilks'  $\lambda=0,32$ ,  $F(3,11)=7,93$ ,  $p=0,004$ ). Υπήρξε σημαντική αύξηση στην παράνομη οπλοκατοχή (Wilks'  $\lambda=0,16$ ,  $F(3,11)=18,68$ ,  $p=0,001$ ), τις απάτες (Wilks'  $\lambda=0,10$ ,  $F(3,11)=32,35$ ,  $p=0,001$ ), τους εκβιασμούς (Wilks'  $\lambda=0,38$ ,  $F(3,11)=4,45$ ,  $p=0,040$ ) και την επαιτεία (Wilks'  $\lambda=0,33$ ,  $F(3,11)=6,22$ ,  $p=0,014$ ). Καμπύλη σχήματος αντεστραμμένου U βρέθηκε για την πορεία των ανθρωποκτονιών, των κλοπών και των ληστειών, με την επίπτωση να κορυφώνεται στα έτη 2010 και 2012 και ακολούθως να μειώνεται το 2014. Η επίπτωση των εγκλημάτων που σχετίζονται με ναρκωτικά και σεξουαλική εκμετάλλευση, δεν εμφάνισε μεταβολές. Απροσδόκητο εύρημα ήταν η μείωση της επίπτωσης στους βιασμούς (Wilks'  $\lambda=0,42$ ,  $F(3,11)=5,14$ ,  $p=0,018$ ). Τα αποτελέσματα της μελέτης μας βρίσκονται σε συμφωνία με τα αποτελέσματα προηγούμενων ευρύτερων μελετών, καθώς και με εγκληματολογικές θεωρίες σύμφωνα με τις οποίες σε καιρούς οικονομικής πίεσης αναμένεται αύξηση τόσο των βίαιων εγκλημάτων όσο και των εγκλημάτων που σχετίζονται με την περιουσία. Όπως είχαμε προβλέψει, παρατηρήθηκε αύξηση στα οικονομικά εγκλήματα (π.χ. σε απάτες και εκβιασμούς) καθώς και σε μικρο-εγκλήματα σχετιζόμενα με την οικονομική στέρηση, όπως η επαιτεία. Περαιτέρω διερεύνηση απαιτείται για τις ανησυχίες που έχουν διατυπωθεί στη βιβλιογραφία σχετικά με την κλιμάκωση του εγκλήματος «λευκού κολλάρου» σε καιρούς οικονομικών υφέσεων.

**Λέξεις ευρητήριο:** Εγκληματικότητα, οικονομική κρίση, φτώχεια, ανεργία, Ελλάδα.

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