Mobility in Income Poverty in Egypt during 2009-2013

Heba El-Laithy
Dina Armanious

Introduction

Successive Household Income, Expenditure and Consumption Surveys (HIECSs) present unique opportunity to study the dynamics of poverty. A subsample of 2008/2009 survey that included 8,781 households was re-interviewed in 2010/2011 survey and re-interviewed again in 2012/2013 survey in the same corresponding month. Thus, changes in poverty and other characteristics of the same households can be assessed.

Accordingly, households in panel survey can be categorized into four broad categories according to their poverty status in the three surveys. Households who stayed in poverty in all years are called "chronically poor", even though household consumption is not measured on yearly basis.[1] Households that were non-poor in 2012/2013 but were poor at any other points (2008/2009 or 2010/2011) are considered to have moved "out of poverty", and those who were poor in 2012/2013 and non-poor in 2008/2009 or 2010/2011 are considered to fell "into poverty". Finally, households that remained above the poverty line in all 2008/2009, 2010/2011 and 2012/2013 are assumed to be "never poor".

1. Poverty Dynamics during 2009-2013

As shown in Table 1, 8.4% of the population stayed in poverty in the three surveyed years (2009, 2011 and 2013) and 19.3% moved into poverty while they were non-poor in either

1 The definition of poverty based on consumption allows the identification of "chronic poverty." The analysis of poverty in Egypt is based on household consumption (and not on expenditures or income), and due to smoothing of consumption by households in the face of income fluctuations, consumption is the most stable measure of household welfare. It is therefore justifiable to assume that if a household is observed to be in poverty all the observed points – 2008/2009, 2010/2011 and 2012/2013– this household is also likely to have stayed in poverty between these points, and will remain poor for some time.

2009 or 2011 or both. On the other hand, 15% were non-poor in 2012/2013 while they were poor in either 2009 or 2011 or both, indicating improvements in their living standards in 2013. There was 57% of population remained non-poor during the years under investigation.

Table 1: Distribution of Population by Poverty Dynamics 2008/09-2012/13

	% within Region					% within Poverty Status				
	chronic poor	moved out of poverty	fell into poverty	never poor	All Region	chronic poor	moved out of poverty	fell into poverty	never poor	All Region
Urban Gov.	1.70	8.57	12.41	77.32	100.0	3.37	9.53	10.71	22.46	16.7
Lower Egypt-Urban	1.64	8.98	9.55	79.82	100.0	2.35	7.20	5.95	16.72	12.0
Lower Egypt-Rural	3.57	15.88	15.66	64.90	100.0	14.29	35.69	27.33	38.12	33.7
Upper Egypt-Urban	9.94	14.00	23.38	52.69	100.0	12.82	10.15	13.16	9.98	10.9
Upper Egypt-Rural	22.01	21.93	31.41	24.65	100.0	65.95	36.91	41.05	10.84	25.2
Frontier Gov.-Urban	0.00	5.71	14.40	79.89	100.0	0.00	0.40	0.79	1.47	1.1
Frontier Gov.-Rural	18.46	3.08	35.38	43.08	100.0	1.22	0.11	1.02	0.42	0.6
All Egypt	8.41	14.98	19.29	57.32	100.0	100.0	100.0	100.0	100.0	100.0

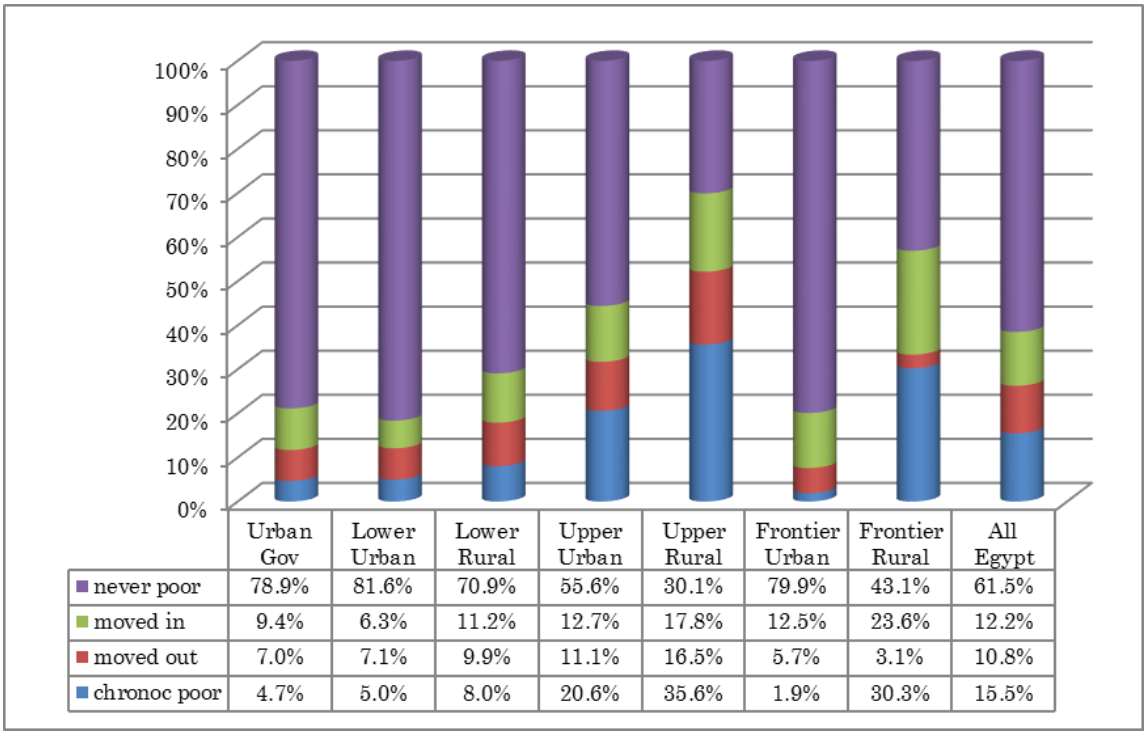
Source: CAPMAS, HIECS panel data, Authors calculations

Chronic poverty is concentrated in Upper Egypt. Breaking down chronic and transient poverty by region using the panel data indicates that almost 22% of the population in rural Upper Egypt was chronically poor – in sharp contrast with just 3.4% in Urban Governorates region; moreover 77% of the Urban Governorates population stayed away from poverty in this all surveyed years. The data imply that 66% of all chronic poverty is concentrated in rural Upper Egypt (which is home to 25% of Egyptians). It also shows high social mobility across the country. Even in rural Upper Egypt almost 22% of the population who were poor in 2008/09 or 2010/11 or both, escaped poverty by 2012/13. At the same time, this region also experienced the highest vulnerability to poverty: 31% of population became poor.

Poverty in 2012/2013 is equally split between the chronically poor (persons who remained in poverty in 2011 and 2013) and those who go in poverty. Looking at the dynamics of poverty during 2011-2013 spans is also important. It portrays the impact of shocks experienced during first two years of January 25th Revolution. As many as 15.5% of the population (or 56% of all poor in 2012/2013) remained in “chronic poverty” over 2010/2011-2012/2013 as shown in Figure 1. At the same time, 41% of the poor in 2010/2011 (10.8% of the population) moved out of poverty. The percentage of population who moved out of poverty was smaller than the percentage of those who fell into poverty

(12.2%), thus, poverty rate increased in 2013. In fact, 9 million persons moved out of poverty in 2010/2011-2012/2013, but unfortunately, a massive inflow in the opposite direction occurred: at least 10.3 million people have become new poor or moved into poverty. Moreover, 61.5 % of population remained out of poverty in both years. If there have been more effective and well targeted preventive social policies, the inflow of the new poor might have been diminished and poverty in Egypt would have fallen by almost 44% in just two years.

Figure 1: Distribution of Population by Poverty Dynamics categories by Region 2011-2013



	Urban Gov	Lower Urban	Lower Rural	Upper Urban	Upper Rural	Frontier Urban	Frontier Rural	All Egypt
never poor	78.9%	81.6%	70.9%	55.6%	30.1%	79.9%	43.1%	61.5%
moved in	9.4%	6.3%	11.2%	12.7%	17.8%	12.5%	23.6%	12.2%
moved out	7.0%	7.1%	9.9%	11.1%	16.5%	5.7%	3.1%	10.8%
chronoc poor	4.7%	5.0%	8.0%	20.6%	35.6%	1.9%	30.3%	15.5%

Source: CAPMAS, HIECS panel data, Authors calculations

2. Key Drivers of Poverty 1: Household Characteristics

Mobility is highly correlated with changes in household characteristics, especially employment characteristics of the head as well as changes in household size. As Table 2 reveals that households with increased members are more likely to fell into poverty; where they are over represented among the “fell in poverty category” (27.6% of transient in poverty exhibited increases in their households size exceeding their population share of 21.5%). On the other hand, households who experienced decreases in their size are more likely to move out of poverty, where their share in “moved out of poverty” category exceeds their population share (31.2% compared to 20.7%). Change in type of

employment; such as work stability or working outside establishments, has also great impact on poverty mobility. Households whose heads worked in permanent job in 2011 and moved to temporary, seasonal or casual work are more likely to fell into poverty as their share in the "fell into poverty" category reached 10% while their population share is 6.6%. Conversely, households whose heads had temporary job in 2011 and permanent job in 2013 are more represented in the "moved out of poverty" category, than their population share. Naturally, households whose heads worked in permanent jobs in both years are more likely to be in the "remained non-poor" category. As far as working outside establishment is concerned, Table 2 shows that changing work inside establishment to outside establishments increases the probability of falling into poverty and vice versa. Moreover, the share of chronically poor is among households whose heads work outside establishments in both years.

Table 2: Distribution of Population within Poverty Dynamics (2011-2013) categories by Households characteristics, %

	chronically poor	moved out of poverty	moved into poverty	never poor	All Egypt
Change in Work place of household head					
Into establishments in both years	27.48	43.23	43.15	61.19	51.69
Into establishments in 2011 and outside establishments in 2013	9.37	6.72	7.84	6.64	7.22
Outside establishments in 2011 and into establishments in 2013	7.31	7.78	10.12	6.35	7.13
Outside establishments in both years	55.84	42.27	38.89	25.83	33.96
All work categories	100	100	100	100	100
Change in Job Stability of household head					
Permanent in both years	64.4	76.6	77.2	86.4	81.8
Temporary in 2011 and permanent in 2013	10.4	11.0	6.7	5.6	6.8
Permanent in 2011 and temporary in 2013	10.9	6.5	10.0	5.3	6.6
Temporary in both years	14.3	5.8	6.1	2.8	4.8
All work categories	100	100	100	100	100
Change in household size					
No change	55.8	48.5	56.6	63.2	59.6
Decreased	19.7	31.2	15.8	16.7	18.6
Increased	24.5	20.3	27.6	20.2	21.8
All categories	100	100	100	100	100

Source: CAPMAS, HIECS panel data, Authors calculations

Changes in household head participation in manufacturing, construction and trade activities had large impact on moving in and out of poverty. Although the distribution of workers by economic activities did not change between 2011 and 2013, some workers moved in and out economic activities. Four out of five household working heads remained in the same economic activities for both years, while 19.1% changed their activities. Generally, services followed by agricultural workers are less likely to change their activities and construction followed by trade workers has higher likelihood to do so. Similar pattern is observed for households who were never poor or who moved out of poverty (80% of workers did not change their activities). Larger movements between economic activities are observed among heads fell in "chronically poor" or "fell into poverty" categories, where only 77% of working heads did not change their economic activities. Agricultural activities are dominant activities for heads that are chronically poor, followed by services. Among chronically poor households, head workers in construction and trade activities moved to agricultural activities (20% of construction workers and 18% of trade workers moved to agriculture), indicating that agricultural activities absorbs unskilled and excess workers in construction and trade activities. Moreover, 16% of manufacturing workers moved to construction activities. Similar observations are traced for households who were non-poor in 2011 and fell into poverty in 2013. Thus, it seems that households whose heads were pushed out from construction and trade activities and absorbed by agriculture activities, fell into poverty or stayed in it. Contrary to "never poor category", movements of workers were from manufacturing, construction, and trade activities towards services. Those workers were skilled and can find another job with similar or higher returns.

Becoming unemployed is a key factor contributing to slipping into poverty or remaining in it. Household heads who worked in manufacturing, construction and trade activities in 2011 and became unemployment in 2013, are more representative among chronically poor or moved on poverty categories. Table 3 shows the overall picture of poverty dynamics by economic activities.

The above analysis on dynamics of poverty shows that deteriorated employment conditions are key derivers of chronic poverty and efforts should focus on stabilizing real incomes through employment generating programs.

Table 3.3: Distribution of Population within Poverty Dynamics (2011-2013) categories by Economic Activities

Economic activities in 2011	Economic activities in 2013						Total	Distribu-tion of workers in 2011
	Agri-culture	Manu-facture	Const-ruction	Trade	Services	un-employed		
Chronic poor								
Agriculture	83.0	1.0	6.1	2.7	7.1		100.0	46.3
Manufacture	7.0	65.1	16.3	2.3	7.0	2.3	100.0	6.7
Construction	20.0	8.0	56.0	6.7	9.3		100.0	11.7
Trade	17.6	2.0	3.9	68.6	5.9	2.0	100.0	8.0
Services	4.2	1.8	3.0	3.0	86.1	1.8	100.0	25.7
Unemployed	33.3	11.1	22.2	11.1	11.1	11.1	100.0	1.6
Total	44.1	6.6	11.9	8.6	27.8	.9	100.0	100.0
Moved out of poverty								
Agriculture	83.3	1.5	3.9	4.4	6.9		100.0	38.2
Manufacture	7.0	73.7	7.0	8.8	3.5		100.0	10.6
Construction	20.0	8.9	62.2		8.9		100.0	8.2
Trade	10.0		6.0	70.0	14.0		100.0	9.3
Services	6.1		3.9	2.2	87.8		100.0	33.6
Total	37.1	9.1	9.3	9.9	34.5		100.0	100.0
Fell into poverty								
Agriculture	81.2	2.5	4.6	3.6	7.6	.5	100.0	33.9
Manufacture	3.0	73.1	13.4	3.0	7.5		100.0	11.6
Construction	11.7	1.7	71.7	3.3	10.0	1.7	100.0	10.6
Trade	11.3	5.7	1.9	62.3	13.2	5.7	100.0	9.2
Services	6.0	3.5	3.0	6.5	80.5	.5	100.0	34.3
Unemployed	33.3				33.3	33.3	100.0	.5
Total	32.4	11.2	11.7	9.8	33.6	1.2	100.0	100.0
Never poor								
Agriculture	83.4	2.0	2.9	3.4	8.0	.3	100.0	21.8
Manufacture	2.7	76.0	1.8	6.2	13.1	.2	100.0	12.4
Construction	5.9	4.6	68.6	5.9	13.5	1.3	100.0	8.4
Trade	5.8	6.2	3.0	73.1	11.4	.4	100.0	12.8
Services	3.3	2.4	1.6	3.4	89.0	.3	100.0	43.8
Unemployed	7.7	7.7	11.5	19.2	26.9	26.9	100.0	.7
Total	21.3	12.2	7.8	13.0	45.2	.6	100.0	100.0
All Egypt								
Agriculture	83.0	1.8	3.9	3.4	7.6	.2	100.0	27.7
Manufacture	3.4	74.7	4.5	5.8	11.2	.3	100.0	11.5
Construction	10.1	5.2	66.5	5.2	12.0	1.0	100.0	9.0
Trade	7.6	5.3	3.2	71.6	11.3	1.0	100.0	11.5
Services	3.9	2.3	2.0	3.6	87.9	.4	100.0	39.6
Unemployed	15.8	7.9	13.2	15.8	23.7	23.7	100.0	.7
Total	26.8	11.1	8.8	11.9	40.8	.6	100.0	100.0

Source: CAPMAS, HIECS panel data, Authors calculations

3. Key Drivers of Poverty 2: Food Security

The status of poverty dynamics is highly correlates with all food security indicators; such as food diversity score and caloric deficiency, chronic poverty rates are the highest - reaching 23% - among individuals suffering from caloric deficiency and it is 29.1% for individuals showed poor food diversity (Table 4). Less than 1% of individuals in high food diversity are chronically poor, while 91% are in the "never poor" category.

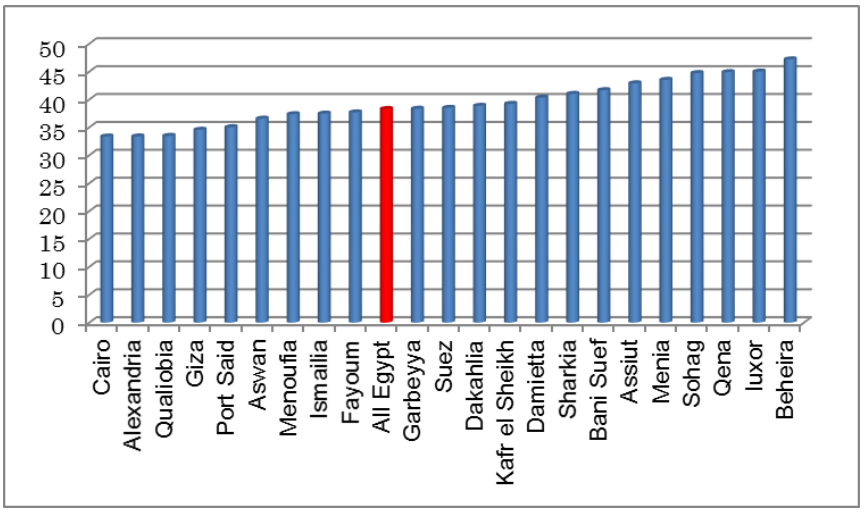
Table 4: Distribution of Population by Poverty Dynamics (2011-2013) categories within food security indicators

	Status of Poverty Dynamics				Total
	poor in both years chronic poor	moved out of poverty	moved into poverty	never poor	
Food Diversity					
Poor	29.1	10.7	17.1	43.1	100.0
Moderate	10.6	11.5	11.0	66.9	100.0
High	.5	6.3	2.5	90.6	100.0
Caloric deficient					
No caloric deficiency	14.4	11.5	11.1	63.0	100.0
Yes	22.9	6.3	19.3	51.5	100.0
All Egypt	15.5	10.8	12.2	61.5	100.0

Source: CAPMAS, HIECS panel data, Authors calculations

Food is the dominant item in total expenditure for residents in both urban and rural areas. Expenditure on food represents 38.1% of total expenditure for the whole population as shown in Figure 2, and food share decreases as we move from the poorest decile (47.7%) to 28.2% for the richest decile as shown in Table 5. Difference between urban and rural areas in terms of the budget shares allocated to food is about 7 percentage points. Thus, increasing food prices at a higher rate compared to other expenditure items has its adverse impact on poorer groups, as they will allocate larger shares of their budgets to food items. The second most important expenditure group is housing followed by medical expenditure as shown in Table 5. However, expenditure shares on transportation, education, health and communication increase as expenditure per capita increases.

Figure 2: Share of Food consumption out of total consumption by Governorate; 2012/13, %



Source: CAPMAS, 2012/2013 HIECS, Authors calculations

Table 5: Consumption Pattern by Deciles in 2012/13

	Deciles of per capita consumption										Total
Commodity Group	1	2	3	4	5	6	7	8	9	10	
food and beverages	47.7	45.7	44.7	43.5	42.5	41.9	40.9	39.1	37.2	28.2	38.1
alcoholic drinks and smokes	4.6	4.5	4.7	5.0	5.0	5.1	4.8	4.7	4.1	2.5	4.1
clothes, textiles and feet covers	6.1	6.0	6.0	6.0	6.1	5.8	5.8	5.6	5.3	4.6	5.5
residence and its accessories	17.7	18.1	18.0	17.9	18.0	17.9	17.5	17.4	17.6	20.0	18.3
furniture, house equipment and regular house maintenance	3.4	3.5	3.6	3.6	3.6	3.7	3.8	3.9	4.1	5.3	4.2
health care and services	6.1	7.1	7.3	7.8	8.0	8.5	9.0	9.7	10.7	11.3	9.4
transportation	3.0	3.3	3.6	3.7	3.7	4.1	4.3	4.6	5.1	8.6	5.3
tele-communications	1.5	1.6	1.8	1.8	1.9	2.1	2.3	2.4	2.7	2.9	2.3
culture and entertainment	0.8	0.8	0.9	1.0	1.1	1.2	1.4	1.6	2.0	4.1	2.0
education	1.7	2.3	2.5	2.7	3.1	3.0	3.5	4.0	4.7	6.2	4.1
restaurants and hotels	4.0	4.1	3.8	3.8	3.8	3.7	3.6	3.7	3.4	3.5	3.6
various services and commodities	3.3	3.2	3.1	3.2	3.2	3.1	3.3	3.2	3.2	2.9	3.1
Total	100	100	100	100	100	100	100	100	100	100	100

Source: CAPMAS, 2012/2013 HIECS, Authors calculations

Food consumption is the most direct measure of food security in terms of quantity. Moreover, pattern of food consumption can be used as quality of food indicator that affects health of household members. Closer analysis of the food consumption patterns of different deciles presented in Table 6 reveals that individuals in poorer deciles allocate larger shares on cheap food and smaller shares on expensive food, compared to well off individuals and these shares decreases as moving from the poorest to the richest; 16% of food expenditure of the poorest decile are spent on grains and starch and 17.6% on vegetables compared to 11% and 11.3%, respectively for the richest decile. The food budget shares allocated to expensive items such as meat, poultry, fish, and milk take the opposite direction, where individuals in the poorest decile spent lower shares of their food budget on these items (44% for the poorest decile versus 54% for the richest). Although food consumption pattern does not differ significantly between the poorest and richest deciles, per capita food consumption is markedly varied. Food consumption of the richest decile represent 3.8 times food consumption of the poorest decile, as such, consumption of meat, fish, dairy products, and fruits for the richest decile represent 3.9, 6.9, 6 and 6.1 times the corresponding consumption of the poorest decile.

Table 6: Food Consumption Pattern by Deciles, 2012/2013

	Deciles of per capita consumption										
	1	2	3	4	5	6	7	8	9	10	Total
Cereals and bread	16.93	16.21	16.08	15.78	15.42	15.17	14.25	13.72	12.3	10.93	13.96
Meat	29.22	29.23	28.83	28.4	27.74	27.8	28.64	28.59	29.39	30.47	29
Fish	4.74	5.33	5.64	6.04	6.43	6.63	6.73	6.93	7.12	7.31	6.57
Dairy, cheese and eggs	9.24	9.84	10.47	11.19	11.73	11.86	12.41	12.74	13.63	14.5	12.36
Oils and fats	8.31	7.79	7.48	7.43	7.04	6.95	6.84	6.75	6.48	6.44	6.95
Fruits	4.76	5.42	5.73	5.79	6.27	6.57	6.77	6.91	7.36	8.18	6.75
Vegetables	17.56	17.16	16.77	16.77	16.62	16.25	15.6	15.44	14.51	12.24	15.29
Sugar and sweet products	4.5	4.35	4.38	4.17	4.24	4.22	4.21	4.22	4.22	4.26	4.26
Other food products	4.74	4.68	4.62	4.43	4.51	4.55	4.56	4.71	5	5.65	4.86
Total food	100	100	100	100	100	100	100	100	100	100	100
Average per capita food	1143	1456	1667	1824	1975	2155	2374	2621	3080	4330	2262

Source: CAPMAS, 2012/2013 HIECS, Authors calculations

Conclusion

One out of twelve persons in Egypt is chronically poor and one out of five fell into poverty; 8.4% stayed in poverty in the three surveyed years (2009, 2011 and 2013) and 19.3% moved into poverty while they were non-poor in either 2009 or 2011 or both. On the other hand, 15% were non-poor in 2012/2013 while they were poor in either 2009 or 2011 or both, indicating improvements in their living standards in 2013. There were 57% of population remained non-poor during the years under investigation.

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Mobility is highly correlated with changes in household characteristics, especially employment characteristics of the head as well as changes in household size. Change in type of employment; such as work stability or working outside establishments, has also great impact on poverty mobility. Moreover, becoming unemployed is a key factor of slipping into poverty.