

Educational Expansion and Delinquency

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Introduction

Education or acquisition of knowledge is essential for individuals in modern societies. While in previous times kinship and religion were important factors to classify people within the social structure, access to higher education has become a basic requirement over the last few decades. Some authors explain the increasing importance of education in a different manner. Bourdieu (1983) points out that education has become an important resource, in his sense, a kind of capital. These resources are scarce, unequally distributed and for this reason valuable goods to achieve different aims like physical well-being and social esteem (Esser 2000). Education is responsible not only for the professional qualification but also for shaping life in a broader sense.

Looking at persons in prison, we can find a link between education and delinquency, too. Several studies conducted in different countries report a very low level of education among this special population. The number of lower and no qualifications is over-represented. On the basis of a representative sample, Enzmann and Greve (2001) show that 40 % of all adolescent prisoners in Germany have no school leaving qualification and only 10 % have a qualification above the *Hauptschule* certificate, which is the lowest one. Entorf, Meyer and Möbert (2004) refer to the adult population in prison and report that 64 % of them have only a *Hauptschule* certificate or even no school certificate at all. Hansen's (2003) findings are similar for England and Wales: two-thirds of all adolescent prisoners there have no school certificate. The problematic school career of these adolescents is indicated by another finding: about 50 % of them were truants during their school career. Further studies in Germany (Matt and Maul 2005) and abroad (Pitsela and Sagel-Grande 2003) corroborate the hypothesis of a low education of incarcerated juveniles. This lack of education of young detainees is a result of an overall negative school career that includes truancy as well as a lack of social bonds within the school.

On the basis of these findings, Lochner and Moretti (2004) calculate for the USA that increasing the rate of males completing high school by about 1 % would reduce financial costs in crime policy (expenditure for prisons, medical

care, etc.) by about one billion dollars. If this rate were to climb by about 10 %, the USA would have 20 % less prison inmates sentenced for homicide or bodily harm.

These data have several shortcomings, however, as may be best illustrated by the distinction between crime or criminal acts, on the one hand, and delinquency or delinquent acts, and so on the other hand. The label "crime" subsumes all actions committed against the law and reported to the police. The statistics gained on the basis of those reports are called *Hellfeld* statistics in Germany and in some cases they have been conducted over several hundred years. These crime statistics are dependent on different aspects. The most important factor is the willingness of people to report experienced crime to the police. It is obvious that this willingness is rather low for rape, for instance, and rather high for burglary. There are also a lot of criminal acts which are not discovered by the police and therefore do not appear in the statistics. All actions committed against the law and potentially punishable are so-called delinquent acts. "White-collar crime" is one example for a delinquent act, which is predominantly committed by married males aged about forty with a good education (Bannenberg 2002). The estimated number of unreported cases is very high for "white-collar crime" and for other criminal acts, too. One way to investigate this *Dunkelfeld* is by interviewing people, for instance, in large surveys. Unfortunately, representative samples for the adult population have very seldom been conducted. Therefore, we have to refer to both *Hellfeld* and *Dunkelfeld* data to answer the question whether educational expansion has an impact on delinquency or not.

Theoretical assumptions

Different theoretical approaches emphasise the hypothesis that education has a strong influence on delinquency. First of all, anomy theory by Robert K. Merton (1995) provides an explanation of this connection. Referring to Emile Durkheim, Merton characterises social strain within a society as anomy. He states that for some groups there is a gap between the predetermined cultural aims of the society and the existing legitimate means to reach this aims. Persons with a low level of education do not have the same opportunities to achieve, for instance, a good job, wealth or other desirable goods. Hence, they are more often forced to achieve these aims by using illegal means. Low education is one possible kind of disadvantage; Merton would say that less educated persons commit more delinquent acts than average or well-educated persons. In his five "modes of adaptation", Merton called this kind of deviance "innovation". Although in his original version Merton's theory provides an explanation of the causal rela-

tionship between class and delinquency, it also seems to be a useful concept to explain the relationship between education and delinquency.

The social control theory presumes that remaining longer in school is closely linked to lower delinquency because a person is confronted with school norms for a longer time. Deviant behaviour is more often discovered in school, it is more often sanctioned and is therefore under a higher degree of control. This specific kind of formal control increases informal social control. For instance, friends, who often come from the same school, are socialised in the same context and cultivate rather similar personal attitudes and values. Informal social control is a very important determinant for delinquency, following Sampson and Laub (1993). The changing nature of informal control explains why some delinquent persons abandon their "career", while other persons continue the delinquent path.

A further theoretical approach within this context deals with self-control. It is assumed that a longer duration of stay in the education system changes personality traits. Because of the higher formal and informal social control highly educated persons are faced with, these persons develop higher levels of self-control. Several studies support the assumption that persons with greater self-control are less involved in delinquent offences (Pratt and Cullen 2000; Vazsonyi, Pickering, Junger and Hessing 2001; Gibbs, Giever and Higgins 2003). Low self-control is, according to the well-known theory of Gottfredson and Hirschi (1990), a trait consisting of high impulsivity, high risk-seeking, and a low degree of future orientation, and is closely related to delinquent behaviour. Adolescents who remain for a longer time in school "are encouraged [...] to have aspirations, to create goals [...] they will be able to achieve [...] and] to develop a stake in their own future and in society" (Hansen 2003). Furthermore, higher education helps to develop different skills in order to solve conflicts in a more communicative way. In conclusion, staying in the educational system helps to create delinquency-averse attitudes and values.

In the sense of Rational Choice Theory (RCT), the focus of which is on a cost-benefit ratio, a longer school attendance decreases the opportunities to commit delinquent acts. "While youngsters are at school, they are being kept off the streets" (Hansen 2003: 143). The higher the education, the higher are the costs of deviant behaviour. In contrast to this hypothesis, Mehlkop and Becker (2004) point out that opportunities to commit special forms of delinquency like tax fraud are better for high status groups; on the other hand, shoplifting may be more frequently committed by low status groups. According to RCT, a crime would be committed if it is profitable. The cost-benefit ratio differs for different acts and for different educational groups.

All in all, most theories assume that higher education would lead to lower willingness to commit criminal acts, educational expansion would lead to lower crime rates. A more differentiated perspective is only held by Rational Choice Theory, which would say that trends vary for different criminal acts. Therefore, we will have a look at violent crime as well as property crime. The development of violence can be analysed by using *Hellfeld* data. Other kinds of delinquent acts will be investigated by using survey data.

Violence: Trends in Crime Statistics

Manuel Eisner (1997, 2002) investigates homicide rates for the last 500 years. According to his research, the rates decreased until the 1950s. Although this development started earlier in the Netherlands and in Great Britain, and some years later in Germany and Italy, the trend was always comparable. An explanation for this development can be found in the theory of civilization by Norbert Elias. The establishment of a state with a pure government monopoly has led to a fundamental shift: violence has become less important, education and economic success are the means to climb the social ladder. However, since the 1950s the numbers of homicide rates have begun to rise again. This development is reported for bodily harm, rape and robbery (Thome and Birkel 2007), too. To explain the u-shaped trend, the authors refer to some new disintegration phenomena like the crisis of the labour market, the crises of the state and further socio-political issues. In general, self-control competences have decreased. In the language of Thome (2004), an “excessive individualism” is responsible for the increasing violence rate.

In the USA and Canada, however, there has been a sharp decline for violent crime since the 1990s. According to LaFree (1999), homicide rates dropped about 30 % between 1991 and 1997, rates for rape about 15 % and rates for bodily harm about 12 %. The decline is also supported by the National Crime Victimization Survey, which has conducted research in the *Dunkelfeld*. Indeed the trend has been reported since 1973, but a tremendous decrease in delinquency rates is reported for the last ten years of the twentieth century. In Canada “homicide rates (...) in 1999 are comparable to rates during the mid-sixties (...) In both countries, the homicide rate increased dramatically between the early sixties and the late seventies before reaching a plateau in the early nineties, after which it decreased again” (Ouimet 2002: 36).

Many criminologists were very surprised about this rapid decline, and influence of educational expansion is almost never mentioned in the literature. Some authors refer to endogeneous reasons, which mean changes in crime policy measures. For instance, the number of police officers has increased in nearly

every city in the United States. Furthermore, more severe penalties have been imposed on offenders. Today the prison population is four times higher than 20 years ago with increasing costs of 20 billion dollars per year. Above all, a new police strategy has been implemented, especially the "zero tolerance" strategy in New York, but empirical evidence for a deterrent effect is very scarce. The crime rate has decreased in every American city, independent of different crime policy measures (Eck and Maguire 2006).

Therefore, exogenous reasons attract more interest in the literature. An interesting explanation is given by Donohue and Levitt (2001), who state that the legalisation of abortion has decreased the number of children who would live in problematical circumstances. On the basis of empirical data this opportunity seems to be without effect (Fox 2006: 301 ff). Some further explanations also try to approach the reasons for this trend. Shrinking youth cohorts, changing drug markets or changing moral standards may be explanations as well as Ouimet's "ethos of moderation in drinking, drug use, sexual activity, and even tobacco use" (2002: 47).

Additionally, Ouimet (2002) gives some figures about the educational development in Canada. He reports that the percentage of young adults between the age of 25 and 29 without a high school certificate was 20 % in 1990, but only 13 % in 1998. In 1990 the percentages of persons with a university degree were 17 % and in 1998 26 %. A significant increase of educated persons is also reported for the United States by LaFree, but according to his study, "educational attainment also expanded rapidly in the 1960s and 1970s, at the same time as the crime boom" (LaFree 1999: 156). According to LaFree and Drass (1996), the economic conditions have to be contained in the analysis. "Increasing levels of educational attainment reduced arrest rates for Whites and African Americans dependent on levels of income inequality" (LaFree 1999: 156).

Up to now declining crime rates, whether in the United States or in Canada, have not been explained sufficiently. For instance, no age-period-cohort analysis has been conducted. Most analyses are restricted to crime statistics and to violent behaviour, not to survey data and other forms of delinquency.

Looking at crime statistics in Germany, different trends can be found. According to the Second Periodical Security Report (German Federal Ministry of the Interior 2006), a decline of all criminal acts has to be reported. Over the last decade offences like burglary and bank robbery have declined about 45 %, homicide rates about 41 %. In contrast to these findings, increasing rates have to be reported for other violent acts. This is caused by the massive increase of bodily harm over the last years. Since the mid 1990s the number of bodily harm offence has risen by almost 15 %. The growing rates of bodily harm have been reported especially for younger persons. The number of violent offences for the

14 to 17 year age group as well as for the 18 to 21 year olds has doubled in the last decade. Some authors argue that the development is an artifact, because the findings of increasing bodily harm are restricted to younger people. They suspect that the willingness to commit a violent act has not risen, but rather the willingness to report it to the police (Pfeiffer and Wetzels 2006). It appears to be difficult to assess whether this development is real or only a product of crime statistics.

In contrast to crime statistics, the development of participation in higher education in Germany follows the trend reported for the United States or Canada. According to Becker (2004), the number of 13-year old schoolchildren who attended a *Gymnasium* (academic secondary school) was rising from 12 to 31 % between 1952 and 1990. The development started in the middle of the 1960s and increased in a linear fashion until 1990. Since that time the educational expansion has remained stable; about 30 % attend the *Gymnasium* annually. Once again we find that crime statistics and trends in educational participation do not overlap. Based on *Hellfeld* analyses we have to conclude that there is no connection between educational expansion and crime development.

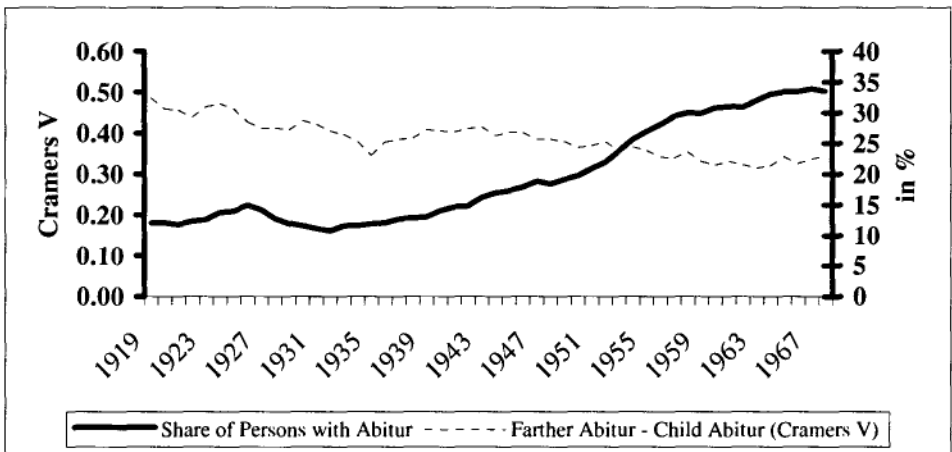
Property Crime: The German ALLBUS

As aforementioned, longitudinal surveys that help to analyse the effect of educational expansion on delinquency over a long time period are rare. One possible source is the German ALLBUS, a representative survey which has been carried out biannually since 1980 (German Social Science Infrastructure Services 2007). In the surveys of 1990 and 2000 a part of the questionnaire dealt with delinquency of the respondents. The sealed-envelope technique was used in order to minimise socially desired answers. In 1990 only persons with a German nationality and residence in West Germany were interviewed. Therefore, the analysis had to be restricted to the same population in the ALLBUS 2000. Due to the fact that the interviewees were selected via telephone in 1990, the household sampling data had to be weighted with an inverted selection-probability. Persons at the age of at least 21 were selected, because they were most likely have finished their school education by the time of the interview. In addition, the analyses are restricted to birth cohorts between 1919 and 1968. In total, 4055 persons were surveyed in order to explore the effect of educational expansion. In 2000, not all respondents had to answer delinquency questions; therefore, the real number is marginally below that. In both surveys four minor delinquent acts, mostly property crime, were asked about; fare-dodging, tax fraud, driving under the influence of alcohol and shoplifting. The participants were asked to tell if they had done such an act in the past, if they would like to

do it in the future, how they would judge it and how likely it is to be detected while doing it.

On the basis of the two surveys, Figure 1 shows how participation in education changed over time (the continuous black line): Only 12 % of the persons born in 1919 acquired a high school diploma (*Abitur*), compared with almost 33 % of the persons who were born fifty years later. In spite of a short interruption in the mid 1920s, the increase is nearly linear. Additionally, the broken line reveals the growing disconnection between the education of the father and the subject: Cramer's V (the connection between the education of the father and the education of the child) decreased continuously from 1919 to 1967.

Figure 1. The educational expansion in Germany

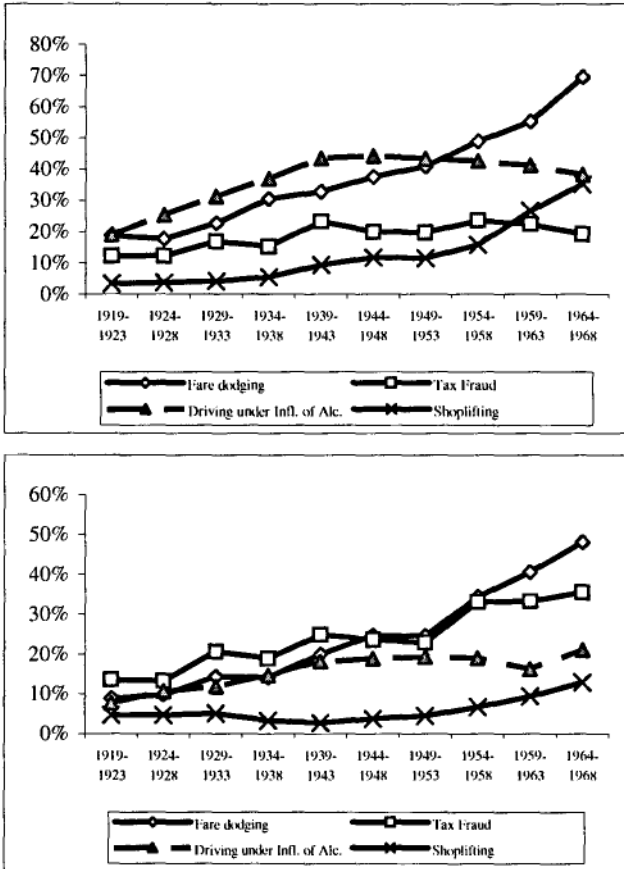


Source: ALLBUS 1990 and 2000

Delinquency rates for different birth cohorts can be found in Figure 2. Nearly 20 % of the oldest cohort have committed at least one act of fare-dodging or driving under the influence of alcohol. For the youngest cohort the numbers are much higher (69 % and 38 %). The percentages in terms of the future willingness to commit a crime are almost a half of the life-time prevalence, but the pattern is nearly the same. Older cohorts do not intend to engage in such activities. Younger cohorts are more willing to commit a crime in future. All in all there is a close connection between the life-time prevalence and the willingness to commit a delinquent act in the future. One exception is tax fraud. Younger cohorts have no higher life-time prevalence, but they would like to do it much more often in the future than older cohorts. Despite this exception, future will-

ingness will be used for the following analyses because of the underlying causal assumption.

Figure 2. Birth cohorts and delinquency (first: lifetime prevalence; second: willingness to do in future)



Source: ALLBUS 1990 and 2000

Due to the fact that the willingness to commit a delinquent act in the future could be answered simply with “yes” or “no”, different logistic regression models have been conducted to analyse the role of education in respect of educational expansion. In the first step only sex, education and the cohort are independent variables (Table 1).

Table 1. Logistic regression models (Exp(B); source: ALLBUS 1990 and 2000)

Model I	Fare dodging	Tax Fraud	Driving under Infl. of Alc.	Shoplifting
Sex: male	1'010	1'331 ***	2'081 ***	0.972
Education: high	2'015 ***	1'974 ***	0.989	1'496 *
Cohort: 1919-1928				
1929-1938	1'631 *	1'664 **	1'522 *	0.887
1939-1948	2'671 ***	2'052 ***	2'188 ***	0.658
1949-1958	3'764 ***	2'428 ***	2'376 ***	1'152
1959-1968	6'558 ***	2'878 ***	2'226 ***	2'268 **
<i>N</i>	3083	3065	3078	3081
<i>Nagelkerkes R²</i>	.139	.070	.046	.044
Model II				
Sex: male	1'015	1'335 ***	2'097 ***	0.958
Education: high	2'037 ***	1'900 ***	1'012	0.994
Cohort: (Year of Birth)	1'051 ***	1'023 ***	1'019 ***	1'019 **
Cohort ²	1'000	1'000	0.999 **	1'001 **
Interaction: Education * Cohort	0.995	1'003	0.993	1'044 **
Survey Year: 2000	0.601 ***	0.755 **	0.803	0.578 *
<i>N</i>	3083	3065	3078	3081
<i>Nagelkerkes R²</i>	.155	.075	.049	.062
Model III				
Sex: male	1'009	1'332 ***	2'088 ***	0.955
Education: high	2'072 ***	1'949 ***	1'022	1'008
Heterogeneity	1'159	1'071	1'027	1'185
Interaction: Education * Heterogeneity	1'064	1'016	1'091	0.736 **
Survey Year: 2000	1'120	1'012	1'010	0.802
Age	0.944 ***	0.971 ***	0.976 **	0.975
Age ²	1'001 *	1'000	1'000	1'001 ***
<i>N</i>	3083	3065	3078	3081
<i>Nagelkerkes R²</i>	.158	.075	.047	.066

The results show that males would commit tax fraud and driving under the influence of alcohol more often than their female counterparts. Surprisingly, a higher education has a negative influence on delinquency. People with higher education are more frequently willing to do three of the four delinquent acts. Almost 42 % of highly educated persons would dodge a fare, but only 21 % of the middle/low educated group would do that (tax fraud: 38 and 21 %, shoplifting: 9 and 5 %). In terms of fare-dodging and tax fraud, a linear trend for the cohorts is obvious. With regard to driving under the influence of alcohol a linear trend is only identifiable for the first three cohorts, the last two do not differ from the cohort between 1939 and 1948. Shoplifting is an act only the youngest cohort is more willing to do.

In the second model a continuous measure of the cohort (year of birth), an interaction term and the year of survey (period) are introduced. Highly educated persons continue to have higher delinquency rates. The same is true for the younger cohorts. In three of four cases there is a large influence of the year of survey. In 2000 people were less willing to commit a delinquent act than in 1990. Shoplifting is the only offence with a significant interaction term. The effect of 1.044 means that the influence of education on shoplifting is higher among the younger than among the older cohorts, which illustrates again a rather unexpected result.

To complete the analyses the age effect is introduced additionally. In order to avoid multi-collinearity the year of birth is replaced by using Cramer's V (the relationship between father's and the child's education). Higher values of this variable stand for higher heterogeneity and that includes older cohorts. The effects for sex and education do not change at all – that is the first result. The second major result is that the effects of the cohort variable disappear completely. What remains is an effect of the age variable: older persons are less willing to commit delinquent acts than younger persons. There is a interaction effect for shoplifting again. The meaning of this effect is the same as the meaning of the interaction effect in the model before: persons from older cohorts with higher education are much less willing to commit shoplifting.

Conclusion

In conclusion, there is a strong effect of education on two of the four variables in the models and, because these educational effects do not increase or decrease over time, we have to conclude that educational expansion has led to higher rates of fare-dodging and tax fraud. This may be labelled as an unexpected consequence. For the other two types of minor delinquency no education effect can

be found. The same seems to be true for violence, but up to now this conclusion is only based on crime statistics and not on survey data.

In addition, the results of the logistic regression models suggest two other conclusions. First, changes in the sex composition of the German population would increase tax fraud and driving under the influence of alcohol, but it can be doubted that such a change will occur at any time. The second conclusion is of much higher actuality: The ageing of the society will decrease rates of all four delinquent acts. So one may say that the ageing of the German society will support inner security.

The presented analyses have several shortcomings, however. First, there are important forms of delinquency completely missed in the analysis of the ALLBUS, like vandalism or violent acts. Secondly, a high number of delinquent acts are committed by adolescents and young adults who have not finished school. For this population no survey data covering different historical periods exist at all. Finally, it is essential to recognise that educational status is only one and not the most important factor in multivariate models of delinquent behaviour. Our focus should shift to other personality factors or social network variables. Of course these factors are associated with educational status, but they are not solely dependent on education. In order to explain long-term development of delinquency, research has to look at changes of these factors, too.