



Food and Agriculture Organization  
of the United Nations

**FAO Statistics Division**

Working Paper Series

ESS / 15-09

**SOCIAL PROTECTION AND  
FOOD SECURITY INDICATORS:  
AN INQUIRY THROUGH DATA  
FROM 10 HOUSEHOLD  
BUDGET SURVEYS**

**JULY 2015**

FAO STATISTICAL DIVISION

Working Paper Series

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# SOCIAL PROTECTION AND FOOD SECURITY INDICATORS

## An inquiry through data from 10 household budget surveys

Erdgin Mane, Michele Rocca and Piero Conforti

July 2015

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
Rome, 2015

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# **Social protection and food security indicators:**

## **An inquiry through data from 10 household budget surveys**

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### **Abstract**

There is growing consensus that social protection constitutes an effective response to poverty and food insecurity in developing countries. While the literature on the conceptual linkages between social protection and food security is abundant, there is little data allowing to analyse it in a comprehensive manner. The aim of the paper is to provide empirical evidence on the association between social protection systems and food security conditions in selected developing countries, which will serve as a basis for building a global data set for monitoring and harmonizing indicators on these two thematic areas. Using the methodology of the ADePT Food Security and Social Protection modules and the classification of the World Bank's Social Protection Atlas (ASPIRE), we cross-tabulate indicators derived from ten Household Budget Survey to capture heterogeneity across regions. In many instances, data highlight inadequate sampling and collection techniques. Several areas for improvement are identified, especially on in-kind transfers and social assistance programs. Higher public transfers are generally associated with lower food security, while private transfers – mainly foreign remittances – are not.

**Key words:** Social Protection, Food Security, Household Budget Surveys, Private Transfers, Remittances

**JEL codes:** H53, H55, I38, O12, Q18

## 1 Social protection: concepts and definitions

Over the last few years, social protection has become a prominent topic in the development policy agenda. Emphasis on this topic in the Post-2015 Development Agenda was recently confirmed by the UN General Assembly's Open Working Group on Sustainable Development Goals, which proposed social protection as one of the targets of Sustainable Development Goal 1 - *"End poverty in all its forms everywhere"*<sup>1</sup>. Fiszbein *et al.* (2013) illustrate the reasons why social protection plays a pivotal role in the post-2015 agenda: Social protection is considered *"an instrument for the goals of reducing poverty, reducing inequality, and reducing risk and vulnerability"*. According to the High-level Panel of Experts of the Committee on World Food Security (CFS) in *Food Security and Nutrition Report on Social Protection* (HLPE, 2012), one reason for its popularity is *social protection tackles poverty and vulnerability directly*, so its impacts are immediate and invariably evaluated as positive – and indirectly, by making economic growth more inclusive.

Social protection was initially seen as an upgrade of social safety nets with a protection focus. Recently the concept has broadened to include additional programmes and functions. The UN Social Protection Floors Recommendation Nr. 202 (ILO, 2012 - R202) states that national social protection floors should include at least the following basic social security guarantees: *(a) access to a nationally defined set of goods and services, constituting essential health care, including maternity care, that meets the criteria of availability, accessibility, acceptability and quality; (b) basic income security for children, at least at a nationally defined minimum level, providing access to nutrition, education, care and any other necessary goods and services; (c) basic income security, at least at a nationally defined minimum level, for persons in active age who are unable to earn sufficient income, in particular in cases of sickness, unemployment, maternity and disability; and (d) basic income security, at least at a nationally defined minimum level, for older persons.*

Devereux and Sabates-Wheeler (2004) proposed to classify the full range of social protection functions in four distinct categories: *protection, prevention, promotion and transformation*. Protection covers the social assistance interventions; prevention relates to social insurance; promotion refers to the enhancement of real incomes and economic capabilities; while transformation addresses social rights and inclusions. This categorization provides a more

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<sup>1</sup> Target 1.3: implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable. For more information, see <http://sustainabledevelopment.un.org/sdgsproposal.html>.

comprehensive classification than FAO's twin-track approach, which only differentiates *emergency assistance* and *livelihood development*.

Such a wide range of programmes and interventions makes it difficult to define social protection and its boundaries. Brunori and O'Reill (2010) reviewed various definitions: 12 proposed by international organizations, six by academia and another 10 proposed by governments in the Sub-Saharan Africa region only. In fact there is no consensus about the boundaries of what we call social protection. One definition that has recently been often quoted is the one proposed by the Institute of Development Studies (IDS) in the UK. This states that social protection includes “*all public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks, and enhance the social status and rights of the marginalised; with the overall objective of reducing the economic and social vulnerability of poor, vulnerable and marginalised groups* (Devereux and Sabates-Wheeler, 2004)”. This definition has been used for this paper.

The High Level Panel of Experts of the Committee on World Food Security (HLPE, 2012) report provides the conceptual linkages between social protection and food security; while the paper by Slater *et al.* (2014) provides a very good review of the evidence on how social protection contributes to food and nutrition security by linking social protection instruments with the four dimensions of food security<sup>2</sup>. In the last decade there has been a proliferation of studies aimed at assessing the impact of social protection programs on food security. In the best scenario, these studies allow conducting cost-benefit analyses of the interventions, and provide the so-called value-for-money, which is more frequently requested by the donor community.

Impact assessment studies are fraught with challenges, such as selection bias, spillover effects, confounding, contamination and heterogeneity. To address these problems, studies need to rely on counterfactual scenarios and *ad hoc* surveys, generally conducted before and after the interventions. Known limitations of these studies are that they thoroughly address issues related to internal validity (cause-effect attribution), but often their conclusions can hardly be generalized (external validity). The paper by Hidrobo *et al.* (2014) aims at generalizing the impact evaluation studies on food security outcomes by conducting a meta-analysis on around 50 scientifically robust studies (generally involving experimental and quasi-experimental designs) for around 40 different programmes. Their paper found that the average social protection programme increases

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<sup>2</sup> The four dimensions of food security are: access, availability, stability and utilization.

by 17% caloric acquisition and by 13% the expenditure on food, but elasticities vary widely across countries and programmes. Moreover, most of the abovementioned studies are based on conditional or unconditional cash transfers and public works, which are only one part of social protection, and are normally referred to as social assistance programmes.

This paper aims to provide a wider picture of social protection systems at a country level by covering not only social assistance but the wide range of formal and informal social protection programmes, which also include social insurance, international remittances and domestic private transfers. The overall performance of social protection systems can hardly be measured with the counterfactual approach described above, as attribution cannot be disentangled. In a macro-level set-up, moreover, the relation between social protection and food security is likely to be bi-univocal: social protection programmes do affect food security; but government decisions about such programmes are in turn affected by the food security levels in the country. For this reason, this paper is not proposing an impact evaluation.

The objectives of this paper are: i) to present empirical evidence on the relationship between social protection and food security through household budget surveys, and ii) to build the rationale for an information base that analyzes indicators at a sub-national level, including urban/rural, income quintiles, male/female, poor/non-poor and other cross-tabulation variables. The scope of the paper is to provide a comprehensive picture of social protection systems at a country level, and to facilitate the comparison with food security indicators. This will serve as a basis for constructing a global database of social protection and food security indicators, which will allow monitoring trends and conduct cross-country analyses on the relation between social protection and food security.

Investigating the causal relationship between social protection and food security, therefore, goes beyond the scope of this paper. We rather provide empirical evidence on the association between social protection systems and food security in selected countries. We aim to answer questions on: who is covered by social protection systems? What is the average amount received? What is their incidence? Is social protection targeting the poor and food insecure? What components of social protection need to be enhanced? The IDS definition of social protection sets the boundaries of our work. First, we refer to *all public and private initiatives*, which implicitly include formal and informal social protection with domestic and foreign remittances; and, second, we refer to both *income and consumption transfers*, meaning that in-kind transfer should also be considered.



To date, there are two international datasets that provide information on social protection: i) the **ILO's Social Security Inquiry (SSI)**<sup>3</sup>, and ii) the **World Bank's Social Protection Atlas (ASPIRE)**<sup>4</sup>. The first provides information *on social security, including employment-related social security schemes, public health, welfare and anti-poverty programmes and non-public schemes of different types transferring goods, services or cash to poor and vulnerable households*. It is based on financing, expenditure, benefit levels and coverage data reported by developing countries. The second provides *harmonized indicators to describe the country context where Social Protection and Labor (SPL) programs operate and to analyze the performance of social assistance, social insurance and labor markets programs* based on nationally representative household survey data from 112 developing countries. This paper builds on the approach of the ASPIRE dataset.

The next section discusses methodological issues of deriving social protection indicators from Household Budget Surveys, while Section 3 presents the situation of social protection systems in ten selected countries. The cross-tabulation of social protection and food security indicators is presented in section 4, while section 5 presents concluding remarks and a proposed follow-up.

## **2 Social protection indicators and data issues from Household Budget Surveys**

The aim of this section is to: i) provide general principles and an operational classification of social protection programmes, as applied to household budget surveys; ii) define standard procedures to process micro-data; and iii) illustrate a preliminary set of indicators.

As mentioned, this paper adopts the operational classification of social protection implemented by the World Bank's ASPIRE Project (Atlas of Social Protection – Indicators of Resilience and Equity, The World Bank). This refers to both public and nonpublic transfers (or formal and informal social protection<sup>5</sup>). Following the ASPIRE's classification matrix (see Annex 1), we classify the various types of public transfer programmes into two groups: social Insurance and social assistance<sup>6</sup>. We

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<sup>3</sup> [http://www.ilo.org/dyn/ilossi/ssimain.home?p\\_lang=en](http://www.ilo.org/dyn/ilossi/ssimain.home?p_lang=en)

<sup>4</sup> <http://datatopics.worldbank.org/aspire/>

<sup>5</sup> The literature often refers to this distinction as formal vs informal social protection. Given the available data in household surveys, the two classifications, public/non-public and formal/informal, although conceptually different, would have been equivalent.

<sup>6</sup> Annex 1 includes a third group: Labor market. We decided to not investigate this area because it was available only for three countries (Albania, Mongolia and Mexico) and response rates were extremely low to conduct any type of analysis.

also consider non-public (or informal) transfers, like domestic remittances, remittances from abroad and income support from charities.

The procedures adopted in processing the data from household budget surveys are presented using examples from the *Malawi Third Integrated Household Survey 2010/11* survey.

## 2.1 Data Processing

In order to compute social protection indicators that are comparable across countries, time and with other sets of indicators, we processed the available data from in Household Budget Surveys by considering in every survey:

- social protection programmes available at the household level;
- transferred amounts on a per capita daily basis;
- value items converted in international dollars in terms of purchasing power parities (PPP, 2011);
- value items deflated with a GDP deflator.

Information on social protection transfers is usually obtained from two or three different modules of household survey questionnaires. Data on social assistance (e.g. transfers in-kind, food or cash-for-work programmes, direct cash transfers from government) and social insurance (e.g. income from pensions) are generally included in a specific module called “social safety net or State benefits”<sup>7</sup>. Survey questionnaires usually ask households to declare transfers received from social safety net schemes, and to report the amount and the reference period. Where the reference period is not included in the questionnaire, we assume that the amount refers to the entire year. However for benefits that usually refer to the month, such as for pensions, the monthly reference period is adopted<sup>8</sup>.

In-kind transfers were converted into dollars per day. Usually questionnaires ask respondents to report the cash value. Where this is not reported, missing values were imputed using median values reported by other respondents. Where questionnaires do not include questions on cash values, we impute values using external sources. For instance, in the case of the Free Maize Programme in Malawi, we used a median annual average in the reference period of the maize

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<sup>7</sup> It is also common to have the entire set of transfers in Other Income module, in surveys with few data on public transfers. The transfers related to education (school assistance or school feeding) are generally located in the education module.

<sup>8</sup> The cases, where the participation to the programme was reported and the monetary value was not, were excluded from the analysis. An exception was made for social assistance programmes in Uganda, where only the information on participation was collected. Therefore, only the coverage indicator is reported for social assistance in Uganda.

monthly retail price in local currency (March 2010 to March 2011) reported in the FAO Global Information and Early Warning System (GIEWS)<sup>9</sup>.

Private transfers are usually reported in the migration module or in the module capturing “other incomes”, where we usually find charities or transfers from NGOs. These transfers are often expressed in local currency<sup>10</sup>.

The conversion of values to PPP was based on indexes obtained from the 2011 round of the International Comparison Program (ICP)<sup>11</sup>. The United States GDP deflator was applied to obtain comparable results across time<sup>12</sup>. Transfers were converted to the same unit of measurement and the reference period for individual households. An outlier detection procedure was then applied on each type of transfer<sup>13</sup>. Observations that were considered outliers were imputed with the median transfer amount received in by the households of the same district or region<sup>14</sup>. Cleaned observations at the household level were finally aggregated to compute indicators using the ASPIRE classification criteria. The number of social protection items depends on the questionnaire design and the number of observations in each programme necessary to ensure the statistical significance of the aggregates<sup>15</sup>.

The ADePT<sup>16</sup> Social Protection module computes indicators that are comparable to the ASPIRE classification. For this reason, ADePT was employed to compute social protection indicators from the micro data. The same type of software – AdePT Food Security Module – was employed to compute food security indicators. The two sets were then compared using routines written in R.

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<sup>9</sup> Further improvements will imply a standard methodology to evaluate the conversion factor for in-kind transfers. In the surveys processed until now, the Free Maize transfer in Malawi was the only one who needed a different method to calculate the unit price.

<sup>10</sup> Albania was the only survey with international remittances expressed in foreign currencies. We have converted them in local currency.

<sup>11</sup> More information on World Bank's International Comparison Program can be found in the following link: [http://siteresources.worldbank.org/ICPEXT/Resources/ICP\\_2011.html](http://siteresources.worldbank.org/ICPEXT/Resources/ICP_2011.html).

<sup>12</sup> The formula for computing constant PPP for country  $c$  and year  $i$  is:  $PPP_{ci}$  constant with base 2011 =  $PPP_{ci}$  rate \* US GDP $_i$  Deflator / US GDP2011 Deflator. (Deaton and Heston, 2010).

<sup>13</sup> An observation is considered as outlier when its deviation from the median in absolute terms is greater than  $3 * 1.428 * \text{median absolute deviation (MAD)}$ . For normally distributed variables, 99.73 percent of the observations fall within three standard deviations from the mean. The problem is that the mean and the standard deviation are not robust to outliers. Therefore, these are replaced by robust parameters: respectively, the mean is replaced by the median, which is its equivalent in normal distributions, and the standard deviation with the MAD, which under the same assumption is approximately 1.428 times lower.

<sup>14</sup> For some public transfers, where the amounts received were generally equivalent among households the mode was used instead of the median.

<sup>15</sup> Annex 2 presents a schematic synthesis on the aggregation procedure in the survey of Malawi 2010-11.

<sup>16</sup> ADePT is a family of free software developed by the World Bank, aimed at standardizing the computation of indicators from micro data derived from surveys, such as Household Budget Surveys, Demographic and Health Surveys and Labor Force surveys.

## 2.2 Social Protection indicators

We focus on three main indicators to investigate the association between social protection and food insecurity, hence only on a subset of the full list of social protection indicators provided by ADePT. The following indicators were used:

- The Average Transfer Value: the per capita amount received by the beneficiary households in a group.
- The Coverage: the portion of population in each group that receives the transfer.
- The Relative Incidence: the per capita transfer received by a group as a share of its per capita consumption, which was used as a proxy for per capita household income.

The complete list of indicators and their definitions is provided on the ASPIRE documentation website<sup>17</sup>. Indicators were computed separately for urban and rural households and for households falling within each quintile of total expenditure. These were generated by the ADePT Social Protection module. Further desegregations were developed separately, for cross-tabulation – see Annex 5.

### 2C. Country Selection

As observed by Slater *et al.* (2014), social protection programmes vary widely across countries, but they show some sort of homogeneity within regions, largely due to historical, political or socio-economic reasons. For example, *in Latin America the focus is mainly on reducing inequality and improving human development outcomes. In Eastern Europe and the Commonwealth of Independent States (CIS), the focus is primarily on formal social security systems. In Africa and South Asia, on the other hand, social protection is mostly a mechanism for combating food insecurity and vulnerability.* The surveys analyzed in this paper were selected from different regions; in particular, we processed data for 3 African countries, 3 Asian countries, 2 countries from Latin America and the Caribbean and 2 countries from Eastern Europe and the CIS. Within regions, countries were selected based on the availability of social protection data (Table 1).

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<sup>17</sup> <http://datatopics.worldbank.org/aspire/Documentation>

**Table 1. The list of household surveys analyzed for this paper**

Country	Year	Survey Name	Total Sample (Households)	Rural Households	Income classification
Albania	2005	Living Standard Measurement	3,836	42.7%	Upper middle income
Bangladesh	2010/11	Household income and expenditure surveys	12,240	64.1%	Low Income
Cambodia	2009	Socio-Economic Survey	11,970	80.1%	Low Income
Kenya	2005/06	Integrated Household Budget Survey	12,980	64.6%	Low Income
Malawi	2010/11	Third Integrated Household Survey (IHSN3)	12,266	81.2%	Low Income
Mexico	2008	Encuesta Nacional de Ingresos y Gastos de los Hogares	29,428	22.8%	Upper middle income
Mongolia	2007/08	Socio-Economic Survey	11,172	44.6%	Lower middle Income
Nicaragua	2005	Encuesta nacional de Hogares sobre Medicion de Nivel de Vida	6,859	49.6%	Lower middle Income
Tajikistan	2007	Living Standard Measurement	4,643	64.3%	Low Income
Uganda	2005/06	National Household Survey	7,419	77,1 %	Low Income

The data on social protection in these surveys show considerable limitations and raise many concerns. One common example is the limited number of observations available, followed by lack of harmonization in defining the different transfers and the limitations of the questionnaires. For each of the surveys processed for this paper, these limitations are described in detail in Annex 4.

### 3 The results: social protection

#### 3.1 Transfer values, Coverage and Relative Incidence

To ensure cross-country comparability, all social protection programmes and transfers have been grouped into four main types: *social insurance*, *social assistance*, *international remittances* and *non-public transfers*. The first two items are consistent with the ASPIRE classification matrix (Annex 1). Remittances, which ASPIRE considers as one single item, were instead split in two groups: international remittances and non-public transfers. The latter include domestic remittances, income, support from charities and other private transfers.

The overall social protection system in each country is represented in Figure 1.1 in terms of daily average USD PPP transfer values per capita. Indicators are only computed on the basis of beneficiary households that declare the monetary value received. The results show a heterogeneous situation across countries with some common regional patterns, especially in the countries of Sub-Saharan Africa. The average transfer value for international remittances is higher than domestic non-public transfers in all countries. Mexico has the highest average values for social insurance and non-public transfers, while Bangladesh has the highest average value of international remittances. In general, average values are higher in countries with higher per capita income. Cambodia, Tajikistan and Malawi show in all social protection areas values below 1 USD PPP, while, Kenya and Uganda show values above 1 USD PPP only for social insurance<sup>18</sup>.

**Figure 1.1: Average Transfer Value (Daily per capita in USD constant 2011 PPP)**

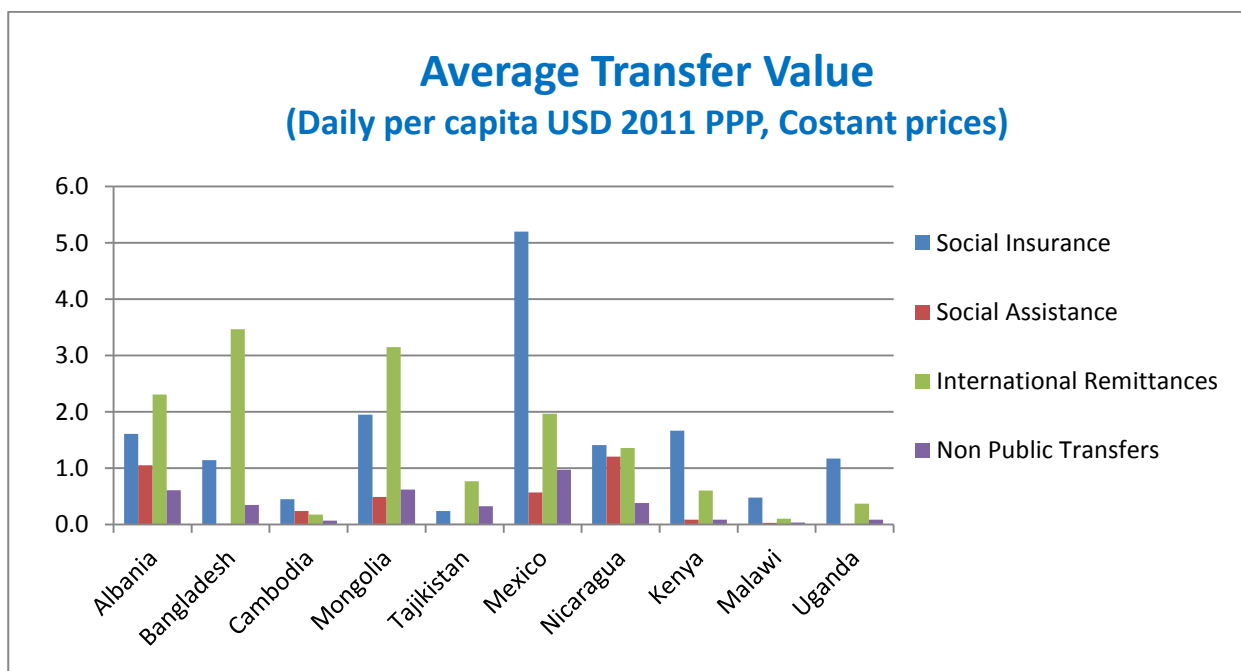


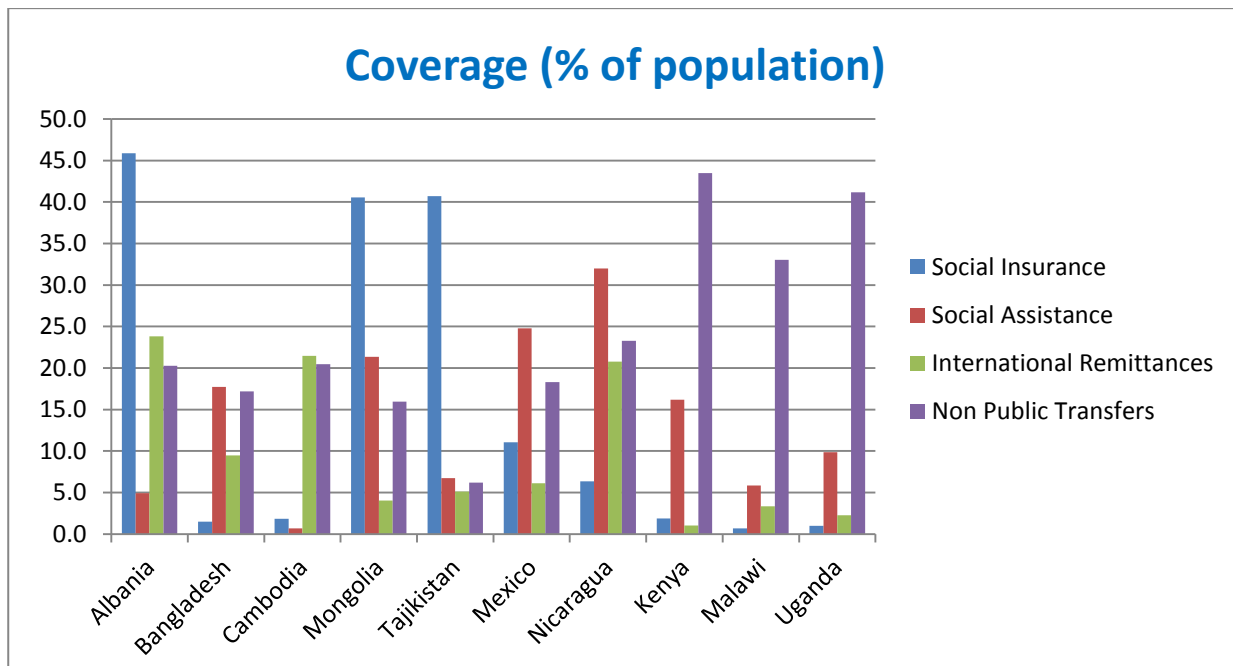
Figure 1.2 shows the coverage (i.e. the share of population participating in social protection programmes<sup>19</sup>) for the four social protection areas. Coverage is considered to be a more reliable

<sup>18</sup> Information on transfer values for cash transfers is not available in the Uganda 2005-06 survey, while the participation is correctly reported. As a consequence, only the coverage indicator could be measured.

<sup>19</sup> For the sake of precision, given that social protection information is available at household level, the household weights are multiplied by the household size in order to estimate the proportion of population which lives in a household with at least one member participating in a social protection programme. We will refer to the coverage as the share of population participating in a specific social protection scheme or programme.

indicator compared to the average transfer values, as the latter is more exposed to under-reporting, hence showing more frequently outliers and inaccuracies in the conversion to PPP<sup>20</sup>. Coverage is instead based on the participation of a household to a certain type of programme, information that is easier to obtain from households.

**Figure 1.2: Coverage (percentage of population participating to at least one programme)**



Results of Figure 1.2 appear consistent with the insights of Slater *et al.* (2014), despite the limited sample. In the former planned economies (Albania, Tajikistan and Mongolia<sup>21</sup>), social protection is mostly focused on social insurance schemes: around 46% of Albanian and 40% of Tajikistani and Mongolian populations participate in at least one social insurance programme. In Sub-Saharan Africa, social protection is mainly aimed at reducing poverty and food insecurity; therefore, social assistance programmes are more prominent – 43% of the population participates in at least one programme in Kenya, 41% in Uganda and 33% in Malawi – while social insurance is virtually absent. However, it should also be noted that, in three countries of Sub-Saharan Africa, the coverage of non-public domestic transfers – i.e. private transfers, charities and NGOs – are 3 to 5

<sup>20</sup> PPP comparisons between widely different countries are based on weak theoretical foundations (Deaton, 2010).

<sup>21</sup> Although not a CIS member, Mongolia was a former planned economy under Sovietic and Chinese influence.

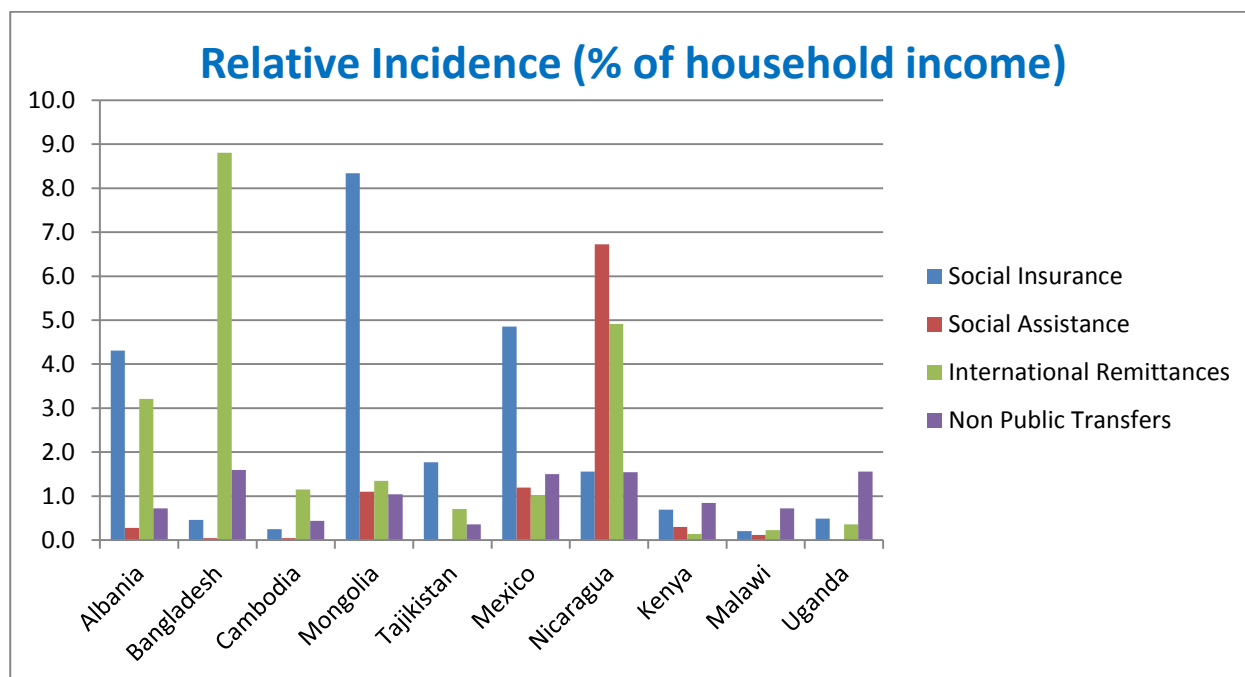
times higher than the coverage of public social assistance transfers. This points to a more fundamental role played by social networks in Africa, which should be further investigated.

International remittances are a powerful instrument for increasing household income and consequently for reducing poverty in developing countries (Ratha, 2013). The proportion of population receiving remittances in the three countries of Sub-Saharan Africa is below 4%, owing to relatively more limited opportunities for international migration. At the other extreme, Albania, Cambodia and Nicaragua show the highest coverage for international remittances – above 20 percent. In the first two countries, the coverage of remittances is higher than that of non-public transfers. Nicaragua and Mexico show the highest coverage for social assistance programmes, consistent with the notion that governments in Latin America tend to focus especially on reducing inequality and improving human development outcomes.

Figure 1.3 shows the relative incidence indicator in the four social protection areas for the beneficiary households. The share of all types of programmes in household's incomes is below 9% in all countries. The highest shares are observed for international remittances in Bangladesh (8.8%), social insurance in Mongolia (8.3%) and social assistance in Nicaragua (6.7%); others are all below 5%. Nicaragua is also the country with the highest share of household income derived from formal and informal social protection programmes (14.7%), followed by Mongolia (11.8%), Bangladesh (10.9%), Mexico (8.6%) and Albania (8.5%). In all other countries social protection accounts altogether for less than 3% of household income.



**Figure 1.3: Relative Incidence (Share of the transfer value on household daily income)**



### 3.2 Targeting of social protection programs

Are the poorer benefitting most from SP schemes? Do rural and urban households have the same access to social protection? To answer these questions, the social protection indicators described above have been tabulated for households falling into different income quintiles, and for urban and rural areas, given that in general most of the poorer households live in rural areas (figures describing these results are included in Annex 3). Main results and their policy implications are organized into the four categories of social protection programmes.

#### *Social Insurance*

- For all countries, except Malawi, social insurance transfers are positively related with income and are higher in urban areas. Mexico is the country with the highest disparity between the poorest and the richest households. The average transfer values by income quintiles and by urban/rural for each country are shown in Figure 2.1.
- In countries with consolidated social security systems like Albania, Tajikistan and Mongolia, the coverage declines with income (Figure 2.2). This may be due to the fact that, in former planned economies, social insurance was based on non-contributory systems. It may also be

that the richest segments of the population are running informal non-farm businesses without contributing to social insurance. In general, social insurance was not an issue in these countries since welfare was redistributed through salaries<sup>22</sup>. In other countries the relationship with income is positive, as poorer households participate to a lower extent in pension schemes, especially in the contributory ones. Albania and Tajikistan are also the only countries where the coverage of social insurance is higher in rural households. In fact, in Albania, rural households used to participate in centralized agricultural cooperatives and nowadays participate in separate pension schemes.

- In Albania, Tajikistan and Mongolia, the relative incidence declines with income (Figure 2.3). In all countries except for Kenya and Mongolia, the relative incidence is higher in urban areas given that transfer values are also higher.

### ***Social Assistance***

- The average transfer values generally increase with income (Figure 3.1). In all countries except for Mexico, average transfer values are higher in urban areas. In Nicaragua, the average transfer value received in rural areas is less than half of that received in urban areas.
- For social assistance programmes, the targeting is expected to be effective if coverage is higher for the poorer population. This is verified in several cases, including Mexico, Kenya and Bangladesh, where coverage decreases with income quantiles (Figure 3.2). This indicates that resources are channeled towards the poorer households, and the risk for assistance to accrue for those less in need is reduced. The opposite situation seems to emerge in Nicaragua, where the coverage of cash transfers increases with income. This could be partially explained by the transition of poorer households in upper quintiles as a result of transfers received, which are significant in this country. However, the effectiveness of the targeting deserves further investigation. The coverage is higher in rural areas in four out of ten of the countries in our sample. Mexico, Kenya and Bangladesh show a coverage in rural areas that is more than twice of that of urban areas. Mexico shows a pro-poor targeting, with households in the lowest quintile presenting a relative incidence of 8.4%, and those in the highest income quintile only

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<sup>22</sup> More insights on this could be gained by looking at a time series, or to look in details at the various cohorts, to understand whether the switch towards from social insurances to contributory systems is making a difference. However, this goes beyond the scope of this paper, and the availability of data could be an issue. In the case of Albania, receivers of old-age pensions are generally considered to be poorer than other population groups, due to the relatively low amounts received.

0.2%. Rural households show a relative incidence of 6.2%, as opposed to urban households (0.5 %). This targeting in Mexico is probably driven by the fact that the main programmes were associated with a system of evaluation and statistical controls to ensure effectiveness. The *Oportunidades* program in Mexico, for example, has become a model for conditional cash transfers programmes instituted in other countries (Nigenda and González-Robledo, 2005). In Mexico, the *Procampo* programme, started in 1993 to support agricultural development, and the *Oportunidades*, and the *Progresa* programmes, are designed with a special focus on rural households. Finally, the relative incidence of social assistance is particularly high in Nicaragua, with more than 6% of household income (Figure 3.3).

### ***International Remittances***

- The average transfer values of foreign remittances increase with income quintiles in all countries (Figure 4.1). The average values received are higher in urban areas.
- The relationship between coverage and income varies across countries (Figure 4.2). In seven out of ten countries, the upper quintiles show greater access to foreign remittances and probably to migration opportunities. In Mexico, Albania and Cambodia there is no clear pattern. The upper quintiles may have better economic conditions and thus make less use of the assistance of migrant relatives and friends. In six out of ten countries, urban areas show greater access to remittances. There are rural households in Mexico, Albania, Cambodia and Bangladesh that have greater coverage.
- Albania, Mexico and, to a lower extent, Cambodia show higher relative incidence of foreign remittances in lower income quintiles (Figure 4.3). Albania, Mexico and Bangladesh show a higher incidence in rural areas.

### ***Non-Public Transfers***

- As for international remittances, the average transfer values of domestic remittances and other private transfers increase with income quintiles in all countries. With the exceptions of Nicaragua and Mongolia, they are always higher in urban areas (Figure 5.1).
- Five countries out of ten present a higher coverage in upper income quintiles, while the other five show a higher coverage in lower quintiles (Figure 5.2). Coverage between urban and rural

areas presents no clear pattern, with Kenya showing the highest disparity in favor of rural areas and Mongolia the highest disparity in urban areas.

- The relative incidence in this case is always negatively related with income quintiles (Figure 5.3). In four out of ten countries (Malawi, Tajikistan, Mongolia and Albania) the relative incidence is higher in urban areas.

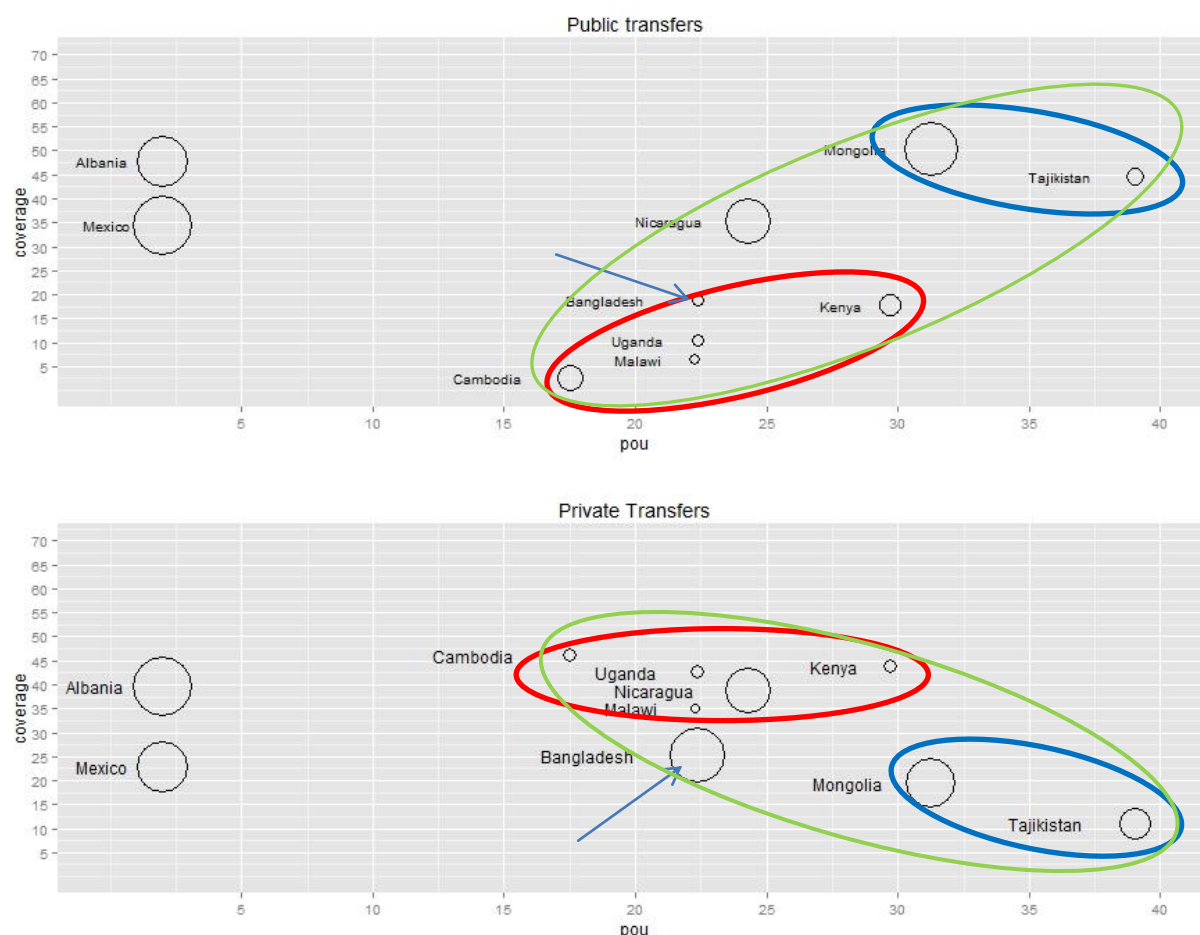
#### **4 Cross-tabulation of social protection and food security indicators**

We first compared the coverage and average transfer values with the estimates of the prevalence of undernourishment<sup>23</sup> (PoU) reported in *The State of Food Insecurity in the World* publication (FAO, IFAD and WFP, 2014). For this purpose, social protection programs were considered in two broad categories: public and private transfers. The first includes social insurance and social assistance, while the second includes non-public transfers and international remittances. The comparison is shown in Figure 6, where the horizontal axis represents the prevalence of undernourishment; the vertical axis represents the coverage and the size of circles represents the daily per capita average transfer value.

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<sup>23</sup> The prevalence of undernourishment refers to the proportion of the population whose dietary energy consumption is lower than its minimum dietary energy requirement. An updated description of the FAO methodology for estimating the prevalence of undernourishment is in Wanner *et al.* (2014).

**Figure 6: Public and Private Transfers compared with Prevalence of Undernourishment**



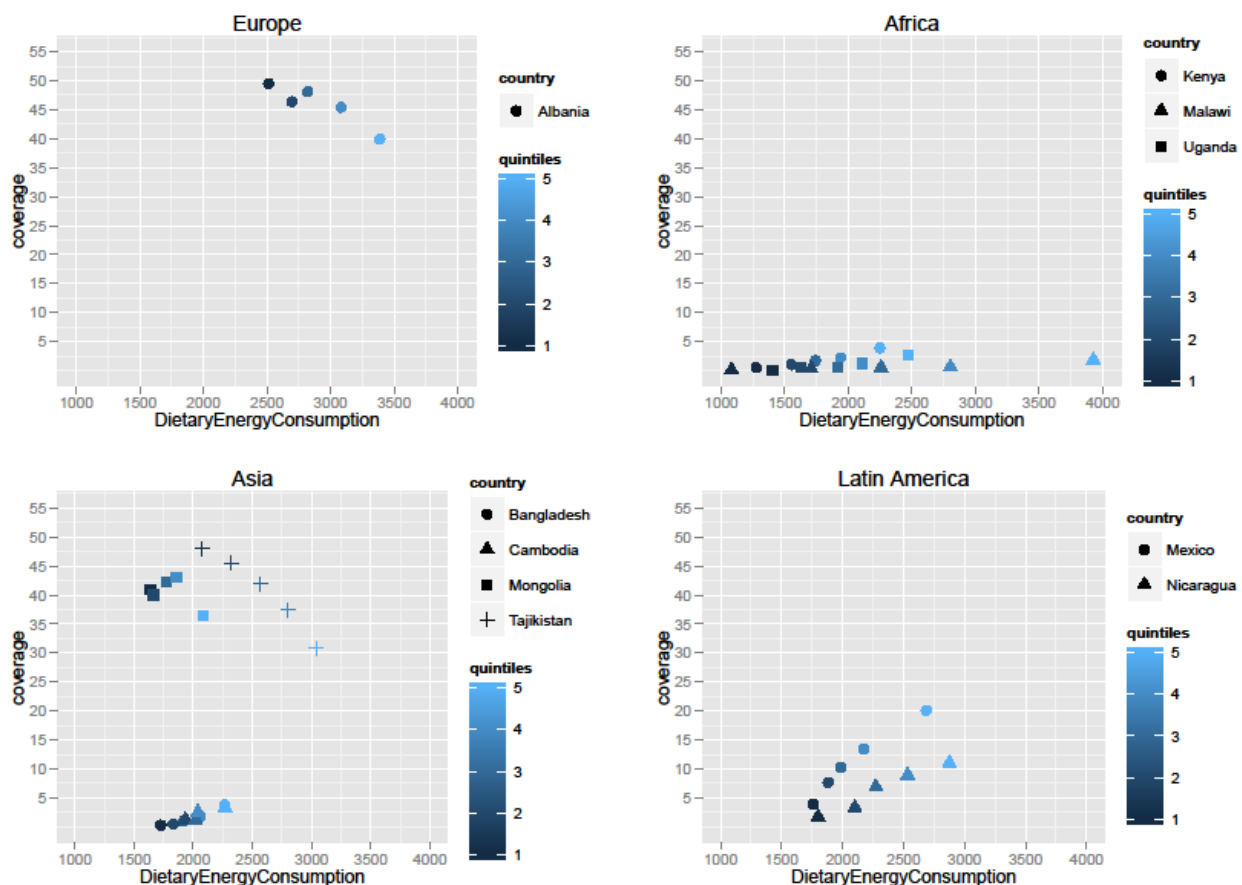
Leaving aside Albania and Mexico, which should be considered as upper-middle income countries and have a PoU below 5%, the remaining eight countries seem to indicate opposite behaviors of public and private transfers. The limited number of observations does not allow drawing general conclusions, and a formal regression analysis would not help. However, the coverage of public social protection programmes seems to increase with undernourishment, while the coverage of private transfers seems to decrease with higher food insecurity.

We can also notice two sets of countries with opposite behavior. While the three countries from Sub-Saharan Africa and Cambodia show higher coverage for private transfers, the two former planned economies, Mongolia and Tajikistan, show a higher coverage for public transfers. This is consistent with the relatively large role played by the State in former planned economies -- even in Albania, the coverage of public transfers is 10% higher than that of private transfers -- and the role played by social networks in Sub-Saharan Africa. While this is true for coverage, capita transfer values are quite different and lower in Sub-Saharan Africa.

Data for Nicaragua, Albania and Mexico show a more balanced situation across private and public transfers, while in the case of Bangladesh it should be noted that the size of private transfers is more than ten times larger compared to that of public transfers.

Interesting insights can be gained by comparing the coverage in each of the four social protection categories of programmes with dietary energy consumption in each income quintile<sup>24</sup>. We chose dietary energy consumption as an indicator of food security, since the prevalence of undernourishment cannot be measured at the household level or within income quintiles<sup>25</sup>. The ten countries were plotted by region to highlight regional differences. Figure 7.1 represents households grouped by income quintiles, with poorer households in darker blue and richer ones in lighter blue. The coverage of social insurance programmes is measured on the vertical axis, and the dietary energy consumption on the horizontal axis.

**Figure 7.1: Social Insurance and Dietary Energy Consumption by Income Quintiles**



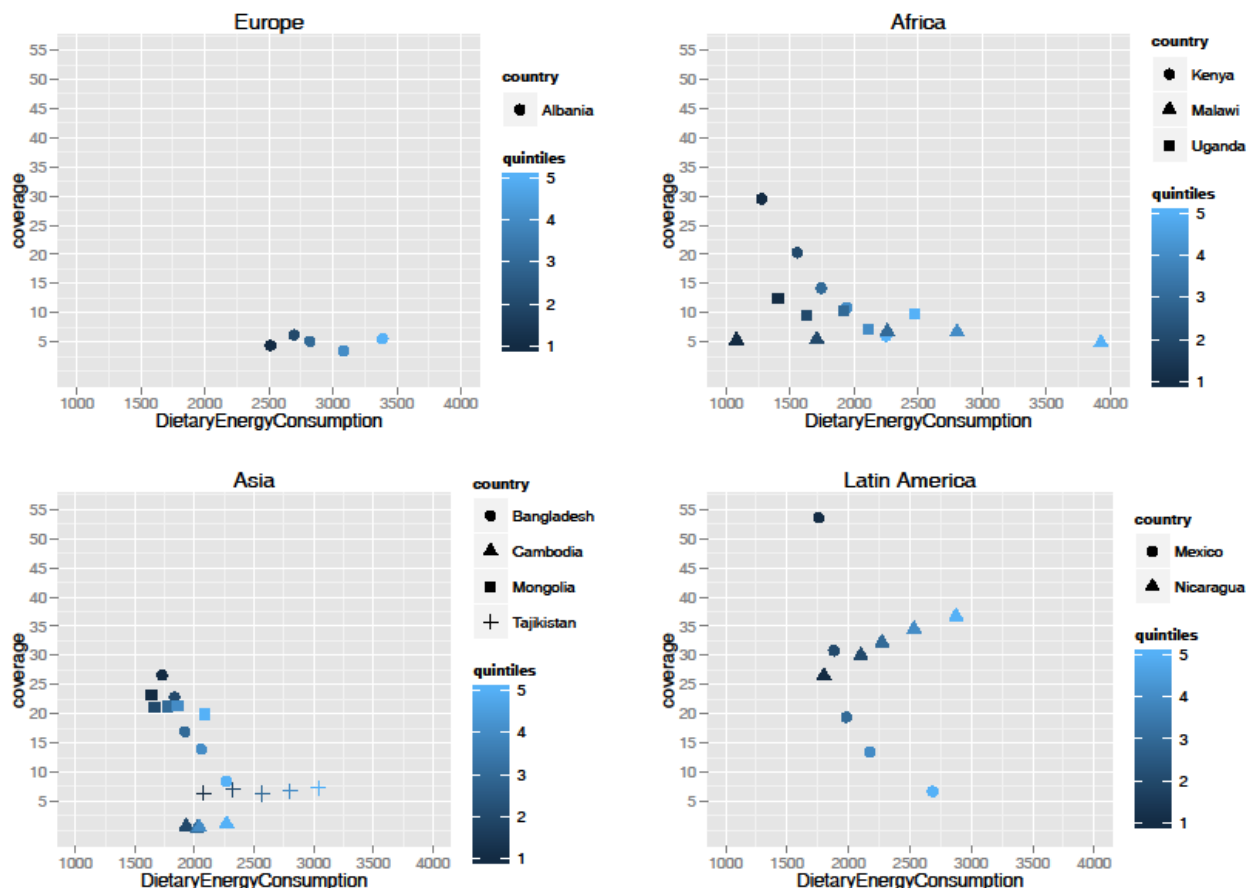
<sup>24</sup> Per capita consumption expenditure has been used as a proxy for income in all surveys.

<sup>25</sup> Reliable information on this indicator can only be obtained through a parametric approach, as in the FAO methodology, which cannot be applied for individual household or income groups (Cafiero, 2014; Wanner et al, 2014).

In former planned economies, like Albania and Tajikistan, the more food insecure households show higher social protection coverage. This is probably due the fact that social insurance schemes in these countries were not based on individual contributions. The opposite is observed in Latin American countries, with the more food insecure showing higher coverage. This is probably due to the fact that social insurance schemes are mostly based on individual contributions. In other countries, social insurance programmes are very small.

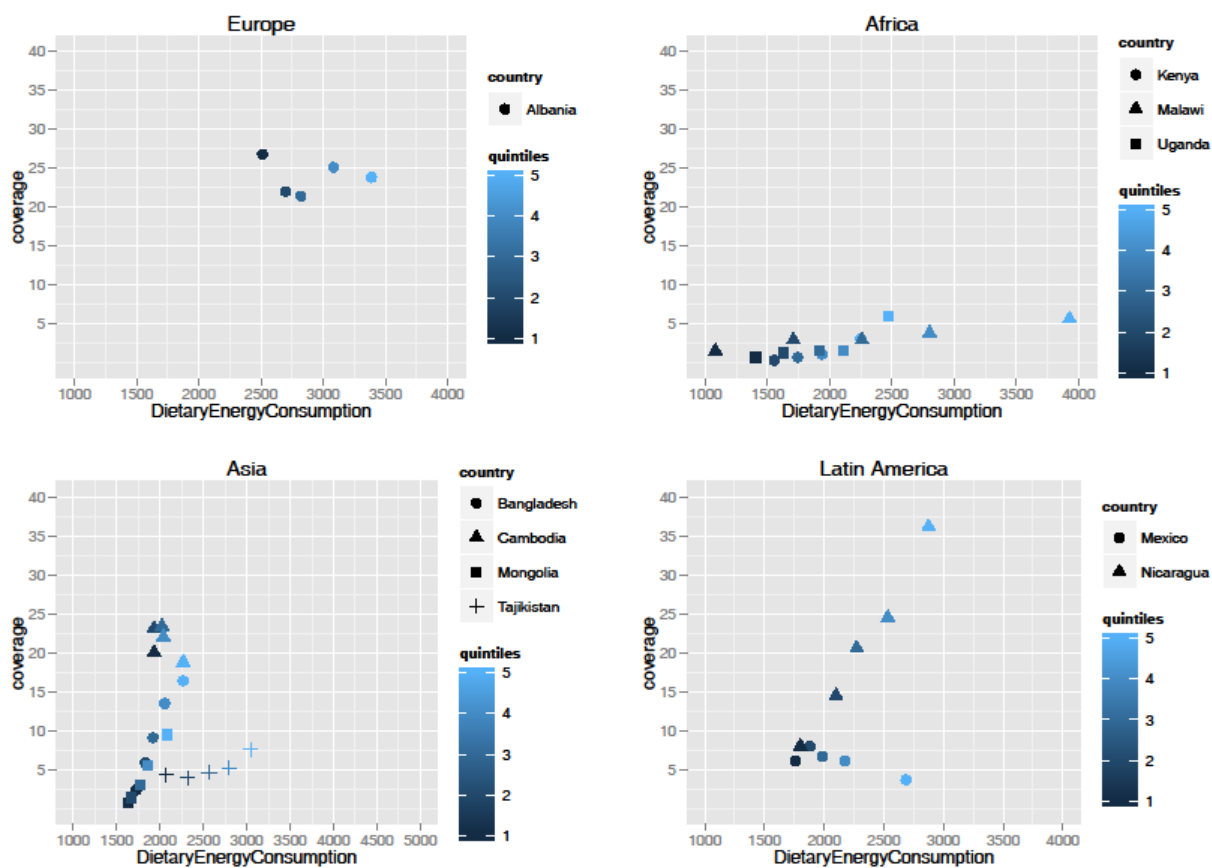
Figure 7.2 shows the same type of evidence for social assistance programmes. With the aim of protecting poor households, targeting is particularly important for these programmes. Only social assistance programmes in Mexico, Kenya and Bangladesh seem to cover the less food secure households to a higher extent. Data for Nicaragua, on the contrary, show that higher levels of energy consumption are associated with higher coverage from social assistance. This may indicate an ineffective targeting; from the questionnaire in Nicaragua, it is clear that most of this evidence comes from the programme called “*Aiudas en dinero*”. At the same time, it may also be possible that being involved in the program allows households to command a higher amount of food.

**Figure 7.2: Social Assistance and Dietary Energy Consumption by Income quintiles**



The cross-tabulation of international remittances and energy consumption is represented in Figure 7.3. In Bangladesh and Mexico the most food secure households show wider access to international remittances. The coverage of the 1st quintile is 5 times lower than the coverage of the 5th quintile. Another interesting result is that the coverage in African countries is less than 7%, even in the higher income quintiles. Asian countries, with the exception of Cambodia, show generally higher food consumption with higher income quintiles, indicating again that the better-off have more access to remittances.

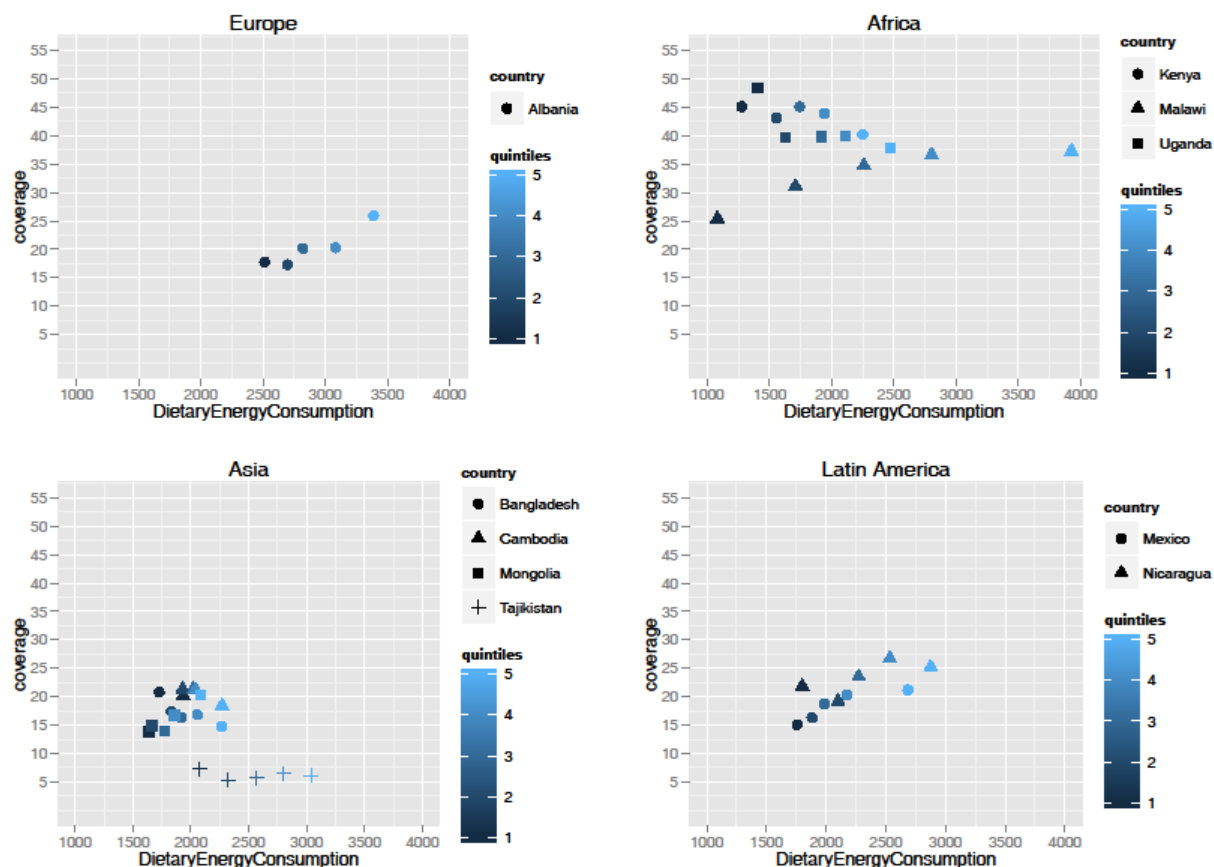
**Figure 7.3: International Remittances and Dietary Energy Consumption by Income Quintiles**



Finally, the cross-tabulation of non-public transfers with dietary energy consumption is shown in Figure 7.4. Coverage of these transfers in the worse off households is only higher in Bangladesh, while this is not the case in other countries. The coverage increases significantly with the levels of food security in Albania, Malawi and Mexico. Social networks, in other words, appear to be stronger in better-off households.



**Figure 7.4: Non-Public Transfers and Dietary Energy Consumption by Income Quintiles**



## 5 Concluding remarks

Based on the methodology of the ADePT Food Security and Social Protection modules and the classification of the World Bank's Social Protection Atlas (ASPIRE), we cross-tabulated social protection and food security indicators from recent surveys in ten countries. Evidence can therefore be shown on the two sets of indicators, while at the same time laying the basis for a dataset that links the two domains using data from household budget surveys. It is worth underlying that the proposed cross-tabulation does not allow drawing conclusions on the causal link between social protection and food security. Rather, the dataset may constitute the basis for such assessment provided that the quality and the extent of information available permit. Data highlight inadequate sampling and collection techniques, and a very limited number of

observations available in several surveys. Possible simple improvements are easily identified, especially on the collection of information on in-kind transfers and social assistance programs.

The coverage of public transfers is more often associated with high levels of food insecurity, while private transfers – mainly foreign remittances – are more often associated with low levels of food insecurity. Even if targeting is fundamental for social assistance, the poorest and the most food insecure do not always seem to be the main target of social assistance programmes. When social insurance is based on individual contributions, the average transfer values and coverage increase with income quintiles. The opposite behavior is observed in Tajikistan and Albania – both former planned economies -- where social security was mostly non-contributory.

International remittances are positively associated with income levels. This is probably due to limited migration opportunities for the poorest households that often live in rural areas or to the absence of infrastructures to receive the transfers. Non-public transfers instead show an irregular pattern, which may be driven by the fact that they include private domestic transfers, but also transfers from NGOs and charities. Non-public transfers show a high coverage in Uganda, Kenya and Malawi, owing to the prominent role played by social networks in several parts of Sub-Saharan Africa.

Additional cross-tabulations are possible on the basis of the data available in these ten surveys. For instance, social protection and food security indicators may also be cross-tabulated with data on female and male headed households; urban and rural households; different level of education; geographical areas, etc. Annex 5 reports a template for building a data set.

## 6 References

- Brunori, P. and O'Reilly, M. (2010). Social protection for development: A review of definitions, paper prepared in the framework of the European Report on Development 2010. Brussels. European Commission.
- Coady, D., Grosh, M. and Hoddinott, J. (2004). The targeting of transfers in developing countries: Review of experience and lessons. Washington DC: World Bank and IFPRI.
- Deaton, A. (2010). Price Indexes, Inequality, and the Measurement of World Poverty. *American Economic Review*, 100(1): 5-34.
- Deaton, A. and Heston, A. (2010). Understanding PPPs and PPP-Based National Accounts. *American Economic Journal: Macroeconomics*, 2(4): 1-35.
- Devereux, S. (2008). The impact of droughts and floods on food security and policy options to alleviate negative effects', in Otsuka, K. and Kalirajan, K. (editors) *Contributions of agricultural economics to critical policy issues: Proceedings of the twenty-sixth conference of the International Association of Agricultural Economists*. Malden, MA: Blackwell.
- Devereux, S. (2010). Dependency and graduation, *Frontiers of Social Protection Brief 5*. Johannesburg: Regional Hunger and Vulnerability Programme (RHVP).
- Devereux, S. and Sabates-Wheeler, R. (2004). Transformative social protection, IDS Working Paper 232. Brighton: Institute of Development Studies.
- European Communities (2010). *European Report on Development: Social protection for inclusive development*. San Domenico di Fiesole: Robert Schuman Centre for Advanced Studies, European University Institute.
- FAO, IFAD and WFP (2014). *The State of Food Insecurity in the World 2014. Strengthening the enabling environment for food security and nutrition*. Rome, FAO.
- Fiszbein, A. and Schady, N. (2009): *Conditional Cash Transfers: Reducing Present and Future Poverty*. World Bank Policy Research Report. Washington DC: World Bank.
- Fiszbein, A., Kanbur, R. and Yemtsov, R. (2013): "Social Protection, Poverty and the Post-2015 Agenda." World Bank Policy Research Paper, 6469. Washington DC: World Bank.
- Fiszbein, A., Kanbur, R. and Yemtsov, R. (2013): "Global Patterns of Social Protection: Facts and Some Explanations." In preparation.
- Hidrobo, M., Hoddinott, J., Kumar, N. and Olivier, M. (2014). Social protection and food security. Working paper prepared by the International Food Policy Research Institute. Washington, DC, IFPRI.
- Gentilini, U. and Omamo, W. S. (2011). "Social protection 2.0: Exploring issues, evidence and debates in a globalizing world". *Food Policy*, Vol. 36.
- High Level Panel of Experts of the Committee of World Food Security (HLPE) (2012). *Social protection for food security. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security*, Rome 2012.

Hoddinott, J. (2008). Nutrition and Conditional Cash Transfer (CCT) Programs. Unpublished manuscript, International Food Policy Research Institute, Washington, DC. Cited in Fiszbein, A. and Schady, N. (2009), Conditional Cash Transfers: Reducing Present and Future Poverty. A World Bank Policy Research Report. Washington, DC: World Bank.

ILO. (2011). Social protection floor for a fair and inclusive globalization, Report of the Social Protection Floor Advisory Group. Geneva: ILO. Accessible at:  
[http://www.ilo.org/global/publications/books/WCMS\\_165750/lang--fr/index.htm](http://www.ilo.org/global/publications/books/WCMS_165750/lang--fr/index.htm)

ILO. (2012). R202 - Social Protection Floors Recommendation, 2012 (No. 202): Recommendation concerning National Floors of Social Protection. Accessible at:  
[http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100\\_INSTRUMENT\\_ID:3065524:NO](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:3065524:NO)

Nigenda, G. and González-Robledo, L. M. (2005). Lessons offered by Latin American cash transfer programmes, Mexico's Oportunidades and Nicaragua's SPN. Implications for African countries. Centre for Social and Economic Analysis Mexican Health Foundation and DFID Health Systems Resource Centre. Accessible at: [http://www.eldis.org/fulltext/verypoor/5\\_nigenda.pdf](http://www.eldis.org/fulltext/verypoor/5_nigenda.pdf) .

Ratha, D. (2013). The Impact of Remittances on Economic Growth and Poverty Reduction. Washington DC: Migration Policy Institute. Accessible at:  
<http://www.migrationpolicy.org/research/impact-remittances-economic-growth-and-poverty-reduction> .

Slater, R., Holmes, R. and Mathers, N. (2014). "Food and Nutrition (in-)Security and Social Protection". OECD Development Co-operation Working Papers, No. 15, OECD Publishing. Available at: <http://dx.doi.org/10.1787/5jz44w9ltszt-en>

Wanner, N., Cafiero, C., Troubat, N. and Conforti, P. (2014). "Refinements to the FAO methodology for estimating the prevalence of undernourishment indicator." ESS Working Paper No. 14-05, September 2014. Food and Agriculture Organization of the United Nations, Rome, 2014.

World Bank (2012). Resilience, Equity and Opportunity. The World Bank 2012-2022 Social Protection And Labor Strategy. Washington, DC: The World Bank.

## Annex 1: ASPIRE classification matrix

SOCIAL PROTECTION AREA	PROGRAM CATEGORY	PROGRAM SUB-CATEGORY
Social Insurance	Old Age Contributory pensions	Old age
		Survivors
		Disability
	Other social Security	Occupational injury benefits
		Paid sick leave
		Health Insurance
		Maternity
		Other Social insurance
Labor Market	Labor market programs	Unemployment compensation
		Severance Pay
		Early retirement due to labor market reason
		Labor Market services(intermediation)
		Training
		Job rotation and Job sharing
		Employment incentives/wage subsidies
		Supported employment and rehabilitation
		Employment measures for disable
Social Assistance	Cash Transfers/Last resort Programs	Cash Transfers
		Low income/last resort program
	Social Pension	Non-contributory social pension
	Other Cash Transfers Programs	Child/family/orphan allowances
		Birth/death grants
		Disability benefits
		Other allowances
	Conditional Cash Transfers	Conditional Cash transfers
	In-Kind food Transfers	Food Stamps and vouchers
		Food rations
		Supplementary feeding
		Emergency food distribution
	School Feeding	School feeding
	Public Works	Cash for work
		Food for Work
	Other Social Assistance Programs	Housing allowances
		Scholarship
		Fee waivers, health
		Subsidies
		Other Social Assistance
Remittances	Remittances	Domestic Remittances

		Remittances from abroad
		Income and support from charity
		Other private transfer (NGOs)

## Annex 2: Malawi Example on Social Protection

2010 - 2011	Malawi Third Integrated Household Survey						
SPL Area	Program classification	Program Name	Type of variable	Original variable	Module/Section in the survey	Question in the survey	Participation Rate in total sample
Social Insurance	Old Age Contributory Pension	Pensions	Monetary	transfers105	Module P: Other income	P01. During the last 12 months, did you or any members of your household receive any [SOURCE]?	0.62%
	Other Social insurance	NA	NA	NA	NA	NA	NA
Labor Market	Labor Market Programs	NA	NA	NA	NA	NA	NA
Social Assistance	Social Pensions	NA	NA	NA	NA	NA	NA
	Other Cash Transfers Programs: family, child or disability allowances	NA	NA	NA	NA	NA	NA
	Conditional Cash Transfers	NA	NA	NA	NA	NA	NA
	In-kind Food Programs	Free food (other than maize)	Monetary	hh_r02a hh_r02b	Module R: Social Safety Nets	R02. In the last 12 months, what was the total assistance received from [PROGRAMME]? Item 102: Annual Free Food (other than Maize)	2.63%
		Free maize	Monetary(Kg in-kind)	hh_r0a		Item 101: Free Maize	
	Public Works	MASAF, PWP	Monetary	hh_r02a hh_r02b		Item 103. Annual Food/Cash-for-Work Programme (MASAF, PWP)	2.29%
		inputs for work program	Monetary	hh_r02a hh_r02b		Item 104. Annual inputs-For-Work Programme	
	Other Social Assistance	Scholarship for secondary education	Monetary	hh_r02a hh_r02b	Module R: Social Safety Nets	Item 108. Annual Scholarships/Bursaries for Secondary Education (e.g.CRECCOM)	1.20%
		Annual scholarship for tertiary education	Monetary	hh_r02a hh_r02b		Item 109. Annual Scholarships for Tertiary Education (University, Upgrading Teachers)	
		Government loan for university	Monetary	hh_r02a hh_r02b		Item 110. Annual Cash - Government Loan for University and Other Tertiary Education	
		Direct cash transfer	Monetary	hh_r02a hh_r02b		Item 111: Direct cash transfer from Government	
		Direct cash transfer	Monetary	hh_r02a hh_r02b		Item 112: Direct Cash Transfers from others (Development Partners, NGOs).	
		Other	Monetary	hh_r02a hh_r02b		Item 113. Annual Other	
Non Public Transfers	Private Transfers	Domestic transfers	Monetary	hh_O14 hh_O17	Module O: Children living elsewhere	How much cash/estimated food and other in-kind did [NAME] send to this household each month during the last 12 months?	36.39%
		Inter-family in kind gifts and monetary transfers	Monetary	transfers101,transfers102,transfers103	Module P: Other income	How much of [Cash/Food/Non food inkind Gifts] came from rural/urban/international locations?	
International Remittances	Private Transfers	Remittances from abroad	Monetary	hh_O14 hh_O17	Module O: Children living elsewhere	How much cash/estimated food and other in-kind did [NAME] send to this household each month during the last 12 months?	3.33%
		Inter-family in kind gifts and monetary transfers	Monetary	transfers101,transfers102,transfers103	Module P: Other income	How much of [Cash/Food/Non food inkind Gifts] came from rural/urban/international locations?	

### Annex 3: Social Protection by Income Quintiles and by Rural/Urban

Figure 2.1: Social Insurance - Average Transfer Value (USD PPP)

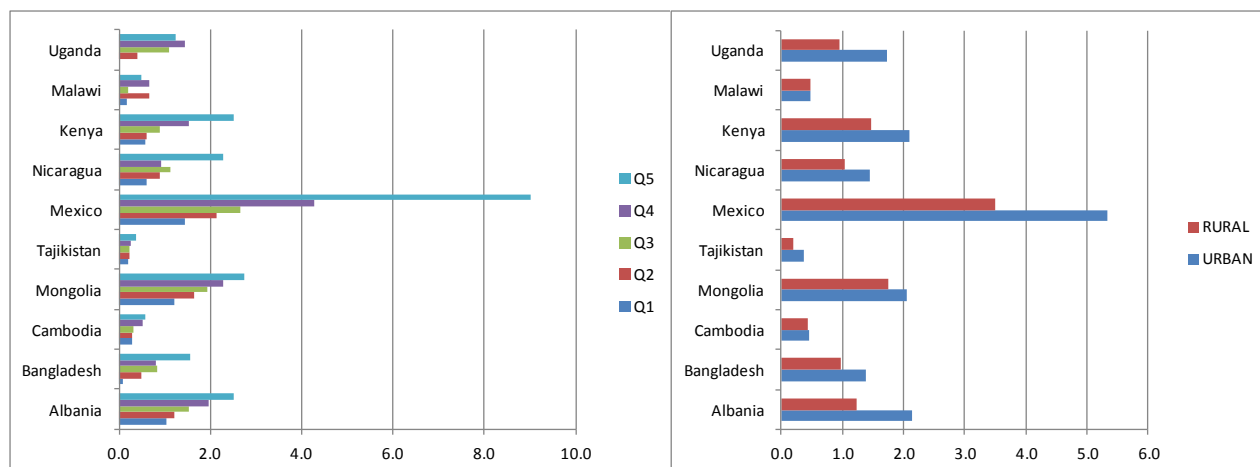


Figure 2.2: Social Insurance - Coverage (%)

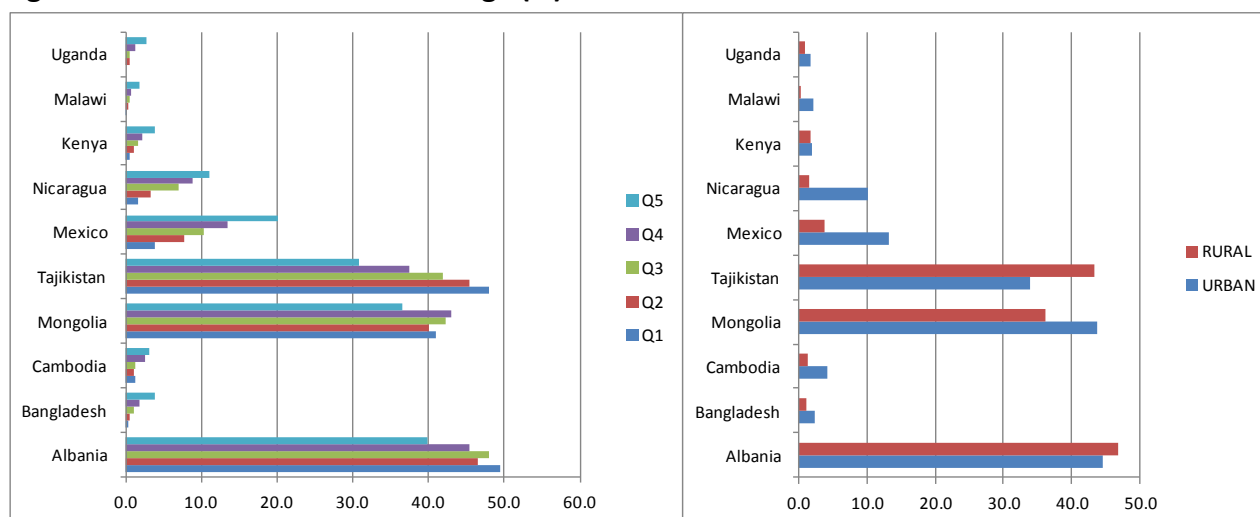
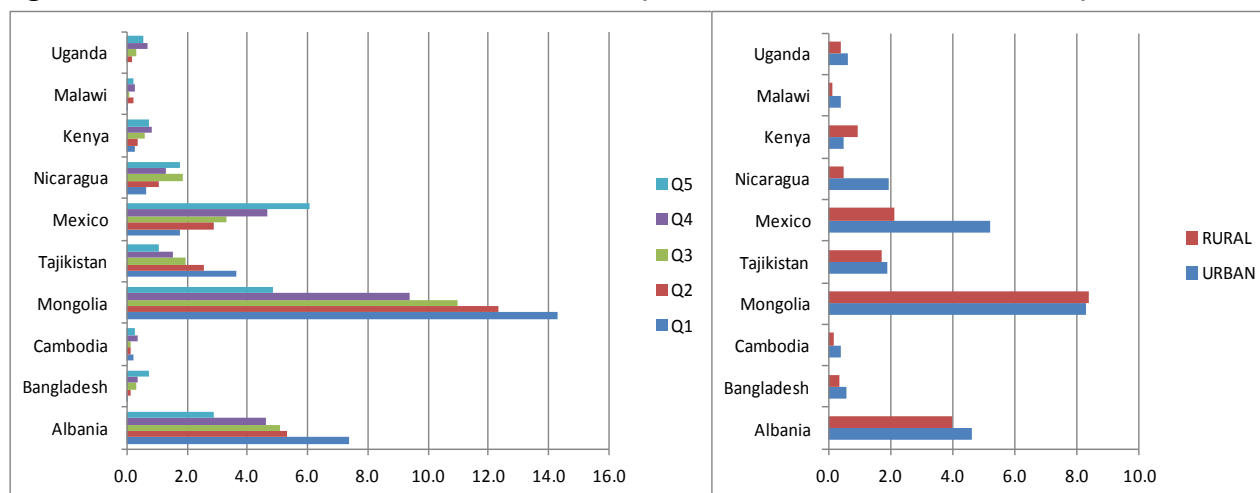
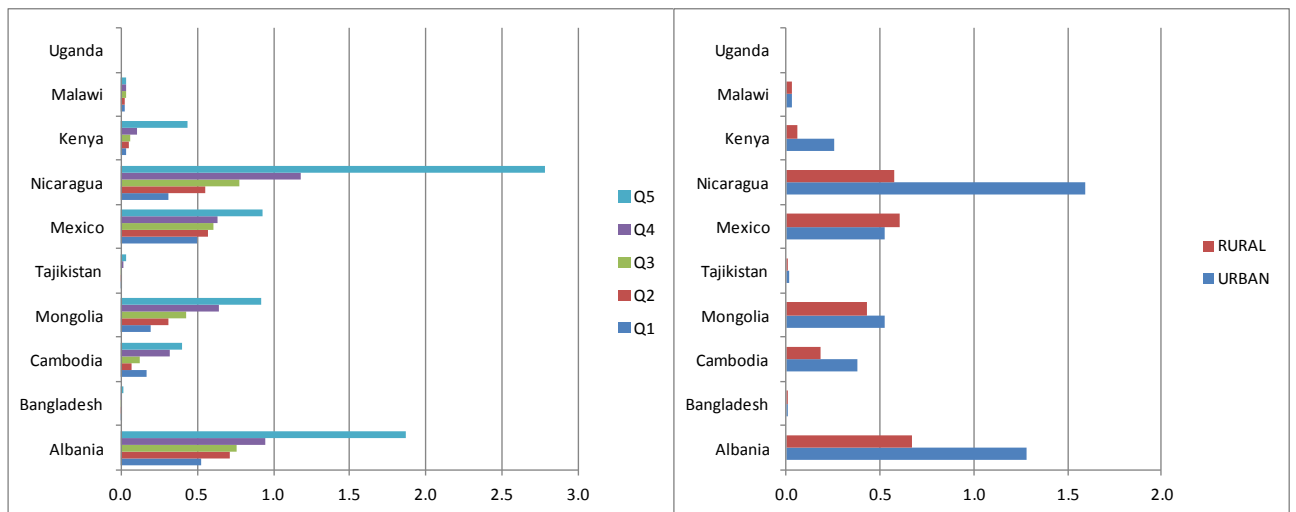


Figure 2.3: Social Insurance - Relative Incidence (share of SP in household income)

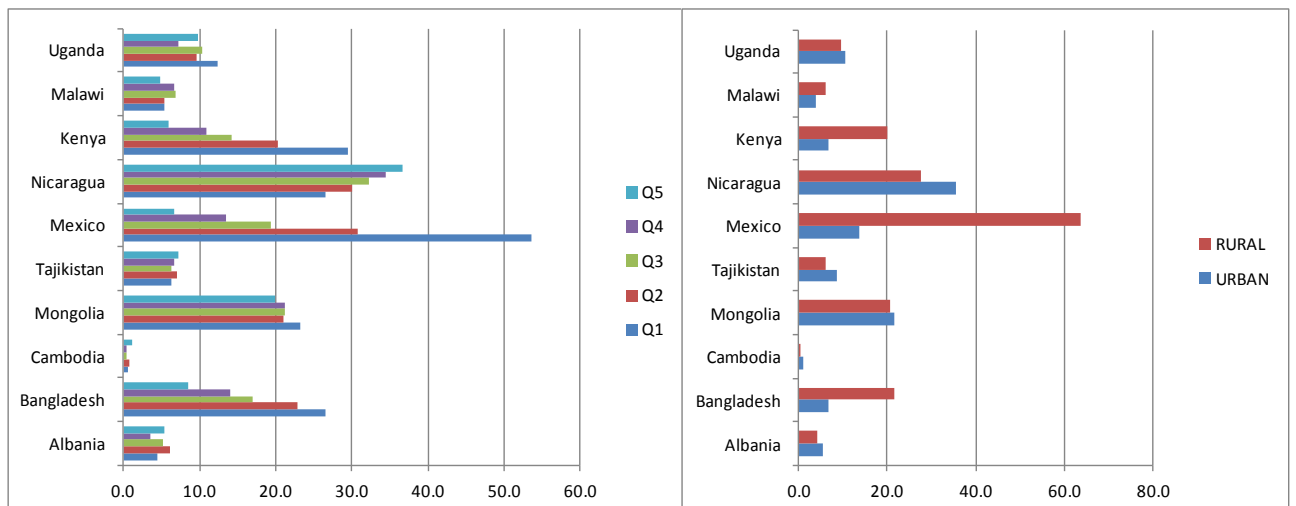




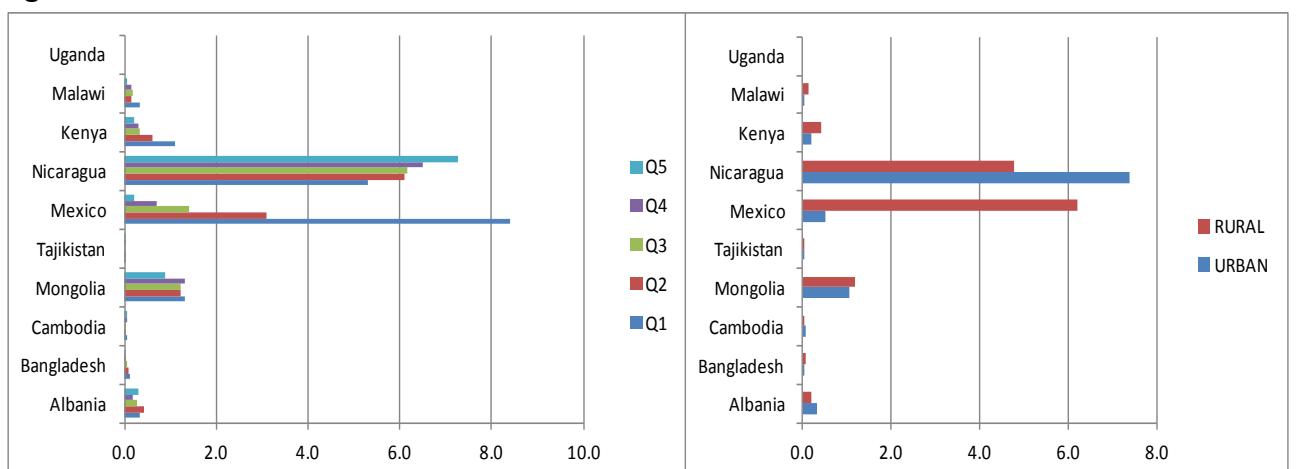
**Figure 3.1: Social Assistance - Average Transfer Value (USD PPP)**



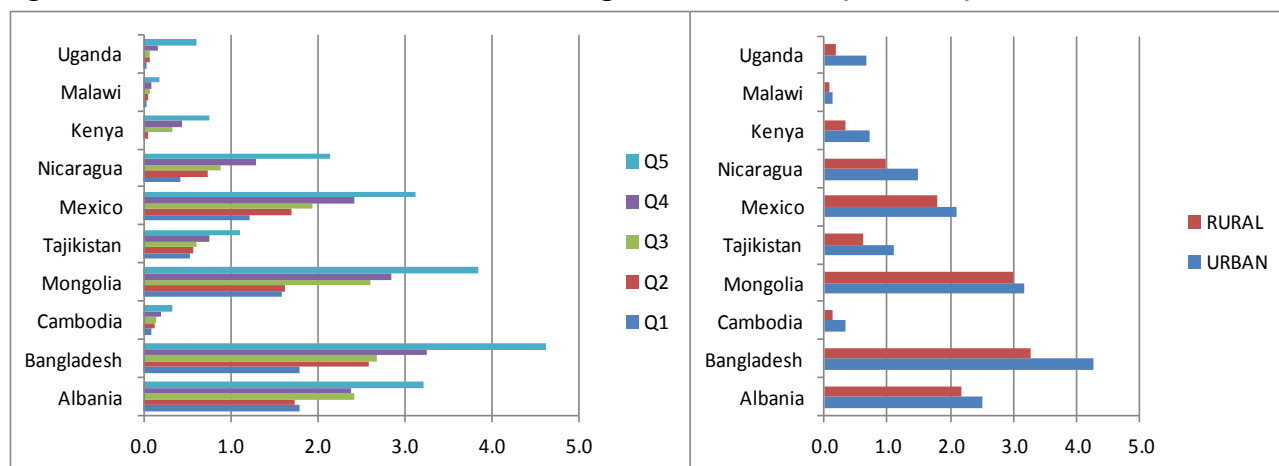
**Figure 3.2: Social Assistance - Coverage (%)**



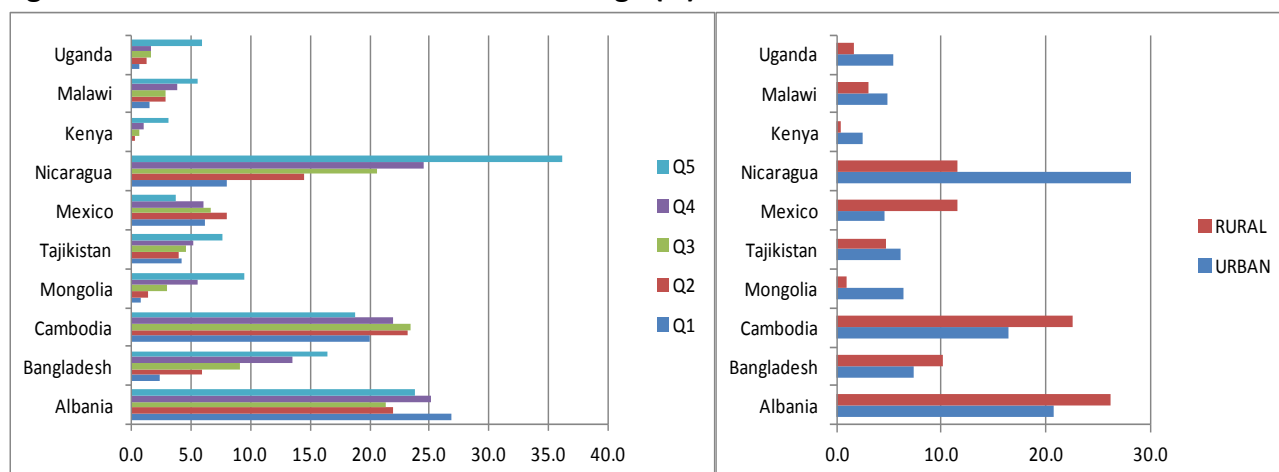
**Figure 3.3: Social Assistance - Relative Incidence**



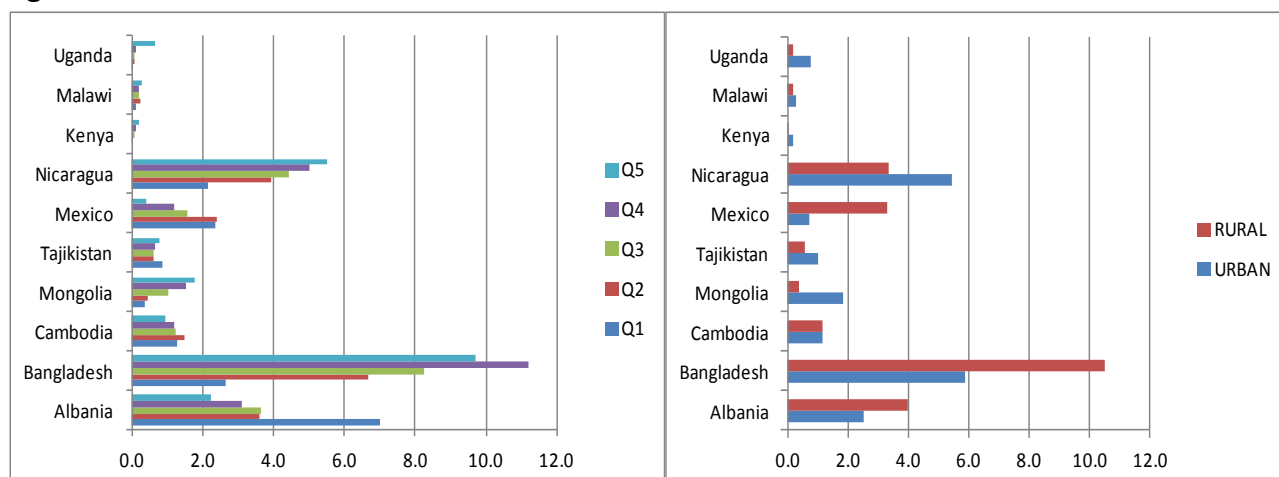
**Figure 4.1: International Remittances - Average Transfer Value (USD PPP)**



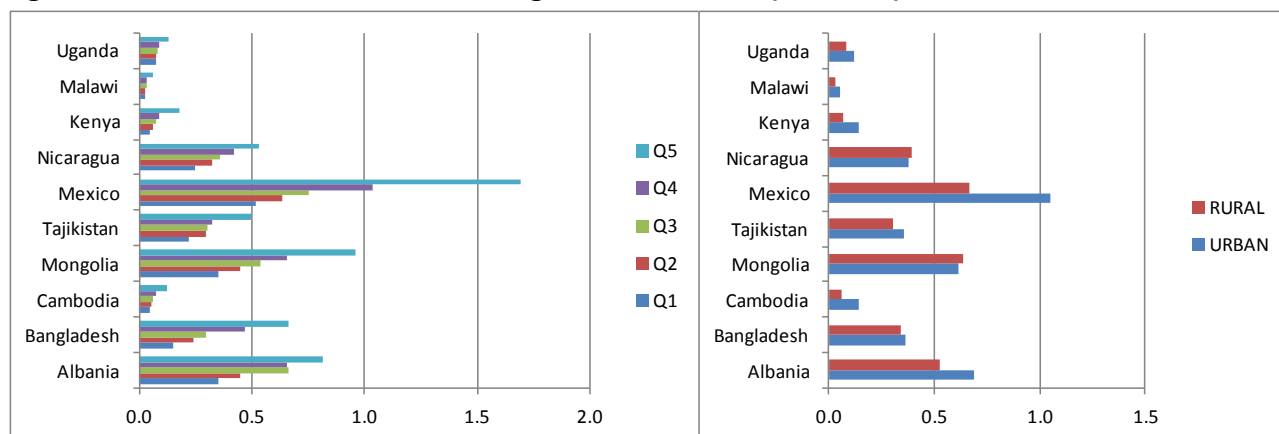
**Figure 4.2: International Remittances - Coverage (%)**



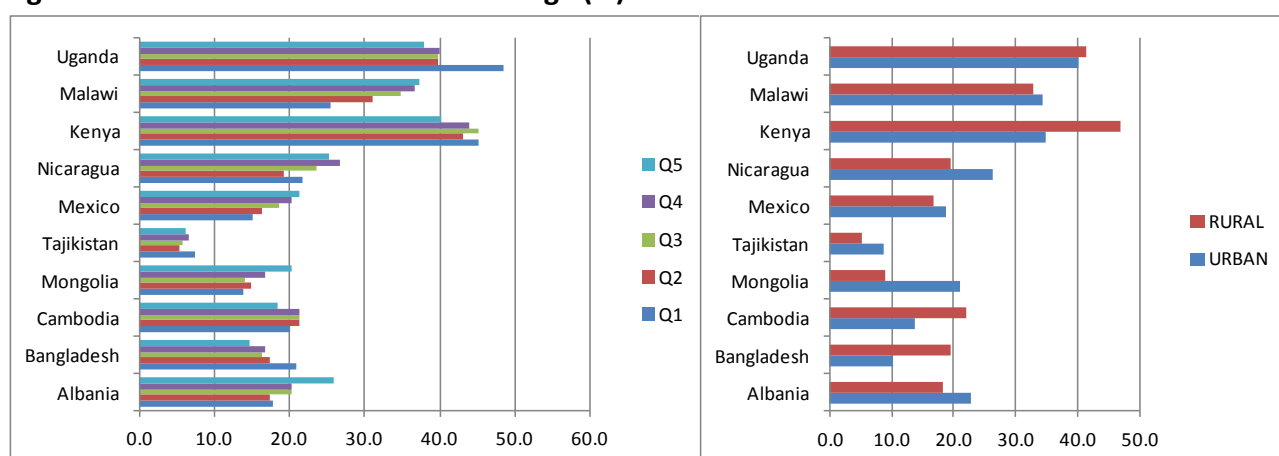
**Figure 4.3: International Remittances: Relative Incidence**



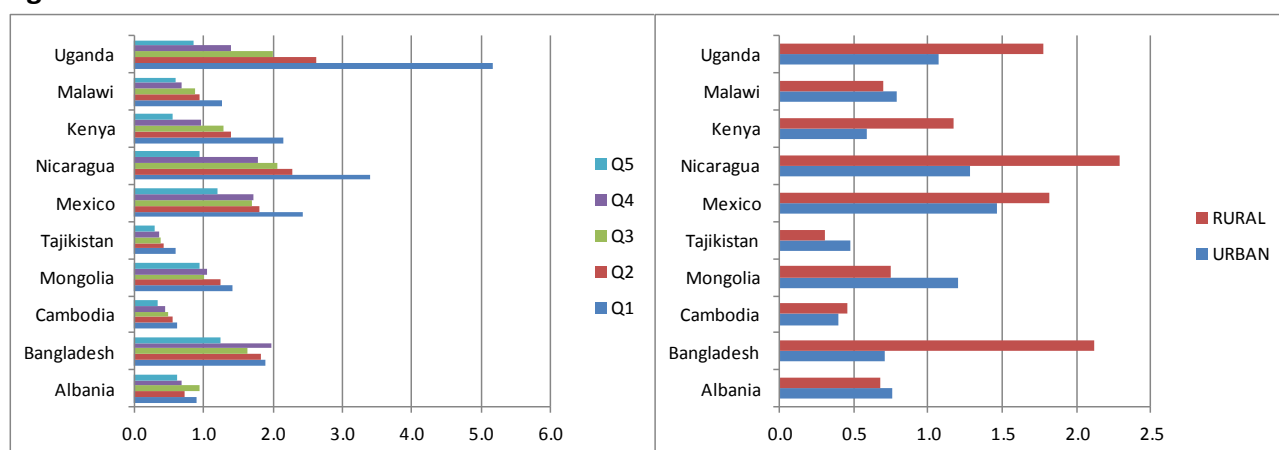
**Figure 5.1: Non-Public Transfers - Average Transfer Value (USD PPP)**



**Figure 5.2: Non-Public Transfers - Coverage (%)**



**Figure 5.3: Non-Public Transfers - Relative Incidence**



## **Annex 4: Data Issues in the households surveys**

### **Albania**

#### *Public Transfers*

This section includes thirteen programmes: eleven are related to Social Insurance and only two are related to Social Assistance. This may be reasonable considering that Albania is an upper-middle income country.

#### *Private transfers*

International remittances are preserved in foreign currencies; we have used the exchange rate in current prices from the WDI and EUROSTAT.

#### *General Issues*

Data on food transfers or in-kind transfers were not available.

### **Bangladesh**

#### *Public Transfers*

The questionnaire includes thirty programmes. For some of them we have very few observations. For instance, “Maternal health Voucher allowance” counts five observations over a sample of 12240 households. We believe that sparse observations of this type are not very informative. Therefore, we have aggregated these programmes in compliance with ASPIRE matrix and have also generated an aggregate like “Other cash transfers programmes” with 8 different kind of transfers.

#### *Private transfer*

No data available on other form of private transfers like Support from NGO or charity.

#### *General Issues*

This survey is a good example of how difficult it is to find a balance between the number of programmes included in the questionnaire and the effective number of programmes reported by the households. In general, a well-designed household budget survey presents no more than ten to fifteen programmes in the questionnaire, since increasing too much the number of programmes increases the risk of having very low response rates.

### **Cambodia**

#### *Public Transfers*

The questionnaire permits to specify if the scholarship or the pension comes from abroad. This specification could lead to an error in the classification criteria, especially if we think about scholarship. For instance, we could think that the transfers on pensions in foreign currency are made by private insurance company from abroad. We have decided to consider these two programmes as public transfers even if this may not be made by the local government.

#### *General Issues*

Data on food transfers or in-kind transfers were not available.

### **Mongolia**

#### *General Issues*

Data on food transfers or in-kind transfers were not available.

### **Tajikistan**

#### *Public Transfers*

The questionnaire lists 17 programmes in the module of Transfers & Social Assistance, although we have data only on five programmes. This is due to two potential causes:

- The programmes listed are not representative of the social protection schemes in the country;
- The sample is not representative of the target population.

#### *General Issues*

Data on food transfers or in-kind transfers were not available.

### **Mexico**

#### *General Issues*

Data on food transfers or in-kind transfers were not available.

### **Nicaragua**

#### *Public Transfers*

The questionnaire overlooks most of the possible transfers under Social Assistance area. We identified only two programmes on this group: education scholarship and cash transfer.

Basically we have two problems under this macro-group:

- Few observations of scholarship transfer;
- The definition of cash transfers could be misleading. The questionnaire does not specify the source of these transfers but only asks to the household if it had received

any form of cash aid during the year. Without the name of the programme, there is also the possibility that these transfers came from social insurance schemes.

## **Kenya**

### *General Issues*

- Data on food transfers or in-kind transfers were not available;
- Although the questionnaire is designed to collect data at the household level, the raw data files have more observations than the actual number of households in the sample. The additional observations were repeated values, probably deriving from a data entry mistake. Therefore, it was decided to drop the repeated values.

## **Malawi**

### *Public Transfers*

As previously mentioned in section 2, we have used an external source to determine the price conversion factor in the absence of correspondent cash value variable for Free Maize programmes.

## **Uganda**

### *Public Transfers*

Monetary values for Social Assistance programmes were not available. In order to have at least the coverage indicator, we used dichotomous variables from the module of education (participation to a scholarship programme) and Major shock experienced (help provided by local government).

### *General Issues*

In general this survey has poor data on social protection (only three programmes for public transfers) and data on food transfers or in-kind transfers were not available.

## **Annex 5: Template for a Global Database**

One of the purposes of this paper is to serve as a basis for constructing a global database which links social protection and food security indicators. The template for constructing such a database is shown in Annex 5 as a data matrix obtained from processing and data from household surveys. The template proposes cross-tabulation of various indicators with sub-national population groups. Indicators are the following:

- Share of the total population (%)

- Average value of total benefit (\$PPP/person/day, constant prices)
- Coverage (%) of social protection
- Relative incidence of social protection
- Dietary energy consumption (kcal/person/day) from survey
- Difference from national average of dietary energy consumption
- Share of animal protein in total Kcal
- Prevalence of Undernourishment (PoU)
- Number of observations

These are cross-tabulated with the following population groups:

- National level
- Geographical Area (Urban, Rural)
- Geographic regions (country specific)
- Level of income (terciles).
- Level of total benefit (No transfer, 1<sup>st</sup> Tercile, 2<sup>nd</sup> Tercile, 3<sup>rd</sup> Tercile)
- Level of education (no education, primary school, secondary and more)
- Gender disaggregation (Male and female headed households)
- Population receiving Social Insurance (yes, no)
- Population receiving Social Assistance (yes, no)
- Population receiving Non-public Transfers (yes, no)
- Population receiving International Remittances (yes, no)

We decided to split the population in terciles of income instead of quintiles in order to have more statistically significant results. The following example refers to Albania 2005.

## Example: Albania 2005

Albania 2005	Population group	Share of the total Population (%)	Average value of total benefit (\$PPP costant/person/day)	Coverage (%)	Relative incidence on total income (%)	Dietary energy consumption (kcal/person/day) from survey	Difference from national average DEC (%)	Share of animal protein in total kcal (%)	Difference from national average Share of Animal Protein in Total Kcal (%)	Prevalence of Undernourishment (PoU)	Observations
Geographical areas*	National	100.00	2.22	65.68	8.41	2924.91	/	5.53	/	<5.0	3836
	Urban	44.38	2.63	64.93	8.15	2888.84	-1.23	5.52	-0.17	<5.0	2198
	Rural	55.62	1.90	66.28	8.83	2953.70	0.98	5.54	0.13	<5.0	1638
	Coastal	31.21	2.44	69.19	9.60	2805.39	-4.09	5.83	5.45	<5.0	998
	Central	44.00	1.96	64.33	8.07	2870.68	-1.85	5.64	1.95	<5.0	999
Level of income*	Mountain	10.97	1.95	61.94	8.81	3471.65	18.69	4.09	-25.97	<5.0	1000
	Tirana	13.83	2.71	65.03	7.20	2933.62	0.30	5.65	2.11	<5.0	839
	1st Tercile of income	30.67	2.70	65.88	18.13	2599.05	-11.14	4.80	-13.14	/	1279
	2nd Tercile of income	33.03	2.12	63.52	9.42	2821.48	-3.54	5.57	0.78	/	1278
	3rd Tercile of income	36.30	1.91	67.48	4.91	3294.43	12.63	6.11	10.41	/	1279
Level of total benefit*	1st Tercile of total benefit	23.20	0.61	100.00	3.52	2941.07	0.55	5.62	1.61	/	824
	2nd Tercile of total benefit	21.98	1.78	100.00	10.64	2877.76	-1.61	5.58	0.82	/	818
	3rd Tercile of total benefit	20.51	4.52	100.00	26.39	2845.17	-2.73	5.73	3.64	/	817
	No transfers	34.32	/	0.00	/	2991.84	2.29	5.32	-3.79	/	1377
	No Education	20.84	2.63	84.82	16.79	2862.27	-2.14	5.28	-4.53	/	754
Level of education*	Primary School	38.17	1.89	60.95	8.16	2849.88	-2.57	5.40	-2.29	/	1337
	Secondary and More	40.99	2.24	60.36	6.14	3026.61	3.48	5.78	4.43	/	1745
	Male headed households	93.04	2.13	63.94	7.89	2907.74	-0.59	5.54	0.17	/	3445
	Female headed households	6.96	3.13	88.92	14.79	3154.32	7.84	5.40	-2.32	/	391
	Population receiving Social Insurance	45.86	1.61	45.86	10.01	2863.36	-2.10	5.61	1.41	/	1745
Social protection areas	Population not receiving Social Insurance	54.14	/	54.14	/	2977.04	1.78	5.47	-1.20	/	2091
	Population receiving Social Assistance	4.93	0.98	4.93	5.50	2937.13	0.42	5.34	-3.51	/	174
	Population not receiving Social Assistance	95.07	/	95.07	/	2924.28	-0.02	5.54	0.18	/	3662
	Population receiving Non Public Transfer	20.28	0.61	20.28	3.24	2885.96	-1.33	5.89	6.45	/	743
	Population not receiving Non Public Transfers	79.72	/	79.72	/	2934.82	0.34	5.44	-1.64	/	3093
* Indicators calculated for the total benefit from social protection	Population receiving International Remittances	23.82	2.31	23.82	14.93	2915.00	-0.34	5.73	3.63	/	890
	Population not receiving International Remittances	76.18	/	76.18	/	2928.01	0.11	5.47	-1.14	/	2946



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I4796E/1/07.15