

## TABLE OF CONTENTS

1. Setting the scene.....	9
2. Conceptual and analytical framework.....	11
2.1. Conceptual framework.....	11
2.2. Analytical framework.....	12
2.3. Child deprivation: the need for a holistic and life-cycle approach.....	13
3. Dataset.....	15
3.1. EU-SILC thematic module and core part .....	15
3.2. Adult items .....	17
3.3. Children’s items .....	17
3.4. Missing pattern .....	18
3.5. Redundancy.....	18
3.5.1. Internet and computer.....	18
3.5.2. Hot running water, flushing toilet and bath/shower .....	18
3.5.3. Shortage of space, overcrowding .....	18
4. Dimensional structure of the full set of MD items (module and core part).....	19
4.1. Dimensional structure - Whole population .....	19
4.2. Dimensional structure - Child population .....	22
5. Suitability of the full set of MD items.....	25
5.1. Suitability of the items in the EU as a whole and between countries within the EU .....	26
5.2. Suitability of the items between sub-groups within countries .....	31
6. Validity of the full set of MD items.....	37
6.1. Criteria and results for the whole population (0+) .....	37
6.2. Criteria and results for the child population .....	40
6.3. Conclusions .....	42

7. Reliability of the full set of MD items - Classical Test Theory (CTT).....	43
7.1. CTT applied to the whole population (0+) - Results and conclusions .....	43
7.2. CTT applied to the child population – Results and conclusions .....	43
8. Overview of the suitability, validity, reliability (CTT) tests at the EU and country level	45
8.1. Whole population .....	46
8.2. Child population .....	48
9. Additional test based on Item Response Theory (IRT) .....	51
9.1. IRT applied to the whole population .....	52
9.1.1. Severity at EU level.....	52
9.1.2. Discrimination at EU level .....	52
9.1.3. 'S' shaped curve at EU level .....	52
9.1.4. Severity at national level .....	54
9.1.5. Discrimination at the national level .....	56
9.2. IRT applied to children.....	59
9.2.1. Severity at EU level.....	59
9.2.2. Discrimination at EU level .....	61
9.2.3. 'S' shaped curve at EU level .....	61
9.2.4. Severity at national level .....	62
9.2.5. Discrimination at the national level .....	65
10. Results of the suitability, validity, CTT reliability and IRT reliability tests.....	69
10.1. Whole population .....	69
10.2. Children.....	71
11. Additivity of the pre-final list of MD items .....	73
11.1. Additivity tests for the child population .....	73
11.2. Additivity tests for the whole population (0+) .....	77

12. Final lists of MD items (and related aggregate indicators) after their tests against the methodological principles to be met by EU social indicators.....	79
12.1. Tests of suitable, valid, reliable and additive items against the EU methodological framework for the development of social indicators .....	79
12.2. Final lists of items .....	81
12.2.1. Final list for the whole population (0+) .....	81
12.2.2. Final list for the child population.....	82
13. Aggregation .....	83
13.1. Whole population .....	83
13.1.1. Reliability of the proposed scale .....	83
13.1.2. Incidence at item and national level.....	84
13.1.3. Aggregated scale - Illustrations.....	84
13.1.4. Overlap with the current EU MD indicators .....	90
13.1.5. Impact on the Europe 2020 social inclusion target .....	96
13.2. Children.....	97
13.2.1. Reliability of the proposed scale .....	97
13.2.2. Incidence at item and national level.....	99
13.2.3. Aggregated scale - Illustrations.....	101
13.2.4. Value added of the children scale .....	104
14. Conclusions.....	109
References .....	115
Annex 1: Missing values of deprivation items in the 2009 module .....	121
Annex 2: Cross-tabulation of computer and Internet .....	126
Annex 3: Dimensional structure of the full set of items .....	127
Annex 4 (Table A9): Heat map of the 2007 Eurobarometer perception of necessities results (by EU Member States).....	137
Annex 5 (Table A10): Countries' official abbreviations .....	138



Annex 6: Incidence of items .....	139
Annex 7: Mean income by deprivation level.....	141
Annex 8: Statistical annex.....	151
Annex 8.a: Whole population.....	151
Annex 8.b: Child population.....	160
Annex 9: Poverty and social exclusion in the UK survey: services module .....	168