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Property crime: Investigating career patterns and earnings☆

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ABSTRACT

I investigate self-reported theft data in the NLSY 1997 Cohort for the years 1997–2011. Several striking patterns emerge. First, individuals appear to be active thieves for extremely short periods – in most cases in only one year, and fewer than 5% of thieves for more than three years out of the 15 years of data. Second, self-reported earnings from theft are generally very low and there is little evidence of "successful" criminals or consistent earnings from theft. Third, measures that proxy impatience (smoking, for example) are highly correlated with theft. Fourthly, thieves and non-thieves have similar earnings during the years of peak theft activity, but thieves have lower earnings in their late 20s (after most have long since stopped committing theft). Attrition of survey respondents, underreporting and incapacitation effects do not appear to explain this. There may be "professional thieves" too rare to show up in even large samples such as the NLSY. Theft in the United States thus appears to be substantially a phenomenon of individuals entering a temporary period of intensified risk-taking in adolescence.

1. Introduction

Economists have studied crime since Becker (1968).[1] Many have used the rational agent model to understand the individual's decision to commit crime; earnings from illegal activity such as property crime represent economic gain to the agent, potentially interacting with legitimate earnings. Additionally, the toolkit of econometrics has been deployed both in combination with a rational agent model, and more generally and atheoretically to understand the causal forces involved in crime.

There is general agreement that individuals respond to measurable costs and benefits when making choices about criminal behavior. There is extremely strong evidence that in situations of extreme hunger, individuals are likely to make a rational decision to steal (Ó Gráda, 2009, pp. 52–56). Grogger (1998) fleshed out and empirically tested a model linking legitimate and illegitimate earnings. Other researchers have found links between aggregate regional (usually state-level) economic opportunities and criminal behavior.[2] There does not yet exist a consensus regarding the magnitude of the relationship. Raphael and Winter-Ebmer (2001) find a 1 percentage point decline in unemployment leading to 1–5 percent drop in property

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[1] See Freeman (1999) for a summary of work up to 1999.

[2] An excellent recent literature review is Lin (2008), although see also Bushway (2011) for a significantly more cautious look based on interventions.

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crime, which appears to be an upper bound.[3] Comparing across individuals, variation in human capital and education help to predict variation in criminal behavior, as would be predicted by the rational agent model (Lochner and Moretti, 2004; Lochner, 2004). The tangible and intangible costs of punishment are also found to influence behavior in rational ways (Viscusi, 1986; Levitt, 1997).[4]

At the same time, there is evidence that different individuals, and individuals at different periods of their lives, can view the costs and benefits of criminal activity in very different ways. Early childhood experiences may not only vary individuals' future earning power, but may influence preferences in ways that are criminogenic (Currie et al., 2012; Hjalmarsson and Lindquist, 2012). Criminal activity is particularly intense during adolescence, such that delinquency has been described as apparently a "normal part of teen life" (Moffitt, 1993, p. 675). Economists have found some evidence that lower opportunity cost and punishment risk of juveniles can help to explain the difference, but the evidence is mixed.[5] Researchers have included discussion of issues of variation in "self-control" (Lee and McCrary, 2005) or "nonstandard preferences" (Levitt and Venkatesh, 2000) to explain some patterns.

Finally, while difficult to define and measure (Manski, 1993), there is ample anecdotal and quantitative evidence of peer effects in crime. In a data set on youth offenders more than 87% of all robbers and more than half of all offenders acted with at least one confederate.[6]

We can therefore give a short list of suspects believed to be behind the phenomenon of property crime: variation in economic circumstances, variation in likely punishment, systematic variation in preferences, biological factors related to youth, peer influences. Each of these suspects seems to play some role, but researchers still struggle to fit them together to understand the big picture.

This paper contributes to this goal by investigating individual property crime career lengths and earnings patterns, working with self-reported data in the NLSY 1997 Cohort surveys from 1997 to 2011. Two patterns appear which are consistent with other research but do not seem to have been noted: First, and most striking, theft behavior is extremely spiky, with a median theft career length of less than a year.[7] Given the limitations of the data it is impossible to estimate the length of the median career, but six to nine months seems roughly correct. Second, presumably because of such short careers, earnings from theft are extremely low and unstable; there is little or no evidence in the survey of successful criminals.

To analyze the pattern in earnings from theft, I use a simple theoretical framework of a threshold response to opportunities, reviewed in the next section.

I then review data from the NLSY 1997. I focus on self-reported theft of items worth more than $50, but discuss petty theft and drug dealing activity briefly. I begin by summarizing the NLSY data set, and summary statistics on rates of theft activity among respondents, and look at how demographic and test score data vary by self-reported theft activity: males are highly over-represented among self-reported thieves, ethnic minorities and lower-SES individuals somewhat so. I next look at summary data on number of acts of theft, career length and earnings from theft. By collating the data in several different ways, it can be clearly seen that thieves generally have extremely short careers, with no evidence of "successful" thieves in the data.

One important data source that offers a potential challenge to these patterns is aggregate recidivism data (particularly US prisoners): recidivism rates for property crime offenders are higher than violent crime offenders.[8] I investigate this and argue that this is largely the interaction of relative age of offense and relative length of punishment.

Moving to self-reported earnings in the NLSY data, there is no evidence of different abilities at theft, and the data are parsimoniously explained by a model where theft opportunities are randomly distributed. The mean earnings per act are virtually identical for thieves active in one year and those active for multiple years.

To investigate differences between thieves and non-thieves, I run a number of regressions looking at number of years of activity. It should be stressed that this is simply part of the general investigation and description of the NLSY patterns; it is not an effort at causal inference.

Virtually all measures that can be thought of as reasonable proxies for impatience are strongly correlated with theft behavior. For example, smoking and use of intoxicants are generally well correlated. Similarly, measures of mental health, or standardized test scores are strongly negative correlated.

For theft behavior generally, measures of opportunity cost (or alternatively, higher marginal utility of consumption) do not show strong relationships during years of peak activity. Specifically, annual income, both of the household of origin

[3] Lin (2008) finds an elasticity of 4–6, roughly in line with the lower end for Raphael and Winter-Ebmer (2001), and Zimring and Franklin (2006, p. 66) describes Raphael and Winter-Ebmer (2001) as at the "high end of current estimates"

[4] Although Lee and McCrary (2005) find more ambiguity.

[5] See Levitt and Lochner (2001), Levitt (1997), Lee and McCrary (2005), and Grogger (1998). Moreover, there is a generalized pattern of greater risk-taking in adolescence that does not seem to have a direct economic explanation Spear (2000), Guo et al. (2010)

[6] Data from Zimring (1998). For a range of discussions of peer effects see Case and Katz (1991) and Kling et al. (2005). It should be noted that economic analyses have tended to define peer effects using what might be called a "contagion" model, where a more criminally inclined individual influences a less inclined individual. In contrast, other disciplines have discussed what might be called a "reverberation" model, where equally risk-averse individuals induce greater risk taking in each other (Gardner and Steinberg, 2005).

[7] It has long been known that aggregate criminal behavior peaks in the late teen years (Hirschi and Gottfredson, 1983) and there is steady attrition of criminals over time (Blumstein and Cohen, 4818) Additionally, researchers have pointed out that property crime is usually a short-lived phenomenon (Shover, 1996). However, no previous researcher has pointed to a median career length anywhere near this short.

[8] I thank Jens Ludwig for this point.