MINISTRY
FOR NATIONAL ECONOMY

Does a warm home mean the same thing in Finland and Portugal?

Evaluation of the cross-country comparability of the material deprivation index and discussion of alternative measures

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Cross-country comparability of material deprivation

- 9 item official MD indicator[1]
- Suggested 13 item indicator based on more detailed analysis[2]
- Purpose:
  - measuring dynamics
  - comparing countries

(1) Guio, A. C. (2009). What can be learned from deprivation indicators in Europe. *indicator subgroup of the Social Protection Committee*, *10*.
(2) Guio, A. C., Gordon, D., & Marlier, E. (2012). Measuring material deprivation in the EU: Indicators for the whole population and child-specific indicators. *Eurostat: Luxembourg*.

Overview

Item selection

- Order of curtailment
- Correlating with other variables
- The issue of the heating item

Weighting

- Using alternative weights
- Robustness to weighting

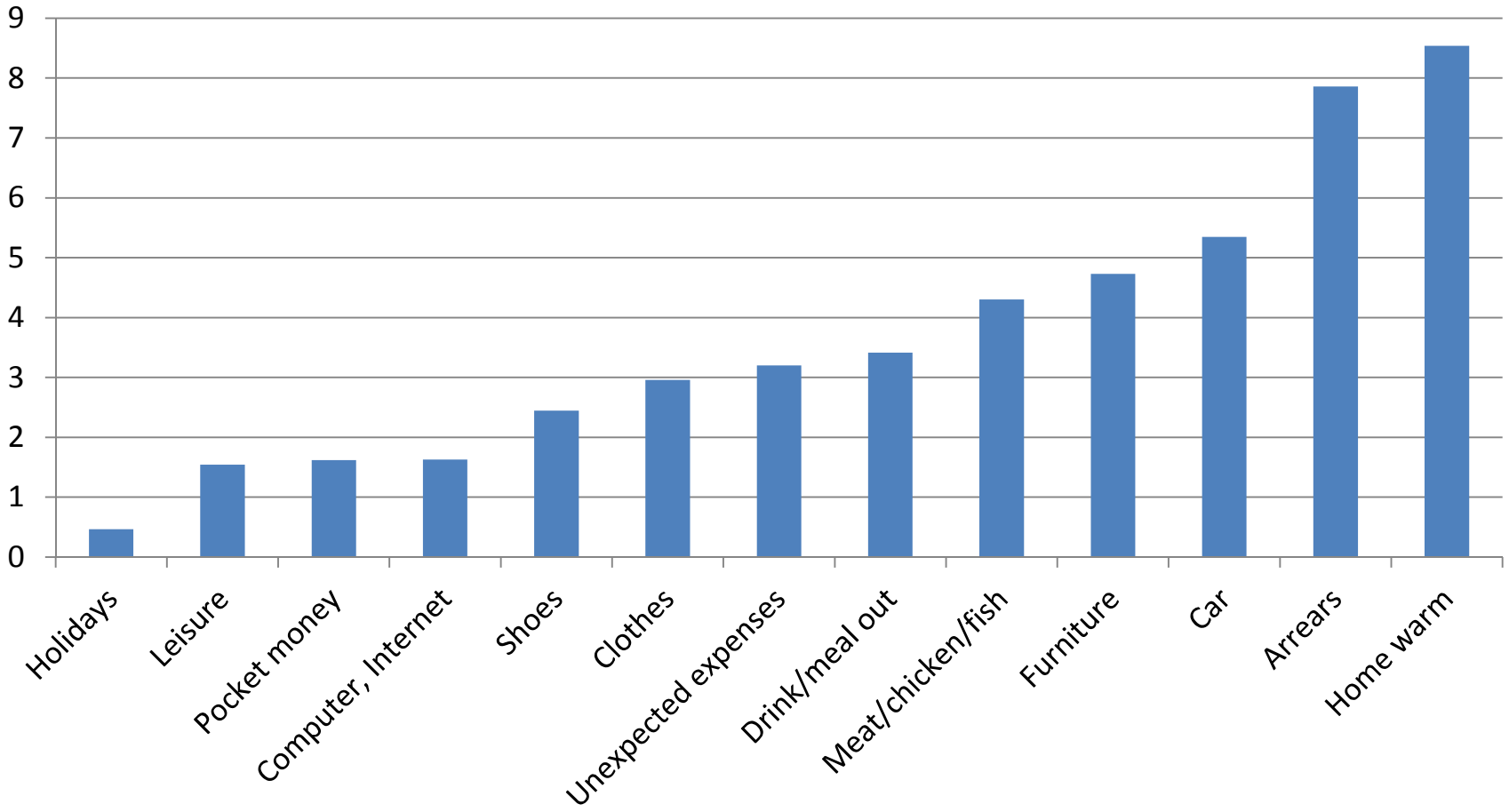
Order of curtailment

- Detect the order from the data![1] (EU-SILC)
- Order of curtailment is similar within and across EU countries.

Country	FI	PT
Unexpected expenses	1	8
Holidays	2	1
Furniture	3	2
Arrears	4	13
Clothes	5	7
Pocket money	6	4
Leisure	7	5
Drink/meal out	8	6
Meat/chicken/fish	9	12
Car	10	10
Computer, Internet	11	11
Home warm	12	3
Shoes	13	9

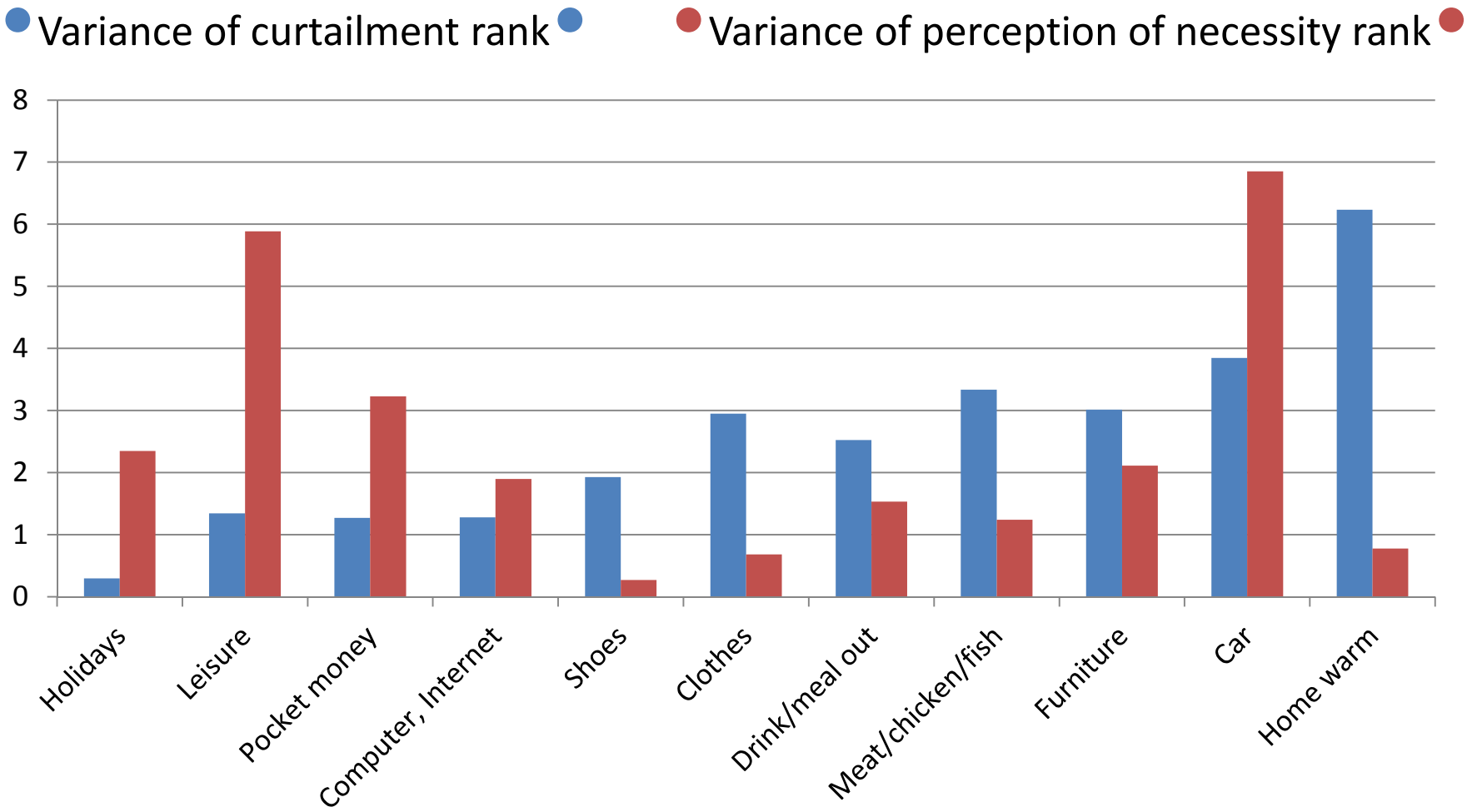
(1) Deutsch, J., Guio, A. C., Pomati, M., & Silber, J. (2015). Material deprivation in Europe: Which expenditures are curtailed first? *Social Indicators Research*, *120*(3), 723-740.

Variation in the ranks of curtailment order



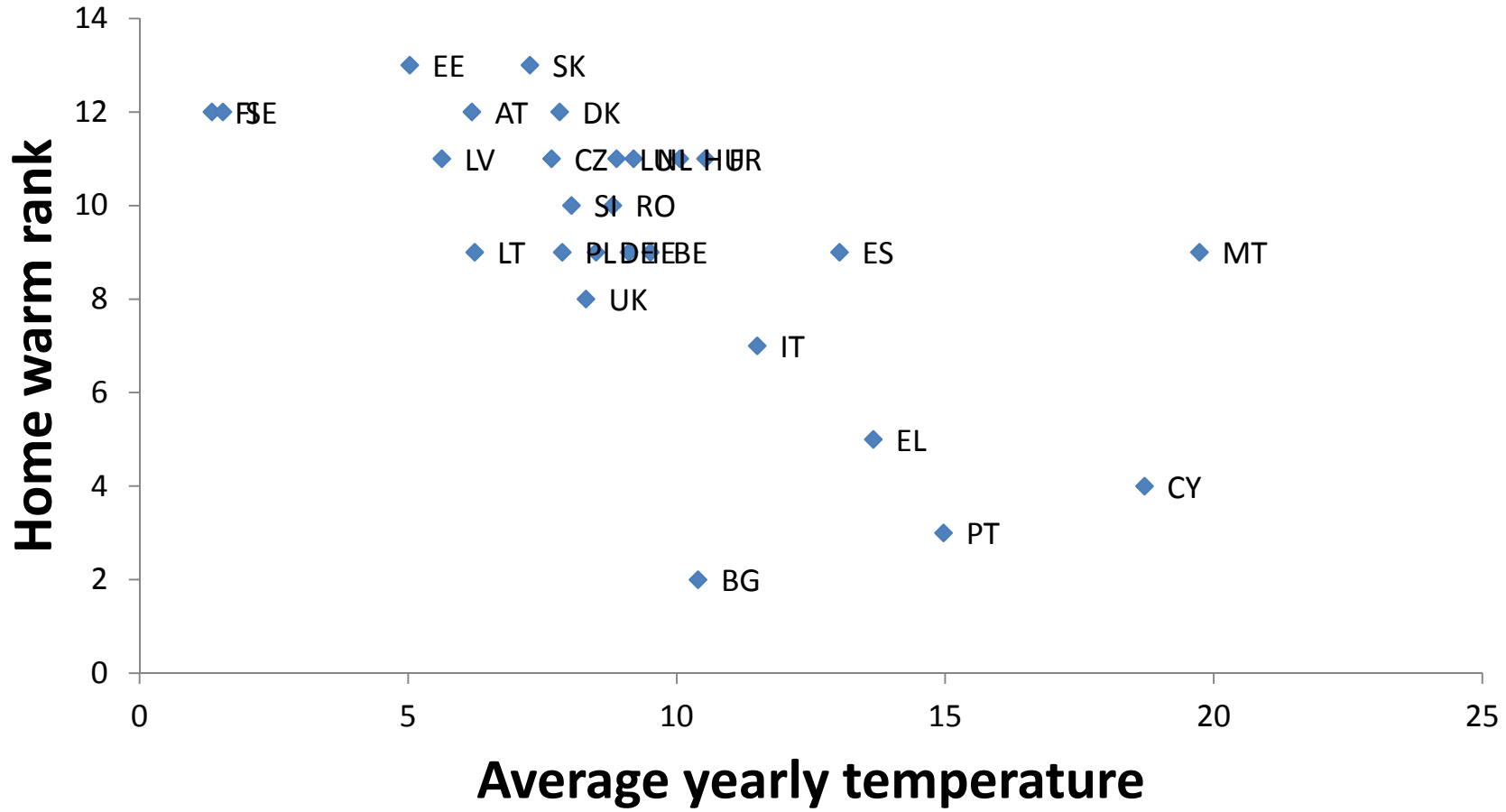
Own calculation based on Deutsch, J., Guio, A. C., Pomati, M., & Silber, J. (2015)

Variation in the ranks



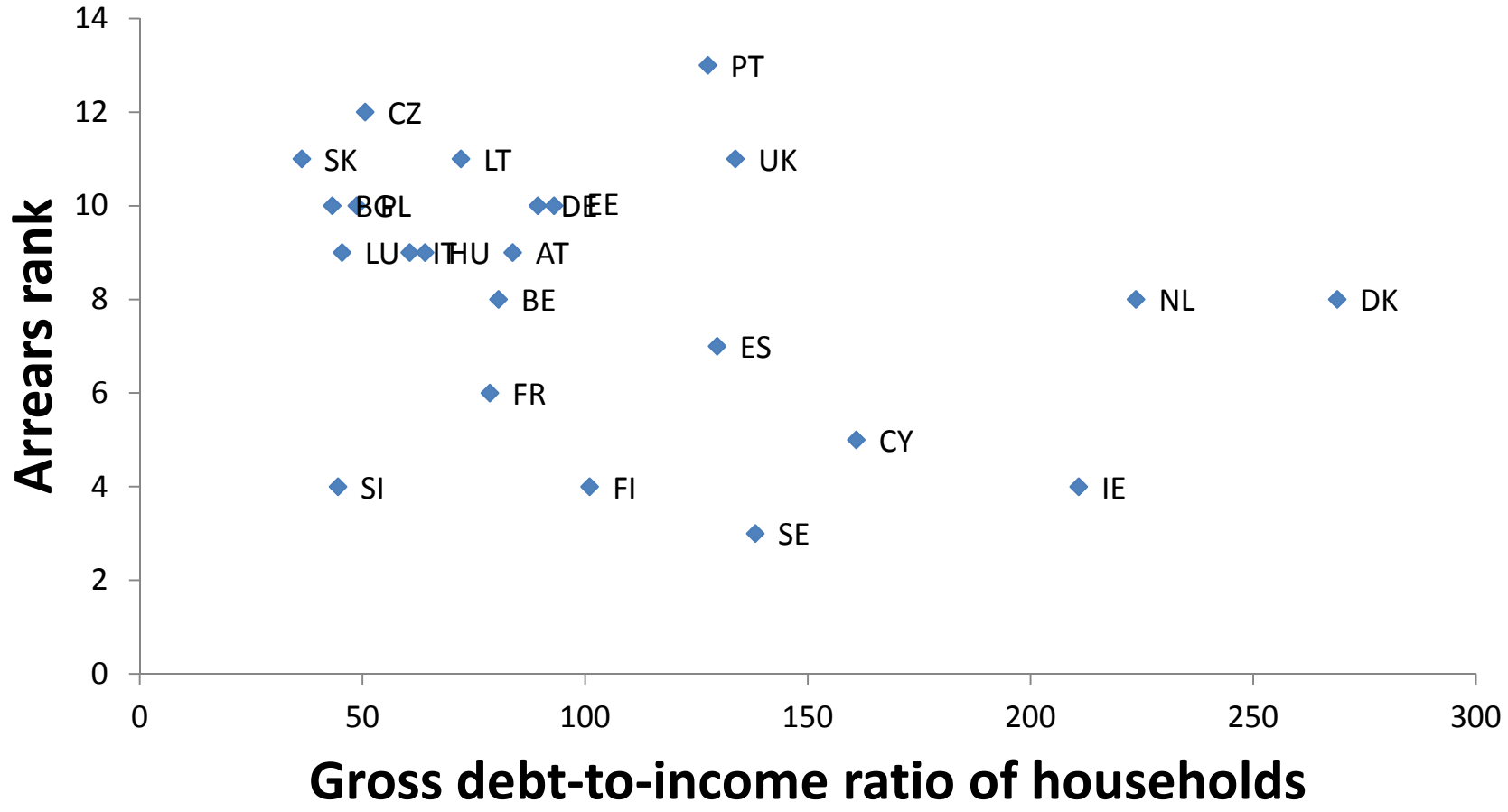
Own calculation based on Deutsch et al. (2015) and Guio et al. (2012).

Heating rank and temperature



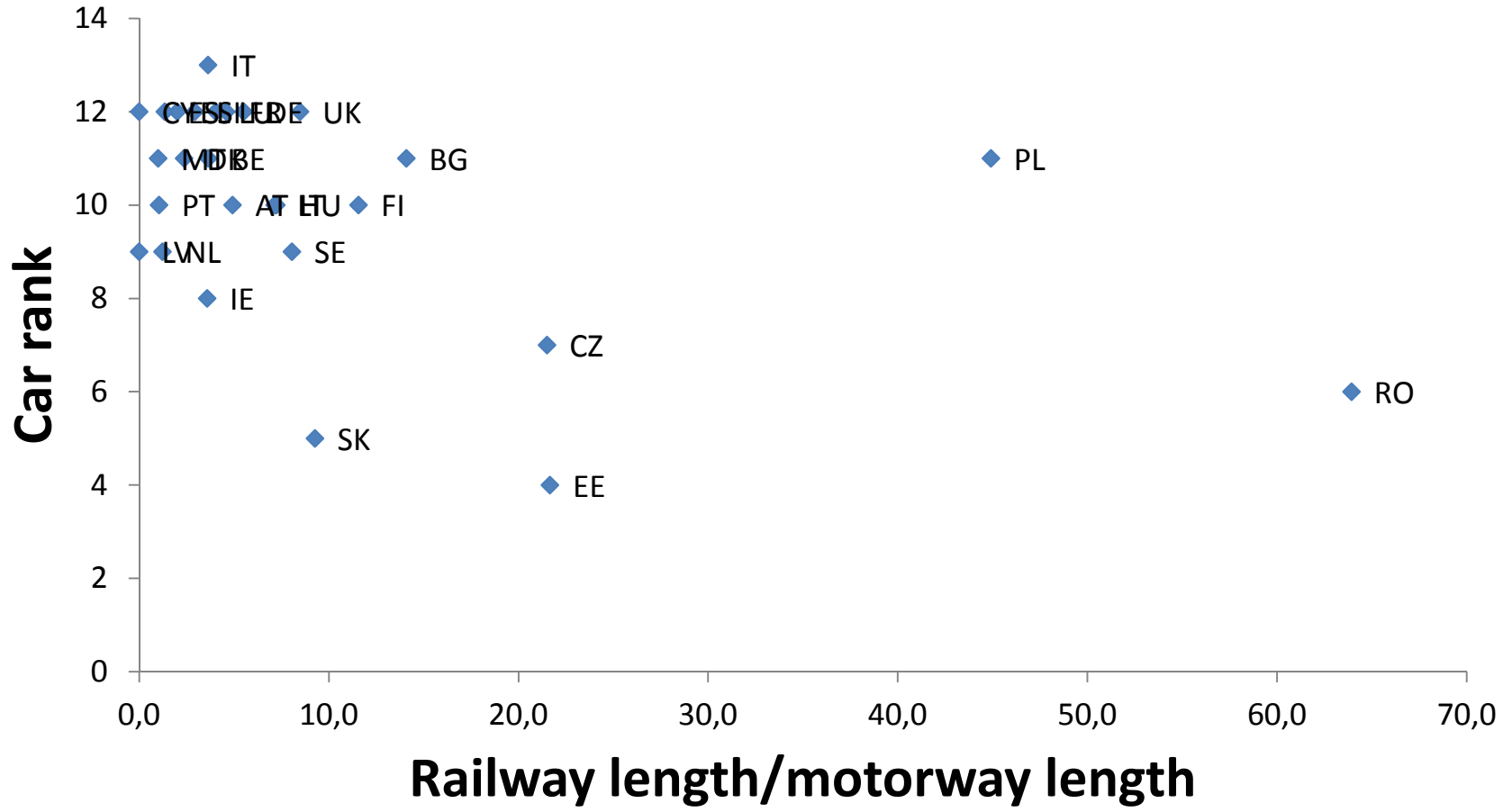
Own calculation based on Deutsch et al. (2015) and World Bank

Arrears rank and debt



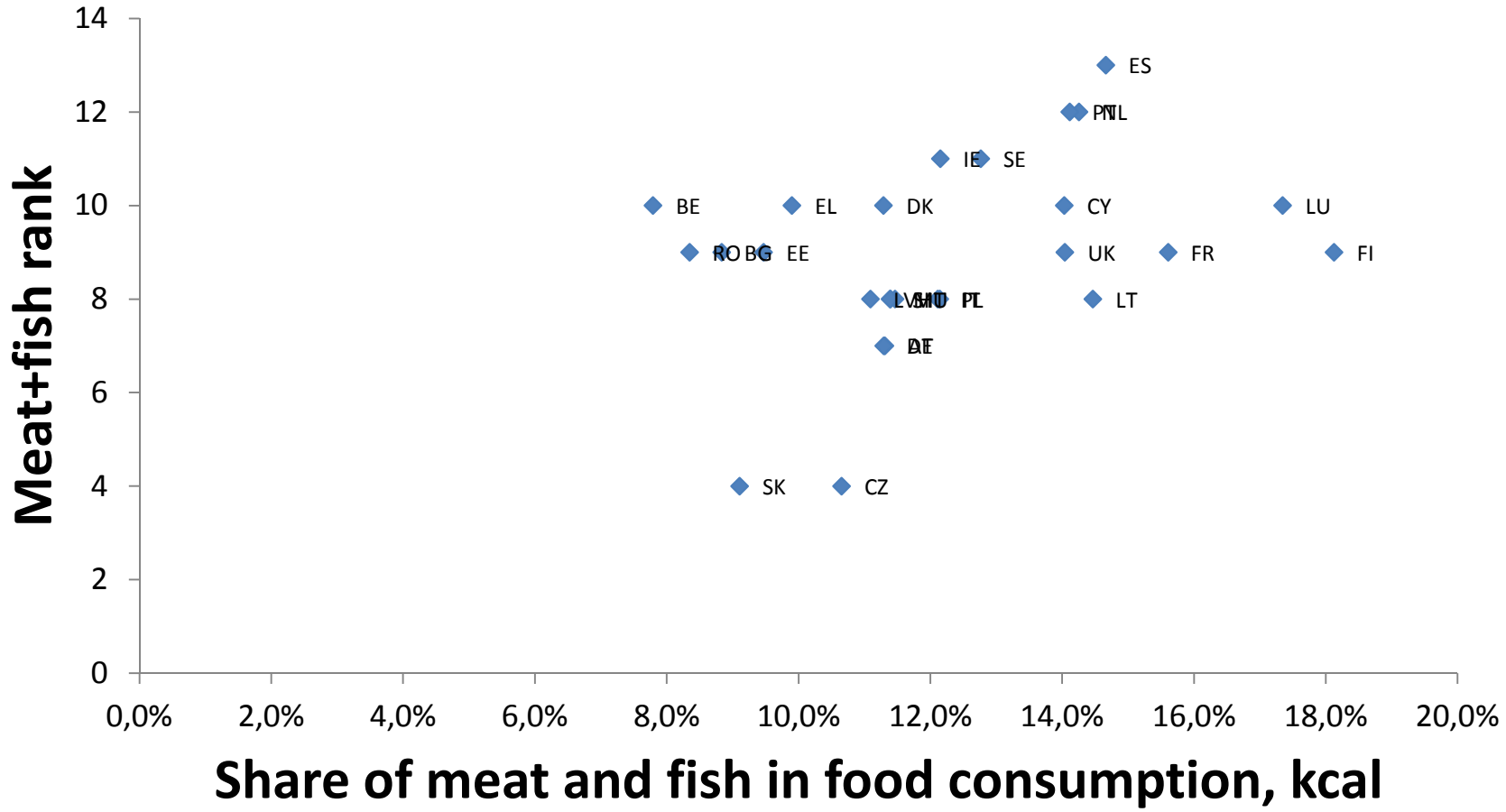
Own calculation based on Deutsch et al. (2015) and Eurostat

Car rank and public transportation



Own calculation based on Deutsch et al. (2015) and Eurostat

Meat+fish rank and usual diet



Own calculation based on Deutsch et al. (2015) and Faostat

Why heating was chosen as an item?

- Aspects considered[1]:
  - Suitability
  - Validity
  - **Reliability**
  - Additivity

➢ No better housing related variable

➢ Additional criteria: what causes deprivation in specific items?

(1) Guio, A. C., Gordon, D., & Marlier, E. (2012). Measuring material deprivation in the EU: Indicators for the whole population and child-specific indicators. *Eurostat: Luxembourg*.

Alternative weightings

- Alternatives:
  - Equal weights
  - Prevalence weighting
  - Consensual approach
  - Different weights by country?
- Difficult to choose one that is better than any other

Robustness to weights![1]

- Define a set of reasonable weightings
- A comparison is robust if it is true for all these weightings.

(1) Foster J. E., M. McGillivray and S. Seth (2010), Rank Robustness of Composite Indices: Dominance and Ambiguity, Paper Presented at the 31st General Conference of The International Association for Research in Income and Wealth, St. Gallen, Switzerland, August 22-28.

Methodological issues

- Weighting and severity of deprivation

- Solution: multiple robustness checks
  - Constant severity (% of deprived in EU), various weightings
  - A range of severity, constant weighting
  - A range of severity, various weightings

Example: 5-10 % weights

Country	Ranking	Minimum	Maximum
BE	5	5	5
BG	24	23	24
CY	15	14	18
DE	7	6	7
EE	8	8	9
EL	19	19	20
ES	9	9	11
FI	2	2	2
FR	6	6	7
HR	16	16	18
HU	22	22	22
IE	10	11	15
IT	16	13	15
LT	20	19	20
LU	4	3	3
LV	21	21	21
MT	14	10	17
NL	3	3	4
PL	13	12	15
PT	18	16	18
RO	23	23	24
SE	1	1	1
SK	11	9	13
UK	11	8	10

Summary: future research

- More detailed analysis of deprivation items
- Weighting and severity robustness checks for comparisons

Thank you for your attention!

Questions, comments?