

An Analysis of the Relationship between Education and Crime: A Case Study of Shiraz, Iran

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Abstract: Does education reduce crime rate? Simple statistics, coupled with the empirical evidence, suggests that criminals tend to be less educated than non criminals. This paper investigates the attitudes toward the relationship between education and crime in Shiraz, Iran. The findings show that improving education can yield significant benefits towards crime reduction. This survey was conducted in 2012 among 225 high school teachers. The survey consists of a face-to face interview. The findings suggest that substantial saving on the social cost of crime can be obtained by investing in education. We find that the probability of committing crimes decreases with the level of education. In conclude we demonstrate that education can reduce the crime rates in the society. It is expected that findings of this study could utilize by policymakers who evaluate the benefits and costs of policies that increase education towards crime reduction.

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1. Introduction

Crime is the major source of insecurity and discomfort in our society (Groot & Brink, 2010). Crime is more than a minor inconvenience or distraction in our otherwise peaceful communities. Crime is a negative externality with enormous social costs. Crime also is an important feature of social and economic life in many countries, especially in the developing world. Crime reduction is high on the public policy agenda; not least because of the large economic and social benefits it brings (Lochner & Moretti, 2003). Reduction in crime can be achieved by more prevention. In this way education can be an important element to prevent individuals from engaging in criminal behavior (Groot & Brink 2010).

A number of studies (Lochner & Moretti 2004; Machin, Marie, & Vujic, 2011; Hirschi & Gottfredson, 1995, Fajnzylber, Lederman & Loayza, 2002, Hjalmarsson, 2008) have looked at the link between education and crime. Among them a more theoretically based approach was offered by Lochner (2004) who develops a life cycle model of education and crime and estimates a negative education-crime relationship.

Education is a potentially large influence on individual propensities to offend and possibly an important source of area-level variation in crime rates. Statistics indicate that crime rates are lower in areas with higher levels of education (Home Office, 2003).

There is much evidence that criminals tend to be less educated than the rest of the population. For instance, according to a Bureau of Justice Statistics Report (2003), about 41 percent of inmates in the

United States prisons in 1997 had not completed high school in comparison to just 18 percent of the general population aged 18 or older (Harlow, 2003). Lochner and Moretti (2003) calculate that for white people in the United States a secondary education reduces the probability of a jail sentence by 0.76 percentage points (Groot & Brink, 2010). In addition, this phenomenon is not isolated to the United States. Machin, Marie, and Vujic (2011) also show that 2.57 percent of UK men aged 21-25 with no educational qualifications were in prison in 2001 compared to 0.3 percent of those with some qualifications.

Much research has been conducted on the relationship between crime and education, yet there is only a small body of literature (Lochner, 2004; Lochner & Moretti, 2004) that speaks directly to public attitudes regarding the relationship between the educational effects and crime reduction.

Hence, in this paper we attempt to analyze the attitudes towards relation between education and crime in city of Shiraz, Iran. However, up to now there is a little research on the effects of education on crime in Iran.

2. Literature review

Education is critical in ensuring the societies' success. Recent studies indicate that a poor education can lead to a steep increase in criminal behavior, and the expense of incarcerating an individual greatly outweighs the cost of providing an education for the same person (Moretti, 2005).

A few empirical studies have addressed the attitudes towards education and crime. Earlier papers have demonstrated that crime and education are related and that indeed policies that increase

education can reduce crime (Lochner & Moretti (2004). Tauchen and Witte (1994) find that young people who are in paid employment or go to school are less likely to engage in criminal behavior (Groot & Brink, 2010). Lochner (2004) argues that education reduces crime because it increases the opportunity costs from forgone earnings and expected costs of incarceration (Groot & Brink 2010). Lochner (2004) emphasizes the role of education as a human capital investment that increases future legitimate work opportunities, which discourages participation in crime. If human capital raises the marginal returns from work more than crime, then human capital investment and schooling should reduce crime. Thus, policies that increase schooling (or the efficiency of schooling) should reduce most types of street crime among adults; however, certain types of white collar crime (e.g. embezzlement, fraud) may increase with education if they sufficiently reward skills learned in school.

Other studies, Open Society Institute (1997), present data on the impact of education on crime, and examine the debate on providing higher education to inmates. They find that education programs can reduce the likelihood of repeat offending and improve public safety.

Not all studies find that higher educated people are less likely to engage in criminal behavior. Some theory suggests several channels through which schooling may affect criminal behavior. For example, Ehrlich (1975) finds a positive relation between years of education and theft committed in 1960. Theory suggests several channels through which schooling Fajnzylber, Lederman & Loayza (2002) also find that the education level in a country does not have a statistical significant effect on the number of homicides and robberies.

Finally, Jacob & Lefgren (2003) find that on days when school is in session the level of crime committed by juveniles decreases by 14%, but the level of violent crime increases by 28%. They conclude that both incapacitation and concentration influence juvenile crime (Groot & Brink, 2010).

Theoretically, there are a number of reasons to expect that an increase in education causes a decrease in crime. First, education increases wages and, therefore, the opportunity costs to committing a crime. Second, individuals may learn to be more patient through schooling (Lochner & Moretti 2003; Lochner, 2010). Third, increased schooling can decrease the chance that an individual engages in criminal activity by increasing his attachment to legitimate society.

Feinstein (2002) also reports five potential channels where education can have an effect on

criminal behavior: Income, parenting, pleasure, patience and risk aversion.

The income effect works through education increasing the returns to legitimate work and/or raising the opportunity costs of illegal behavior (Lochner, 2004; Lochner & Moretti, 2003; Hjalmarsson, 2008).

In terms of parenting, education could have effects on parenting skills, which have implications for the criminality of their children (Rutter et al. 1998). Thus, individuals with a lot of patience have low discount rates and value future earnings more highly as compared to those with high discount rates.

Pleasure from criminal activity is another channel by which education may have effects (Farrington, 2001). Education may be important for teenagers in terms of limiting opportunities for participating in criminal activity. Education also increases patience, which reduces the discount rate of future earnings and hence reduces the propensity to commit crimes.

In terms of risk aversion, education may increase risk aversion, which, in turn, increases the weight given by individuals to the possible punishment and hence reduces the likelihood of committing crimes (Hirschi & Gottfredson, 1995).

Finally, education may also have a direct effect on crime. For instance, education increases the earnings that one can derive from crime and the tools learnt in school may be inappropriately used for criminal activities (Levitt & Lochner, 2000).

3. Methods

This study examined teachers' attitudes towards the relationship between education and crime in the city of Shiraz. This study is based on quantitative methodology and the data for the empirical analyzes are taken from the survey questionnaire. The data for this study was collected from high school teachers. They were chosen because of their knowledge and role in the educational system. This survey was conducted in November and December 2012 among 225 respondents. The survey consists of a face-to-face interview.

The questionnaire was structured around a Likert scale. Each statement was situated on a five scales with (1) representing a response of "strongly disagree" and (5) representing "strongly agree".

Pre-testing of the research instrument was carried out to examine the appropriateness and reliability of the instrument by taking 42 convenience samples. Twenty nine questionnaires, a 89.12% response rate, indicated that the results were sufficiently comprehensive and verified the value of the instrument and the statements received.

Descriptive analysis and coefficient correlation were used to interpret the data in this study.

4. Result

The objective of this study was to determine relationship between level of education and crime reduction rate. Respondents were asked to rank their responses to the questions on educational relation to crime rate on a five point agreement or disagreement scale. Descriptive statistics revealed that respondents rated higher on positive statements and lower on negative statements, indicating consistency in the direction of their perceptions.

Out of 225 teachers who responded, 45.12% were female and 54.88% were male participants, with

an average age of 41 years. Of all the respondents, 72.51% said their highest levels of education earned were a bachelor's degree, 21.94% had a Master degree and 06% were PhD.

Pearson coefficient correlation was used to identify this relationship. A Pearson correlation addressed the relationship between educational level and crime reduction rate. As depicted in Table 1 there was a significant positive correlation between attitudes towards the relationship between level of education and crime reduction rate ($r = .411$, $N = 225$, $p = .000$, two-tailed).

Table 1. Correlation between education and crime.

		Level of education	Crime rate
Level of education	Pearson Correlation	1	.411**
	Sig. (2-tailed)		.000
	N	225	225
Crime rate	Pearson Correlation	.411**	1
	Sig. (2-tailed)	.000	
	N	225	225

** Significant at the .001 probability level.

The findings of the study suggest a positive relationship between a level of education and crime reduction. These findings are of importance given findings that previous research has demonstrated that higher education predicted a highest support for crime reduction (Lochner, 2004; Lochner & Moretti, 2004, Lochner & Moretti 2003; Lochner, 2010). Among all the findings, the work of Lochner (2004) is highly supportive of the findings of this study. Lochner (2004) emphasizes the role of education as a human capital investment that increases future legitimate work opportunities, which discourages participation in crime.

5. Conclusions and Implication

This paper provides an empirical evaluation of the benefits of education in crime reduction. Theoretically, it is expected that education may contribute to crime reduction by increasing income and hence the opportunity cost to engage in criminal activities. We showed that there were significant relationships between crime reductions with the extra education. The implications of these findings are clear. Not only do they show that improving the educational level can act as a key policy tool to reduce crime, but also that such educational improvements can yield sizable social benefits.

The results in this paper suggest that substantial savings on the social costs of crime can be obtained by investing in education. We find that the probability of committing crimes decrease with years of education.

It is expected that findings of this study could utilize by policymakers who evaluate the benefits and costs of policies that increase education towards crime reduction.

References

1. Becker, Gary (1968). Crime and Punishment: An Economic Approach, *Journal of Political Economy*, 76(2), 169-217.
2. Calvo-Armengol, A. & Zenou, Y. (2004). Social networks and crime decisions: the role of social structure in facilitating delinquent behaviour', *International Economic Review*, 45 (3), 939-958.
3. Farrington, D. P. (2001). Predicting persistent young offenders'. In G.L. McDowell and J.S. Smith (eds) *Juvenile delinquency in the US and the UK*, Macmillan Press Limited, UK.
4. Feinstein, L. (2002). Quantitative estimates of the social benefits of learning, 1: crime, *Wider Benefits of Learning Research Report No. 5*, London: Institute of Education.
5. Groot W & H. M. van den Brink (2010). The effect of education on crime, *Applied Economics*, 42, 279-289.
6. Grogger, J. (1998) Market Wages and Youth Crime, *Journal of Labour Economics*, 16,756-791.
7. Harlow, Caroline (2003). Education and Correctional Populations," Bureau of Justice Statistics Special Report, NCJ 195670.
8. Hirschi, T. & Gottfredson, M. (1995). Control theory and the life-course perspective', *Studies on Crime Prevention*, 4: 131-142.

9. Hjalmarsson, R. (2008). Criminal Justice Involvement and High School Completion, *Journal of Urban Economics*, 63, 613-630.
10. Hjalmarsson R. & Lochner L. (2012). The Impact of Education on Crime: International Evidence, CESifo DICE, Report 2/2012. Retrieved from: http://www.economics.handels.gu.se/digitalAssets/1439/1439011_49-55_research_lochner.pdf.
11. Jacob, B.A., & L. Lefgren. (2003). Are Idle Hands the Devil's Workshop? Incapacitation, Concentration, and Juvenile Crime. *The American Economic Review*, 93:pp. 1560-1577.
12. Home Office (2003). Recorded crime, England and Wales, 12 months to March, 2003, Home Office Statistical Bulletin, December, London: The Home Office.
13. Levitt, S. & L. Lochner (2001). The Determinants of Juvenile Crime," in Gruber, J. (ed.) *Risky Behavior among Youths: An Economic Analysis*, Chicago: University of Chicago Press.
14. Levitt S.D. & Lochner, L. (2000). The determinants of juvenile crime. In J. Gruber (ed.) *Risky behavior by youths*, Chicago: University of Chicago Press.
15. Lochner, L. & E. Moretti (2003). The Effect of Education on Crime: Evidence From Prison Inmates, Arrests and Self-Reports, *American Economic Review*, 94, 155-189.
16. Lochner, L. (2004). Education, Work, and Crime: A Human Capital Approach," *International Economic Review*, 45(3), 811-843.
17. Lochner, Lance (2008). Education and Crime, *International Encyclopedia of Education*, 3rd Edition, Elsevier Ltd.
18. Lochner, Lance (2010). Education Policy and Crime," NBER Working paper 15894.
19. Machin, S. & C. Meghir (2004). Crime and Economic Incentives, *Journal of Human Resources*, 39, 958-979.
20. Machin, Stephen, Olivier Marie, & Sunčica Vujić (2011). The Crime Reducing Effect of Education," *Economic Journal*, 121, 463-484.
21. Meghir C; Palme M & Schnabel, M (2001). The Effect of Education Policy on Crime: An Intergenerational Perspective. Discussion Paper No. 6142, Germany.
22. Moretti, E. (2005). Does education reduce participation in criminal activities? Research presented at the 2005 Symposium on the Social Costs of Inadequate Education. Teachers College, Columbia University, New York, NY.
23. Oreopoulos, P. (2007) Do Dropouts Drop out too soon? Wealth, Health and Happiness from Compulsory Schooling, *Journal of Public Economics*, 91, 2213-2229.
24. Open Society Institute (1997). Education as a crime prevention, Occasional paper series, NO 2, reterived from: http://www.prisonpolicy.org/scans/research_brief_2.pdf.
25. Palmer, E. J., Holmes, A. & Hollin, C.R. (2002). 'Investigating burglars' Decisions: Factors Influencing Target Choice, Method of Entry, Reasons for Offending, Repeat Victimization of a Property and Victim Awareness', *Security Journal*, 15 (1), 7-19.
26. Rutter, M., Giller, H. & Hagell, A. (1998) *Antisocial behaviour by young people: The main message from a major review of research*, Knutsford: Social Information Systems Limited.
27. Tauchen, H., A. Witte, & H. Griesinger (1994) Criminal Deterrence: Revisiting the Issue with a Birth Cohort, *Review of Economics and Statistics*, 76, 399-412.
28. Tauchen, H. & A. Witte (1994), 'Work and crime: an exploration using panel data, NBER Working Paper 4794.
29. Witt, R., Clarke A., & Fielding, N. (1999). Crime and economic activity', *British Journal of Criminology*, 39: 391-400.

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