The Unclear Relationship Between Standard and Administrative Poverty. Why Does Target Inefficiency Arise?

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Outline

- Theoretical issues about poverty, anti-poverty measures and target efficiency
- The indeterminacy of poverty concepts: what effects on the overlapping of the poor population according to the various concepts? Some evidence on EU countries
- Eligibility criteria of MIS and poverty concepts: what linkages? Is an imperfect overlap always a sign of an inefficient policy?
- The Italian Citizenship Income case study and the empirical crossing between CI eligibility and absolute poverty status (based on a joint research project with the Treasury Department of the Ministry of Economy and Finance)

Theoretical framework about poor T.E. (a)

- Target efficiency – i.e. the capacity of the scheme of perfectly covering the target group of a targeted scheme (thus dealing with poverty incidence and intensity) – should be the main objective of anti-poverty measures
- MIS have the main objective of fighting poverty so their target efficiency must be assessed according to some poverty indicator
- But criteria to identify the poor are not univocal, from both normative and empirical perspectives
- They depend on normative judgements about the height of the poverty lines and on methodological choices (about the poverty line and how to compute it)

Theoretical framework about poor T.E. (b)

- The targeting performance of a given MI scheme will depend on the (often implicit) chosen poverty indicator when means testing is established (as concerns eligibility) and on the take-up rate (as concerns recipiency)
- On the one hand, implicit poverty criteria in the MI might be based on unobservable or not reliable variables (e.g. consumption), thus imperfect proxies might be used to define requirements (e.g. income). On the other hand, eligibility might be based on criteria other than those followed by researchers
- Moreover, for a wide set of reasons, not all eligible households actually claim the benefit (non-take-up)
- All these issues should be taken into account to provide a comprehensive assessment of a given MI scheme without arguing that a bad matching is merely due to a bad design or to an unproper poverty concept

Main issues to investigate

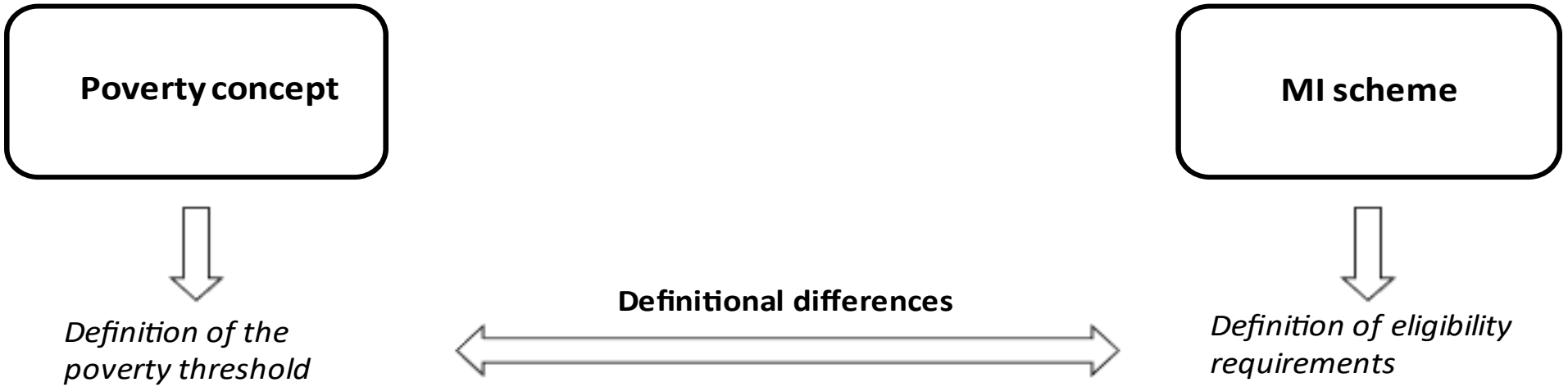
1. Preliminary issues: what are pros and cons of the various poverty concepts?
2. Is the poverty concept adopted by researchers and policymakers the same?
3. Why are different concepts followed? Because of different judgement values or other objectives affecting the definition of the target group (e.g. budgetary constraints, stigma towards some groups)?
4. Are we able to precisely identify the poor in empirical analyses?

Summarising…

- Targeting inefficiencies may arise from:

1. Limitations of the poverty concept on which the theoretical target group of a MIS is based => **Upstream errors**
2. Imperfect overlap between the poor population (theoretical target) and the MIS target population (depending on eligibility criteria and on the observable variables used for the means testing) => **Design errors**
3. Failure to reach all the eligible units (because of stigma, lack of information, administrative abuses, 'opportunistic' self-selection) => **Non-take-up**

Possible reasons behind design errors



- Number of welfare dimensions considered (unidimensional vs multidimensional)
- Dimensions of welfare considered (income, consumption, wealth)
- Relation of the treshold to the overall distribution of living standards (absolute vs relative)
- Assumptions on how to compare welfare across different characteristics
  1. Equivalence scales
  2. Territorial price differentials
  3. Treatment of non-monetary income

Who are the poor?

- No univocal criteria to identify who is a poor
- Many choices about: the criteria followed to choose a line (e.g. absolute vs relative); the level of the line; the proxy of living standard; the dimensions considered; the methodological choices to compute these proxies (e.g., equivalence scales and imputed rents; or the various choices to define a 'reference budget')
- No clear-cut suggestions by the literature, e.g. about income vs consumption, about relative vs absolute approaches, about the detailed methodological choices → choices often constrained by data availability
- In most cases extent of poverty and – mostly – the identification of the poor group is not robust to these choices
- Several EU and national poverty concepts and measures, with many methodological details behind them

Pros and cons of consumption vs income poverty

	Theoretical issues		Empirical issues	
	Pros	Cons	Pros	Cons
Income-based	Accounts for insecurity;	Affected by temporary income fluctuations;	Easy to monitor for means-tested welfare transfers;	Affected by income underreporting;
	Measure of 'potential consumption' not affected by preferences;			Difficult to take into account the monetary value of in-kind services and geographical price differentials (in case of national thresholds);
Consumption-based	Better reflects lifetime resources;	Affected by preferences;	More reliable in developing countries;	Expenditure may be a poor proxy of consumption;
	Directly associated with utility;	Problematic comparisons across time and space;		

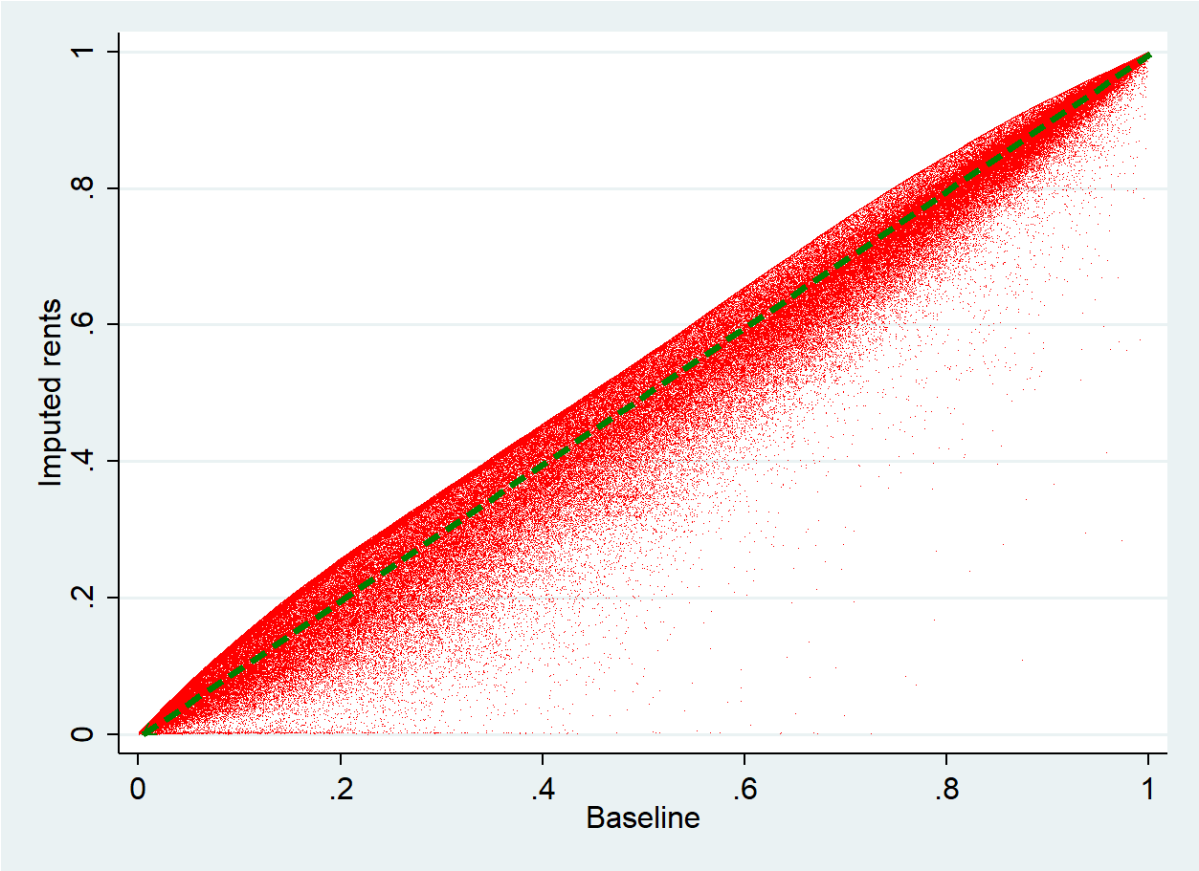
Further limits of consumption poverty

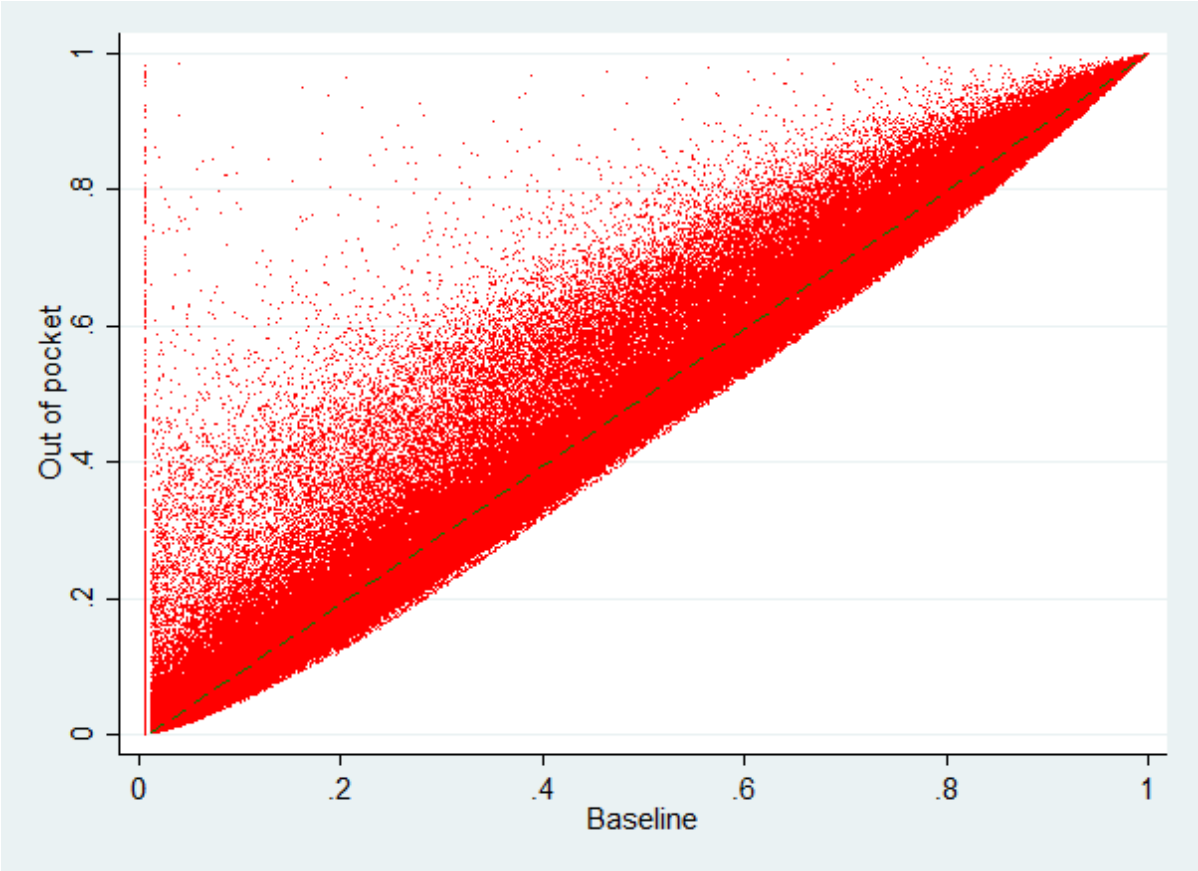
- Is consumption a better proxy of individual wellbeing? What happens during a pandemic? Are all types of consumption associated with a higher wellbeing?
- How should we assess extraordinary expenses (also for durable goods or unluck events)?
- Surveys measure expenditure instead of consumption
  - Difficulties in attributing an annual value to durables, service flows and extraordinary expenses
  - How to incorporate lack of spending thanks to in-kind transfers (as for income)
  - Seasonality of spending => do poverty ratios change according to the month of the interview? Is the bias higher for some population subgroups?
- Is HBS able to provide individual status rather than a mere aggregate value?
- N.B. Absolute poverty lines theoretically independent of the wellbeing concept

Crossing between AROP and SMD

	Cross between AROP and SMD		Cross between AROP-40 and SMD	
	Share of not in SMD among those poor-60	Share of non-poor-60 among those in SMD	Share of not in SMD among those poor-40	Share of non-poor-40 among those in SMD
AT	88.5%	41.6%	85.8%	77.5%
BE	76.8%	23.9%	66.5%	75.0%
DE	87.9%	35.0%	86.0%	77.6%
DK	87.9%	55.5%	89.5%	87.2%
EL	59.5%	54.7%	52.4%	76.8%
ES	83.9%	34.8%	76.1%	58.9%
FI	90.9%	61.6%	92.3%	94.4%
FR	81.1%	43.6%	76.3%	86.5%
IE	85.4%	55.9%	88.0%	93.4%
IT	79.0%	49.6%	72.5%	69.5%
LU	94.5%	28.6%	90.2%	51.5%
NL	92.4%	55.1%	95.0%	91.6%
PT	80.6%	43.8%	77.5%	77.5%
SE	96.8%	48.3%	95.9%	82.3%

Individual rankings when housing costs and benefits are considered in EU-27

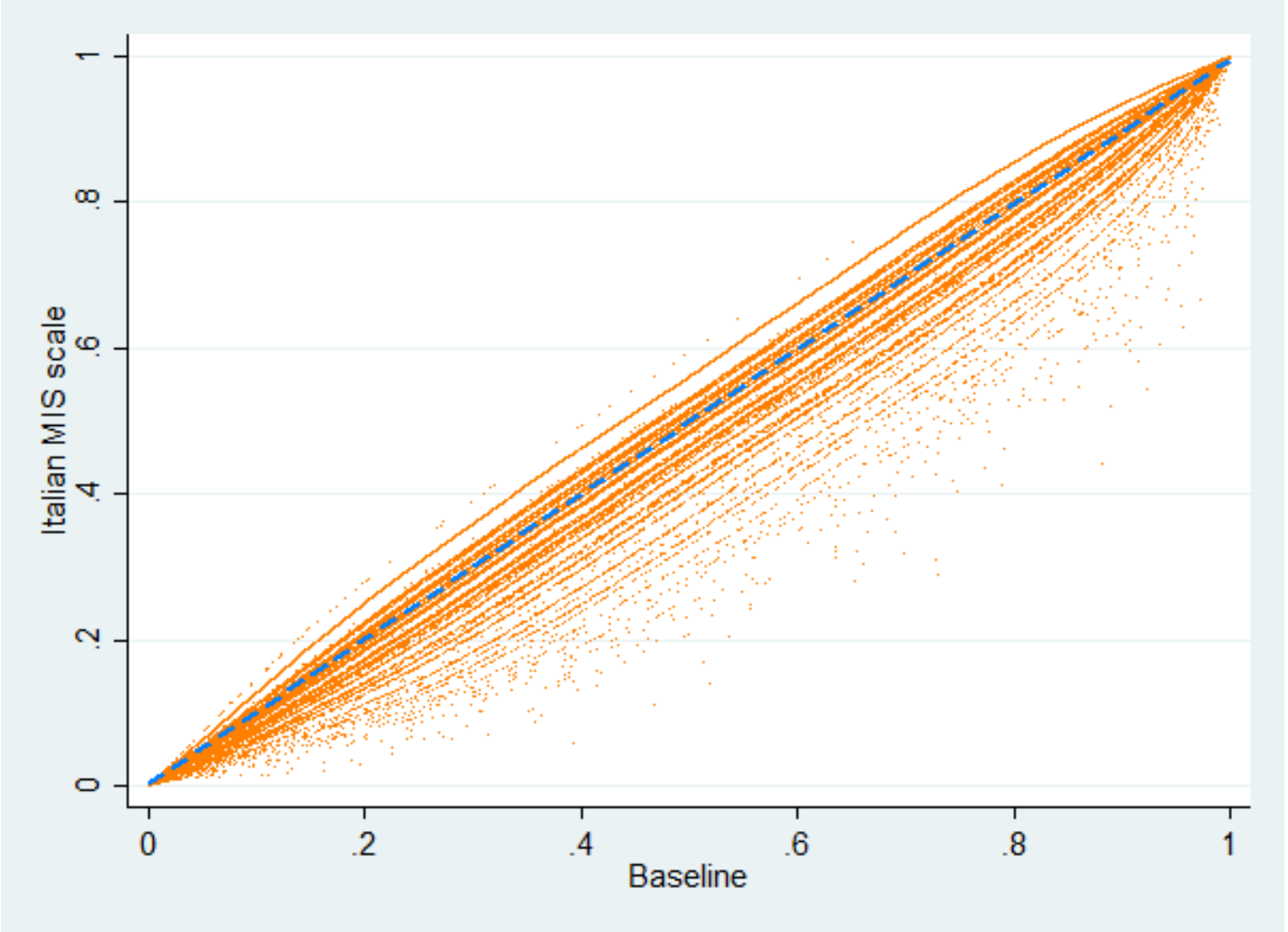




Poverty mobility when housing costs and benefits are considered

	Poor in the baseline who exit out of poverty		Non-poor in the baseline who drop into poverty	
	Non-poor with IR	Non-poor with OP	Poor with IR	Poor with OP
AT	11.9%	1.6%	2.2%	7.5%
BE	21.6%	3.3%	2.8%	8.2%
DE	14.7%	3.0%	3.7%	8.5%
DK	15.7%	0.4%	2.6%	11.5%
EL	21.1%	2.0%	2.9%	12.3%
ES	17.8%	2.3%	2.1%	5.8%
FI	22.8%	6.5%	4.9%	10.2%
FR	12.5%	4.3%	2.4%	8.1%
IE	30.7%	2.8%	2.1%	5.5%
IT	17.2%	3.0%	3.1%	5.2%
LU	5.6%	4.8%	1.5%	7.5%
NL	14.1%	2.1%	2.1%	10.3%
PT	6.1%	3.1%	0.8%	5.0%
SE	12.8%	1.0%	3.0%	8.8%

Individual rankings according to the equivalence scale in EU-27



Poverty mobility when the equivalence scale changes

	Poor in the baseline who exit out of poverty		Non-poor in the baseline who drop into poverty	
	Non-poor with the OECD scale	Non-poor with the Italian MIS scale	Poor with the OECD scale	Poor with the Italian MIS scale
AT	9.1%	9.6%	2.8%	2.7%
BE	15.3%	15.5%	1.7%	4.3%
DE	13.3%	6.6%	2.1%	2.3%
DK	19.1%	8.2%	0.9%	3.2%
EL	5.7%	8.9%	2.2%	1.9%
ES	3.7%	11.0%	2.1%	2.8%
FI	27.3%	14.6%	2.5%	4.9%
FR	11.4%	18.3%	2.4%	1.9%
IE	19.0%	11.8%	1.4%	3.0%
IT	6.5%	9.2%	2.8%	1.4%
LU	6.1%	12.8%	2.2%	1.8%
NL	17.1%	11.9%	1.4%	3.2%
PT	10.6%	9.7%	1.6%	2.5%
SE	18.4%	10.8%	1.2%	3.7%

Cross between AROP and recipiency of non-contributory and means tested cash benefits

	Cross between AROP-60 and non-contributory and means tested family, housing and social exclusion allowances		Cross between AROP-60 and non-contributory and means tested social exclusion allowances	
	Not recipients among those in poverty	Non poor among recipients	Not recipients among those in poverty	Non poor among recipients
AT	77.8%	53.5%	84.9%	47.1%
BE	81.5%	25.0%	81.7%	18.0%
DE	63.8%	59.0%	90.7%	38.0%
DK	53.9%	64.4%	n.a.	n.a.
EL	n.a.	n.a.	n.a.	n.a.
ES	87.0%	59.6%	91.5%	58.3%
FI	39.8%	66.2%	71.6%	58.9%
FR	19.3%	77.0%	47.8%	61.2%
IE	52.3%	68.1%	92.6%	52.4%
IT	88.8%	45.8%	96.7%	31.7%
LU	54.7%	55.5%	60.5%	26.5%
NL	39.6%	66.9%	70.7%	50.5%
PT	56.2%	74.0%	87.8%	36.5%
SE	50.8%	41.9%	75.8%	21.5%

The Italian case study

- Main question: **Is Citizenship Income (RdC) targeted towards those most in need? => Is the scheme target efficient?**
- In the debate this question is usually implicitly stated as “Is RdC able to cover absolutely poor individuals?”
- To assess this issue, two sets of interrelated questions to answer:
  1. What is the potential and the actual audience of the recipients? How efficient is the design of the measure with respect to our target group (avoiding a tautology or only focusing on non-take-up)?
  2. Who are “those most in need”? What is the best proxy variable of poverty, both on theoretical and empirical grounds?

The Italian case – The absolute poverty indicator

- Since 2005 ISTAT estimates an absolute consumption-based poverty measure based on the reference budgets approach (to be revised in 2022-2023)
- A household is considered poor if its monthly expenditure – net of some items not directly related to utility and gross of imputed rents – falls short of a household-specific poverty line defined as the monetary value, at current prices, of a basket of basic needs The basic needs considered in the reference budget concern: i) Adequate nutrition; ii) Accommodation; iii) A residual component
- Basic needs are assumed to be uniform across the national territory (apart from the heating costs). Poverty lines are different since the cost of the fixed basket varies according to the cost of living => hundreds poverty lines by household types, 3 degrees of urbanization and 3 macro-regions

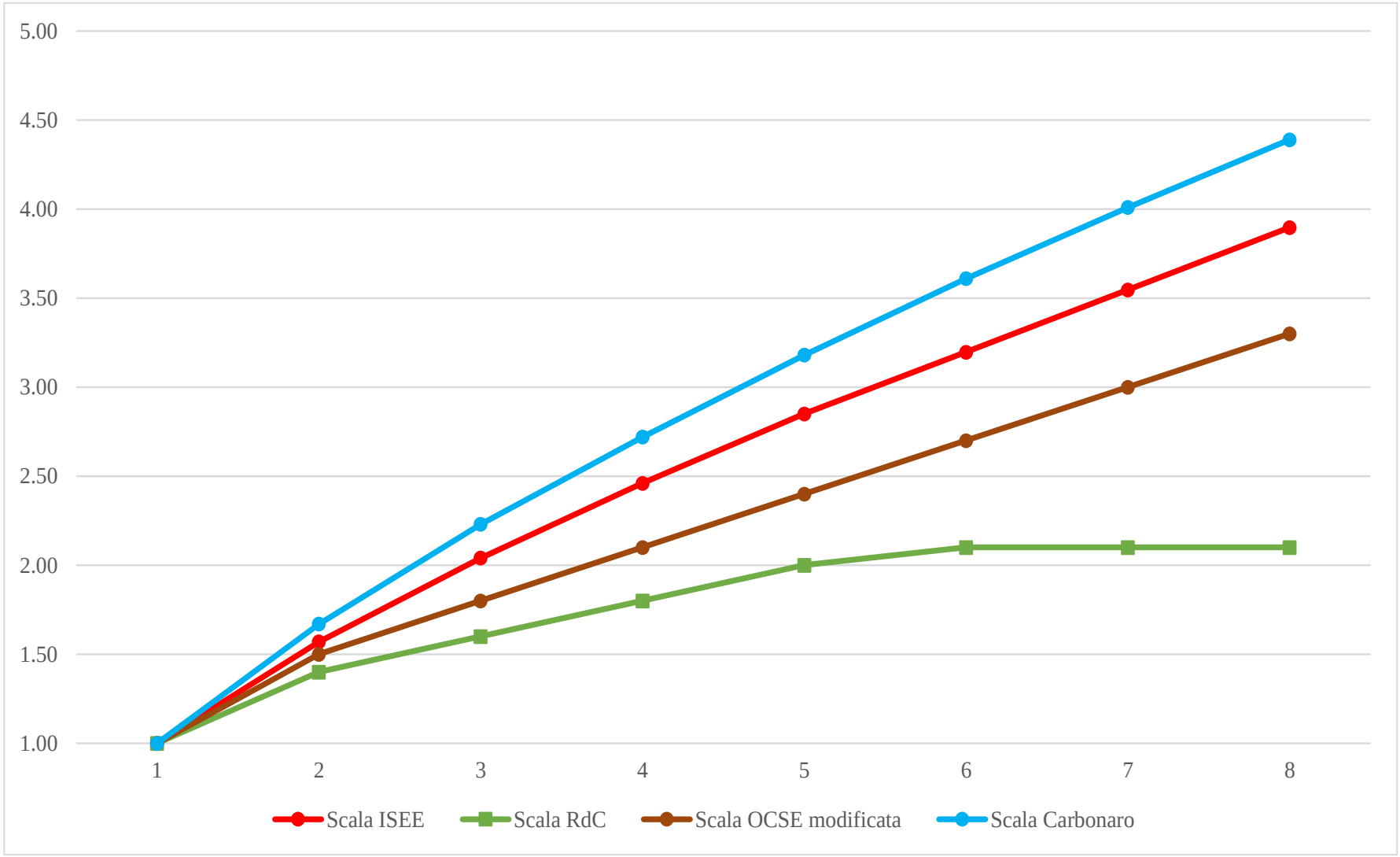
The Italian case – RdC eligibility requirements

- Citizenship/residence: the member filing the application has to have resided in the country for at least 10 years (the last two continuously)
- Income and wealth, the household must cumulatively have:

1. an ISEE lower than 9,360€;
2. an annual equivalised income no higher than 6,000€;
3. real estate assets – excluding the family home – no higher than 30,000€;
4. financial assets below a threshold of 6,000€ (increased according to household size)

- Consumption of some durable goods
- Peculiar equivalence scale (assuming very low economies of scale) in addition to the ISEE scale are used to define eligible individuals and compute the benefit

The peculiar RdC equivalence scale



Data and limits (a)

- *Analyses (carried out with M. Aprea and G. Gallo) within a joint research project between Department of Treasury of the Italian Ministry of Economy and Finance and the Department of Economics and Law at Sapienza University of Rome*
- Exploiting an innovative database built deterministically merging (through blanked fiscal codes) HBS with INPS administrative archives on labour and transfer incomes, we investigate the crossing between RdC recipiency (recorded in INPS archives), eligibility (based on the fulfilment of the monetary and citizenship requirements) and absolute poverty status (recorded in HBS).
- 2019 HBS sample composed by 42,818 individuals living in 18,718 households (analyses at the household level)
- We assess the target efficiency of RdC with respect to the official absolute poverty indicator

Data and limits (b)

- We consider poverty status before RdC (assuming a 100% spending of the benefit, consistently with the content of the measure)
- **Strengths:** true data for RdC (and other transfers) => no transfer underreporting (a typical issue in surveys). Detailed information on consumption expenditure.
- **Weaknesses:** not all income sources are registered (capital and business income, no info about wealth that is imputed in some cases). Underreporting of labour income may also play a role => income poverty may be badly measured (e.g. for households living of capital or business incomes, not recorded in INPS archives; Irpef data should be needed)

Data and limits (c)

- To assess the RdC eligibility of households, we need to impute Isee values for those who did not file the declaration in 2019 (13,080 households out of 18,718)
- Share of households with no Isee declaration is however much lower among absolute poor households (41% vs 72%)
- We impute household ISR, ISP, financial wealth, and property wealth adopting a two-stage regression method in a multiple imputation framework
    1. Estimate probability to have a non-zero value of income/wealth
    2. Estimate the value of income/wealth by means of the predictive mean matching imputation method on the 30 closest neighbours
- Analyses carried out on the whole sample, possible extensions on the subsample of those presenting the ISEE (also considering income poverty)

Overlap between the RdC and absolute poverty: what do we expect? (a)

- According to our framework:

1. Flaws in the expenditure-based poverty indicator due to both theoretical and empirical issues
2. Design errors: eligibility thresholds and poverty lines are defined according to very different assumptions, e.g. different proxies of wellbeing, equivalence scales, consideration of differences in cost of living at the territorial level, also because of budgetary constraints…. Exclusion by design may be a very important issue to be investigated according to judgement values
3. Non-take-up: not our main research interest here

Overlap between the RdC and absolute poverty: what do we expect? (b)

=> Bad matching due to:

- I-type errors: eligibility criteria may wrongly exclude some poor households (e.g. because of residence requirement or different consideration of geographical areas or an excess of wealth requirements) or the poverty indicator may incorrectly identify some households as poor (i.e. frugal preferences)
- II-type errors: eligibility criteria may wrongly include some non-poor households (i.e. temporarily low income or income underreporting) or the poverty indicator may wrongly identify some households as non poor (i.e. infrequent expenses)

To recap: RdC coverage for households fulfilling the ISEE test (5,1 million)

Possesso degli altri requisiti				Quota delle famiglie
Reddito familiare	Patrimonio mobiliare	Patrimonio immobiliare	Residenza 10 anni	
Sì	**Sì**	**Sì**	**Sì**	**34.2**
Sì	Sì	Sì	No	**4.6**
Sì	Sì	No	Sì	**0.2**
Sì	Sì	No	No	0.0
Sì	**No**	**Sì**	**Sì**	**13.7**
Sì	No	Sì	No	1.2
Sì	No	No	Sì	0.1
Sì	No	No	No	0.0
No	**Sì**	**Sì**	**Sì**	**29.4**
No	Sì	Sì	No	2.6
No	Sì	No	Sì	0.0
No	Sì	No	No	0.0
No	**No**	**Sì**	**Sì**	**12.7**
No	No	Sì	No	1.3
No	No	No	Sì	0.1
No	No	No	No	0.0

(Very weak) Overlap between asbolute income and consumption poverty in our data

Consumption	Income		Total
	Non poor	Poor	
Frequencies (%)			
Non poor	83.8%	9.8%	93.6%
Poor	4.0%	2.4%	6.4%
Total	87.8%	12.2%	100.0%

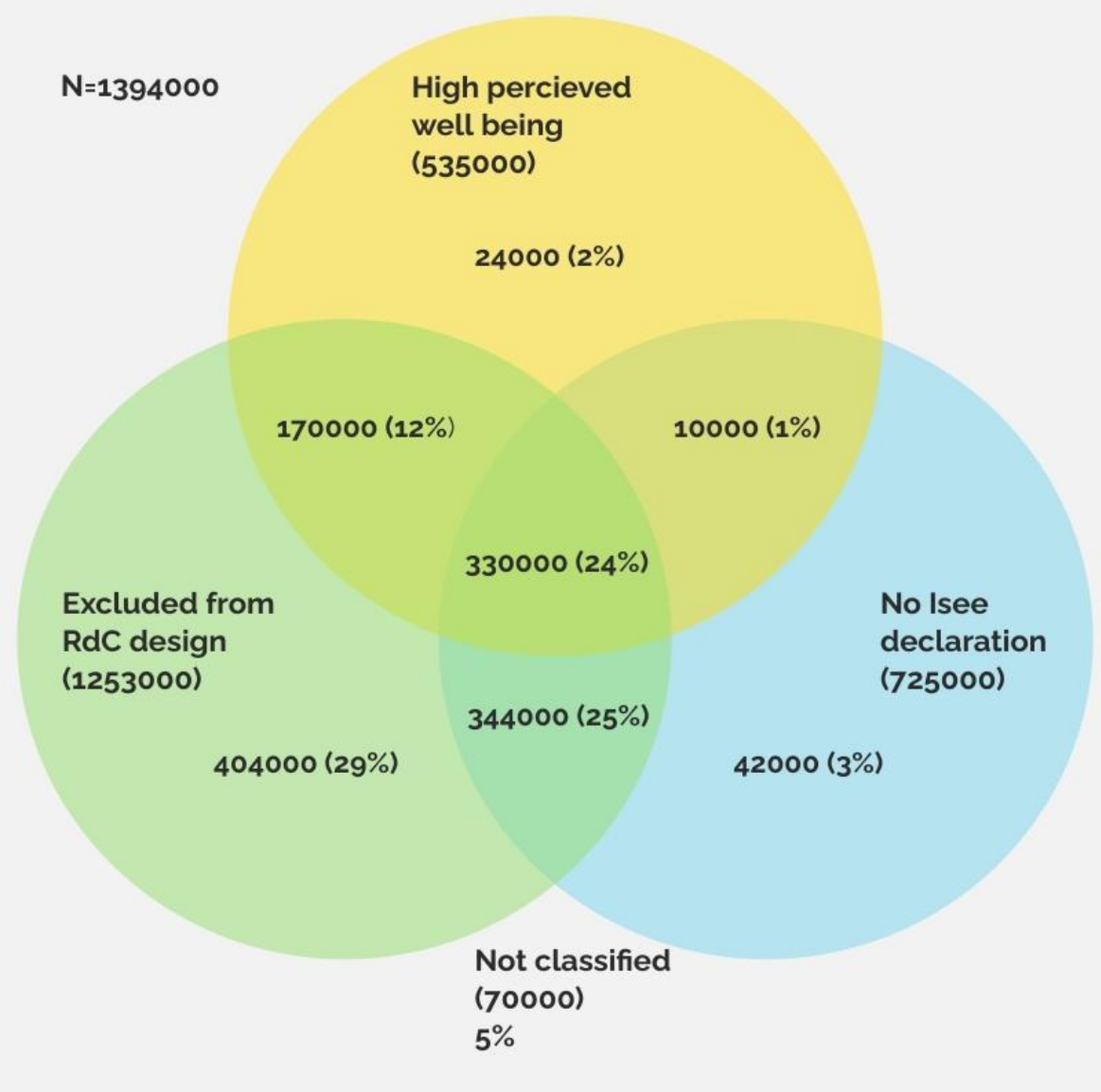
Overlap between absolute consumption poverty and RdC eligibility

RdC receipt	Poverty status		
	Not poor	Poor	Total
Number of households (thousand)			
Not eligible	22,708	1,249	23,956
Eligible	1,429	609	2,038
Total	24,137	1,858	25,994
Relative frequency (%)			
Not eligible	87.4%	4.8%	92.2%
Eligible	5.5%	2.3%	7.8%
Total	92.9%	7.2%	100.0%
Row relative frequency (%)			
Not eligible	94.8%	5.2%	100.0%
Eligible	70.1%	29.9%	100.0%
Column relative frequency (%)			
Not eligible	94.1%	67.2%	92.2%
Eligible	5.9%	32.8%	7.8%

Overlap between absolute consumption poverty and RdC recipiency

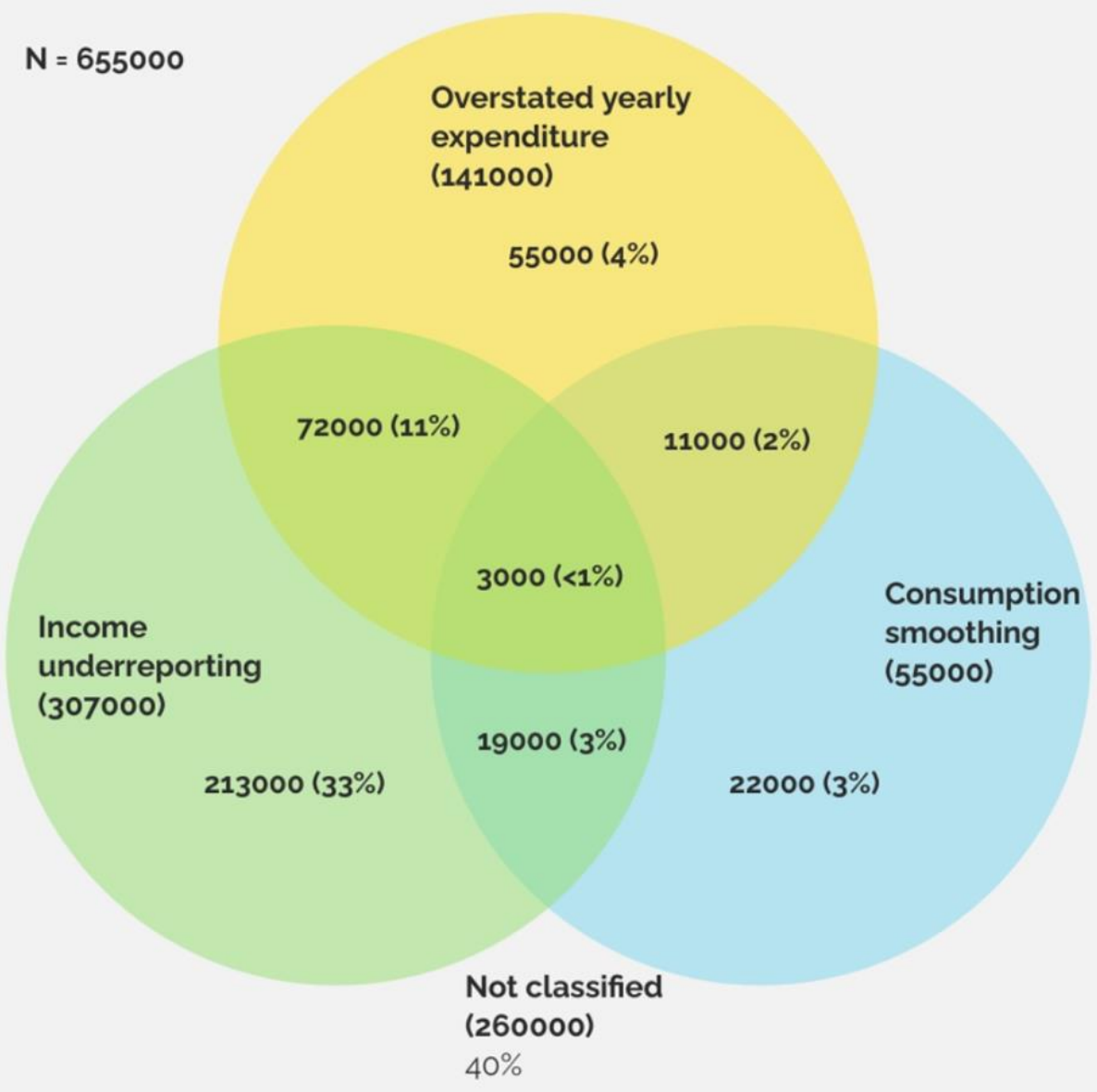
RdC receipt	Poverty status		
	Not poor	Poor	Total
Number of households (thousand)			
Not recipient	23,482	1,395	24,877
Recipient	655	463	1,118
Total	24,137	1,858	25,994
Relative frequency (%)			
Not recipient	90.3%	5.4%	95.7%
Recipient	2.5%	1.8%	4.3%
Total	92.8%	7.2%	100.0%
Row relative frequency (%)			
Not recipient	94.4%	5.6%	100.0%
Recipient	58.6%	41.4%	100.0%
Column relative frequency (%)			
Not recipient	97.3%	75.1%	95.7%
Recipient	2.7%	24.9%	4.3%

A focus on I-type error: upstream or design issue?



1. 90% are excluded by design (1,248,000 households), mostly according to a single criteria (also among those presenting ISEE)
2. Among them 500,000 vs 404,000 declare adequate vs unadequate resources
3. In addition, 344,000 excluded by design and feeling poor do not apply for ISEE
4. 52% do not present ISEE (725,000 households) => self-selected by (unobservable) status or by tight eligibility constraints?
5. Limited evidence on non-take-up among the poor (people fulfilling requisites and not applying/receiving)

A focus on II-type error: upstream or design issue?



1. 21% have a possibly overstated expenditure (141,000) → they may be poorer than they seem => upstream error?
2. 46% (307,000) have relatively high consumption/income rario => possible income underreporting?
3. 8% (55,000 households) may be smoothing consumption when income is volatile thanks to savings
4. Possible 'calendar effects' on high spending?
5. More difficult to distinguish reasons behind the II-type error (further analyses based on the gap from the poverty line)

Correlates with the errors

	Not recipient, poor (I-type)	Recipient, poor	Recipient, not poor (II-type)	Nor recipient, not poor	Share of poor popu-lation	Share of total popu-lation
Lower secondary education	2.7	4.0	2.1	0.3	69.2%	44.1%
Upper secondary education	0.6	0.5	0.9	1.6	26.2%	37.4%
Tertiary education	0.3	0.1	0.2	5.3	4.7%	18.5%
All local-born	0.2	0.4	0.5	4.4	71.2%	91.1%
At least 1 foreign-born	5.6	2.7	2.0	0.2	28.8%	8.9%
Working age only	0.8	1.2	1.2	1.0	38.2%	40.8%
Adults with children	1.7	2.3	1.5	0.6	35.3%	23.6%
Multigenerational	1.8	1.6	1.6	0.6	1.7%	1.0%
Working age and over 67	0.8	0.3	0.5	1.8	24.9%	34.6%
Work intensity $> 50\%$	0.7	0.2	0.5	1.9	33.1%	45.9%
Work intensity $\leq 50\%$	1.7	2.1	1.3	0.6	25.6%	16.3%
Work intensity $= 0\%$	1.5	7.9	4.5	0.3	20.2%	9.1%
No employable member	0.8	0.4	0.7	1.6	21.1%	28.7%
Homeowners	0.4	0.1	0.2	4.6	42.3%	72.1%
Tenants	2.8	10.3	5.4	0.2	57.7%	28.0%
North	0.9	0.4	0.3	1.8	40.9%	47.8%
Centre	0.6	0.5	1.0	1.4	14.0%	20.5%
South	1.4	3.6	3.3	0.4	45.1%	31.7%
Metropolitan area	0.8	1.6	1.1	1.0	16.1%	16.8%
Medium city	0.8	1.1	1.2	1.0	26.2%	28.1%
Small city	1.3	0.7	0.8	1.0	57.7%	55.1%

Discussion

- Well-known design limits of RdC for many reasons (e.g. ‘Saraceno Commission’, Alliance against poverty)
- Income and wealth underreporting issues (but maybe emphasised in their numerical relevance), but not precisely investigable with our data (unless we re-impute incomes according to expenditure)
- However, main statements:

1. Bad matching may be due to different implicit identification criteria => a critique should be made according to the right perspective (e.g. evasion, take-up, clear limits in the design, different consideration of geographical and household size heterogeneities)
2. We cannot simply base our assessment on absolute poverty as it were an objective status of high needs at the individual level => theoretical and empirical limits of the absolute poverty indicator based on expenditure

Conclusions

- Observing bad matches with respect to a theoretical poverty concepts is not enough per se to assess the target efficiency
- Two interrelated strategies:

1. Improve the design – and the transparency – of the scheme design assessing the consistency of the various requirements about access and benefit amount, discussing the reasons behind a certain target
2. Compare pros and cons of the various poverty concepts at the individual level, to better inform the design of a MIS and its target efficiency.

- Future research should need a better matching of consumption and income/wealth data (also to directly estimate underreporting from survey and administrative sources)

Thanks for your attention!!! ☺