

Challenges with measuring fuel poverty



Index



1.- Motivation



2.- Spanish Strategy



3.- Comparative Spain Ireland



4.- Models



1.- Motivation

Motivation



Energy Poverty

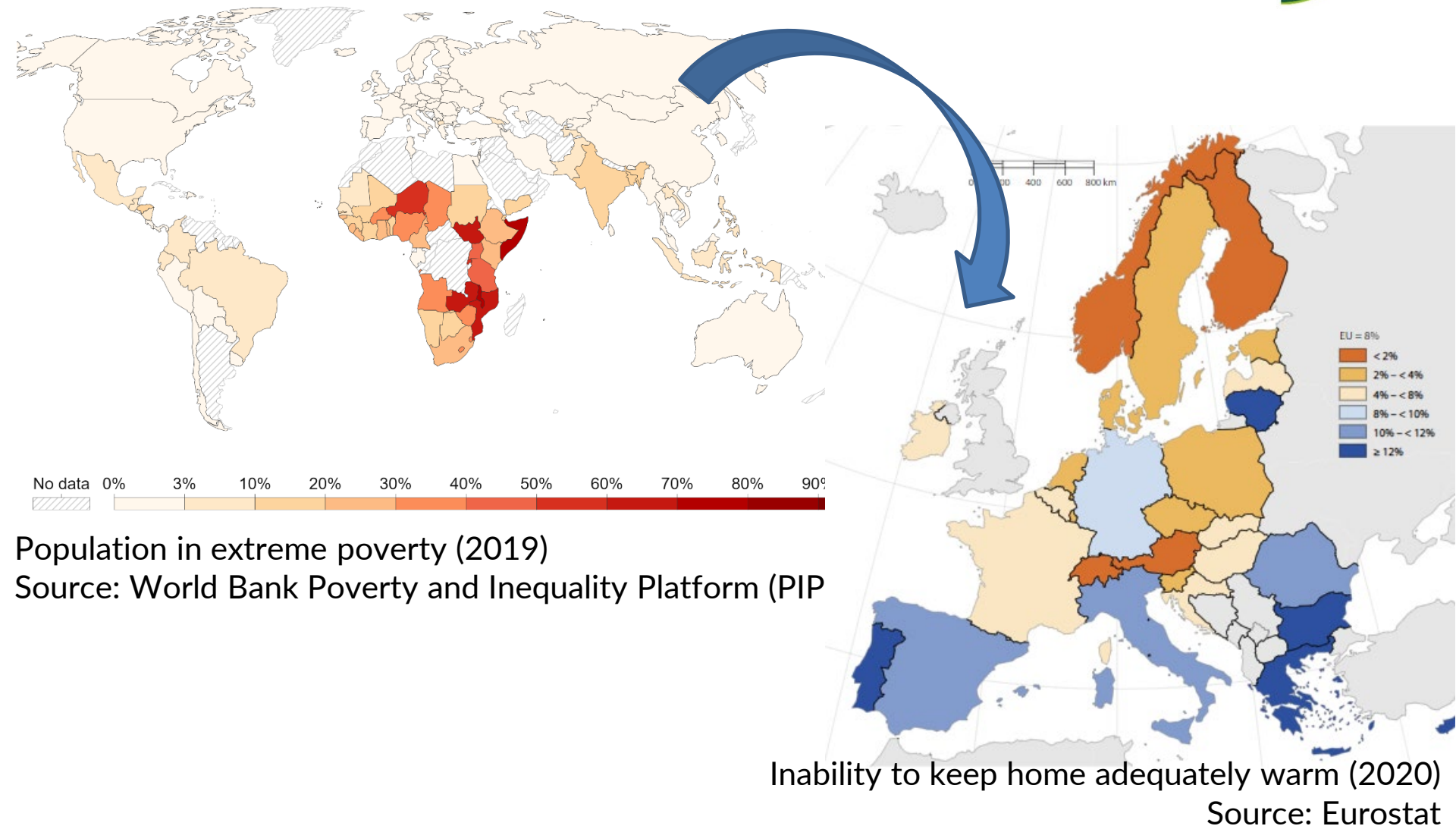


Who suffers from it?



Consequences

Motivation



Motivation



EU Regulation



The European Pillar of Social Rights

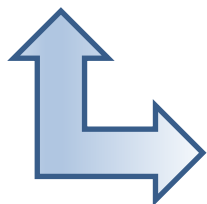


Directives

Motivation



European Economic and Social
Committee



Statistics & indicators



European
ENERGY POVERTY
Observatory



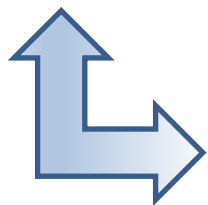
EU
Energy Poverty
Advisory Hub



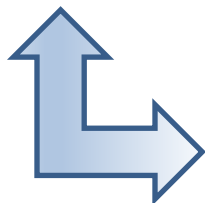
Motivation



Green Deal



Fit for 55



Social Climate Fund



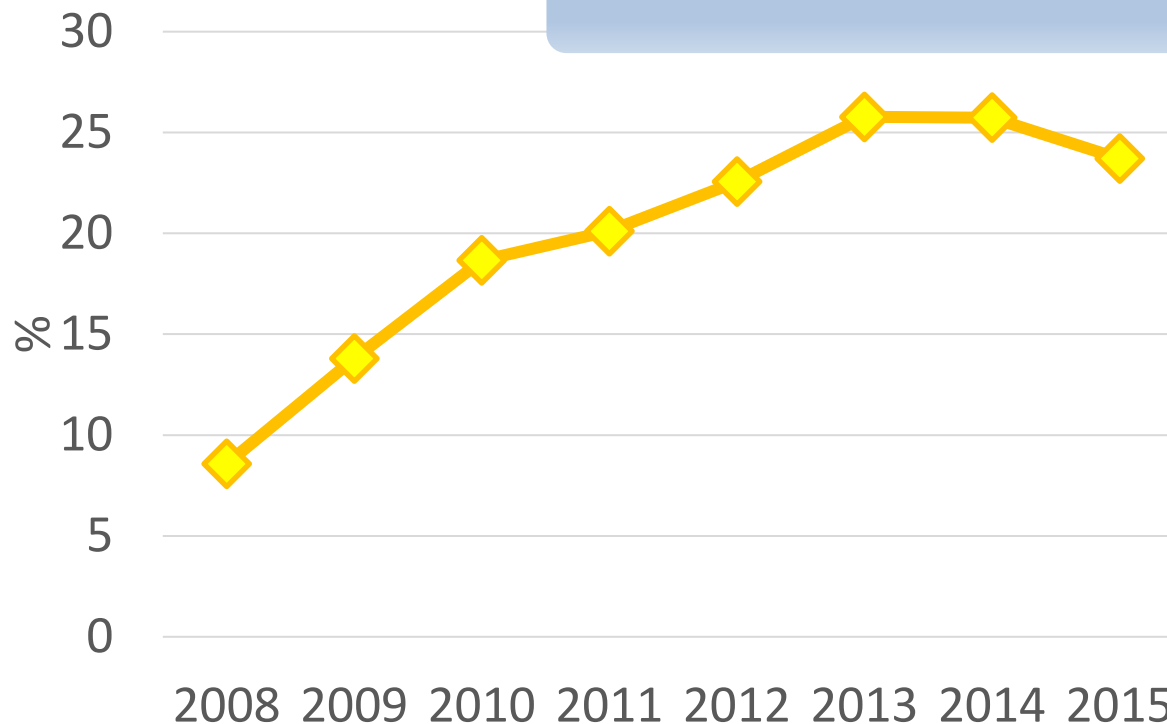
2.- Spanish Strategy



The 2008 crisis



Unemployment





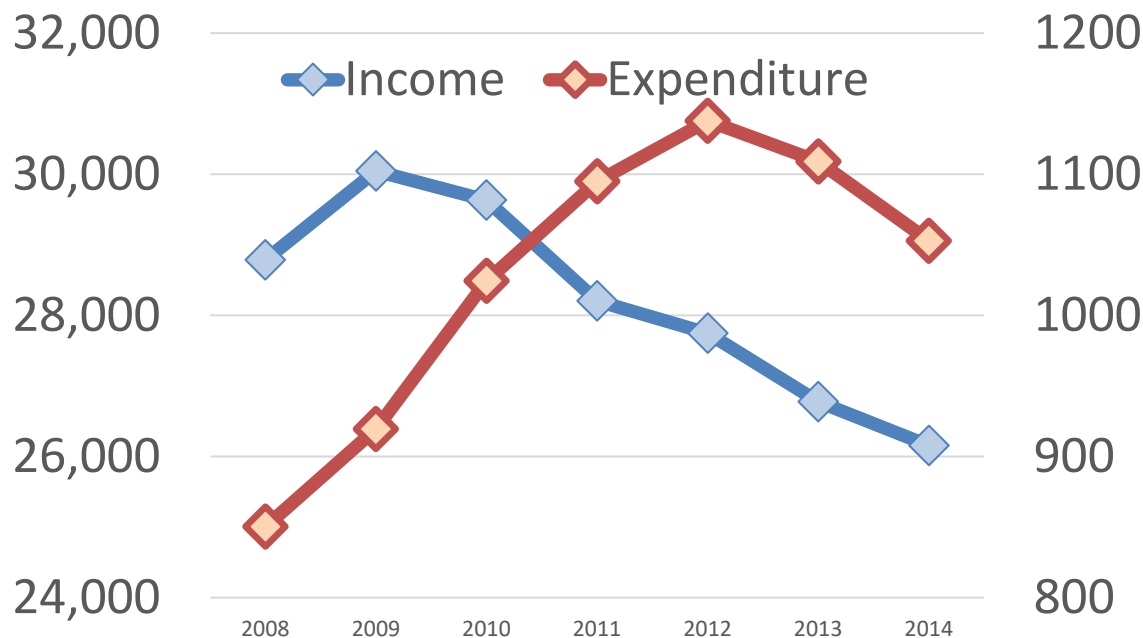
The 2008 crisis



Income



Energy prices



Energy Poverty Conference - 19 June 2023

Spanish National Strategy



Official metrics under the Spanish National Strategy

Household
Budget Survey
(HBS)

Disproportionate expenditure
(2M)

$$EE/I > 2 * Median(EE/I)$$

Hidden energy poverty
(HEP)

$$EE < Median(EE)/2$$

Official metrics under the Spanish National Strategy

Survey
Income Living
Conditions
(EU-SILC)

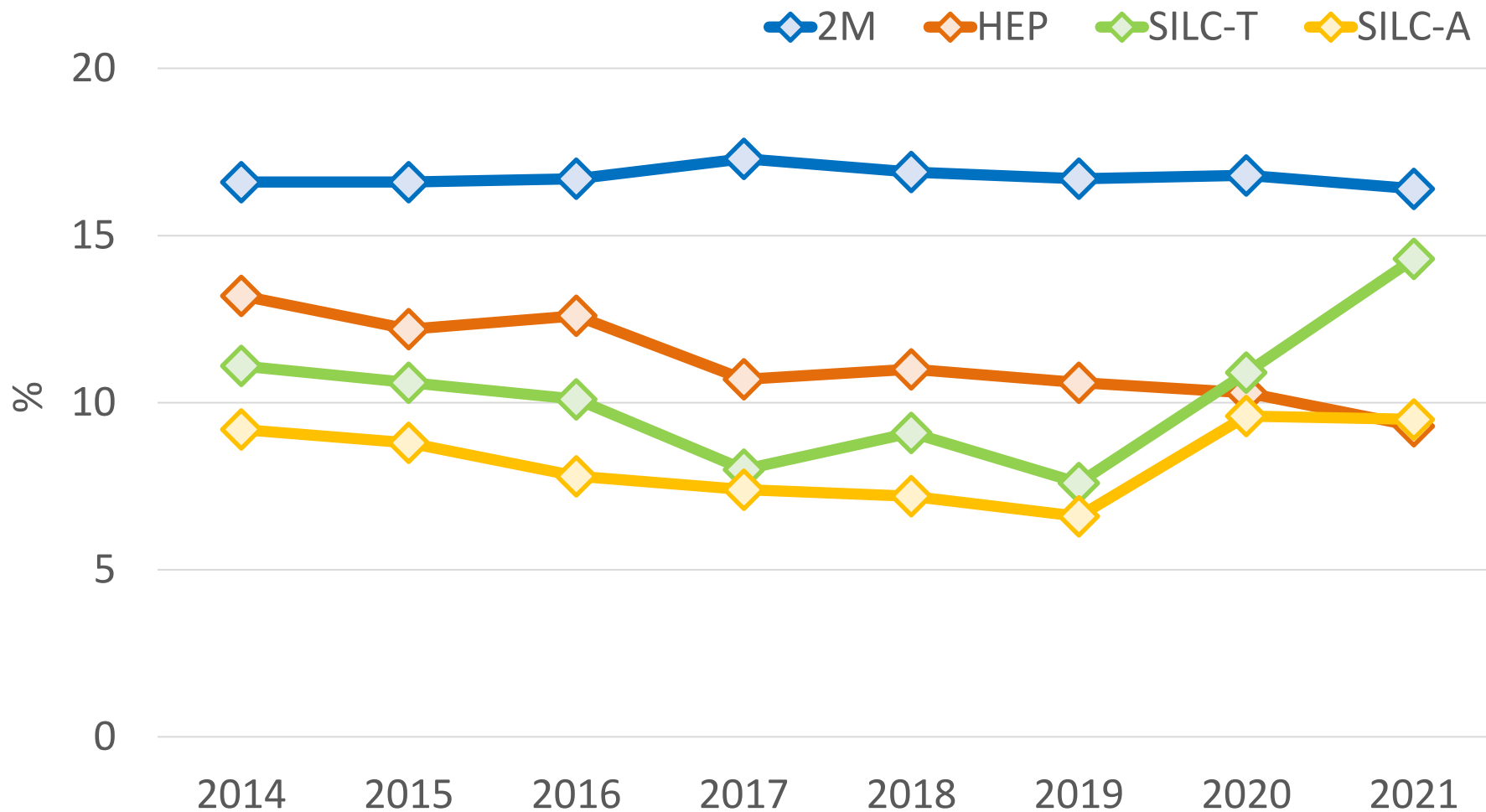


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graph LR; A[Survey Income Living Conditions (EU-SILC)] --- B[Inability to keep home adequately warm (SILC-T)]; A --- C[Arrears on utility Bill (SILC-A)];
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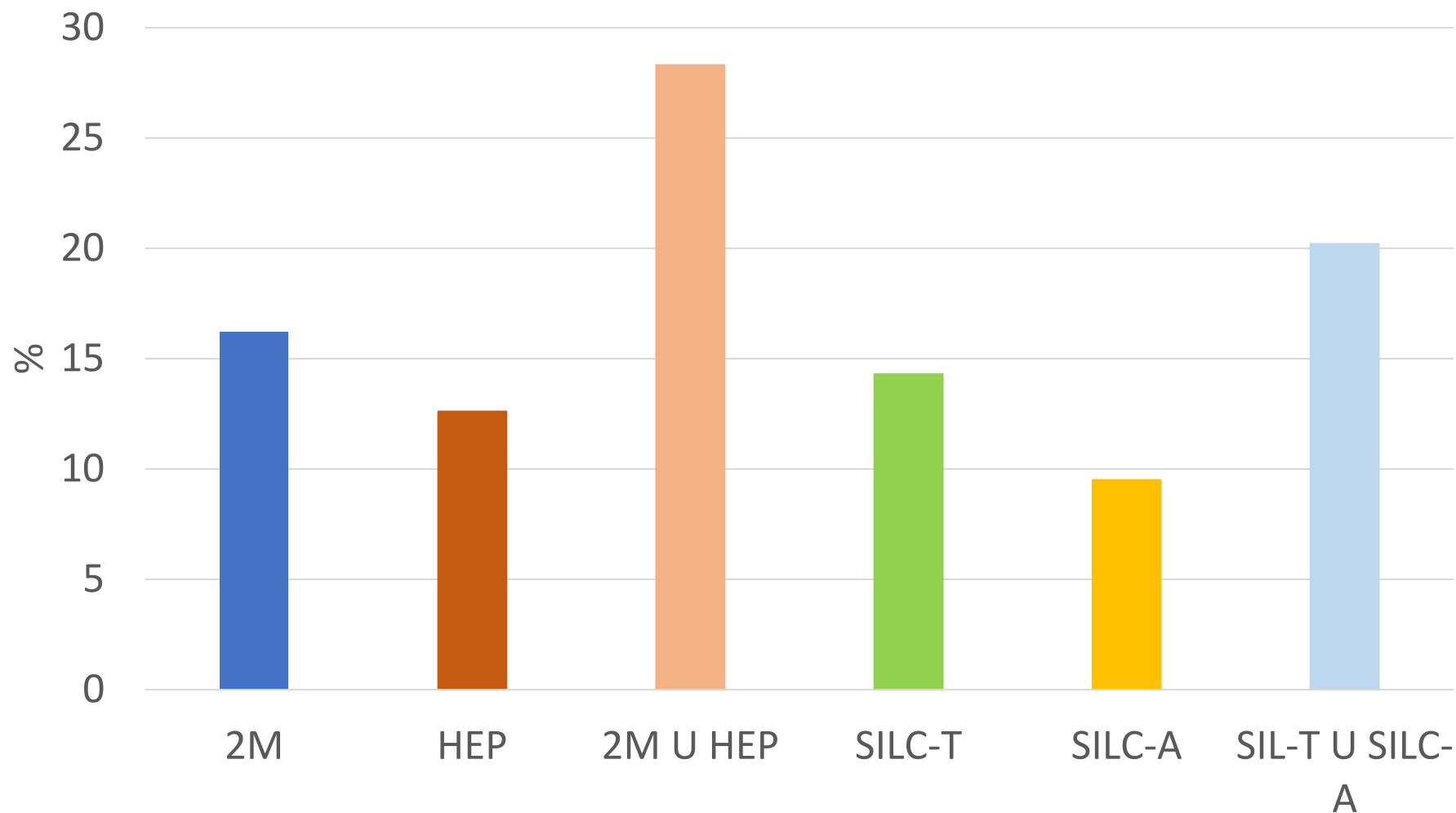
Inability to keep home
adequately warm
(SILC-T)

Arrears on utility Bill
(SILC-A)

Official metrics under the Spanish National Strategy



Official metrics under the Spanish National Strategy





3.- Comparative Spain - Ireland

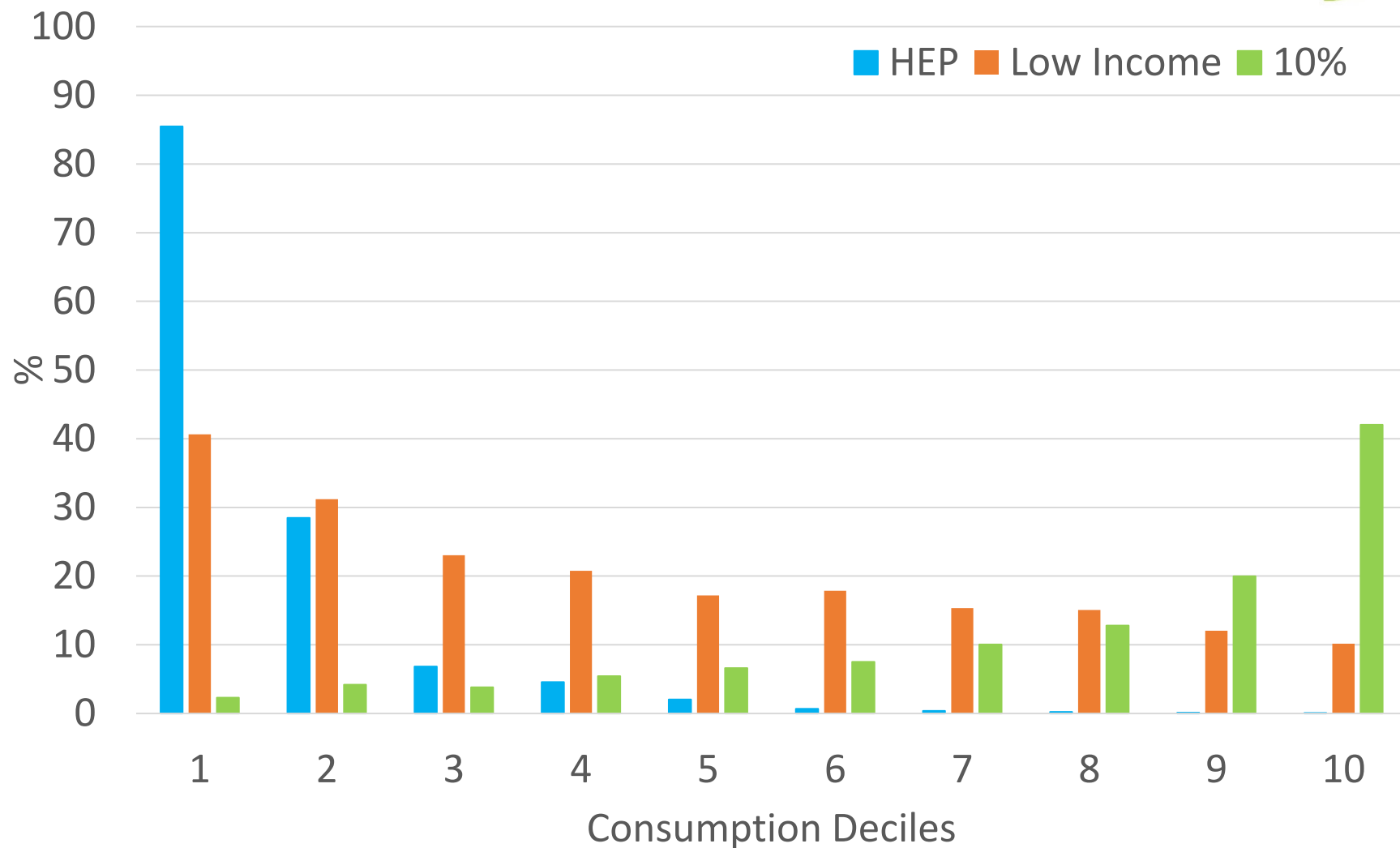
Spain - Ireland

Spanish & Irish Data

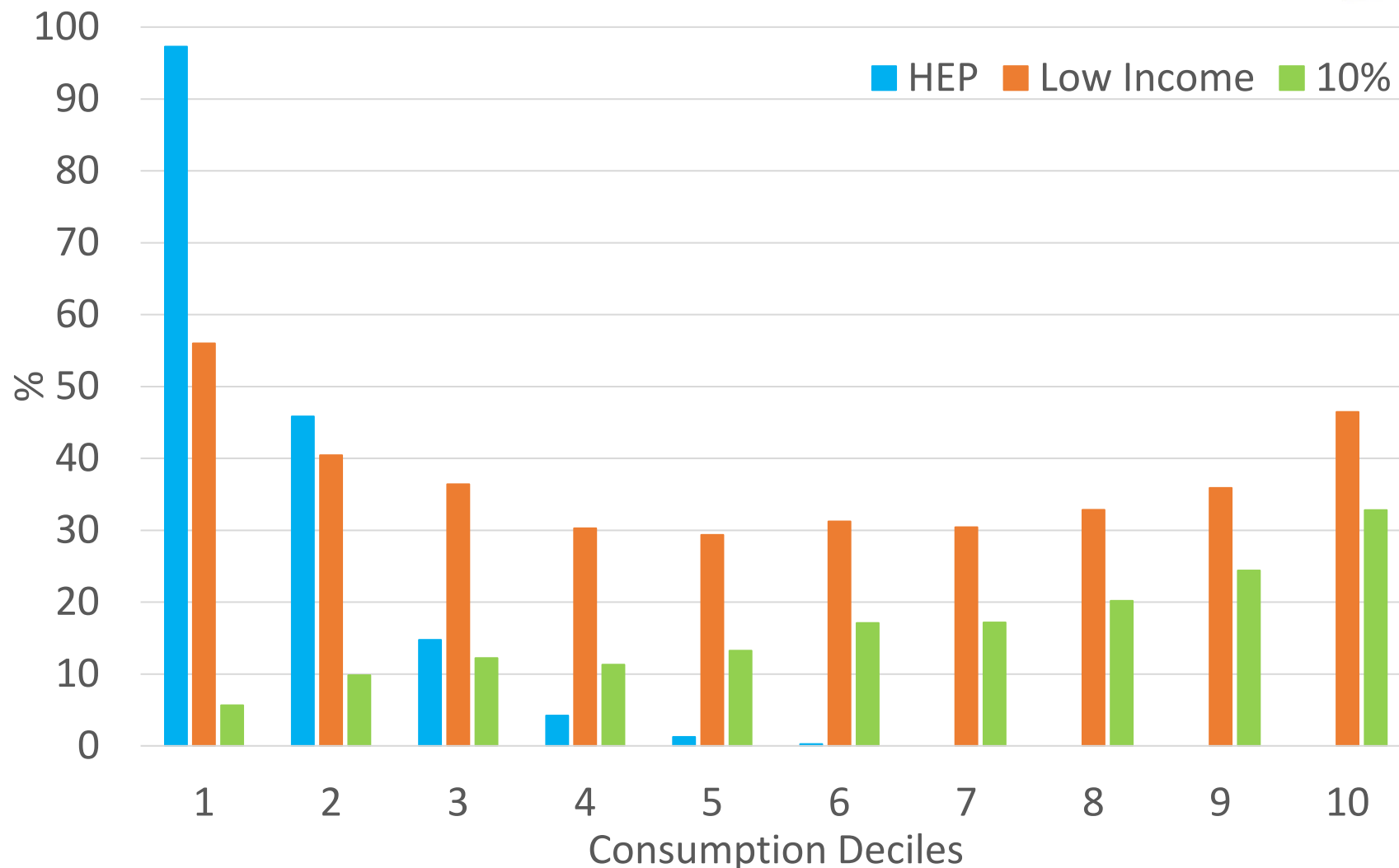
❖ HBS 2016

❖ EU-SILC 2021

Spain - HEP vs 10%

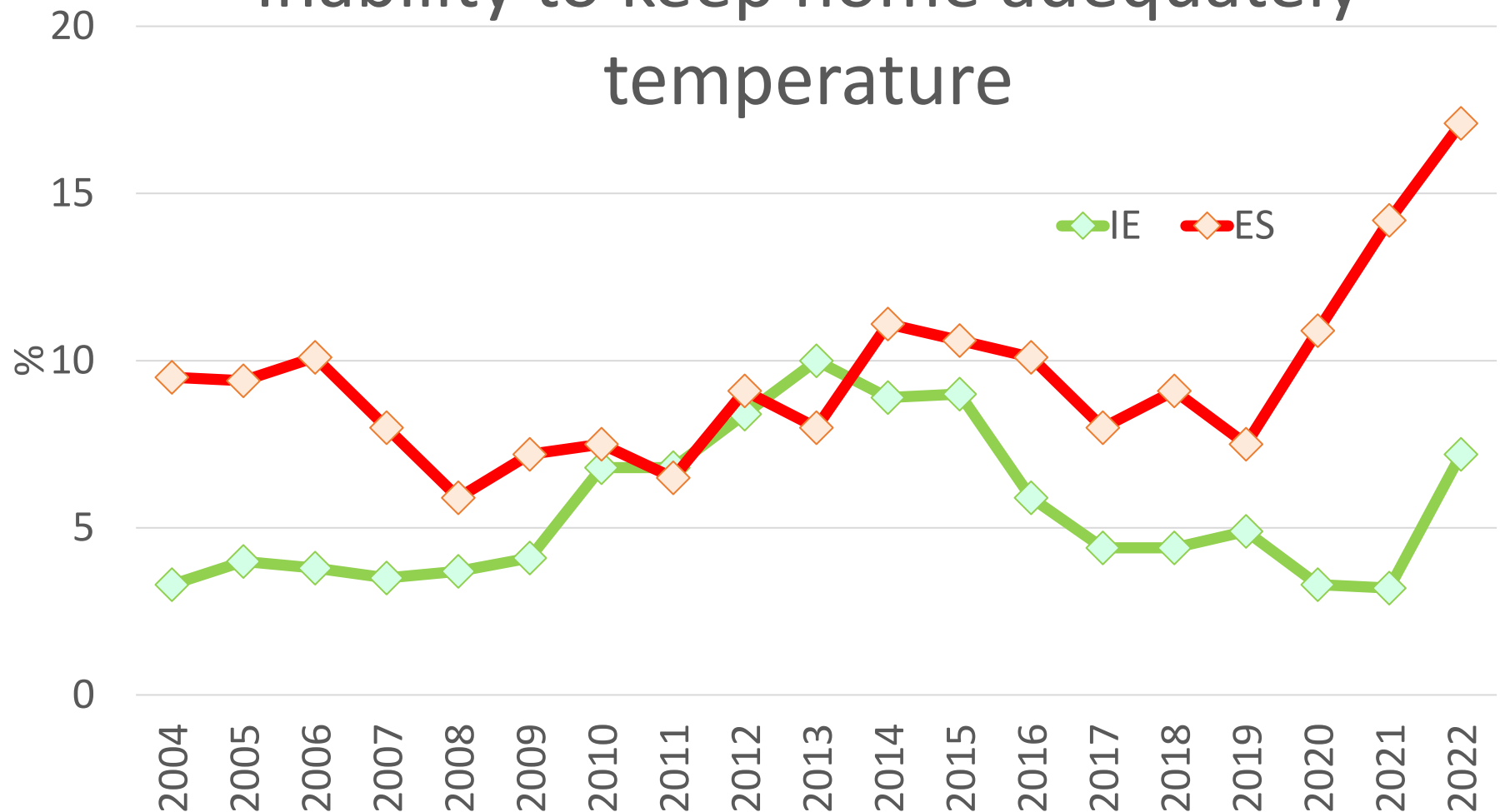


Ireland - HEP vs 10%



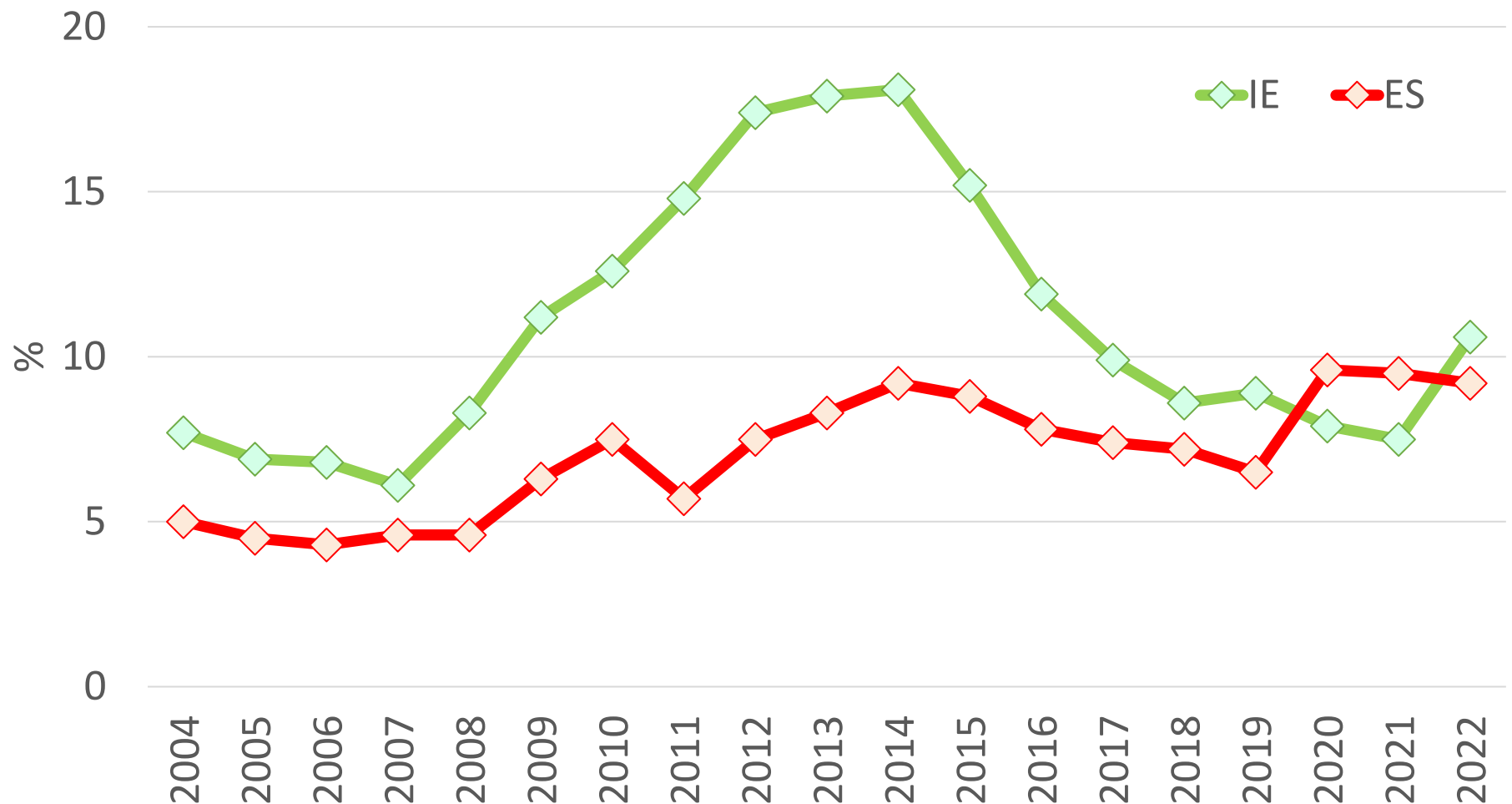
Spain - Ireland

Inability to keep home adequately temperature



Spain - Ireland

Arrears on utility bills





4.- Models



Quantile regression



Logit regression

Quantile regression - ES

Consumption (Q1)	Coef.	Sig.
Number HH Members	291,917	(+) ***
Age Head HH	17,176	(+) ***
Education	694,516	(+) ***
Unemployed	-529,088	(-) ***
House Rented	-714,481	(-) ***
House Semi-detached	-312,754	(-) ***
Rural Area	147,984	(+) **
Dweling Large	1601,138	(+) ***

Quantile regression - IE

Consumption (Q1)	Coef	Sig	
Number HH Members	507,4	(+)	***
Age Head HH	1051,13	(+)	***
Education	1934,42	(+)	***
Unemployed	-2651,82	(-)	***
House Rented	-408,06	(-)	
House Detached	4905,3	(+)	***
House Semi-detached	2917,81	(+)	***
Large	1192,55	(+)	

Logistic regression

HH in Q1 Consumption

Spain

Ireland

Unemployment	1,508 ***(▲ 6,28%)	1,91 ***(▲ 9,92%)
Rented	1,984 ***(▲ 11,61%)	1,11 (▲ 1,68%)
House detached	1,141 * (▲ 2,00%)	0,19 ***(▼ 32,5%)
House semi-detached	1,309 ***(▲ 4,22%)	0,29 ***(▼ 25,6%)

Future work

- Hidden poverty is not considered when measuring poverty using the 10% metric
- The 10% metric could be misleading regarding targeting of low-income households
- We can identify those with very low consumption levels

Future work

- To include the role of energy efficiency in the estimation
- To investigate the drivers of proving state aid to face the cost of energy and its effect on fuel poverty across the two countries.
- To propose a metric that is suitable in the Irish and Spanish contexts

Challenges with measuring fuel poverty

Thanks for your attention

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