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Comparison of different measures of poverty in Poland
(based on the results of the EU-SILC survey)

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Aim and content of the presentation

Aim

To present the results of the analysis concerning the consistency between various objective and quasi- subjective measures of poverty and the subjective assessment of the economic situation (based on the so-called Deeleck question)

Content

 1. Applied poverty measures

 2. Poverty versus subjective perceptions of economic situation
   – distribution of subjective assessments of 'making ends meet' among the 'poor' and 'non-poor' according to the poverty measure used
   – consistency at the microdata level

 3. Main findings

 4. Concluding remarks

Data source

Polish edition of the EU-SILC 2019 survey

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Applied so-called subjective poverty measures (based on EU-SILC 2019) – Poland

| Indicator/ measure	Measurement method (approach)	Poverty rate (% of persons)
Indicator of subjective economic stress –difficulties to make ends meet	**Indirect (proxy) measure** of subjective poverty subjective assessment of the ability to make ends meet ('Deeleck question')	15,6
Subjective income poverty rate – so-called MINQ poverty rate	**Indirect (proxy) measure** of subjective poverty) based on the question on 'lowest monthly income to make ends meet' (so-called minimal income question, MINQ)	23,5
Poverty rate based on the SPL method	Measure of quasi-subjective poverty **('objectivised' approach)** subjective assessments (answers to the question of the minimum income needed to make ends meet, MINQ) are only the starting point for estimating so-called objectivized poverty lines assessed with the use of statistical methods	20,2
Poverty rate based on the quasi LPL method	Measure of quasi-subjective poverty **('objectivised' approach)** subjective assessments (the ability to make ends meet based on 'Deeleck question') are only the starting point for estimating so-called objectivized poverty lines assessed with the use of statistical methods	28,4

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Applied so-called objective poverty measures (based on EU-SILC 2019) – Poland

| Iddicator/ measure	Measurement method (approach)	Poverty rate (% of persons)
At-risk-of-poverty rate (ARPR)	A relative measure of **poverty based on income poverty threshold** (60% of median income)	15,4%
Extreme income poverty rate	Absolute measure of poverty based on **income poverty threshold** (below subsistence)	2,1%
Income privation rate	Absolute measure **based on income privation threshold** (adds social needs to subsistence)	12,9%
Severe material and social deprivation rate (SMSD)	Absolute measure of **non-monetary** poverty (7 of 13 deprivation)	3,5%
At risk of poverty or social exclusion rate (AROPE)	Composite indicator - both relative and absolute sub-indicators and **monetary and non-monetary components**	17,9%

Poverty vs subjective assessment of economic situation
Distribution of subjective assessments of 'making ends meet'
among the 'poor' and 'non-poor' according to the poverty measure used
(Poland, EU-SILC 2019)
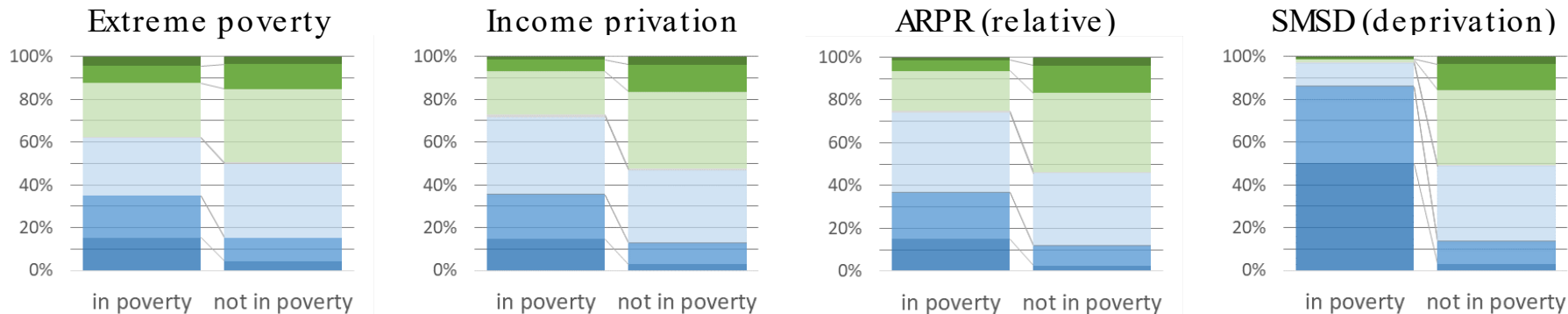
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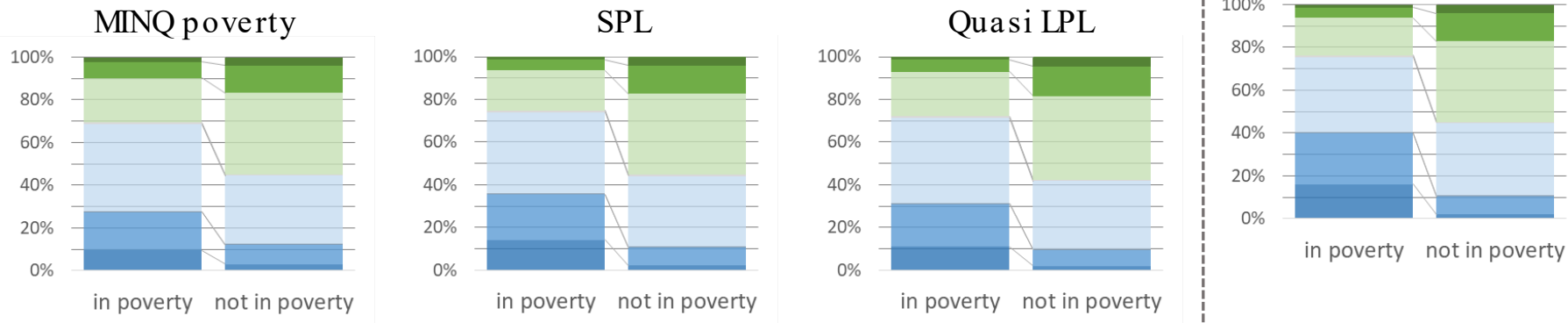
Poverty vs subjective assessment of economic situation – microdata level consistency

• Two types of inconsistency ('misclassification'):

'False poverty' - people who are considered poor according to a specific definition of poverty, but at the same time, according to a subjective assessment, do not experience financial/ economic problems (making ends meet easily or very easily)
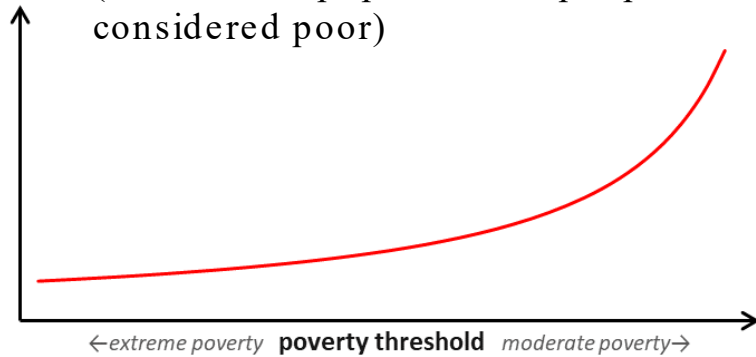
'Undetected poverty' - people who are not considered poor according to a specific definition of poverty, but at the same time, according to a subjective assessment, experience financial/ economic problems (making ends meet with difficulty or great difficulty).

• We analyse the incidence of these categories ('false poor' , 'undetected poor') depending on the method of measurement and the value of the poverty threshold
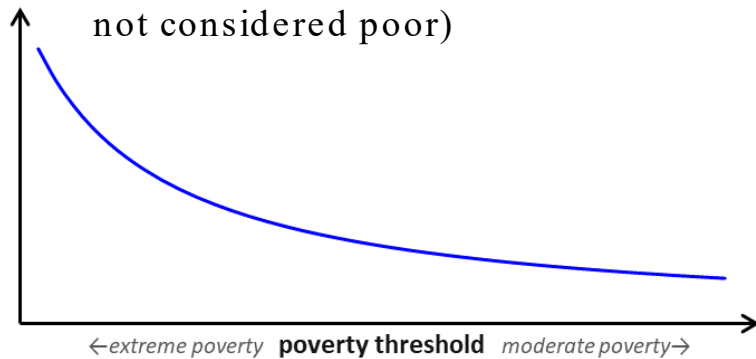
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What do we expect?
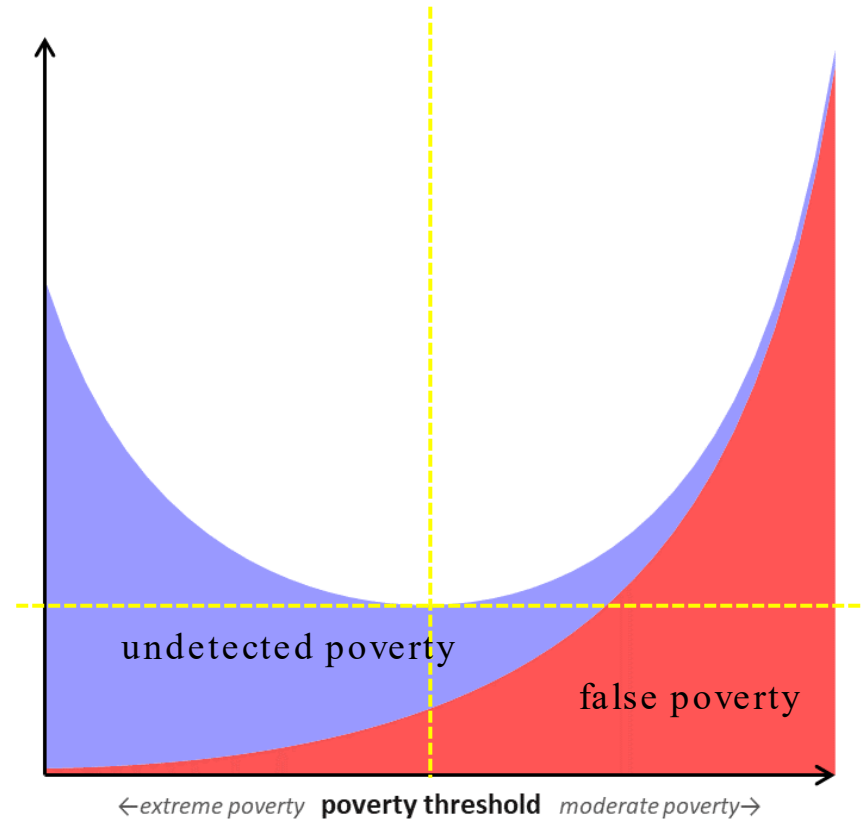## (theoretical model)

„False poverty" rate
(share in the population of people considered poor)

←*extreme poverty* **poverty threshold** *moderate poverty*→

„Undetected poverty" rate
(share in the population of people not considered poor)

←*extreme poverty* **poverty threshold** *moderate poverty*→

Overall misclassification rate
(shares in the whole population)

undetected poverty

false poverty

←*extreme poverty* **poverty threshold** *moderate poverty*→

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Income poverty vs subjective assessment of economic situation
Eqivalised income, modified OECD scale (1, 0.5, 0.3)
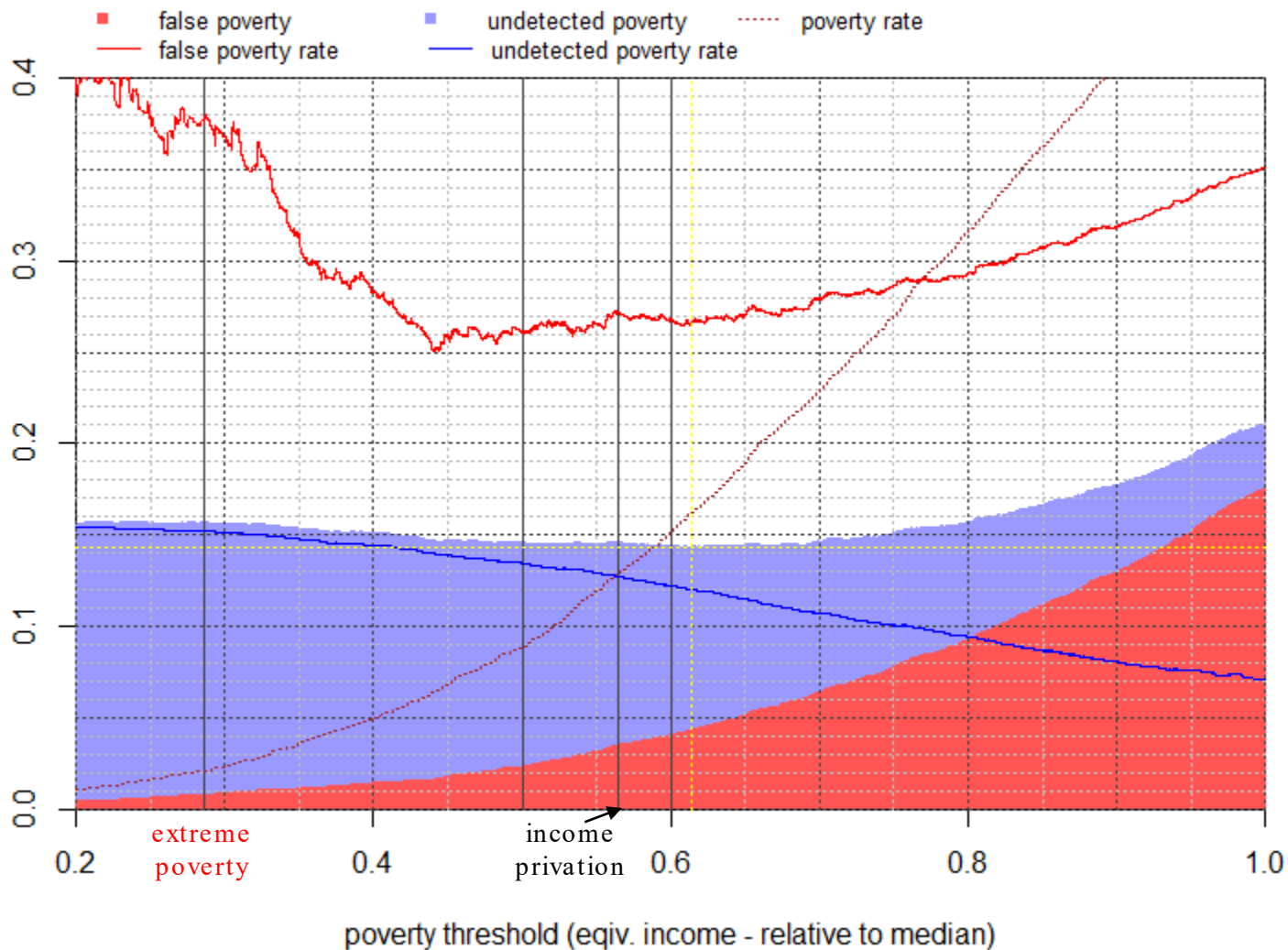### Poland, EU-SILC 2019

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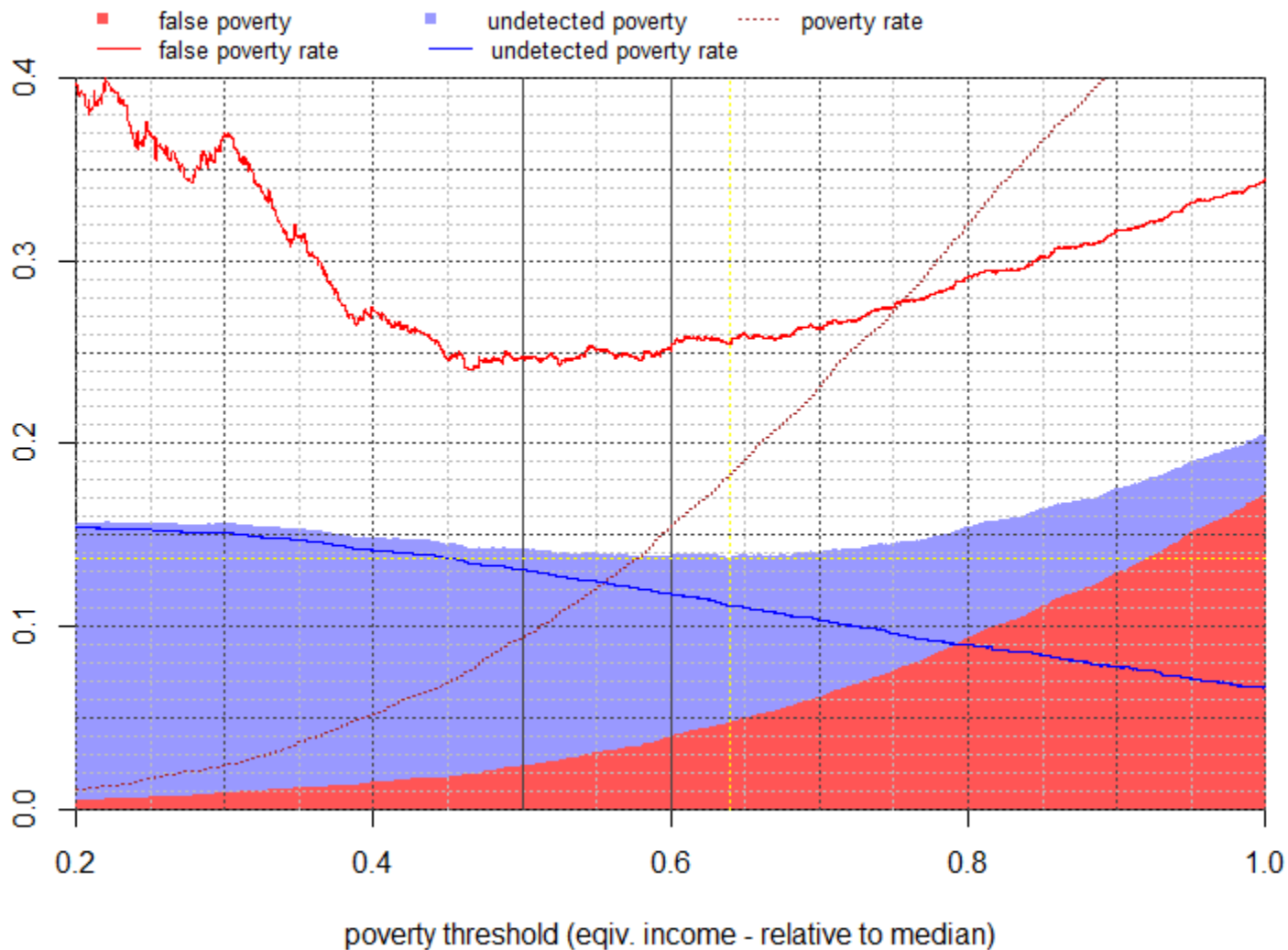
Income poverty vs subjective assessment of economic situation
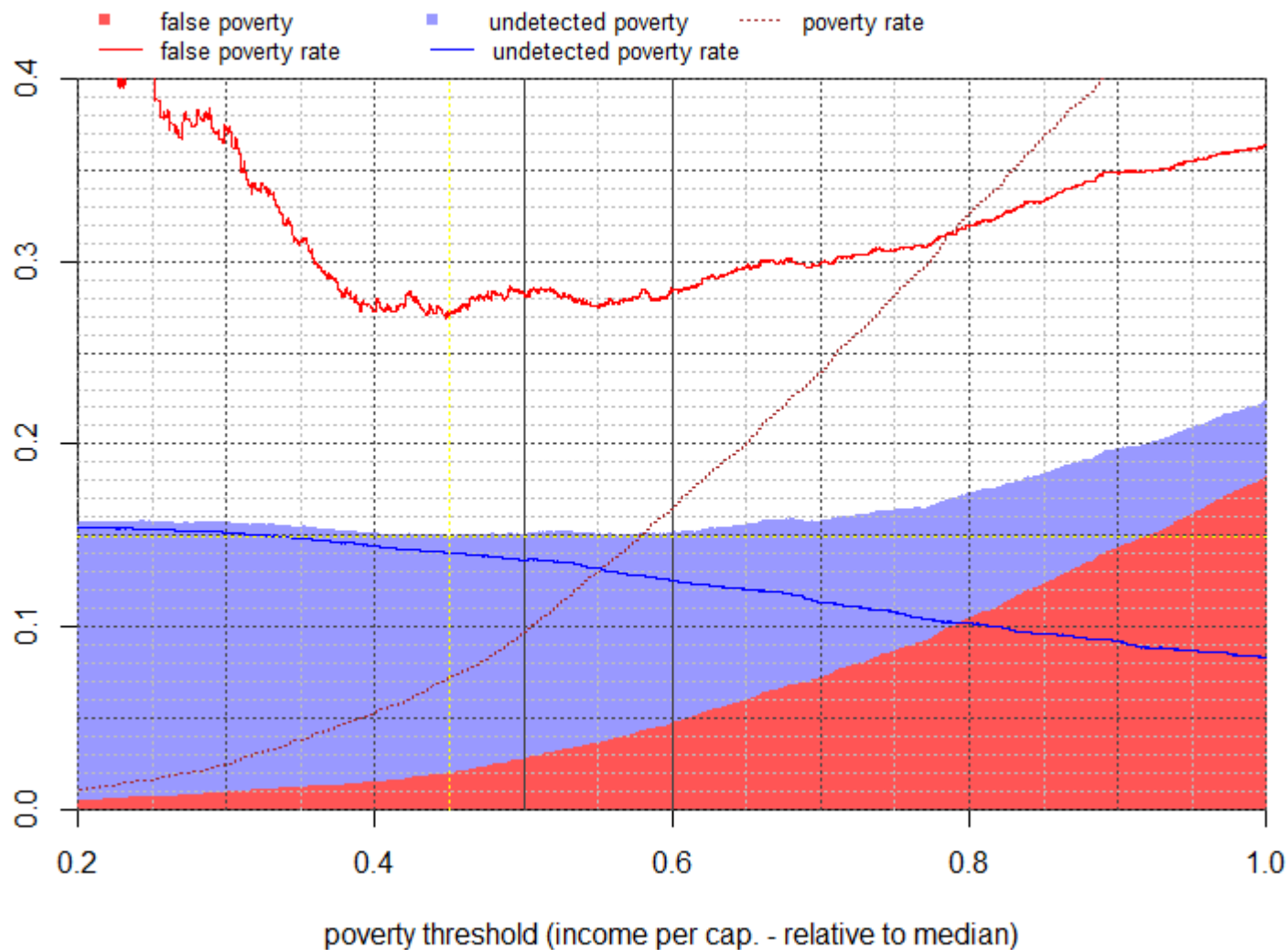## Eqivalised income, original OECD scale (1, 0.7, 0.5)
Poland, EU-SILC 2019

Income poverty vs subjective assessment of economic situation
Income per person in household
Poland, EU-SILC 2019

poverty threshold (income per cap. - relative to median)

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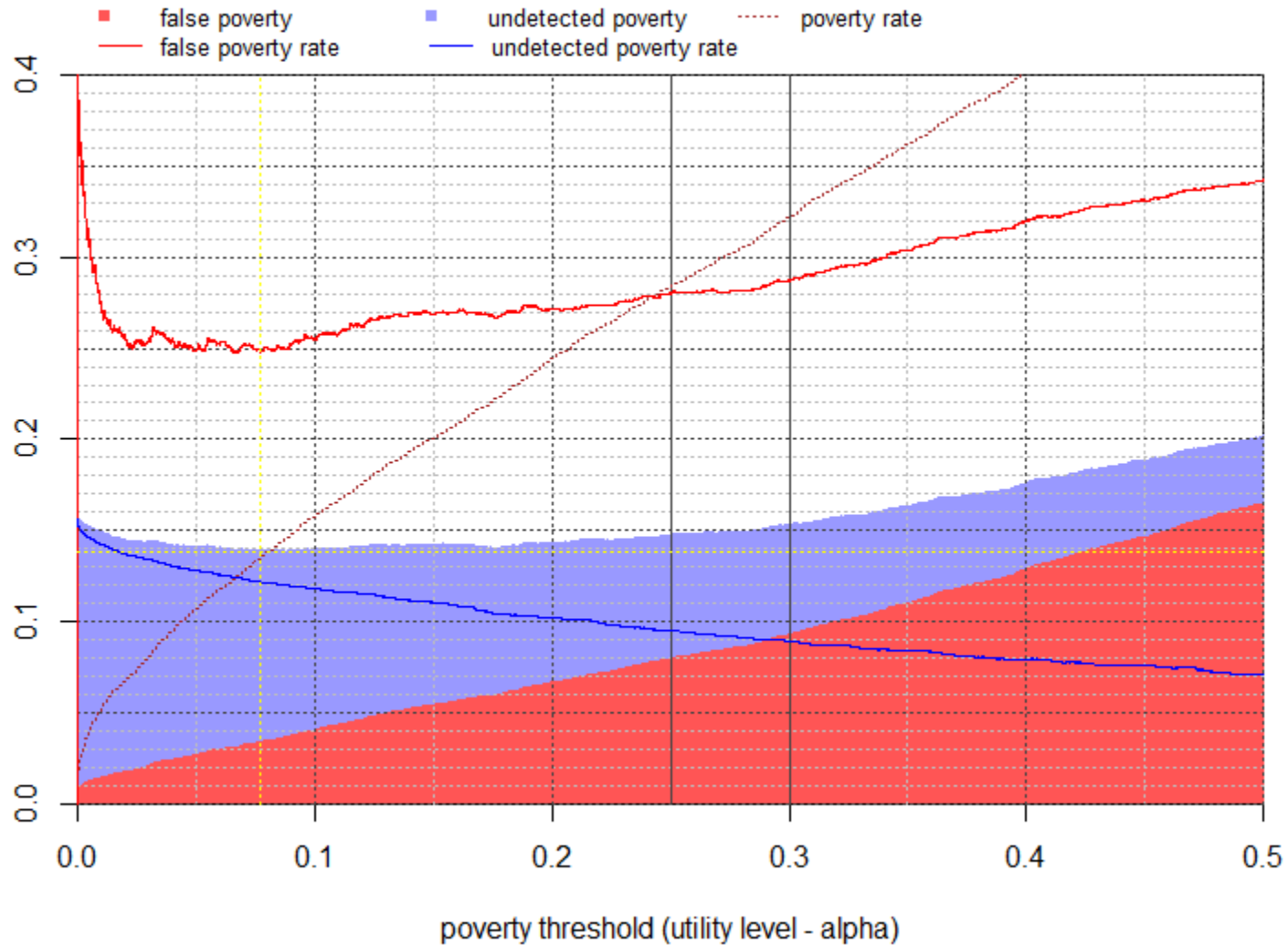
'Objectivised' subjective poverty vs subjective assessment of economic situation
Quasi LPL, utility (α) threshold
Poland, EU-SILC 2019

poverty threshold (utility level - alpha)

Non-monetary poverty vs subjective assessment of economic situation
Material and social deprivation (based on SMSD)
Poland, EU-SILC 2019

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Inconsistencies between poverty and subjective assessments of economic situation according to poverty type and threshold – summary

Poverty types (poverty definitions)	Overall misclassification rate* for the specified threshold:		"Optimal" threshold (minimum misclassification)	
	50% of median	60% of median	threshold value	misclassifica-tion rate*
Equivalised income based (modified OECD scale)	*14.2%*	*13.8%*	64.0% of median	*13.7%*
Eqivaliised income based (original OECD scale)	14.6%	14.4%	61.3% of median	14.3%
Income per person based	15.1%	15.2%	45.0% of median	14.9%
	threshold value	misclassifica-tion rate*	threshold value	misclassifica-tion rate*
Quasi LPL	α = 0.25	14.7%	α = 0,08	13.8%
Material or social deprivation (SMSD related)	7 items (at least)	**13.2%**	2 items (at least)	**7.8%**

* the sum of 'false poverty' and 'undetected poverty' (share in the whole population)

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Main findings

➢ Among the poverty measures included in the analysis, the highest consistency with subjective assessments of economic situation was recorded for the SMSD indicator (severe material and social deprivation)

➢ A detailed analysis of the material and social deprivation index shows that the highest consistency with subjective assessments of the economic situation was recorded for the inability to meet 2-3 needs (rather moderate deprivation). For 4-5 items, 'false poverty' is already negligible; raising the 'deprivation threshold' only increases 'undetected poverty'

➢ Among the income-based poverty measures used (including 'objectivised' subjective measures), a similar picture of consistency with the subjective perception of the economic situation was observed. The rate of 'false poverty' is quite high. This is particularly surprising in the case of extreme poverty

➢ 60 % of the median appears to be a good threshold for relative poverty based on equivalised income (modified OECD scale) compared with the subjective perception of the economic situation (very close to the 'optimal' threshold)

➢ For those with very low incomes (below 0.45 median equivalised income), an increasing inconsistency was observed between income poverty and subjective assessment of economic situation (assessment of "making ends meet")

What are the potential reasons for inconsistencies between different measures of poverty and subjective assessment of economic situation?

Can the 'indicator of subjective economic stress' (difficulties to make ends meet) be treated as a measure of poverty? Does income poverty always indicate only those in a really bad economic situation?

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Concluding remarks

➢ Poverty is a complex phenomenon. As a concept it is defined and understood in different ways. The choice of a particular definition of poverty and of the measurement method used determines the results of the assessment

➢ The decision on how to measure poverty involves, among other things, the choice to consider poverty in an objective or in a subjective way

➢ Subjective poverty measurement is not an alternative to objective poverty measurement, but should be considered as complementary. The subjective approach shows the problem of poverty from a different perspective than the objective one

➢ **Any known and used measure of poverty shows only selected aspects/dimensions of the phenomenon**

➢ The purpose of using different measures of poverty should be to enrich knowledge of the phenomenon, not to introduce 'information noise' in this regard. Each indicator has its own advantages and disadvantages and a different interpretation, which should be clearly communicated to the users of the data, including the general public

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Thank you for your attention

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