

Progress Report of the UNECE Task Force on Subjective Poverty Measures

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28–29 November: Meeting of the UNECE Group of Experts on Measuring Poverty and Inequality

Session D. “Subjective poverty” 28 November 2023 16:05 - 17:30

Geneva, Switzerland

**Appreciation to
UNECE Expert Group on Poverty and Inequality
Task Force Members & Vania**



Progress Details

- Meeting of Task Force members (throughout 2023)
 - ▶ Finalized what to include
 - ▶ Identified leadership and contributors for writing chapters
- Final draft report
 - ▶ Introduction
 - ▶ Chapter 2. Focus on Subjective Poverty
 - ▶ Chapter 3. Approaches for Measurement and Analysis
 - ▶ Chapter 4. Methods for Data Collection and Guidance
 - ▶ Chapter 5. Recommendations
 - ▶ Appendices
 - Appendix A. Survey of countries summary
 - Appendix B. R computer code to produce Subjective Poverty Line as intersection of MIQ & income based on econometric estimation

Chapters 1 & 2

- Chapter 1 Introduction -- background
- Chapter 2. Focus on Subjective Poverty
 - ▶ Introduction
 - ▶ Definitions of subjective poverty
 - Contrast to objective poverty
 - Frameworks for subjective poverty
 - Collection and analysis of subjective poverty at NSOs
 - Collection and analysis of subjective poverty at International Agencies
 - ▶ Why measure
 - ▶ Evolution of subjective poverty measurement (literature review)

Chapter 3

■ Approaches to measurement

- ▶ Qualitative questions not focused on specific level of income (or consumption)
 - Identification
 - Evaluation
 - Prediction
- ▶ Qualitative categorical focused on specific level of income (or consumption)
 - Evaluation
 - Prediction
- ▶ Money metric valuation question

■ Analysis

- ▶ Relationships
- ▶ Subjective poverty lines
- ▶ Country/international organization examples

Box 7. Example of Qualitative Categorical Evaluation Questions Focused on Income (Deleeck)

[EU-SILC participating countries] A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?

- With great difficulty
- With difficulty
- With some difficulties
- Fairly easily
- Easily
- Very easily

Box 10. Examples of Money Metric Valuation Questions, Minimum Income (MIQ)

[Brazil] Taking into account the current situation of your family, what would be the minimum monthly income needed to “make ends meet”?

[Ukraine] What do you think: how much money (according to today’s price level) for one of your household members is needed in order to not feel poor?

[Kyrgyz Republic] What is your opinion, how much money on average per month at today's price are needed for the family with the same number of people as you have in order to avoid poverty?

[Moldova] What monthly cash income would meet the minimum needs of one person in order to 'live from day to day'?

[Belarus] In your opinion, what amount of money does your household need to have monthly to meet[satisfy] the minimum needs of all its members?

Chapter 4. Methods for Data Collection and Guidance - 1

- Survey frame and sample consideration
- Surveys – traditional versus alternative (e.g., rapid response)
- Administrative and registry data
- Sources of error – responses and representativeness
- Validity and relationship to other measure of poverty and economic well-being
- Time frame for data collection and release
- Cross sectional versus longitudinal data collection
- OECD subjective well-being guidelines

Chapter 4. Methods for Data Collection and Guidance - 2

- Hypothetical assessments of subjective poverty
 - ▶ Importance of question wording and examples
 - ▶ Frame and mode effects
 - ▶ What impacts responses (e.g., demographics, culture STiK)
- Lessons learned from COVID 19
 - ▶ Subjective poverty in SEIA Questionnaires and Comparability Analysis
 - ▶ Overview of UNDP Socio-Economic Impact Assessments (SEIAs) for countries in households of UNECE region
 - ▶ Implications regarding COVID experience outbreak

Money Metric Valuation and Use

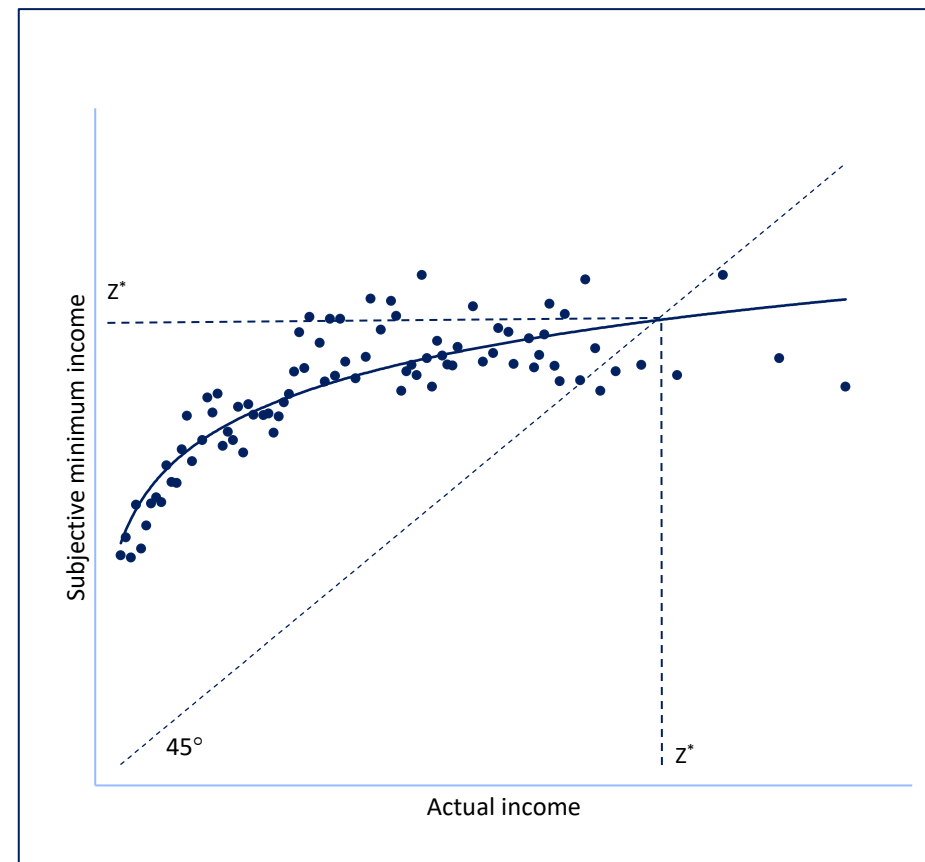
Version 1 (MIQ, 1988)

■ To meet the expenses you **consider necessary**, what do you think is the minimum income, **before tax**, a family like yours needs, on a yearly basis, to make ends meet (if you are not living with relatives, what are the minimum needs, before tax, of an individual like you)?

Version 2 (MSQ, 1988)

■ In your opinion, how much do you have to **spend** each year in order to provide the **basic needs** for your family? By basic needs I mean barely adequate food, shelter, clothing and other essential items required for daily living.

Intersection of MIQ and Income



Chapter 5. Recommendations 1-3



Subjective measures of poverty should be included among the set of assessment tools used by countries ...

- NOT to replace objective measures or multidimensional measures
- Serve as complements
- Countries with dashboards of poverty indicators should include subj assessments



Given their inclusion in EU-SILC, and their utility in identifying subjective poverty, NSOs use as standard for international comparisons...

- Deleck questions - refer to level of financial difficulty (categorical)
- Minimum Income Question (money metric valuation)



Primary method to estimate subjective poverty lines ...

- Utilize Minimum Income Question with
- Intersection approach (econometric estimation)

Chapter 5. Recommendations 4-6



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NSOs and analysts should consider the possible impacts of ...

- Survey mode, context (framing), sampling methods, and working differences
- When analyzing subjective indicators like subjective poverty
- Countries with dashboards of poverty indicators should include subj assessments



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NSOs and analysts should continue to demonstrate the utility of subjective poverty measures, considering...

- Issues of overlap with objective poverty measures and
- Policy applications



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Subjective poverty measures should be ...

- Disaggregated to at-risk groups
- Follow recommendations in UNECE's guide to disaggregation

Table A.1: Question Types Reported Being Asked by Country in UNECE (2021) Study

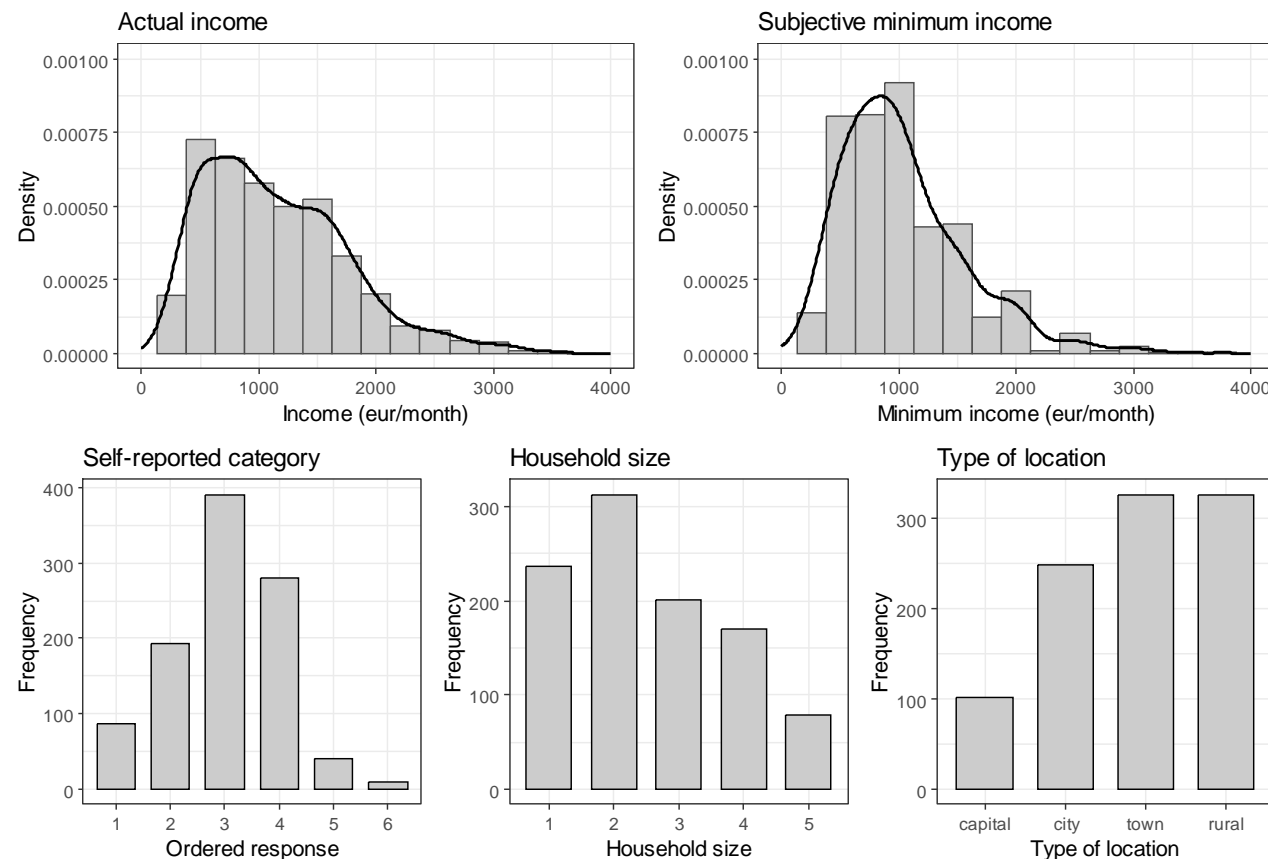
	Qualitative Categorical			Money Metric	Total # of Subjective Poverty Questions	Other
Country	Identification	Evaluation	Prediction	Evaluation		Deprivation, Social Exclusion, Well-being
Total # across all Countries	4	42	6	40	45	22



Appendix B. Estimation Example - Sample

■ Sample data ($N=1000$):

- ▶ `income`: monthly household income
- ▶ `miq`: response to the Minimum Income Question
- ▶ `ordered`: response to a categorical question (categories: 1-6)
- ▶ `size`: household size
- ▶ `urban`: degree of urbanisation with categories: capital city; other cities; towns; rural areas
- ▶ `LNincome`; `LNmiq`, and `LNsize` refer to natural logs of `income`, `miq`, and `size` variables.



Appendix B. R Code Provided to Produce SPL

Box B.1: Intersection method (R code chunk)

```
# Step 1 :: Estimate the equation
eq.miq <- LNmiq ~ LNincome + size + urban
model.spl <- lm(formula = eq.miq, data=DATA)
summary(model.spl)

# (additional step: estimated coefficients)
coef.alpha <- as.vector(coef(model.spl)[1])
coef.income <- as.vector(coef(model.spl)[2])
coef.size <- as.vector(coef(model.spl)[3])
coef.city <- as.vector(coef(model.spl)[4])
coef.town <- as.vector(coef(model.spl)[5])
coef.rural <- as.vector(coef(model.spl)[6])

# Step 2 :: Estimate subjective poverty lines for different subgroups:
Result <- data.frame(size=1:5)

for(i in Result$size) {
  Result$capital[i] <- exp((coef.alpha+coef.size*i)/(1-coef.income))
  Result$cities[i] <- exp((coef.alpha+coef.size*i+coef.city)/(1-coef.income))
  Result$towns[i] <- exp((coef.alpha+coef.size*i+coef.town)/(1-coef.income))
  Result$rural[i] <- exp((coef.alpha+coef.size*i+coef.rural)/(1-coef.income))
}

Result
```

Table B.1: Regression output: Intersection method

	<i>Coefficient Estimates</i>
Intercept	4.308 ^{***} (0.171)
LN(actual income)	0.365 ^{***} (0.027)
Household size	0.122 ^{***} (0.012)
<i>Degree of urbanisation (ref. = Capital city)</i>	
Other cities	-0.330 ^{***} (0.041)
Towns	-0.354 ^{***} (0.040)
Rural areas	-0.366 ^{***} (0.040)
Adjusted R ²	0.533
F-statistic	229.4 ^{***}

Notes: ^{***} $p < 0.001$; ^{**} $p < 0.01$; ^{*} $p < 0.05$; \cdot $p < 0.1$

Table B.2: Estimated SPLs by household size and urbanisation degree

<i>Size</i>	<i>Capital city</i>	<i>Other cities</i>	<i>Towns</i>	<i>Rural areas</i>
1	1066	634	610	599
2	1292	769	740	726
3	1567	932	897	881
4	1900	1130	1088	1068
5	2303	1370	1319	1294



Remaining Timeline

Time	Task	Status
20 Nov 2023	Draft report posted on wiki	Completed
15 Dec 2023	Report finalized	
Early Jan-Feb 2024	Send full report to Conference of European Statisticians (CES) Bureau for review	
Mar-Apr 2024	Electronic UNECE wide consultation with all UN Member States – here is where we expect to receive comments from the countries	
End of April-May 2024	Integrate comments and submit final report to the CES Bureau (CES Bureau meeting held in June)	
May 2024	Submit final report to the CES plenary session for endorsement	

Discussion & Questions



Contact

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