Elżbieta SZCZYGIEŁ, PhD
Section of socio-economic analysis, "Center for Education and Enterprise Support"

CHILD HOMELESSNESS. STATISTICAL ANALYSIS OF THE PHENOMENON AND ITS IMPLICATIONS IN MATERIAL SECURITY CONTEXT.

"All times create their homeless"
/Jan Śledzianowski/

Introduction[1]

Homelessness of children and youth is a phenomenon which has many reasons. Central Statistical Office (further: CSO) as well as Ministry of Labour and Social Policy (further: MLSP) have conducted the research to diagnose a number of factors that may have decisive influence on the homelessness of a particular person. According to CSO, the most common are: expulsion from home, moving out (an administrative decision), leaving the dwelling to family and eviction[2]. The aim of the article is to present statistical analysis of the phenomenon of child homelessness[3] in Poland and its implication in material security context. The data used for the purpose of analysis come from two nationwide researches presenting the phenomenon of homeless children as well as information concerning financial situation in particular provinces of Poland.

Spatial differentiation of child homelessness

In the last few years a number of researches concerning the problem of homelessness were conducted. The most common are National Census of Population and Housing, and National Counting of the Homeless Action. First of them took place in 2011, and the second one is a cyclical research and was held twice (in 2011 and 2013).[4]

According to census data from 2011 in Poland there were 7662 homeless people, including 96 persons below 19 year old. Slightly different results are presented by the MLSP, which show that the number of the homeless in Poland in 2013 reaches over 30 000 of people, including 1538 children. In 2011 the estimat-

---

[1] The article came into being within the confines of the research conducted for "Children Rough Sleepers" project (Daphne III – project no. JUST/2011/DAP/AG3022).

[2] *Population. Socio-demographic condition and structure. National Census of Population and Housing 2011.* Warsaw 2013, review table no. 49
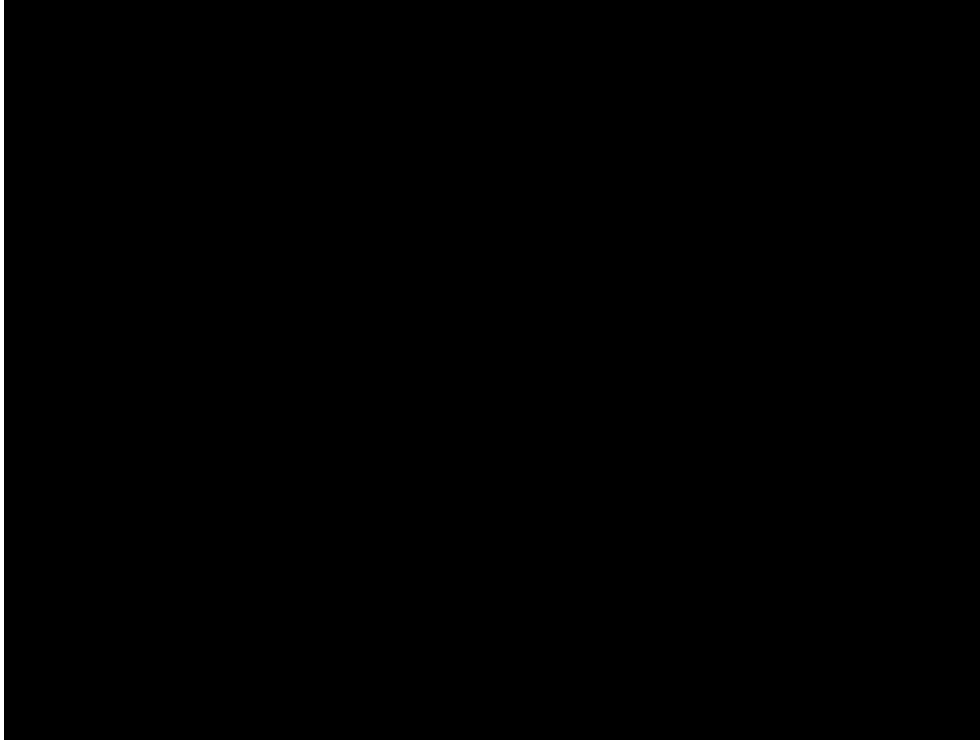
[3] For the purpose of the article, the term "child" indicates a person below 18 (or 19 years old, according to the CSO researches).

[4] The findings of both researches are available on the Internet:
http://www.stat.gov.pl/gus/nsp_PLK_HTML.htm and http://www.mpips.gov.pl/pomoc-spoleczna/bezdomnosc/

ed number of homeless people was over 43 000, including 2055 children.[5] Different results concerning the magnitude of the problem are also given by institutions responsible for bringing help to these people[8]. Each of these researches show different spatial arrangement of the phenomenon of homelessness affecting the examined group.

The analysis of the rate of homeless children in particular provinces indicates that only in a few of them the scale of the problem is similar. (Fig. 1).

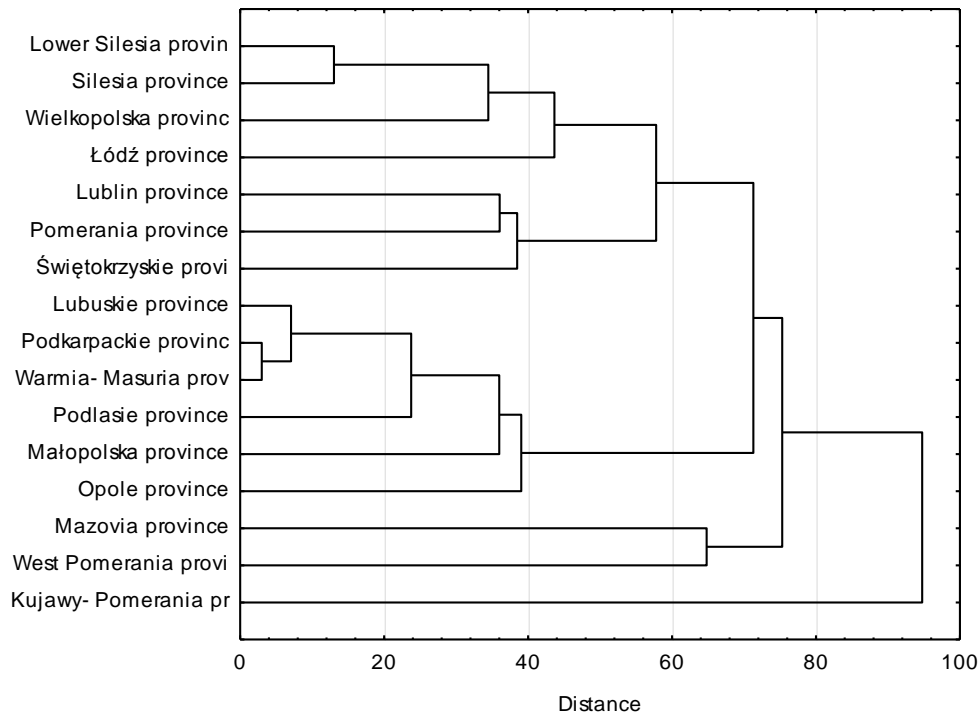**Figure 1**: The rate of homeless children according to CSO and MLSP researches.

*CSO 2011 – the research presents only the number of people aged 0- 29 in the scheme of the provinces belonging to so-called I category of homelessness.

Source: Self-elaboration on the basis of *Population. Socio-demographic condition and structure. National Census of Population and Housing 2011. Warsaw 2013.* Review table no. 50; *Report on the implementation of activities for homeless people in the provinces in 2010*, MLSP, Warsaw 2012, p.7 *Report on the implementation of activities for homeless people in the provinces in 2012* and the results of *National Counting of the Homeless Action (February 7/8,2013),* MLSP, Warsaw 2013, p. 8

Figure 2: Euclidean distance for the number of homeless children in particular provinces on the basis of MLSP researches*

---

[5] *Population. Socio-demographic condition and structure...* op. cit., review table no. 48

* - considering the two datasets (2011 and 2013)
Source: self-elaboration on the basis of data from fig. 1

Considering the similarities and the differences between provinces, they were grouped according to the similarity of the problem (Fig. 2). By denoting cut-off point at the level of 40, six groups of provinces were distinguished where the phenomenon of homelessness of children and youth is of the similar rank:

1) Lower Silesia province, Silesia province, Wielkopolska province and Łódź province
2) Lublin province, Pomerania province, Świętokrzyskie province
3) Lubuskie province, Podkarpacie province, Warmia-Masuria province, Podlasie province, Małopolska province, Opole province
4) Mazovia province
5) West Pomerania province
6) Kujawy-Pomerania province

Such a grouping shows the diversity of the analysed phenomenon. Some groups (e.g. 3) comprise a few provinces, including these of so-called Eastern Wall, which is poorer when compared with the rest of the country. In children finantial security context, the action to indicate the economic factor, which has the influence on the existence of homelessness, was undertaken.

The Causes of Homelessness

CSO, as well as MLSP, in the conducted researches tried to diagnose what are the reasons for homelessness. According to census data, there are ten key

causes. The most important are: expulsion from home, moving out as a result of an administrative decision, leaving the dwelling to family on one's own initiative, eviction or unemployment[6]. These causes are analysed also with reference to children. The data of the Ministry research were not presented yet, that is why it is impossible to indicate the key causes of homelessness among the examined people[7]. The majority of causes concerning the homeless in total corresponds to these indicated by people aged 0-19. (Table 2)

Table 2: The causes of homelessness of people altogether and people aged 0-19 according to CSO

Age group	Total			0-19 lat		
	Total	Male	Female	Total	Male	Female
number of people						
Moving out (an administrative decision)	19,19	19,23	18,92	35,42	38,78	31,91
Expulsion from home by family/flatmates	24,64	25,11	21,88	22,92	22,45	23,40
Leaving home to family on one's own initiative	14,68	14,86	13,63	20,83	16,33	25,53
Escape from violence in family	2,69	1,57	9,24	7,29	8,16	6,38
Losing accommodation guaranteed by previous employee	1,07	1,13	0,72	0,00	0,00	0,00
Compulsion to leave an orphanage at the age of 18	0,61	0,60	0,72	1,04	0,00	2,13
Eviction	14,04	14,19	13,18	5,21	6,12	4,26
Debt	6,68	6,46	7,98	1,04	2,04	0,00
Unemployment	12,29	12,28	12,38	5,21	4,08	6,38
Leaving penal institute	4,10	4,57	1,35	1,04	2,04	0,00

Sources: Self-elaboration on the basis of *Population. Socio-demographic condition and structure...,* op. cit. Review table no. 48

In financial security context of children, it is worth noticing that the eviction, unemployment or debt, which are, above all, of income character, are the common causes indicated by adults (1/3 of cases in total), though they are not the most frequent. As it is shown in the research on Life Satisfaction of the Homeless held under the guidance of Prof. M. A. Basińska, only 10% of homeless people seeks causes of homelessness in financial problems[8].

---

[6] When the causes are considered to be the only one. Taking into account more than one simultaneously, the causes of homelessness were: debted, eviction, the compulsion of leaving an orphanage due to reaching the lawful age (more than 10% of respondents). Cf. *Population. Socio-demographic condition and structure...,* op. cit. Review table no. 51

[7] Cf. *Report of Realization of activity for homeless people in provinces in 2012...,* op. cit., p. 15

[8] M. A. Basińska, A. Sucharska-Daraż, K. Wolszczak, *Satysfakcja z życia osób bezdomnych. Doniesienie z badań.* www.salvus.org.pl

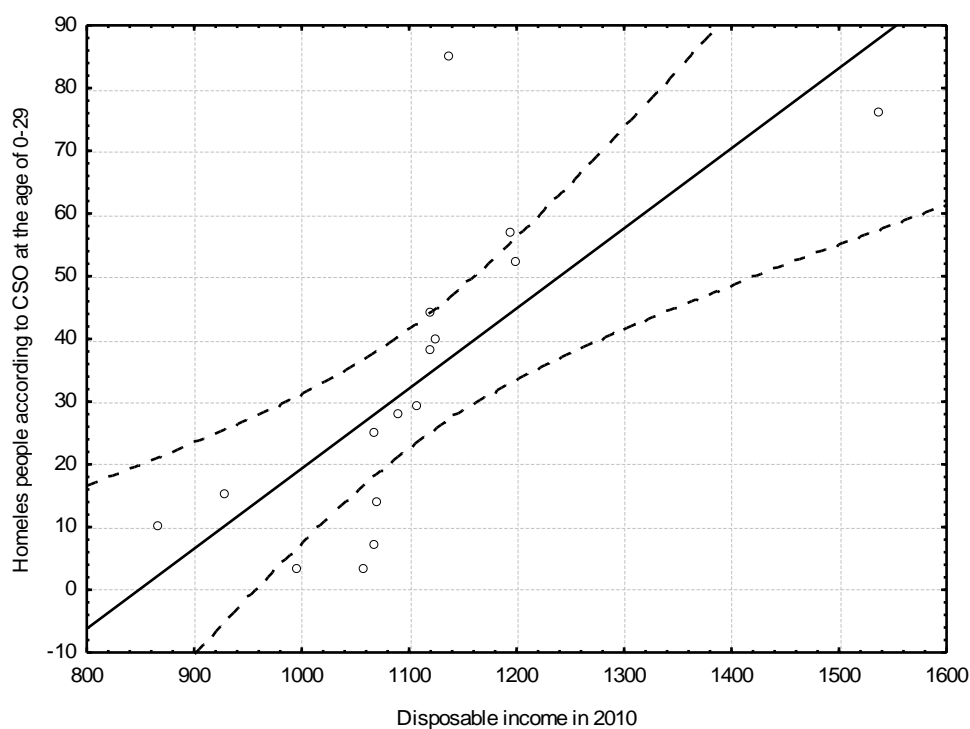**Financial situation of children and the danger of becoming homeless**

Homelessness can be associated with poverty and unsatisfied basic financial needs. In this context, it can be the effect of low income or its lack. The attempt was made to indicate economic factors which may have influence on the existence of the phenomenon of child homelessness in a particular province[9]. Two variables were designated:

x1: average disposable monthly income per person in particular province for the year preceding the research;

x2: the percentage of people in families taking advantage of financial help on the grounds of poverty in a particular province for the year preceding the research.

In the first instance, the existence of relation between child homelessness and lower average disposable income was analysed. The aim of such a research was to conclude whether in a province where people have lower incomes the problem of homelessness in the following years is of greater extent (Fig. 3,4 and 5)
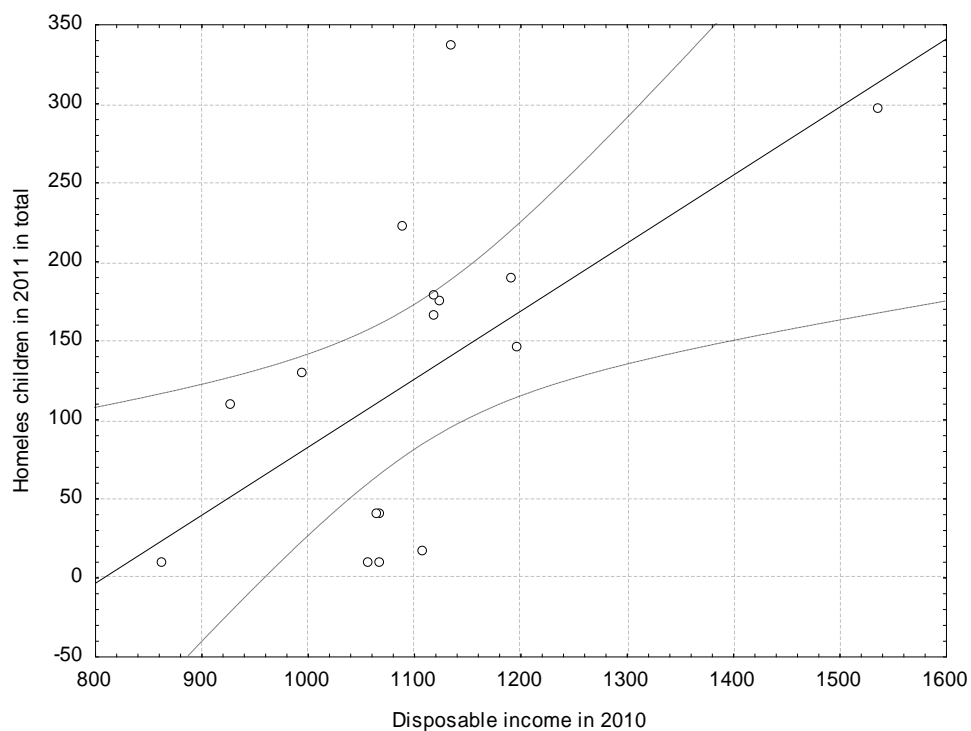
Figure 3: Scatter diagram showing the relationship between the average disposable income in 2010, and the number of homeless children in 2011 (CSO's research)

Source: self-elaboration based on *Household budgets survey in 2010*, Warsaw 2011, p. 95; *Population. Social demographic condition and structure*..., op. cit. review table No. 50
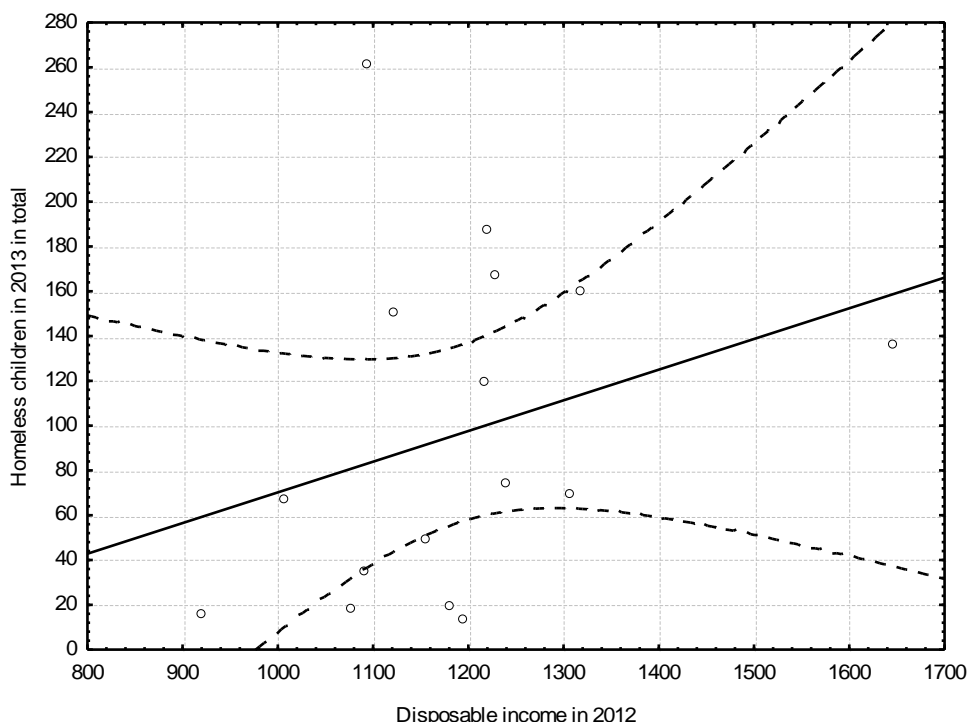
---

[9] Due to the lack of the access to the data not identified in the respective researches (that is CSO and MLSP), the attempt to analyse the factors causing homelessness according to result data was rejected. It results from the lack of possibility of finding the correlation between these causes.

Figure4: Scatter diagram showing the relationship between the average disposable income in 2010 and the number of homeless children in 2011 (the research of MLSP)

Figure 5: Scatter diagram showing the relationship between the average disposable income in 2012 and the number of homeless children in 2013 (the research of MLSP)

The analysis of the scatter diagrams indicates that these phenomena to a considerable degree were correlated with one another only in 2011, which can suggest that indeed the average monthly disposable income in a particular region obtained in 2010 could have an impact on the occurrence of the problem of child homelessness (but without determining the direction of this impact) However, the results of ministerial research from 2013 do not confirm the existence of such a relation. At this point it should be noticed that the correlation between the number of homeless adults and the respective income presents itself in a slightly different way (Tab. 3.)

Table 3: The Results of the correlation between the number of homeless adults and the average monthly disposable income obtained in a particular province

	R	R^2
CSO 2011	0,8329	0,6937
MLSP 2011	0,7394	0,5467
MLSP2013	0,5364	0,2878

Source: self-elaboration based on the same data as in fig.1

The coefficients of correlation for individual researches show stronger relationship between both of the analyzed quantities. It is necessary to stress that the number of the adults will be the intervening variable between the income and the number of homeless children, on account of the phenomenon of child homelessness itself. In Poland the problem of children rough sleepers was not diagnosed in such a scale as it is e.g. in Russia[10]. Child homelessness in most cases is an effect of parents' homelessness. It can be easily noticed while analyzing the values of correlation parameters in the respective researches (Table 4.)[11]

Table 4: The Results of the correlation between the number of homeless adults and the number of homeless children in a particular region

	R	R^2
CSO 2011	0,8852	0,7836
MLSP 2011	0,8158	0,6655
MLSP 2013	0,7591	0,5763

Source: self-elaboration based on the same data as in fig. 1

The results of the analysis of regression indicates positive correlation between variables only for the data from 2011 (Table 5),thus only for this year it will be possible to reject a conclusion that there is a connection between child homelessness and obtaining lower average disposable income in a particular province (i.e. in richer provinces there will be more homeless children.) The lack of regression relationship for the year 2013 can indicate that the probability of occurrence of this type of relationship can be greater (i.e. in richer provinces homeless children statistically will not occur more often.)

---

[10] The Bezprizorni phenomenon.
[11] Cf. a comment in *National Population and Housing Census 2011: "number of children under 17 clearly indicates that the number of homeless families is increasing."* Cf. *National Population and Housing Census 2011,* Warsaw 2012, p. 91.

Table 5: The results of the analysis of regression between the number of homeless children and the monthly average disposable income obtained in a particular province

	R	R^2	alt. R^2	F (1, 14)	*p*
CSO 2011	0,69978	0,48970	0,45325	13,43474	0,00255
MLSP 2011	0,57381	0,32926	0,28135	6,87253	0,02012
MLSP 2013	0,28168	0,07935	0,01358	1,20657	0,29054
	model's components	B	Standard error B	t(14)	p
CSO 2011	Free term	***-95,5031***	***35,33181***	***-2,70304***	***0,017154***
	Parameter α_1	***0,1161***	***0,03167***	***3,66534***	***0,002546***
MLSP 2011	Free term	-304,446	166,5721	-1,82771	0,088980
	Parameter α_1	***0,391***	***0,1493***	***2,62155***	***0,020115***
MLSP 2013	Free term	-51,9462	136,0646	-0,381776	0,708359
	Parameter α_1	0,1245	0,1134	1,098441	0,290544

Vital parameters – bold and italics
Source: self-elaboration based on the same data as in fig. 1

An attempt to explain the fact that there is positive correlation between the average monthly level of disposable income per household member and the number of homeless children through migration of homeless people is not satisfactory It has two reasons. Firstly, as ministerial data on this subject indicate, migration itself does not cover all of the homeless. Apart from the difficulty in measuring this phenomenon, the migration balance in 2013 is (-10288) people in total (without age division.)[12] Therefore, not all of the "diagnosed" people (as defined in the ministerial document) whose last place of living was a community in a particular province, took advantage of the pay for accommodation in a community in other region[13]. Besides, the only province where in 2013 the increase in the number of people from other provinces took place, and to whom the community council of a particular region paid "extra" for a stay in places of accommodation, was mazowieckie province[14]. Secondly, as it results from the content of quoted ministerial document, "Children were staying mostly in places for single mothers with children and in cottages and summer houses[15]. Staying in such institutions is connected with a place of the last register, so children placed in the institutions located in a particular province had to "come from" this province.

It can be also confirmed by the results of analysis for the second of the variables taken into account (x_2) – the percentage of people in families taking advantages of the financial help on the grounds of poverty in a particular province for the year preceding the research. For the data from 2011 (CSO and MLSP data) there is a statistically significant positive correlation between the percentage of people taking advantage of the financial help on the grounds of poverty in the year preceding the research and the percentage of homeless children and teenagers in

---

[12] Cf. *Report on action implementation for the homeless in regions in 2012…*, op. cit., p. 23 and next.
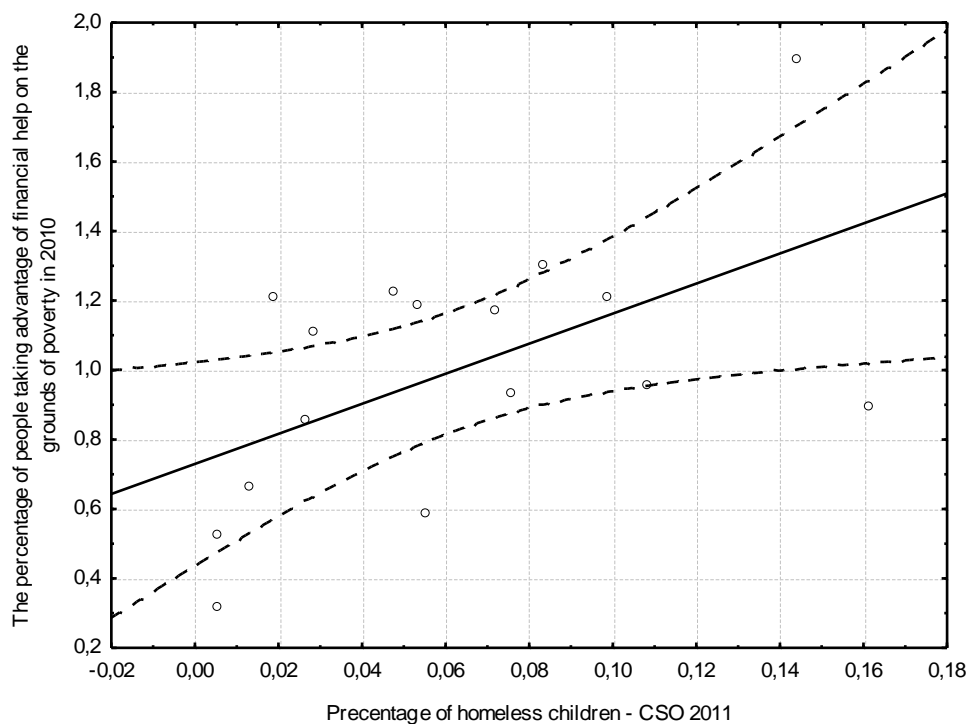[13] Ibidem, p. 25.
[14] Even in śląskie and pomorskie provinces, where the next highest average monthly disposable income is registered, there was an "outflow" of the homeless in general.
[15] *Report on action implementation for the homeless in the provinces in 2012…,* op. cit., p. 7.
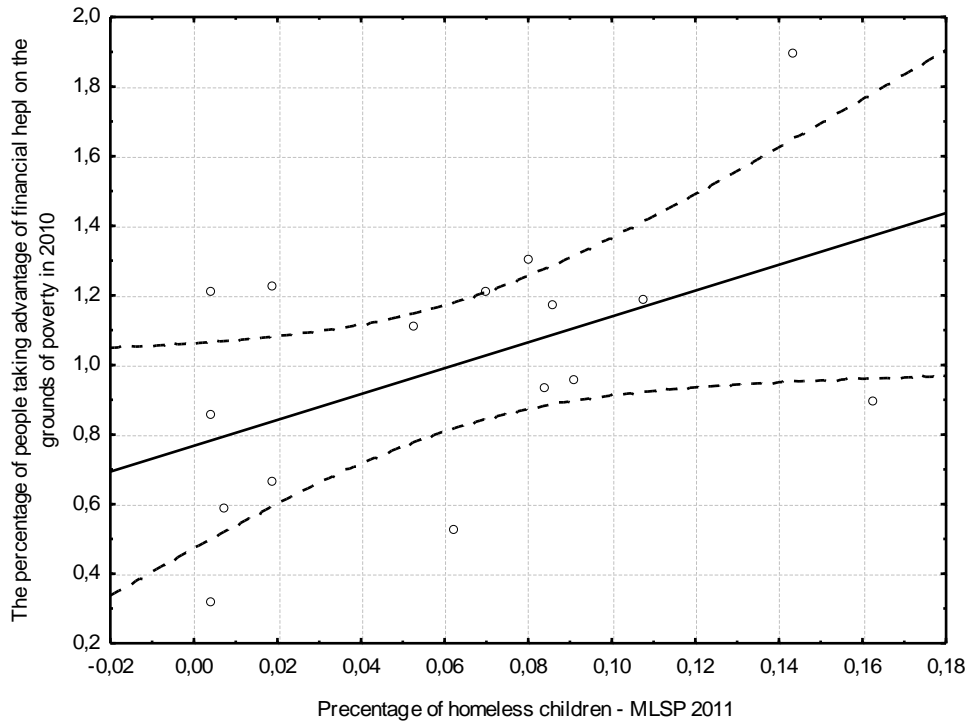
the year of research in a particular province. This relation indicates that in the provinces, where the percentage of people taking advantage of the financial help on the grounds of poverty was higher than the national average salary, in the following year the percentage of homeless children was also higher (Figure 6, 7, 8.) Due to the precision of the data the information concerning the number of people in families which were entitled to receive the help on the grounds of poverty is better than the poverty risk indicators presented by CSO. This is mainly due to the fact that the data for a particular province are averaged, which does not happen in the case of MLSP data concerning the reasons of this help.

Figure 6: Scatter diagram showing the relationship between the percentage of people in families taking advantage of the financial help on the grounds of poverty in 2010 and the percentage of homeless children in 2011 (the research of CSO)

Figure 7: Scatter diagram showing the relationship between the percentage of people in families taking advantage of the financial help on the grounds of poverty in 2010 and the percentage of homeless children in 2011 (the research MLSP)
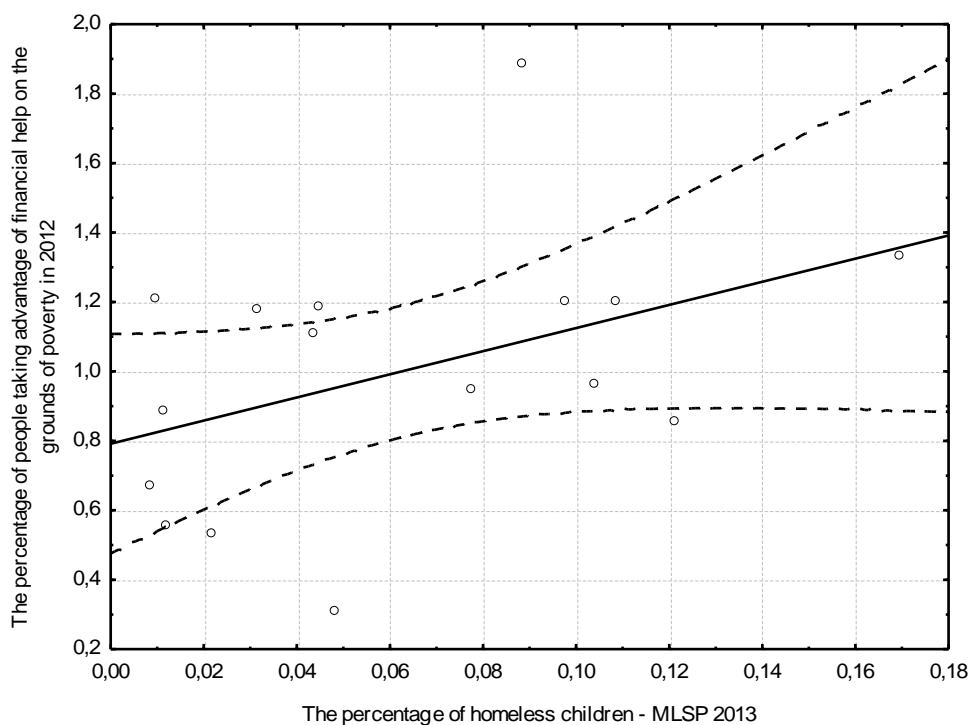

Source: Self-elaboration on the basis of *Report on the implementation of the activities …(2010)*, op. cit. p.7; *MPiPS-03-R report for I-XII 2010…*, op. cit. Sector 4.

Figure 8: Scatter diagram showing the relationship between the percentage of people in families taking advantage of the financial help on the grounds of poverty in 2012 and the percentage of homeless children in 2013 (MLSP research)

Source: Self-elaboration on the basis of *Report on the implementation of activities… (2013)*, op. cit. p.8; *MPiPS-03-R* report for *I-XII 2012*, MLSP, Department of Social Assistance and Integration, Comparison by provinces, Sector 4

The results of the conducted analysis of the linear regression allow one to draw a conclusion that the significant economic factor, which has an influence on the existence of the phenomenon of child homelessness, is not the average disposable income, but the threat of poverty expressed in the possibility of taking advantage of the social assistance on the grounds of poverty. (Table 6).

Table 6: The results of the analysis of linear regression between the percentage of homeless children and inclusive percentage of people in families taking advantage of financial help on the grounds of homelessness in a given province in the year preceding the year of the research.

	R	R^2	alt. R^2	F (1, 14)	p
CSO 2011	0,550253	0,302778	0,252977	6,079691	0,027209
MLSP 2011	0,497315	0,247322	0,193559	4,600250	0,049997
MLSP 2013	0,426746	0,182112	0,123692	3,117264	0,099257
	Model's components	**B**	**Standard error B**	**t(14)**	**p**
CSO 2011	Free term	-0,007479	0,030201	-0,247629	0,808016
	Parameter α_1	*0,069979*	*0,028381*	*2,465703*	*0,027209*
MLSP 2011	Free term	-0,004071	0,033029	-0,123245	0,903665
	Parameter α_1	*0,066571*	*0,031038*	*2,144819*	*0,049997*
MLSP 2013	Free term	0,007833	0,032973	0,237546	0,815674
	Parameter α_1	0,054667	0,030963	1,765578	0,099257

Source: Self-elaboration on the basis of the same data as in fig.6,7,8

For the data concerning the year 2011, the regression shows statistically significant linear form of the model. To verify the correctness of the form of such model, the analysis of the variances was used, in which the number of degrees of freedom was 1 (v_1) for numerator and 14 (v_2) for dominator (Table 7).

Table 7: The results of the analysis of variances for linear forms between the percentage of homeless children and inclusive percentage of people in families taking advantage of financial help on the grounds of homelessness in a given province in the year preceding the research.

Research	Description	Sum square	df	Mean square	F	p*
CSO 2011	Regression	*0,010374*	*1*	*0,010374*	*6,079690*	*0,027209*
	Remainders	0,023889	14	0,001706		
	Sum	0,034263				
MLSP 2011	Regression	*0,009388*	*1*	*0,009388*	*4,600250*	*0,049997*
	Remainders	0,028571	14	0,002041		
	Sum	0,037960				
MLSP 2013	Regression	0,006410	1	0,006410	3,117264	0,099257
	Remainders	0,028788	14	0,002056		
	Sum	0,035198				

* - level of significance $p=0,05$
Source: Self-elaboration on the basis of the same data as in Tab.6.

The number of degrees of freedom v_1 for the numerator is 1, while v_2 or the denominator is 14 and the value for the Snedecor's F distribution is 4.60, therefore the established hypothesis H0: α1 = 0 is rejected, because the value of the statistics obtained on the basis of the data are bigger than the values of the data from the tables. Therefore we can say that the first two models are correct and well-adjusted to the data.

Conclusion

Basing on presented data it should be stated that the economic factors to a limited degree have the influence on the occurrence of the phenomenon of child homelessness, and their direction is dependent on the examined variable taken into consideration. As long as in the scale of the whole province, higher monthly average level of the disposal income per person in the year preceding the research was favouring to the occurrence of the phenomenon of the homelessness within the scrutinised group (for the data from 2011), its influence concerning the data from 2013 was no longer so clear. The migration of the homeless cannot be the explanation in relation to children, what is caused by the institutional character of homelessness within this group and the procedural way of placing them in the institutions in the community of their last registration. Analysing the phenomenon from the aspect of poverty (i.e. by the analysis of the number of people entitled to and taking advantage of financial help on the grounds of poverty), it can be stated that for the data from 2011, the poverty causes homelessness of the scrutinised group in the following year. Such results allow one to state that the poverty already affecting the family can significantly favour the occurrence of the phenomenon of child homelessness.

Literature:

Basińska M. A., Sucharska-Daraż A., Wolszczak K., *Satysfakcja z życia osób bezdomnych. Doniesienie z badań.* www.salvus.org.pl

Household budgets survey in 2010, Warsaw 2011

Household budgets survey in 2012, Warsaw 2013

Population. Socio-demographic condition and structure. National Census of Population and Housing 2011. Review table. Warsaw 2013.

National Census of Population and Housing 2011. Central Statistical Office, Warsaw 2012.

MPiPS-03-R report for I-XII 2010. Ministry of Labour and Social Policy, Departament of Social Assistance and Integration, Comparison by provinces, Warsaw 2010

MPiPS-03-R report for I-XII 2012. Ministry of Labour and Social Policy, Departament of Social Assistance and Integration, Comparison by provinces, Warsaw 2012

*Report on the implementation of activities for homeless people in the provinces in 2012,and the results of National Counting of the Homeless Action (Fabruary 7/8, 2013).*Ministry of Labour and Social Policy, Warsaw 2013

Report on the implementation of activities for homeless people in the provinces in 2010. Ministry of Labour and Social Policy, Warsaw 2012

Stanisz A., *Przystępny kurs statystyki z wykorzystaniem programu STATISTICA PL na przykładach z medycyny*. Kraków 2000