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Social Non-Economic Effects of Education on The Level of Crime

Abstract

The aim of the study is to quantitatively analyze and confirm the existence of a relationship of direct and indirect dependence between the number of crimes committed, or the number of persons sentenced, as the case may be, and selected factors such as expenditure on education, educational structure of population, average length of study and unemployment rate (which is directly related to education). Fulfilment of the aim assumes validation of the research assumption in the form of a hypothesis, the source of the hypothesis being partial theories of a relationship between education and crime. The hypothesis assumes the existence of a relationship of mutual direct non-linear and linear dependence between selected factors. The object of quantitative analysis is a sample from 15 EU countries. The key methods of scientific research are the methods of classification analysis, comparison and abstraction in the formation of a theoretical and methodological framework for addressing the issue; methods of quantitative analysis using statistical methods for processing and evaluation of information in validation of the hypothesis in the application section of the study and methods of synthesis and partial induction in drawing conclusions of the research. Specification of education as the public sector branch of key importance from the viewpoint of society development by public investments for its protection from sociopathic behaviours and particularly crime is an expected benefit. The contribution is an output of the sub-project KEGA 037 UMB - 4/2013 Innovative Study Programme Social Economy and Entrepreneurship.

Keywords: *public expenditure on education, educational structure, unemployment, crime rate, crimes*

Introduction, Research Methods

Education as a result of the educational process is an essential prerequisite for the development of any society. It is involved in the formation of labour force qualifications, in creation of their working-professional skills. It fulfils the economic as well as socio-cultural function. With its effects, education influences human personality. It is important for human values. In addition, it has an impact on family life, its stability, parenting and quality of population; it affects social and political initiative, and many other qualities of personality and society. It shapes the relationship of people to consumption, affects the use of pensions; it has an impact on the character and structure of material consumption and consumption of services. It provides general and specific knowledge which is part of a person's preparation for participation in the labour force. It enables the person to get a job satisfying his/her interests (Benčo, 2000, pp. 137–138). The above shows that attained education has a direct impact on the person's employability and thus the unemployment rate in the country. With its social and economic dimensions, unemployment affects the whole economy as well as society. Social consequences of people's failure to make themselves useful as bearers of work in the market of a given production factor are linked to social consequences. They lie in the negative impact on the psychological development and condition of the person. Unemployment lowers the standard of living, leads to poverty, has a negative impact on family, breaks daily family customs, changes the position and authority of the unemployed in the family, limits social contacts. The unemployed loses self-confidence, sense of life and more frequently commits a crime, succumbs to alcoholism, etc.

Effects of education are manifold, in addition to the economic substance; they may be divided into direct and indirect ones. Within our study, we shall focus mainly on direct and indirect effects in relation to committed crimes (Hronec, M., 2007).

Commitment of crimes and criminality as such belong to the most serious worldwide problems, they are classified as sociopathic deviant forms of behaviour. According to J. Hroncová (2008, 2010, 2012), during the transformation period there was a sharp increase in delinquent behaviour in the population of the Slovak Republic, culminating in 1993 and rising by 56.59% in comparison with 1989. Crime means the aggregate of offences committed in a given society, state or region, based on the definition of an offence in the applicable criminal statute (Emmerová, I., 2011, 2012, 2013). Education and its positive effects is one of effective tools for elimination of criminal activity.

The assumption of the existing mutual relationship between the level of education and the crime rate has been partially supported by several scientific studies.

The theory of a collective consumption good (Samuelson, 1954) describes education as a good the individual consumption of which is connected with arising universal positive externalities (Pigou, 1960). Reduction in the extent of criminal activity committed in society can be identified as one of them.

Feinstein (2002) considers learning and education as the determinant of an individual's propensity to commit a crime. He identifies the influence of education through several channels: the individual's income from legitimate work, quality of family relationships, amount of free time, ability to be aware of and assess risks of individual conduct. This assumption has been partially confirmed by several studies (Nemec, J., Meričková, B., Štrangfeldová, J., 2010).

Attainment of higher education by an individual assumes the individual's higher income from legitimate work and thus increases individual opportunity costs of participation in criminal activities (Lochner, 2004). In a simplified way, this means that participation in criminal activities may be economically disadvantageous to an individual with a legitimate high income. This is associated mainly with the risk the individual has to take and possible incarceration and subsequent loss of legitimate income.

Educational attainment is reflected in the quality of family relationships, which again has an indirect impact on an individual's propensity to commit a crime (Rutter et al., 1998). Children from single-parent families or disrupted families have a higher crime rate than children with a functional family background (Farrington, 2001).

Higher propensities for crime commitment have been proved in the unemployed (unemployment is frequently a result of a low level of educational attainment), when talking about working-age population, and in children and youth with no other out-of-school educational activities, when talking about pre-working-age population (Calvo-Armwengol and Zenou, 2004; Lochner and Moretti, 2001). The employed and students simply have no time left to commit crime.

Education changes, to some extent, an individual's view of his/her own individual conduct, he/she is able to understand better its consequences and related risks; this, of course, holds also for conduct against the law (Hirschi and Gottfredson, 1995).

The above empirical studies partially confirm the existence of a relationship between the level of education and the extent of crime committed. However, these studies do not clearly quantify the degree of influence that factors derived from education have on the extent of crime committed, or they do not determine the order of their importance (Hronec, Š., Meričková, B. and Marcineková, Z., 2008).

The aim of the presented study is to quantitatively test the intensity of the relationship between the extent of crime committed as the dependent variable

and factors linked to education (educational attainment, average duration of education, unemployment in relation to educational attainment, expenditure on education) as independent variables. Outputs of quantitative secondary research seek to test the validity of the scientific assumption in the form of hypotheses about the existence of a relationship between the level of education and the crime rate in society, based on the current stage of knowledge of the problem and results of partial empirical studies and to indicate priority areas of the education and labour market policy from the point of view of the effort to minimize the crime rate in society. In accordance with the aim of the study and formulated research assumption, the *research object* was defined, which is the relationship between the amount of funds spent on education, length of study, educational structure of population and, in the indirect relationship, also between unemployment and the number of committed crimes per 1,000 inhabitants, or the number of the incarcerated per 1,000 inhabitants in selected EU countries. The *object* of quantitative analysis was a sample of 15 EU countries. Selection of the sample was intentional in terms of the comprehensiveness of available data required for the analysis.

The key *methods of scientific research* are the methods of classification analysis, comparison and abstraction in the formation of a theoretical and methodological framework for addressing the issue; methods of causal analysis and comparison in dealing with the posed research question in the application section of the work and methods of synthesis and partial induction in drawing conclusions from the research. The complexity of the research object in the area of the world economy assumes a high degree of abstraction in research of a secondary character. Secondary collection of information from available statistics of the Statistical Office and databases of Eurostat has been made by means of the constructive method of scientific observation. The information obtained was processed and evaluated using statistical methods with the emphasis on correlation analysis.

Pearson's correlation coefficient determines the strength of dependence between observed variables. The correlation coefficient is a measure of the strength of linear dependence. The estimate of the pairwise correlation coefficient is defined as a quotient of the estimate of covariance between x and y to a product of their standard deviations, i. e.:

$$(1) \quad r_{yx} = \frac{\text{COV}_{xy}}{S_x S_y}$$

where $\text{cov } xy$ is the covariance between x and y and can be calculated as the arithmetic mean of the quotient of deviations, i. e., it is a “common” measure of variability (covariance) for two characters (x and y).

The calculation is based on covariance, which is a measure of mixed variability of the variables X and Y .

$$(2) \quad \text{cov } xy = \frac{1}{2} \sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y}) = \bar{x}\bar{y} - \bar{x} \cdot \bar{y}$$

The coefficient of pair-wise correlation (Pearson’s correlation coefficient) has values within the interval $<-1, +1>$, while the closer its value to -1 or $+1$, the stronger the dependence (direct linear relation in the case of positive values, or indirect linear relation in the case of negative values), the closer to zero, the weaker the dependence. The correlation coefficient measures the bilateral strength of dependence between x and y (Hendl, 2012).

The correlation coefficient value identifies the existence of dependence relationship between the level of crime and development of individual indicators: the amount of financial support for education, length of study as well as the unemployment rate.

2. Quantitative Analysis of the Relationship between Selected Indicators of Education and Criminal Activity in Selected EU Countries

The dependence analysis processing is based on available data of dependent and independent variables in selected EU countries within the period from 2003 to 2012, where 2012 is an estimation based on trend analysis. Our study on the dependence between education and criminal activity is based on data about the development of annual expenditure on public and private educational institutions calculated per student. Other economic indicators included in the analysis are data about the unemployment rate in the selected sample (Štrafeldová, J., Hronec, Š., 2013). Of non-economic parameters, dependence is studied in relation to the educational structure of population, defined by % of population with secondary and higher education, total average length of study, as well as the unemployment rate. The above data represent a time series of independent variables. The dependent variable is a time series of the number of crimes committed, as well as the numbers of incarcerated population calculated per 1,000

inhabitants. The following table presents the development of dependence of annual expenditure per student and the number of crimes committed in selected EU countries.

Table 1. Dependence between annual expenditure on private and public educational institutions per student and the number of crimes

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Bulgaria	-	-1.00	-0.97	-0.95	-0.84	-0.96	-0.38	0.03	-0.08	-0.29
Czech Republic	-	-1.00	-0.96	-0.97	-0.47	-0.56	-0.69	-0.69	-0.75	-0.81
Denmark	-	-1.00	-0.94	-0.97	-0.86	-0.52	-0.19	-0.15	-0.17	-0.35
Germany	-	1.00	-0.86	-0.81	-0.86	-0.93	-0.95	-0.95	-0.93	-0.85
Spain	-	-1.00	0.38	0.54	0.59	0.77	0.41	0.03	-0.22	-0.40
France	-	-1.00	-0.92	-0.93	-0.95	-0.97	-0.97	-0.98	-0.99	-0.99
Italy	-	1.00	-0.11	0.82	0.71	0.48	0.45	0.47	0.46	0.43
Cyprus	-	-1.00	-0.85	0.20	-0.19	-0.65	-0.77	-0.55	-0.42	-0.54
Netherlands	-	-1.00	-0.41	-0.72	-0.81	-0.89	-0.92	-0.91	-0.92	-0.93
Poland	-	-1.00	-0.95	-0.84	-0.88	-0.93	-0.92	-0.84	-0.79	-0.79
Slovakia	-	1.00	0.78	0.12	-0.28	-0.59	-0.69	-0.80	-0.86	-0.89
Finland	-	1.00	-0.36	-0.71	-0.53	-0.32	-0.28	-0.44	-0.10	-0.38
Sweden	-	-1.00	-0.65	-0.90	0.40	0.74	0.78	0.77	0.81	0.79
United Kingdom	-	1.00	-0.67	-0.82	-0.83	-0.80	-0.77	-0.82	-0.86	-0.89
Norway	-	-1.00	-1.00	-0.95	-0.95	-0.96	-0.94	-0.94	-0.96	-0.94
Average		-0.33	-0.56	-0.53	-0.45	-0.47	-0.46	-0.45	-0.45	-0.52

Source: own processing based on Eurostat, 2014

As presented in the table, indirect linear dependence can be identified in most of the countries (except Italy and Sweden). Countries with the highest positive influence include France (-0.99), Norway (-0.94), the Netherlands (-0.93). Countries with the lowest influence include Bulgaria (-0.29) and Denmark (-0.35). On average, it is moderate linear dependence, meaning that the number of crimes committed falls moderately with the increase in annual expenditure on education per student. The development of dependence between the educational structure and the number of crimes committed is presented in the following table.

Table 2. Dependence between the % of population with secondary and higher education and the number of crimes committed

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Bulgaria	-	-1.00	-0.98	-0.83	-0.74	-0.79	-0.38	0.22	0.06	-0.20
Czech Republic	-	-1.00	-1.00	-0.99	-0.53	-0.64	-0.78	-0.84	-0.89	-0.91
Denmark	-	-1.00	-0.45	-0.72	0.11	-0.11	-0.25	-0.25	-0.24	-0.22
Germany	-	1.00	0.96	0.90	0.02	-0.54	-0.70	-0.79	-0.82	-0.80
Spain	-	-1.00	0.38	0.54	0.62	0.72	0.38	-0.08	-0.35	-0.51
France	-	-1.00	-0.97	-0.98	-0.99	-0.98	-0.98	-0.99	-0.99	-0.99
Italy	-	-1.00	0.44	0.76	0.86	0.73	0.50	0.31	0.32	0.43
Cyprus	-	-1.00	-0.91	0.28	-0.17	-0.53	-0.62	-0.45	-0.36	-0.50
Netherlands	-	-1.00	-0.69	-0.82	-0.88	-0.89	-0.88	-0.63	-0.55	-0.61
Poland	-	-1.00	-0.88	-0.93	-0.91	-0.94	-0.94	-0.92	-0.91	-0.91
Slovakia	-	1.00	0.35	-0.17	-0.43	-0.64	-0.73	-0.81	-0.85	-0.88
Finland	-	1.00	-0.79	-0.87	-0.72	-0.58	-0.49	-0.60	-0.26	-0.47
Sweden	-	-1.00	-1.00	0.68	-0.04	-0.27	-0.26	-0.25	-0.18	-0.12
United Kingdom	-	-1.00	-0.87	-0.91	-0.95	-0.93	-0.96	-0.97	-0.98	-0.98
Norway	-	-1.00	-1.00	0.38	0.58	0.64	0.66	0.67	0.63	0.61
Average		-0.60	-0.49	-0.25	-0.28	-0.38	-0.43	-0.43	-0.42	-0.47

Source: own processing based on Eurostat, 2014

Similarly as in the above dependence, on average, moderate non-linear dependence can be identified in the countries studied. The only country with no positive dependence proved is Italy (0.43). Countries with proved positive dependence between the educational structure and the number of crimes committed include France, England, the Czech Republic and Poland. Commitment of crimes is probably influenced also by the average length of study.

Table 3. Dependence between the total length of study in years and the number of crimes committed

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Bulgaria	-	-1.00	-0.95	-0.97	-0.92	-0.70	-0.58	-0.01	-0.23	-0.48
Czech Republic	-	-1.00	-0.98	-0.90	-0.39	-0.56	-0.72	-0.82	-0.87	-0.92
Denmark	-	-1.00	-0.76	-0.73	-0.74	-0.71	-0.65	-0.56	-0.47	-0.59
Germany	-	1.00	-0.27	-0.63	-0.71	-0.82	-0.88	-0.91	-0.87	-0.78
Spain	-	-1.00	0.02	0.22	0.31	0.40	0.25	-0.51	-0.74	-0.83

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
France	-	1.00	0.74	0.83	0.93	0.95	0.95	0.90	0.86	0.66
Italy	-	-1.00	0.04	0.62	0.70	0.70	0.57	0.47	0.46	0.40
Cyprus	-	1.00	0.03	0.53	-0.03	-0.60	-0.84	-0.78	-0.77	-0.72
Netherlands	-	-1.00	-0.06	-0.64	-0.78	-0.87	-0.92	-0.92	-0.87	-0.92
Poland	-	1.00	-0.95	-0.86	-0.77	-0.75	-0.79	-0.81	-0.82	-0.84
Slovakia	-	1.00	0.66	0.17	-0.23	-0.48	-0.57	-0.66	-0.69	-0.71
Finland	-	1.00	-0.91	-0.91	-0.81	-0.72	-0.71	-0.74	-0.51	-0.57
Sweden	-	-1.00	-0.86	-0.69	-0.89	-0.97	-0.96	-0.89	-0.84	-0.84
United Kingdom	-	-1.00	-0.98	0.57	0.76	0.79	0.77	0.73	0.71	0.68
Norway	-	-1.00	-0.56	-0.71	-0.79	-0.67	-0.54	-0.61	-0.67	-0.70
Average		-0.20	-0.39	-0.27	-0.29	-0.33	-0.38	-0.41	-0.42	-0.48

Source: own processing based on Eurostat, 2014

On the basis of the above table, a positive influence of the total length of study may be assumed. On average, there is moderate non-linear dependence for the whole time period and the countries studied. The highest influence of the length of study on crime reduction can be observed in the case of the Czech Republic and the Netherlands. Strong non-linear dependence can be observed also in the case of Spain, Poland and Sweden. There is relatively strong non-linear dependence also in the case of the Slovak Republic. Again, Italy is specific. The correlation coefficient of this country is 0.4, i.e., moderate linear dependence, meaning that the number of crimes committed grows moderately with the increase in the number of years of study.

Unemployment is one of the important factors affecting crime commitment. With its social and economic dimension, unemployment affects the whole economy as well as society. Social consequences of the failure to use people as bearers of work in the market of a given production factor is connected with psychological consequences. They lie in a negative influence on human psychological development and condition. Unemployment reduces the standard of living, leads to poverty, negatively affects family, breaks daily family customs, changes the position and authority of the unemployed in the family. Since education directly influences employability of individuals, it is necessary to examine its relation to crime commitment. In this case, the influence of education is indirect. Thus, average linear dependence of the relation is assumed.

Table 4. Dependence between unemployment (in %) and the number of crimes committed

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Bulgaria	-	1.00	0.97	0.98	0.86	0.89	0.55	0.44	0.34	0.10
Czech Republic	-	-1.00	-0.13	0.70	-0.14	0.25	0.20	0.01	0.03	0.00
Denmark	-	-1.00	0.94	0.89	0.82	0.49	0.59	0.41	0.29	0.06
Germany	-	1.00	-0.74	-0.35	0.26	0.65	0.74	0.82	0.83	0.79
Spain	-	1.00	-0.49	-0.61	-0.67	-0.06	-0.44	-0.73	-0.83	-0.89
France	-	-1.00	-0.95	-0.77	0.44	0.69	0.31	-0.01	-0.18	-0.39
Italy	-	1.00	-0.46	-0.91	-0.96	-0.93	-0.93	-0.91	-0.81	-0.22
Cyprus	-	1.00	-0.55	-0.47	-0.08	0.35	-0.25	-0.03	0.04	-0.34
Netherlands	-	-1.00	-0.80	-0.25	0.28	0.61	0.62	0.31	0.21	-0.13
Poland	-	1.00	0.95	0.98	0.99	1.00	1.00	1.00	1.00	0.99
Slovakia	-	1.00	0.23	0.46	0.63	0.77	0.79	0.60	0.54	0.48
Finland	-	-1.00	0.93	0.99	0.64	0.44	0.44	0.32	0.26	0.27
Sweden	-	-1.00	-0.97	-0.35	-0.74	-0.75	0.03	0.17	0.23	0.27
United Kingdom	-	1.00	0.85	-0.33	-0.56	-0.75	-0.81	-0.88	-0.91	-0.92
Norway	-	-1.00	-0.97	0.29	0.60	0.74	0.75	0.66	0.62	0.63
Average		0.07	-0.08	0.08	0.16	0.29	0.24	0.14	0.11	0.05

Source: own processing based on Eurostat, 2014

On average, the correlation analysis does not prove any direct dependence between the variables studied. This may be a result of various social security systems in the EU countries studied. Clearly, the strongest influence of unemployment and the number of crimes can be observed in Poland (up to 0.99) and Germany (0.79). In both cases there is strong linear dependence. Countries where no dependence between the variables is confirmed include the Czech Republic, Denmark, Bulgaria and the Netherlands. Non-linear dependence can be observed in the case of England, where the coefficient is - 0.92. It means that the number of crimes committed falls with the increasing unemployment rate.

The following table presents the overall assessment of the influence of the factors examined on the number of crimes. The extent of influence has been calculated as the average order of the country in examining individual factors and the number of crimes. The lowest score means the highest average influence (positive dependence) between the factors examined and the number of crimes committed.

Table 5. Overall assessment of dependence between selected factors and the number of crimes per 1,000 inhabitants

	A	B	C	D	E	Average of order	Average of Influence
Bulgaria	-0.45	-0.74	-0.32	0.02	0.00	5.40	4.00
Czech Republic	0.89	0.85	0.97	0.97	-0.25	13.00	12.00
Denmark	0.17	0.28	0.58	0.50	0.43	8.20	7.00
Germany	-0.95	-0.62	-0.94	-0.93	0.97	1.60	1.00
Spain	0.77	0.68	0.68	0.26	0.36	9.00	8.00
France	0.91	0.88	0.93	-0.44	0.54	9.60	10.00
Italy	-0.31	-0.24	0.48	-0.13	0.66	5.40	4.00
Cyprus	0.51	0.26	0.59	0.65	0.14	9.60	10.00
Netherlands	-0.83	-0.64	-0.44	-0.78	0.31	3.60	2.00
Poland	-0.08	-0.38	0.18	0.30	-0.46	8.20	7.00
Slovakia	0.70	0.88	0.53	0.29	0.30	9.40	9.00
Finland	-0.81	-0.66	-0.77	-0.52	0.21	3.80	3.00
Sweden	-0.83	-0.66	0.02	0.50	-0.17	6.40	5.00
United Kingdom	0.88	0.81	0.91	-0.78	0.85	7.80	6.00
Norway	0.96	-0.22	-0.67	0.78	-0.65	10.20	11.00

A – Overall dependence between annual expenditure on private and public educational institutions calculated per student and the number of crimes

B – Overall dependence between annual expenditure on private and public educational institutions in % of GDP per inhabitant and the number of crimes

C – Overall dependence between the % of population with secondary and higher education and the number of crimes

D – Overall dependence between the total length of study in years and the number of crimes

E – Overall dependence between unemployment in % and the number of the incarcerated per 1,000 inhabitants

Source: own processing based on Eurostat, 2014

The countries where positive effects of investments in education, length of study, qualifications structure and unemployment are reflected to the greatest extent include Germany, the Netherlands and Finland. The countries where the least positive average influence of the factors on the number of crimes committed is reflected are the Czech Republic, Cyprus, France and Norway.

In connection with the number of crimes, also dependence between the factors and the number of the incarcerated should be examined. In this case, considerable differences are observed, which can be explained by the strictness or benevolence of the judicial system and criminal legislation.

Table 6. Overall assessment of dependence between selected factors and the number of the incarcerated per 1,000 inhabitants

	A	B	C	D	E	Average of order	Average of influence
Bulgaria	-0.29	-0.06	-0.20	-0.48	0.10	11.40	12.00
Czech Republic	-0.81	-0.91	-0.91	-0.92	0.00	4.20	1.00
Denmark	-0.35	-0.13	-0.22	-0.59	0.06	10.60	13.00
Germany	-0.85	-0.54	-0.80	-0.78	0.79	5.40	5.00
Spain	-0.40	-0.65	-0.51	-0.83	-0.89	8.60	9.00
France	-0.99	-0.82	-0.99	0.66	-0.39	6.40	6.00
Italy	0.43	-0.52	0.43	0.40	-0.22	12.20	14.00
Cyprus	-0.54	-0.51	-0.50	-0.72	-0.34	9.40	10.00
Netherlands	-0.93	-0.66	-0.61	-0.92	-0.13	5.20	4.00
Poland	-0.79	-0.56	-0.91	-0.84	0.99	4.60	2.00
Slovakia	-0.89	-0.70	-0.88	-0.71	0.48	5.00	3.00
Finland	-0.38	-0.11	-0.47	-0.57	0.27	9.80	11.00
Sweden	0.79	0.77	-0.12	-0.84	0.27	8.60	9.00
United Kingdom	-0.89	-0.90	-0.98	0.68	-0.92	7.60	8.00
Norway	-0.94	0.35	0.61	-0.70	0.63	7.20	7.00

A – Overall dependence between annual expenditure on private and public educational institutions calculated per student and the number of the incarcerated per 1,000 inhabitants

B – Overall dependence between annual expenditure on private and public educational institutions in % of GDP per inhabitant and the number of the incarcerated per 1,000 inhabitants

C – Overall dependence between the % of population with secondary and higher education and the number of the incarcerated per 1,000 inhabitants

D – Overall dependence between the total length of study in years and the number of the incarcerated per 1,000 inhabitants

E – Overall dependence between Unemployment in % and the number of the incarcerated per 1,000 inhabitants

Source: own processing based on Eurostat, 2014

The best of the assessed countries is the Czech Republic, which, paradoxically, is in the last position in the influence on the number of crimes. This may be caused by the very nature of crimes where offenders may be granted a suspended sentence because of low gravity of the crime, or by misconfigured legislation failing to sufficiently protect society from such sociopathic behaviour. Poland and Slovakia hold the top positions. All the cases include V4 countries characterized by poor law enforcement. The poorest positive influence of the factors can be observed in the case of countries such as Italy, Denmark and Bulgaria.

Conclusion

Education is involved in the formation of labour force qualifications, shaping of their working-professional skills enabling them to perform complex work. It fulfils economic as well as socio-cultural functions. With its effects, education influences human personality. It is important for the formation of human values.

The aim of the study was to quantitatively analyze and confirm the existence of a relationship of direct and indirect dependence between the number of crimes committed, or the number of persons sentenced, as the case may be, and selected factors connected with education, such as expenditure on education, educational structure of population, average length of study and unemployment rate (which is directly related to education) (Hronec, M., 2007). The given hypothesis assuming the existence of a relationship of mutual non-linear and linear dependence between the selected factors was partially confirmed. The countries with the greatest positive effects of investments into education, length of study, qualifications structure and unemployment observed were Germany, the Netherlands and Finland. The countries showing the least positive average influence of the factors on the number of committed crimes were the Czech Republic, Cyprus, France and Norway.

In examining the dependence between the selected factors and the number of the incarcerated, distinctively dissimilar differences were observed, which can be explained by the strictness or benevolence of the system of justice and criminal legislation. The Czech Republic was the best of the assessed countries, paradoxically, in the last position in the influence on the number of crimes. This may be caused by the very nature of crimes, where offenders may be granted a suspended sentence because of the low gravity of the crime, or by misconfigured legislation failing to sufficiently protect society from such sociopathic behaviour. Also Poland and Slovakia held top positions. All the cases included V4 countries characterized by poor law enforcement.

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