

# ***Poverty and income inequality in Poland – objective measures and social perception***

Paper prepared for the IARIW-HSE Conference  
'Experiences and Future Challenges in Measuring Income  
and Wealth in CIS Countries and Eastern Europe'

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## The purpose of the paper:

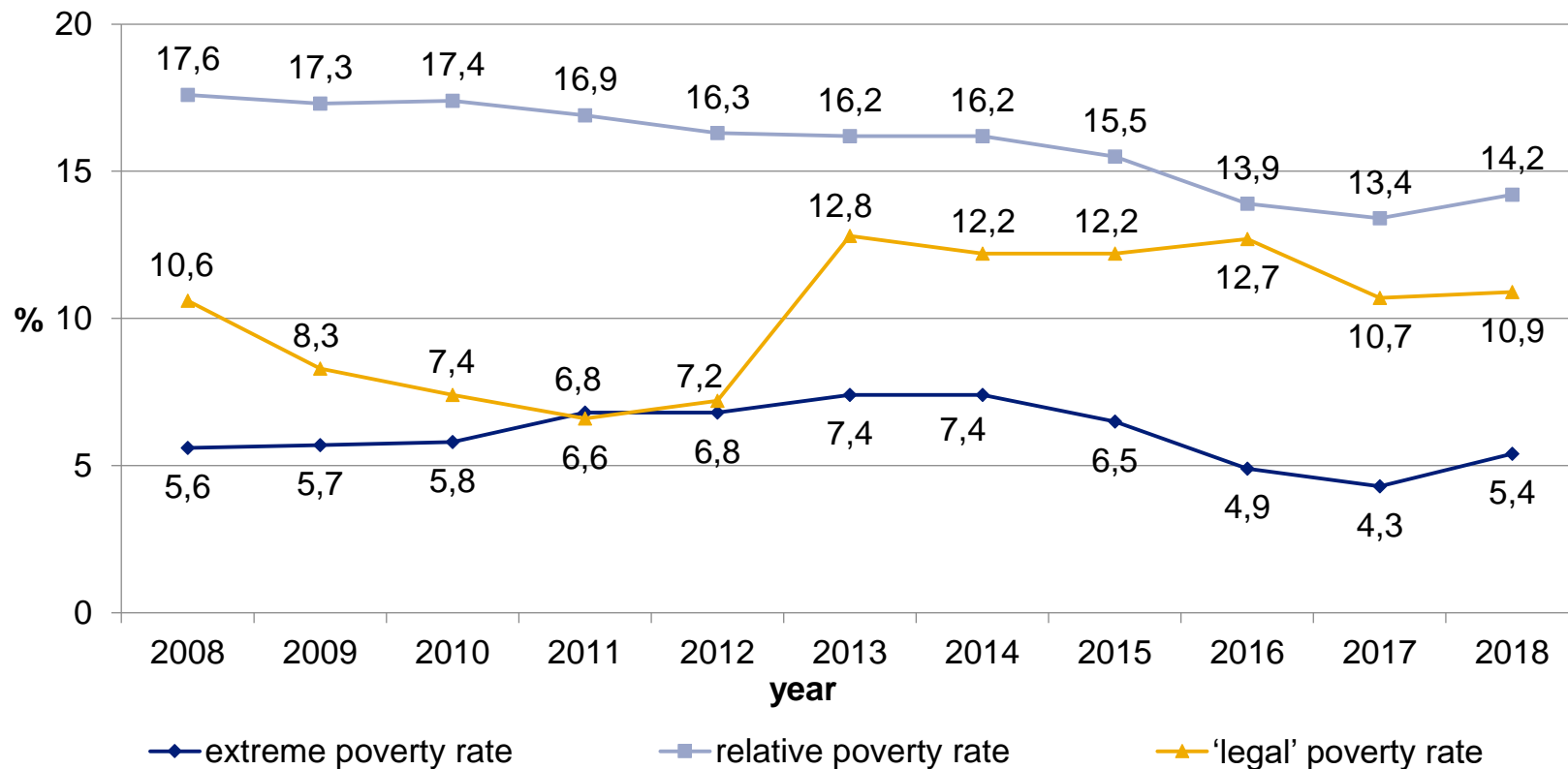
- Presentation of methods of measuring poverty and income inequalities currently used by Statistics Poland as well as basic data on these phenomena
- Drawing attention to the importance of measuring the social perception of poverty and income inequalities (for a more complete assessment of these phenomena and in the context of social policy needs). Discussion of the results of the Polish Social Cohesion Survey in this field

**The basis for analyses of poverty and income inequalities in Poland are the results of sample surveys of households, such as:**

- Household Budget Survey (HBS)
- European Statistics on Income and Living Conditions (EU-SILC)
- Social Cohesion Survey (SCS)

# Monetary poverty in Poland calculated on the basis of the Household Budget Survey (HBS)

Poverty rates in Poland estimated on the basis of HBS  
in % of persons in households



# Poverty measurement based on EU-SILC survey (harmonised at European Union level)

## Indicators of the risk of poverty or social exclusion in Poland and in the European Union\* based on EU-SILC

Indicator		2008	2015	2016	2017	2018
		in % of persons				
At-risk-of-poverty or social exclusion rate	Poland	30.5	23.4	21.9	19.5	18.9
	EU	23.7	23.8	23.5	22.4	
At- risk- of poverty rate after social transfers	Poland	16.9	17.6	17.3	15.0	14.8
	EU	16.6	17.3	17.3	16.9	
Severe material deprivation rate	Poland	17.7	8.1	6.7	5.9	4.7
	EU	8.5	8.1	7.5	6.6	
People(aged 0-59) living in household with very low work intensity	Poland	9.3	8.0	7.4	6.7	6.6
	EU	9.7	11.2	11.2	10.3	

\* Data for 2015-2018 refer to 28 countries and for 2008 to 27 countries.

Source: Statistics Poland, Eurostat database (27.08.19)

# Poverty measurement based on EU-SILC survey (harmonised at European Union level)

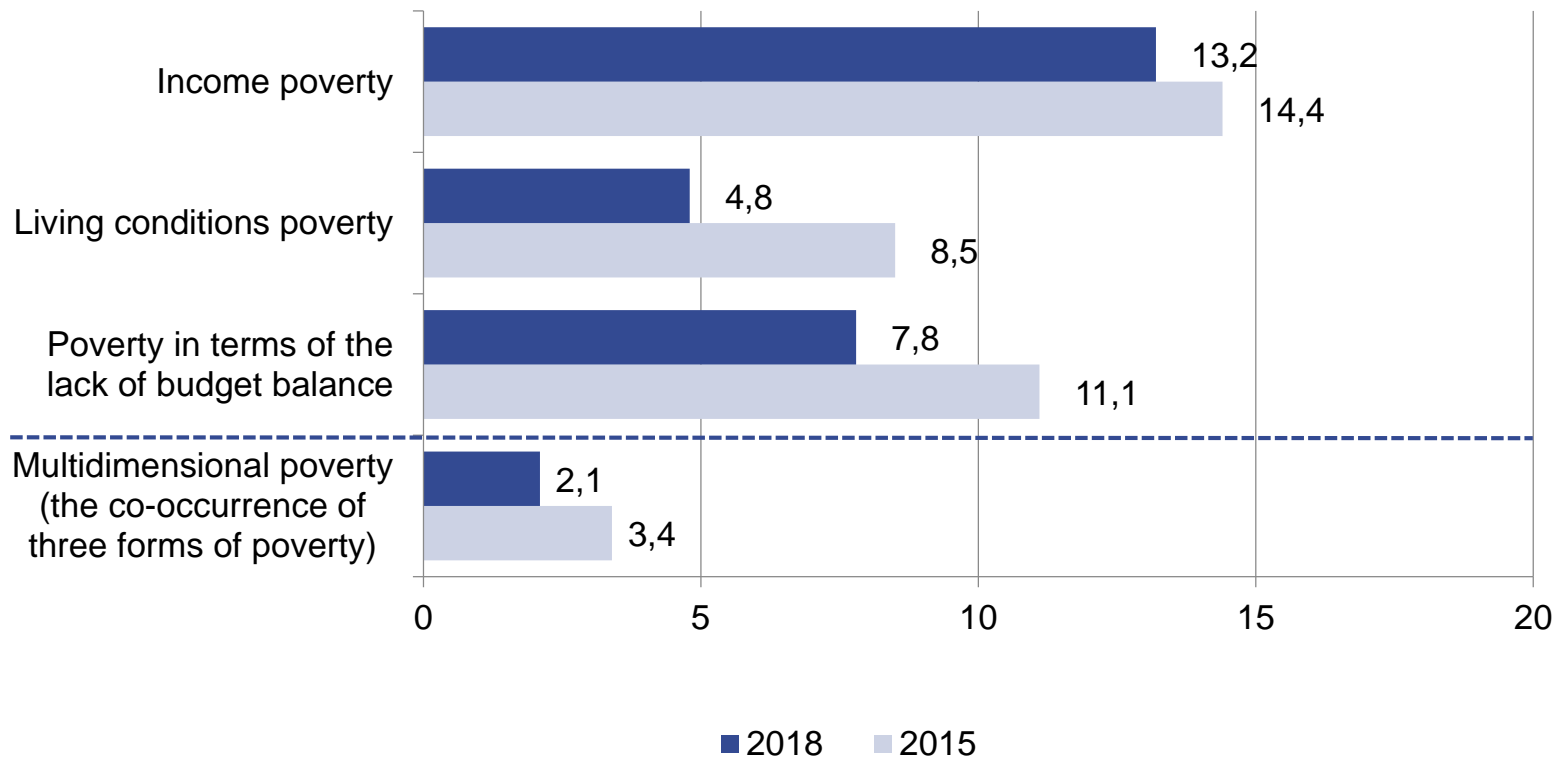
## Complementary poverty indicators in Poland and in the European Union\* based on EU-SILC

Indicator		2008	2015	2016	2017	2018
		in % of population				
Persistent at-risk-of-poverty rate	Poland	10.4	10.1	9.7	9.1	10.5
	EU	8.7	10.9	11.0	10.8	
At-risk-of-poverty rate anchored at a fixed moment in time (2008)	Poland	16.9	10.2	8.8	6.6	5.5
	EU	16.6	18.6	17.5	15.9	
At-risk-of-poverty rate before social transfers	Poland	44.1	43.6	43.1	43.6	44.4
	EU	42.0	44.7	44.5	43.8	

\* Data for 2015-2018 refer to 28 countries and for 2008 to 27 countries.  
Source: Statistics Poland, Eurostat database (27.08.19)

# Multidimensional poverty in Poland based on the Social Cohesion Survey

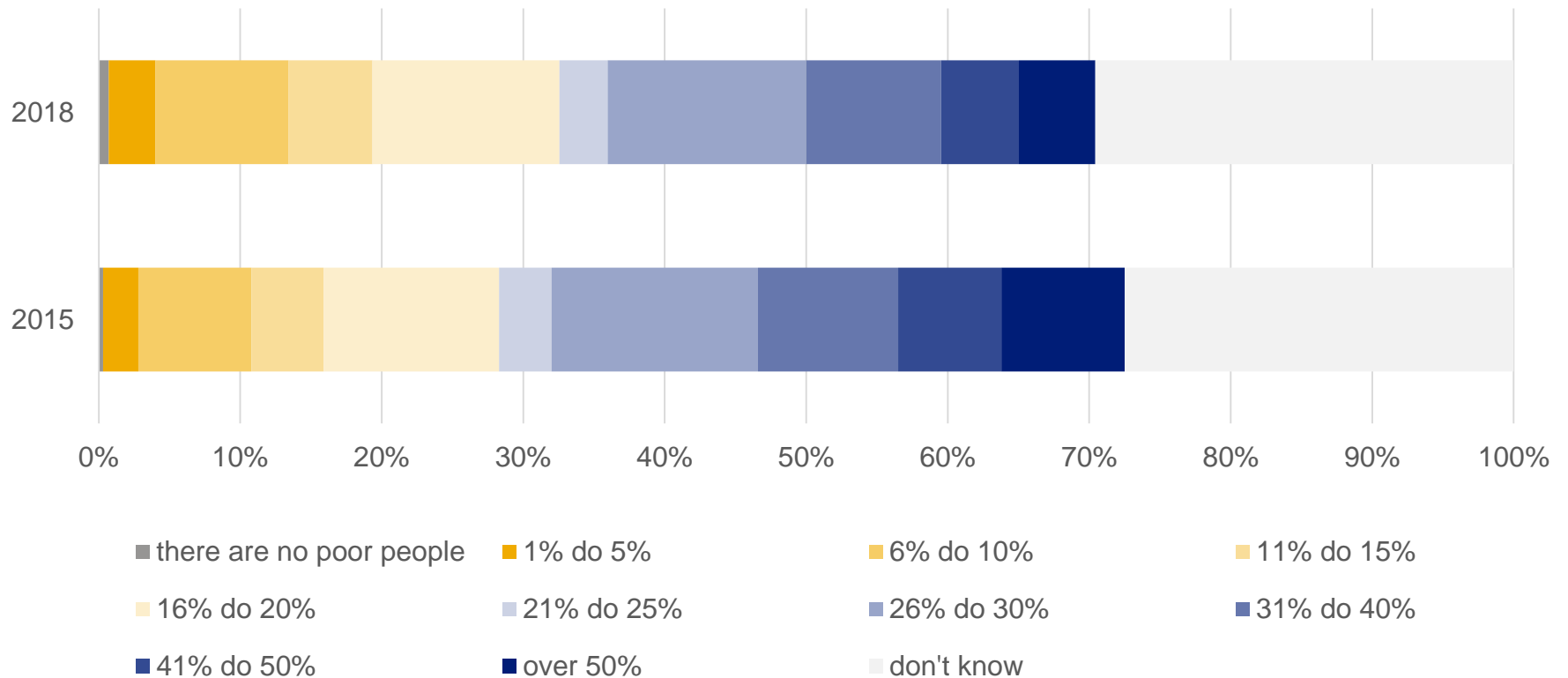
Poverty rate in % of households



# Perceptions of the scale of poverty

In your opinion, what percentage - roughly - do the poor constitute in our country? That is the people who, among other things, cannot afford to purchase food, clothing and pay their rent.  
Please specify %

*in % of persons in households aged 16 or more*

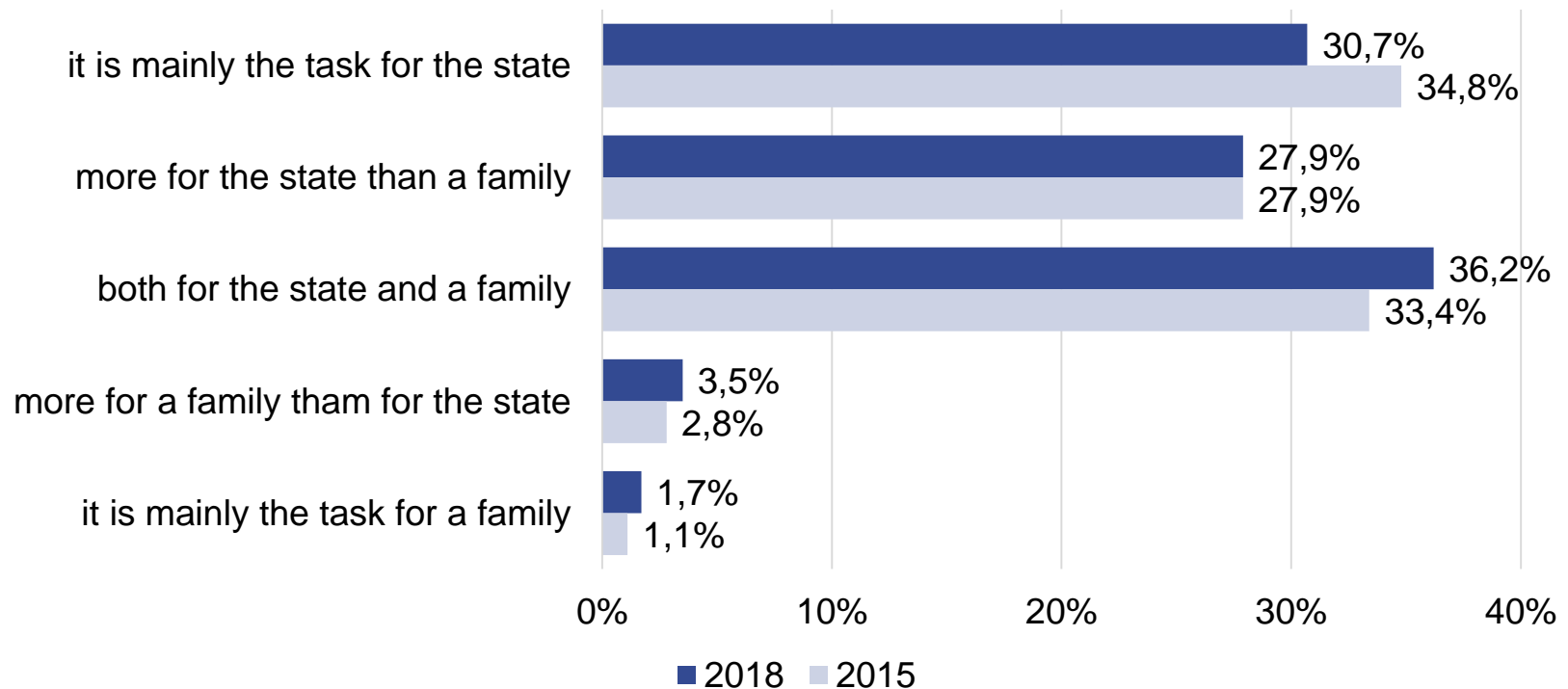




# Perceiving the role of the state in poverty reduction

**Do you think that material support for people living in poverty is a task for the state, a family or both the institutions?**

*answers in % of persons aged 16 or more*



# The most needed forms of assistance for the poor people according to the opinion of the inhabitants of Poland

Based on the answer to the question: Taking your place of residence into consideration - city, town, village - what kind of assistance is most needed for persons residing there, who you would consider as living in poverty ones? (three possible indications)

*(answers in % of persons aged 16 or more)*

Forms of assistance	Total		people living in income poverty	
	2015	2018	2015	2018
Assistance in finding a job <sup>b</sup>	74.3	43.1	81.6	49.5
Assistance in taking care of chronically ill, disabled people	33.1	31.7	27.4	29.1
Improving accessibility of free medical services	28.7	27.6	24.5	28.1
Assistance in running a household for the elderly (e.g. cleaning, washing, shopping, cooking a meal)	19.3	24.8	17.4	22.5
Cash benefits	18.7	15.8	30.2	23.5
Providing access to inexpensive municipal and social dwellings	13.8	12.6	9.6	11.2
Free nurseries and kindergartens for children	12.4	12.2	9.0	8.3
Assistance for housing purposes (covering rent, energy, gas, renovation of the apartment)	11.4	11.7	15.8	13.7

# Income inequalities – objective measurement

## Inequality of income distribution in Poland and in the European Union\* (based on the EU-SILC)

Indicator		2008	2015	2016	2017	2018
Gini coefficient	Poland	32.0	30.6	29.8	29.2	27.8
	EU	31.0	31.0	30.8	30.7	
S80/S20 income quintile share ratio	Poland	5.1	4.9	4.8	4.6	4.25
	EU	5.0	5.2	5.2	5.1	
Theil index	Poland	0.186	0.163	0.151	0.150	
* Data for 2015-2018 refer to 28 countries and for 2008 to 27 countries.						
Source: Eurostat database, own calculations based on the Polish edition of the EU-SILC survey, Statistics Poland						

# Income inequalities – objective measurement

## Inequality of income distribution in Poland based on Social Cohesion Surveys 2015 and 2018

Indicator	2015	2018
Gini coefficient	29.7	27.5
S80/S20 income quintile share ratio	4.5	4.0
Theil index	0.154	0.132

# Decomposition of the objective income inequalities measured by Theil index

$$T = s_1 T_1 + \dots + s_k T_k + T_B$$

$T_1, \dots, T_k$  – values of Theil index for subpopulations corresponding to particular levels of qualitative characteristic (e.g. education levels), representing income inequality within a given subpopulation (within-group inequality)

$s_1, \dots, s_k$  shares of individual sub-populations in the population total of income

**$T_B$  – a factor reflecting the variability of average income levels between particular sub-populations (between group variability)**

How the characteristic explains the overall income inequality:  $T_B / T$

# Results of decomposition of Theil index in Poland by various characteristics

based on Social Cohesion Survey 2018

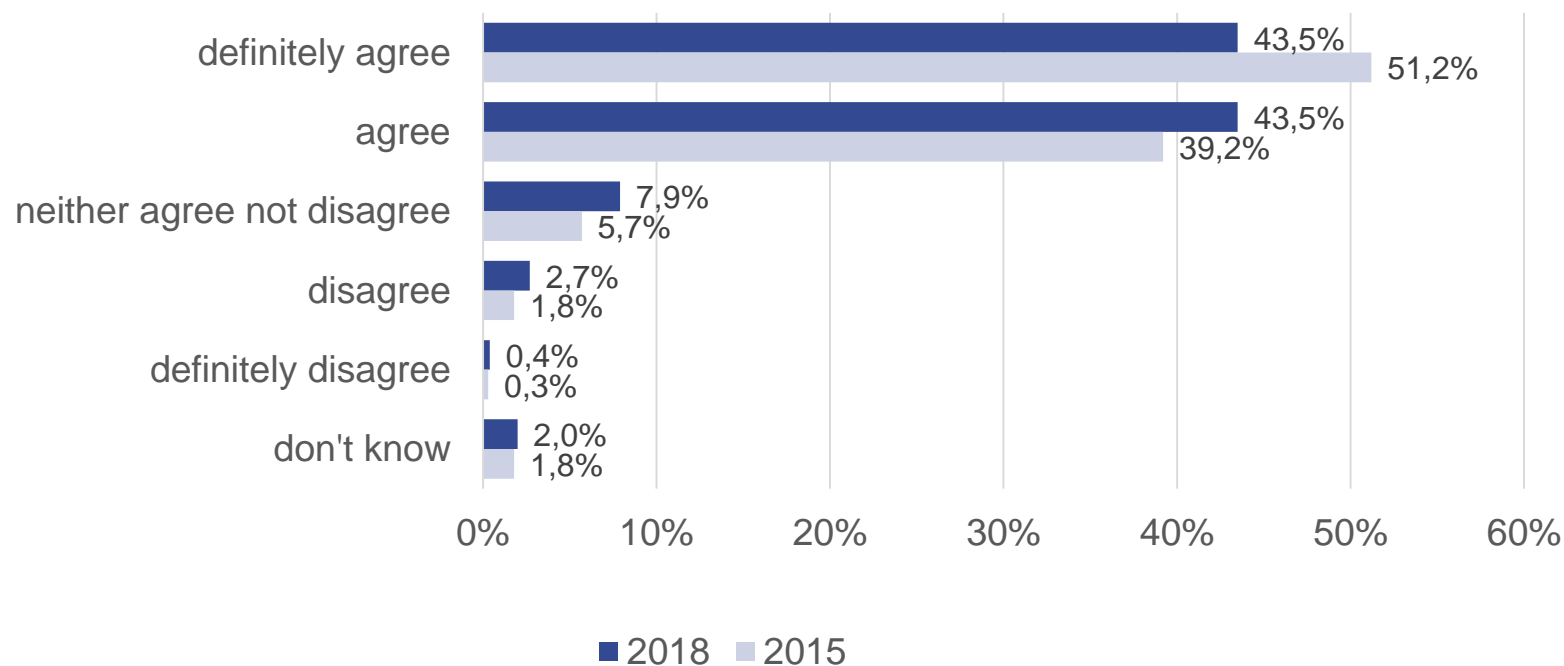
Share of the factor corresponding with the between group variation by selected characteristics  
in the overall income inequality measured by Theil index

Year	Theil index	Characteristics of household/person					
		Number of persons aged 0-17 in the household	Age	Education	Economic activity	Type of locality	Region (Voivodship)
		Share in %					
2015	0.154	4.0	1.9	23.9	11.9	11.4	5.0
2018	0.132	1.4	2.7	23.4	11.7	11.6	4.9

# Social perception of income inequalities

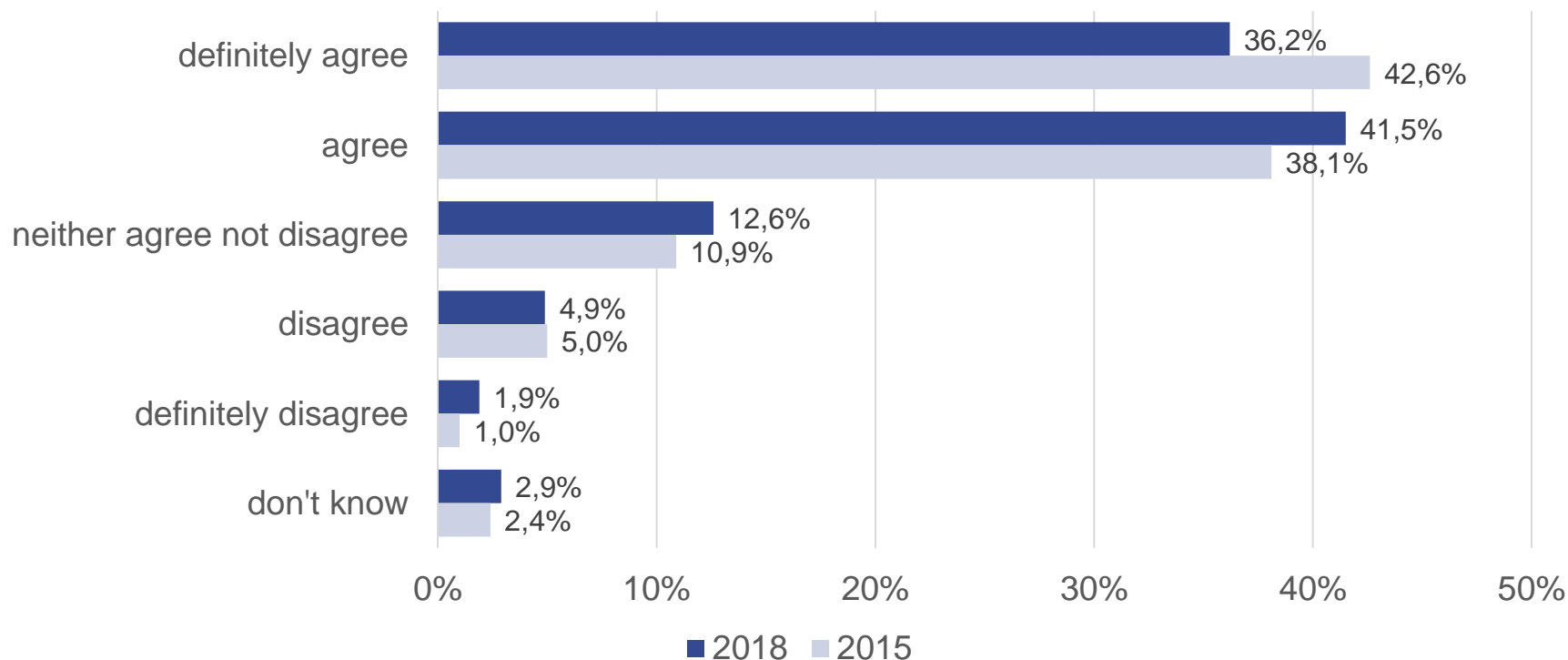
Please, specify what is your attitude towards the statement:  
'The income differences in Poland are too great'.

*in % of persons aged 16 or more*



**Please, specify what is your attitude towards the statement:  
'It should be the state's duty to reduce the differences  
between high and low income'.**

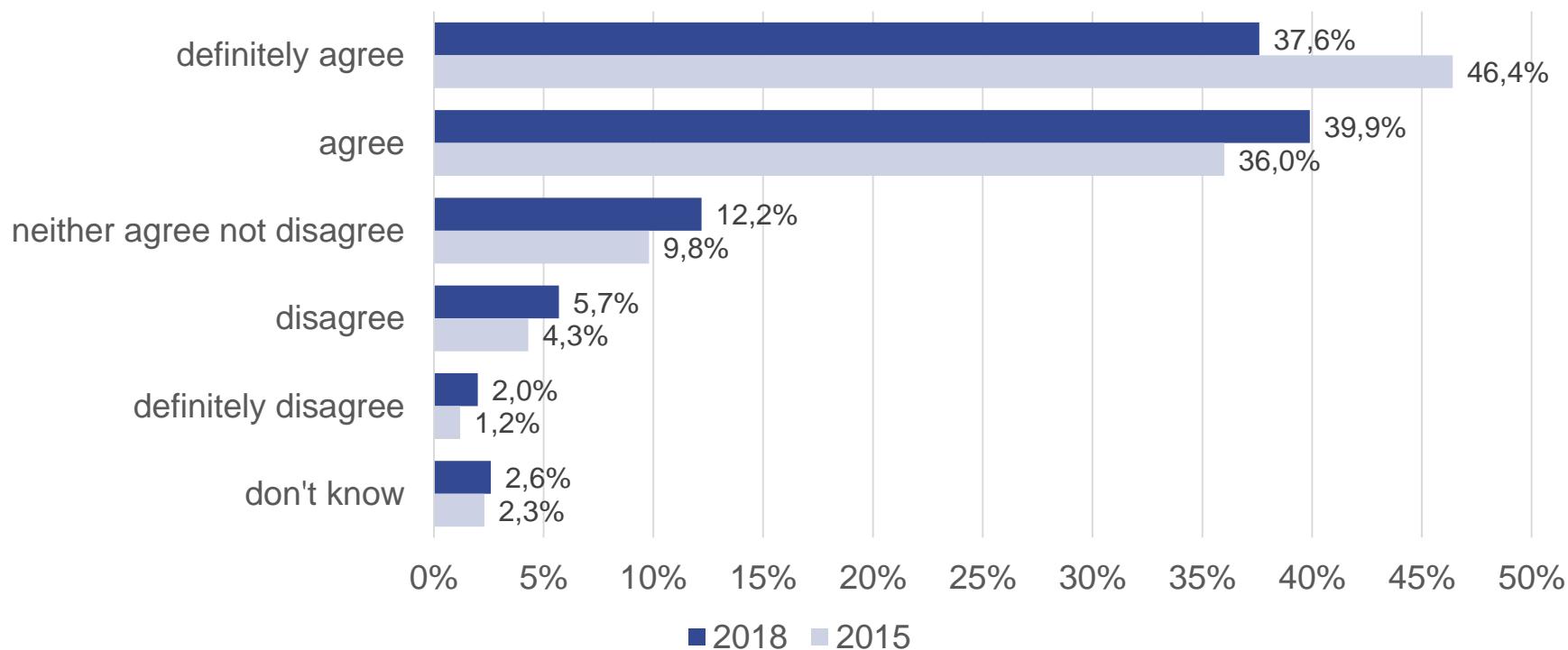
*in % of persons aged 16 or more*





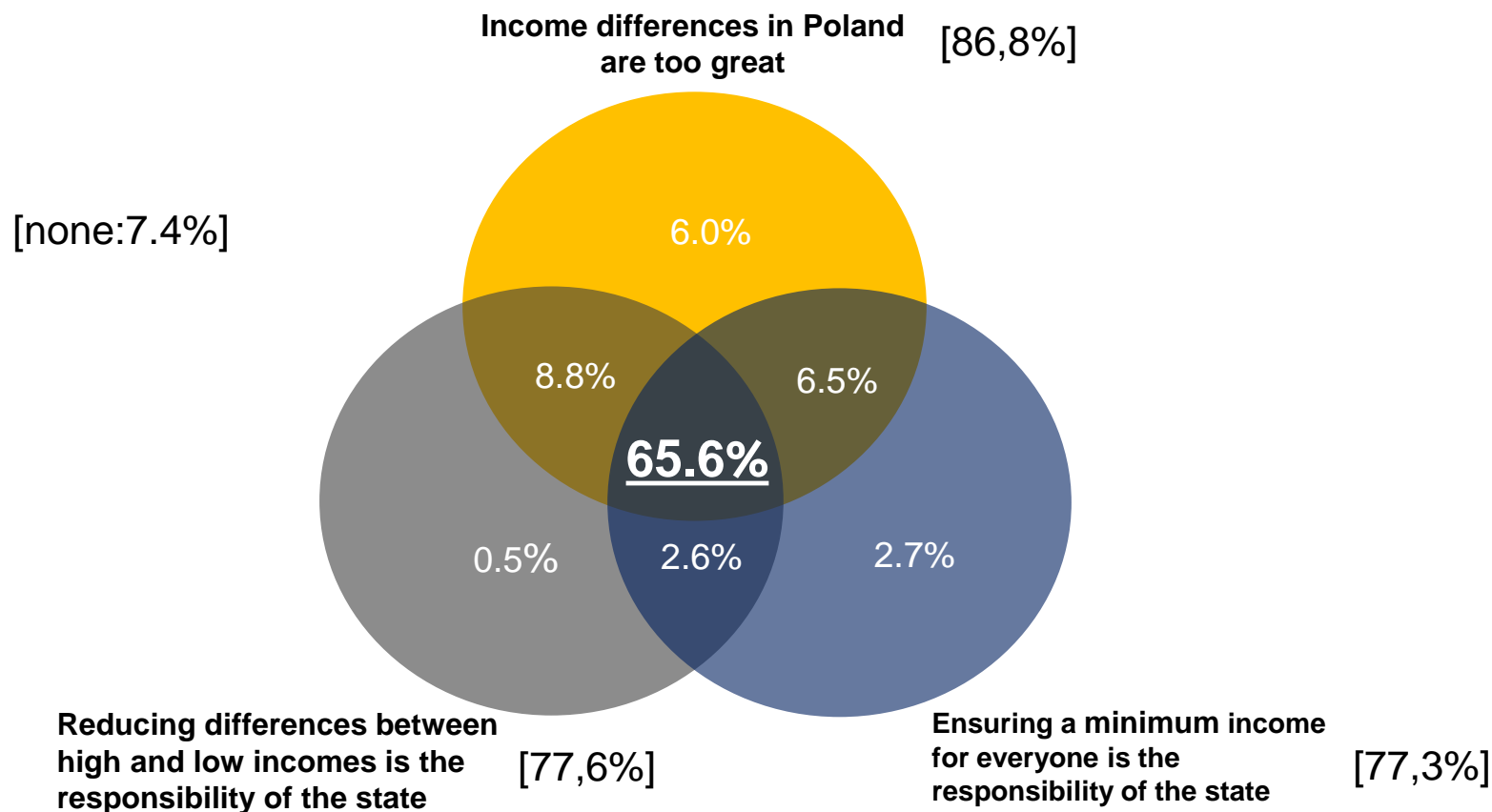
**Please, specify what is your attitude towards the statement:  
'The state should provide everybody with the minimum  
income'.**

*in % of persons aged 16 or more*



# The coexistence of the three egalitarian opinions

*in % of persons aged 16 or more*



# Determinants of the perception of income inequalities

- Logistic regression
- Two models explaining which characteristics determine the egalitarian opinions on individual level :
  - Model 1: the opinion that the income differences in Poland are too great ('agree' or 'definitely agree')
  - Model 2: the complex egalitarian opinion, what means the coexistence of the three egalitarian opinions (answers 'agree' or 'definitely agree') :
    - the income differences in Poland are too great
    - reducing differences between high and low incomes is the responsibility of the state
    - ensuring a minimum income for everyone is the responsibility of the state

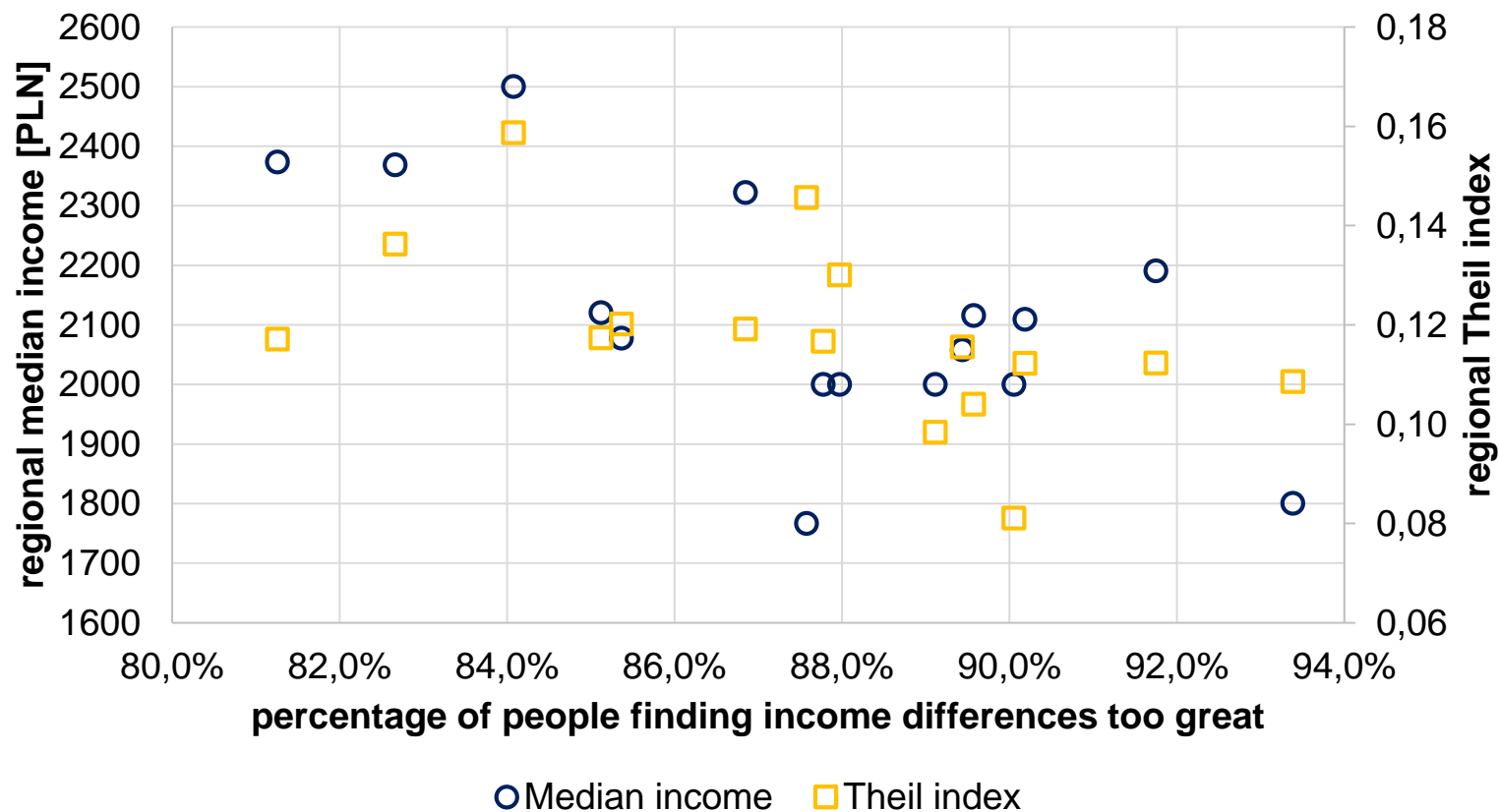
# Determinants of the perception of income inequalities in Poland

## (significance of the factors' effects)

Explanatory factor	DF	Explanation of the opinion that the income differences in Poland are too great [Model 1]		Explanation of the complex egalitarian opinion [Model 2]	
		Wald statistics	p-value	Wald statistics	p-value
Region (voivodship)	15	77.6	<.0001 ***	97.2	<.0001 ***
Type of locality of residence	4	11.7	0.0195 *	51.3	<.0001 ***
Age	6	56.3	<.0001 ***	19.5	0.0034 **
Sex	1	5.1	0.0243 *	2.6	0.1062 n.s.
Being in a marriage or in an informal relationship	2	6.3	0.0427 *	1.4	0.4923 n.s.
Education	4	28.5	<.0001 ***	53.7	<.0001 ***
Status on the labour market	8	28.6	0.0004 ***	37.6	<.0001 ***
Occupation	9	11.8	0.2258 n.s.	21.3	0.0115 *
Income situation	4	17.7	0.0014 **	29.9	<.0001 ***
Living conditions	2	6.5	0.0383 *	8.1	0.0170 *
Household budget balance	2	15.3	0.0005 ***	28.3	<.0001 ***
Disability	1	1.9	0.1715 n.s.	0.8	0.3701 n.s.
Religiousness (level of religious commitment)	4	21.9	0.0002 ***	23.4	0.0001 ***
Type of life pathway (trajectory scheme)	5	20.2	0.0011 *	4.8	0.4408 n.s.
Presence of poor people in the surrounding	1	58.7	<.0001 ***	31.4	<.0001 ***

Significance codes: \*\*\* significant at 1%, \*\* significant at 5%, \* significant at 10%, n.s. not significant

# Perception of inequalities vs. actual income level and inequalities (regional comparison)



Data source: Social Cohesion Survey 2018, Statistics Poland

## Final remarks

- The complexity of poverty and the fact that it is linked to practical action in the social policy sphere means that the application of several methods of its measurement (absolute and relative poverty, monetary and multidimensional poverty, objective and subjective) enables a more complete diagnosis of this phenomenon as well as a more reliable assessment of the implemented actions to prevent poverty or to reduce its negative effects. Using a single measure or just one family of measures (methods) may cause some effects to be overlooked or weaken the certainty of conclusions.
- Subjective measures of poverty and income should complement the so-called objective indicators. Obtaining in a systematic way information on the social perception of such important aspects of social-economic life as poverty or income distribution can be helpful both in conducting social dialogue and in creating, verifying and monitoring social policies aimed at improving the quality of life and social cohesion.

*‘Social policy makers need both objective and subjective indicators. Though subjective indicators have their limitations, objective indicators also labor under serious shortcomings. For some purposes objective indicators are best suited, for other use subjective indicators are preferable. The challenge of social reporting is to combine the strengths of these indicators and to make sense of the discrepancies they show’. Ruut Veenhoven (2002)*

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