How Data was used for Wellbeing Assessment and Development of Targeting Tools in Egypt

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Why do we need data?

- If you want to manage it ….. You have to measure it….

- The discussions of the need for more and better data for policymaking has reached an almost unprecedented level.

- Only data enable the government to actually determine the effectiveness of policies and interventions.

Micro data was used for poverty reduction policies through

- Measuring poverty indicators at one point of time,

- Monitoring progress toward specific goals, by tracking the evolution of these indicators,

- Understanding and explain the reasons behind the observed measures, to help governments achieve these goals efficiently,

- Providing tools to target the poor efficiently,

- Providing evidence-based impact of some policy options.

Content

A. measure well-being indicators :

1. Poverty,

2. Growth; Is it pro-poor, inclusive growth, Poverty trends

3. food security; How poverty and food security are inter-related,

4. Multidimensional poverty

B. Assessment of existing targeting mechanisms

Who benefit from cash transfers?

Who benefit from government subsidies?

C. Impact of social programs

How much impact do/will they have on poverty? The expected impact of policies on living standards.

D. Two targeting mechanisms are based on household surveys

Poverty map

Proxy means testing

Stylized facts

Egypt currently faces what may seem to be conflicting objectives. On the one hand, there's an urgent need to restore economic stability—by achieving lower budget deficits, public debt and inflation, and adequate foreign exchange reserves. At the same time, there's a long-standing need to achieve better standards of living—with more jobs, less poverty, and better health and education systems.

At 2.2 percent in 2013/14, economic growth was too low to improve vital socioeconomic indicators. Unemployment peaked at 13.4 percent, with the highest levels found among youth and women. Poverty rose to 27.7 percent in 2015, with another 20 percent of the population estimated to be close to the poverty line.

In 2013/14, Egypt spent over 6 percent of its GDP on fuel subsidies—more than on health or education.
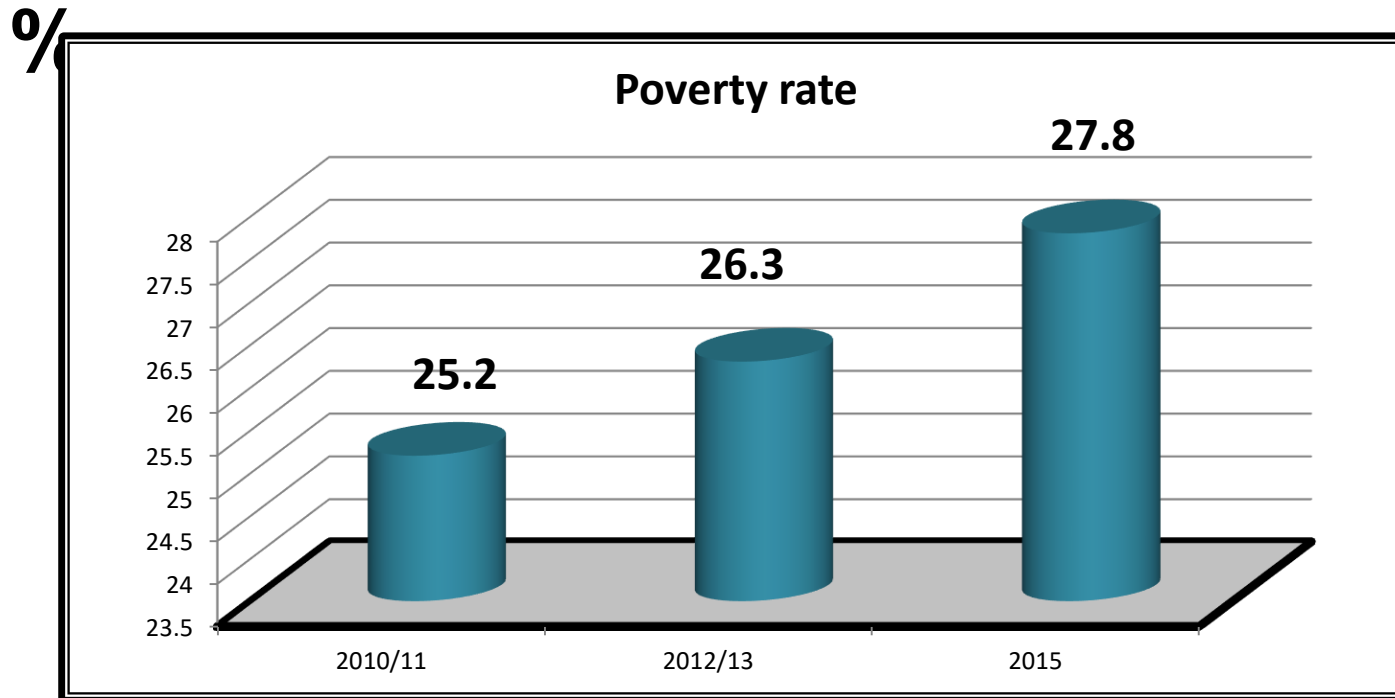
Stylized facts, cont.

- In 2014, the Government started implementing a bold and transformational reforms program, aimed at spurring the economy, enhancing the country's business environment and staging a balanced and inclusive growth.

- The first wave of reforms package focused on rebalancing the macroeconomic aspects, which included difficult policy choices that were adopted simultaneously; such as the VAT Law, reducing energy subsides and the liberation of the Egyptian Pound.

- To mitigate the adverse effects of the economic reforms on the poor and vulnerable, the government has scaled up key social protection short-term mitigating measures, through higher allocations of food smart cards, expanding targeted cash transfer programs and shifting from generalized energy and food subsidies to more poverty targeted programs.

But

- Despite the Government's current efforts, social conditions remain difficult due to the episode of high inflation and the erosion of real incomes. More than one quarter of Egyptians live in poverty, high inflation over the course of FY17 has taken a toll on social and economic conditions. Regional disparities are an enduring characteristic, where Upper Rural Egypt continues to lag behind other regions, with poverty rates reaching as high as 60% in some governorates. Although, the unemployment rate has declined to 11.3% in Q2-FY18, reaching its lowest level since 2010, still, unemployment remains high especially among youth and women.

A. How Data was used to Measure well-being
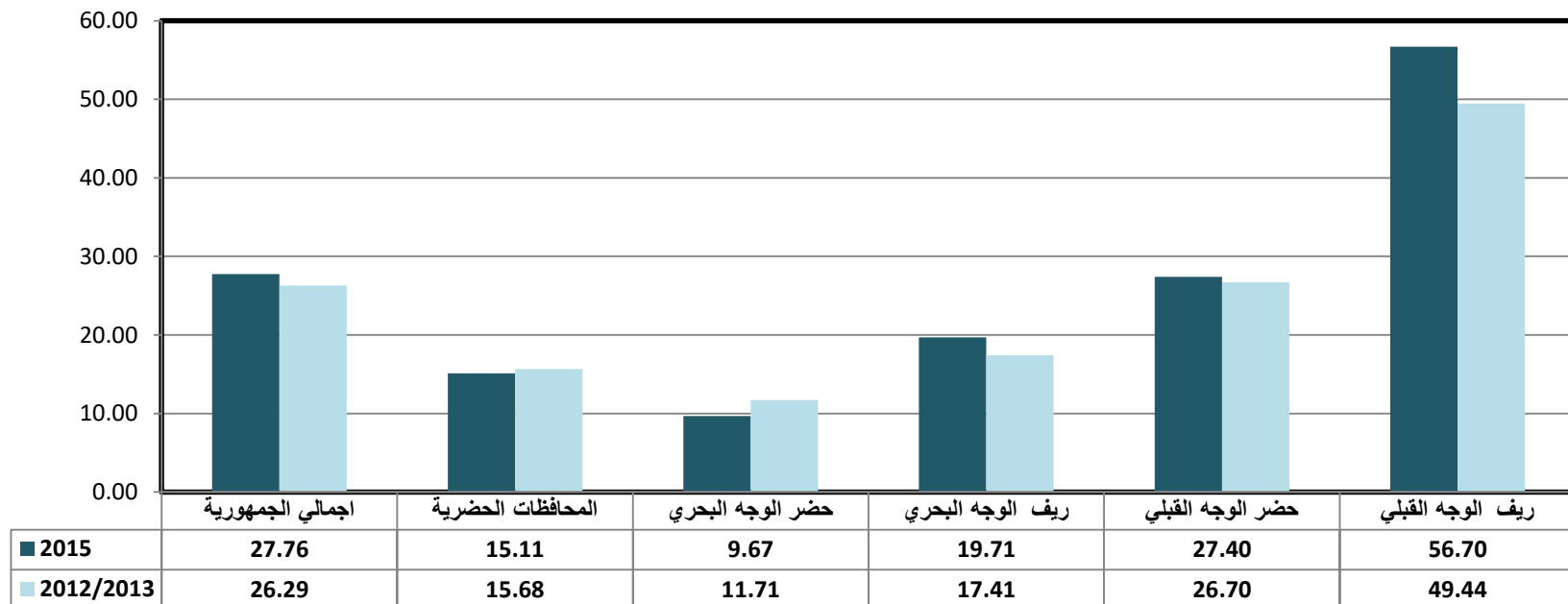
1-Poverty trends 2010-2015

%

Poverty rate

27.8

26.3

25.2

28		
27.5		
27		
26.5		
26		
25.5		
25		
24.5		
24		
23.5		

2010/11   2012/13   2015

- **The highest poverty rate is observed in 2015**
- **It increased from 16.7% in 2000, 21.6 in 2008; 25.2% in 2010/11.**
- **Preliminary result in the last quarter of 2017 indicated that poverty increased further to 29.8%**

Trends in poverty between 2012/13 and 2015

	2015	2012/13	Change
Total Egypt	27.76	26.29	1.47
Urban	16.90	17.59	-0.69
Rural	35.95	32.38	3.57
Urban governorates	15.11	15.68	-0.57
Lower Egypt-Urban	9.67	11.71	-2.04
Lower Egypt_rural	19.71	17.41	2.30
Upper Egypt_urban	27.40	26.7	0.70
Upper Egypt_rural	56.70	49.44	7.26

-Urban areas has not seen a significant change in poverty indicators between 2013 and 2015,

-but poverty in rural areas has been increase significantly.

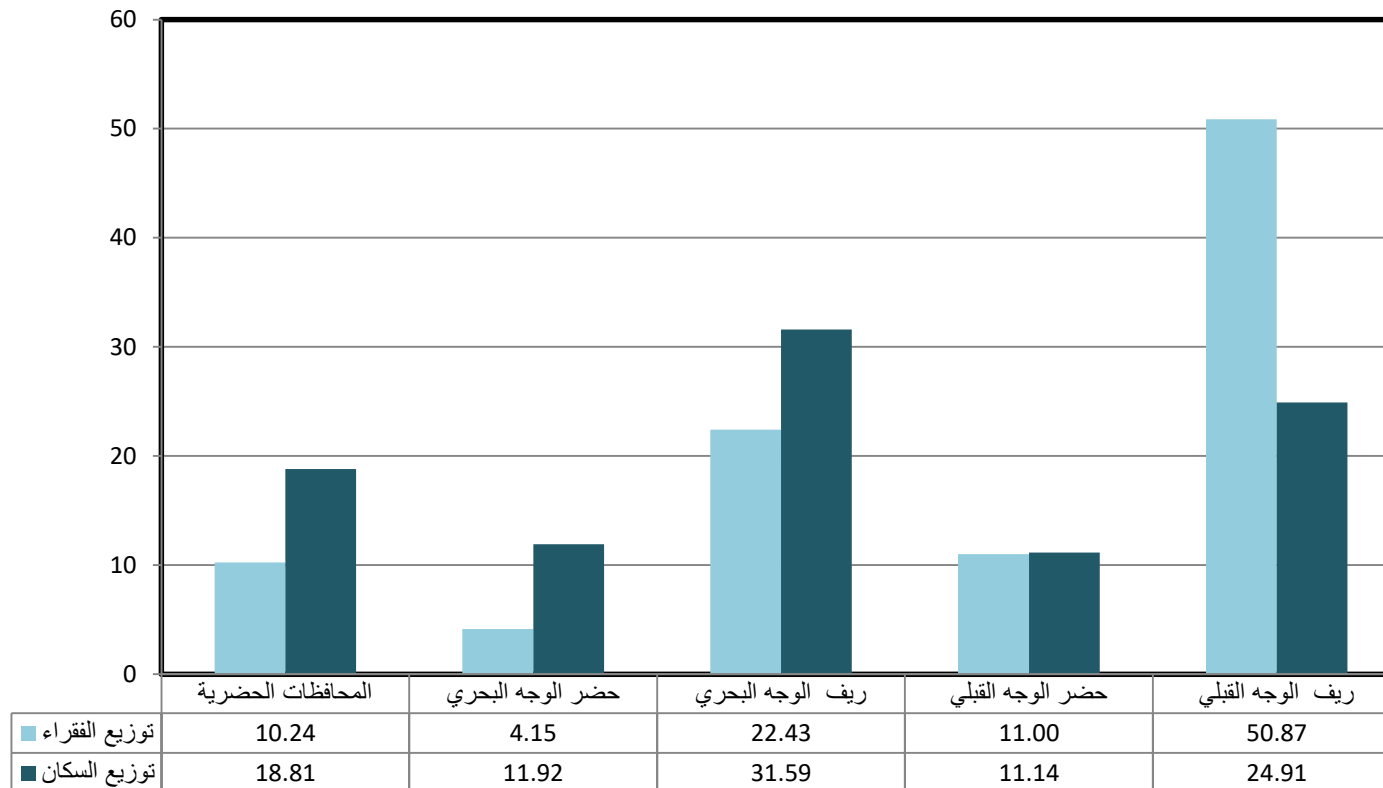-Rural Upper Egypt region exhibited the largest rise in the poverty indicators,

Regional disparity in Poverty trends

	اجمالي الجمهورية	المحافظات الحضرية	حضر الوجه البحري	ريف الوجه البحري	حضر الوجه القبلي	ريف الوجه القبلي
2015	27.76	15.11	9.67	19.71	27.40	56.70
2012/2013	26.29	15.68	11.71	17.41	26.70	49.44

- 57% Of the population in rural Upper Egypt in 2015 can not meet their basic needs of food and non-food,
- This percentage is less than a third in Urban areas of Upper Egypt (27%) in 2015,
- 15% of "urban governorate" region are poor

Distribution of the poor in 2015 by region

%

	المحافظات الحضرية	حضر الوجه البحري	ريف الوجه البحري	حضر الوجه القبلي	ريف الوجه القبلي
توزيع الفقراء	10.24	4.15	22.43	11.00	50.87
توزيع السكان	18.81	11.92	31.59	11.14	24.91

•73.8% of the poor live in rural areas in 2015.
• 51% of the poor in rural Upper Egypt while its population represents 25% of total population in Egypt.
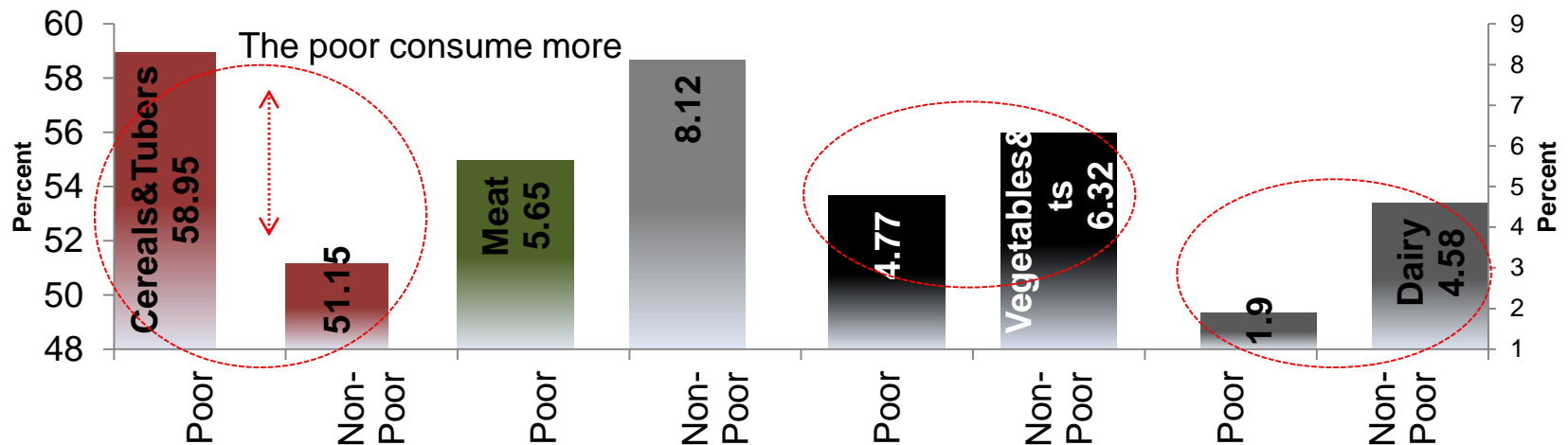•10% of the poor live in urban Governorates .

2-Measuring inclusive growth; Panel data 2009-2013
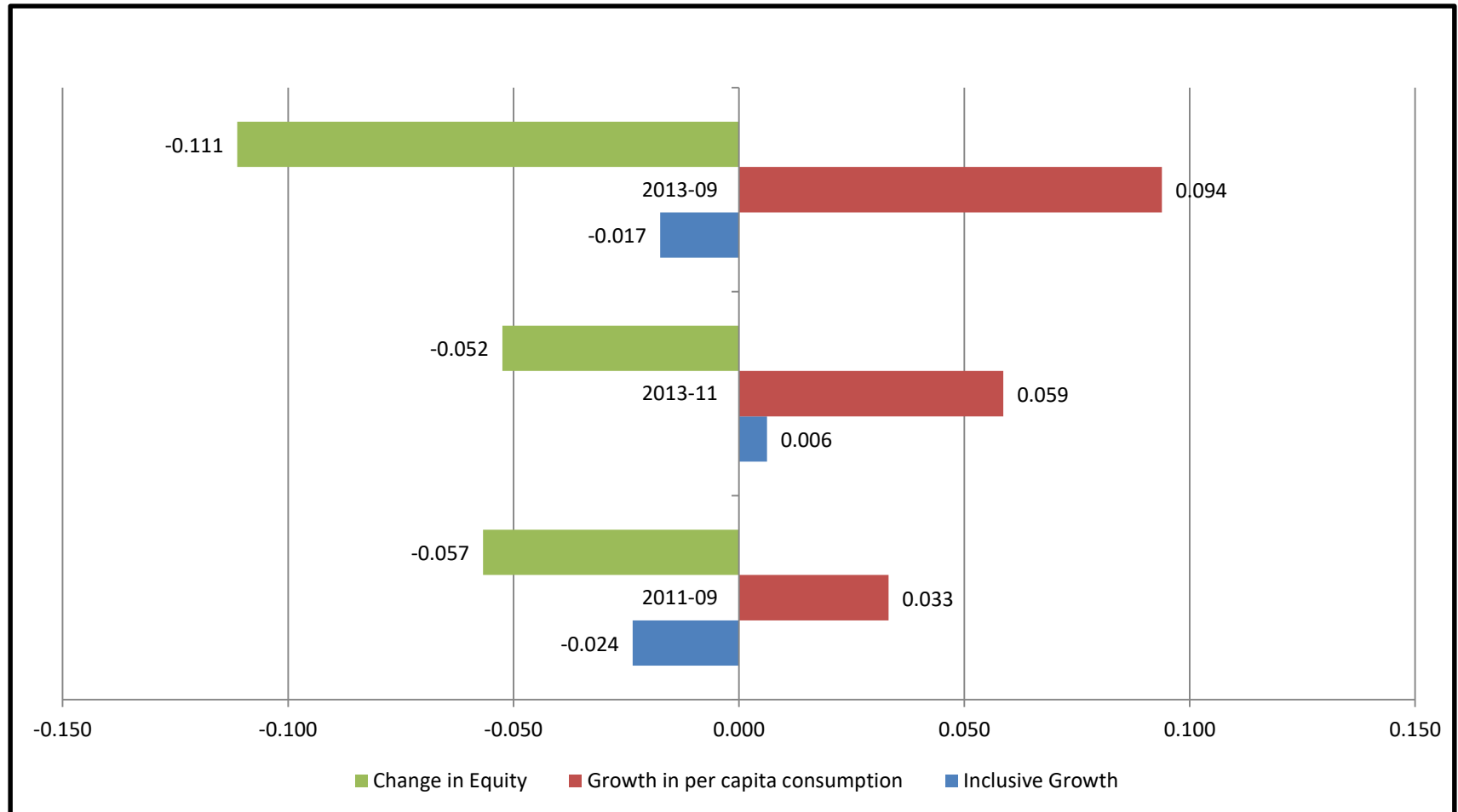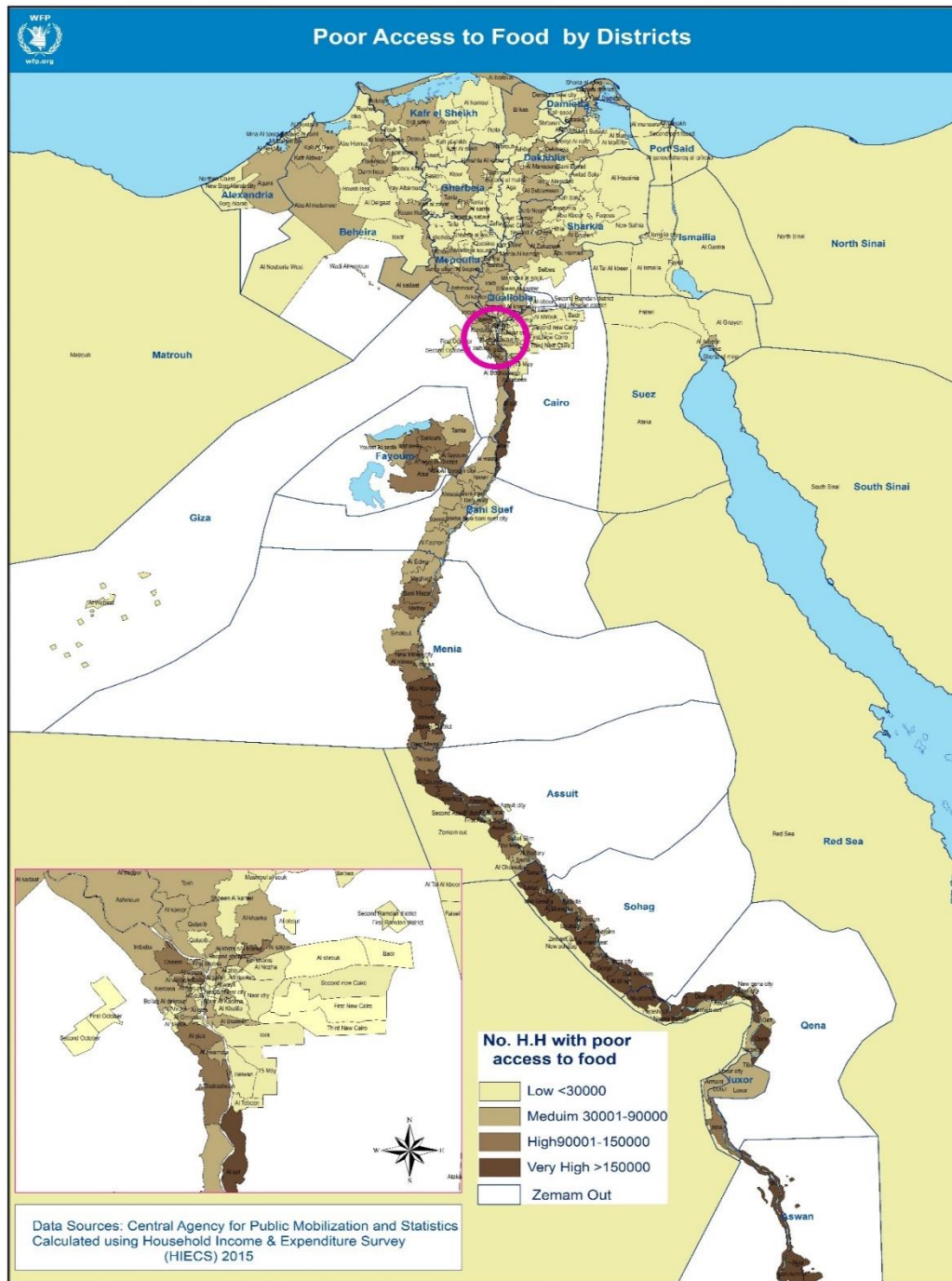
3-Food Security

Poor dietary diversity is a key aspect of food security

Sources of Energy, Poor Vs. Non-Poor

- The prevalence of poor dietary diversity increased from 33.3 percent in 2009 to 35.1 percent in 2011, driven by increases in poverty rates and the adoption of negative coping mechanisms by vulnerable households.
- 58.3 percent of the income poor have poor dietary diversity, compare to 36 percent of the near-poor and 22.9 percent of the non-poor.

14

Count of Population with poor Access to Food

Poor Access to Food by Districts

No. H.H with poor access to food

- Low <30000
- Meduim 30001-90000
- High90001-150000
- Very High >150000
- Zemam Out

Data Sources: Central Agency for Public Mobilization and Statistics
Calculated using Household Income & Expenditure Survey
(HIECS) 2015

4-Multidimensional Poverty

Monetary approach of poverty is the most widely used approach in identifying and measuring poverty for a long time.

However,

Income non-poor households may experience various deprivation, and income-poor households may be saved from some deprivation.

4- MPI for Egypt Using EDHS, 2014

G. Contribution of Each Indicator to Overall Poverty at the National Level, for Urban Areas, and for Rural Areas
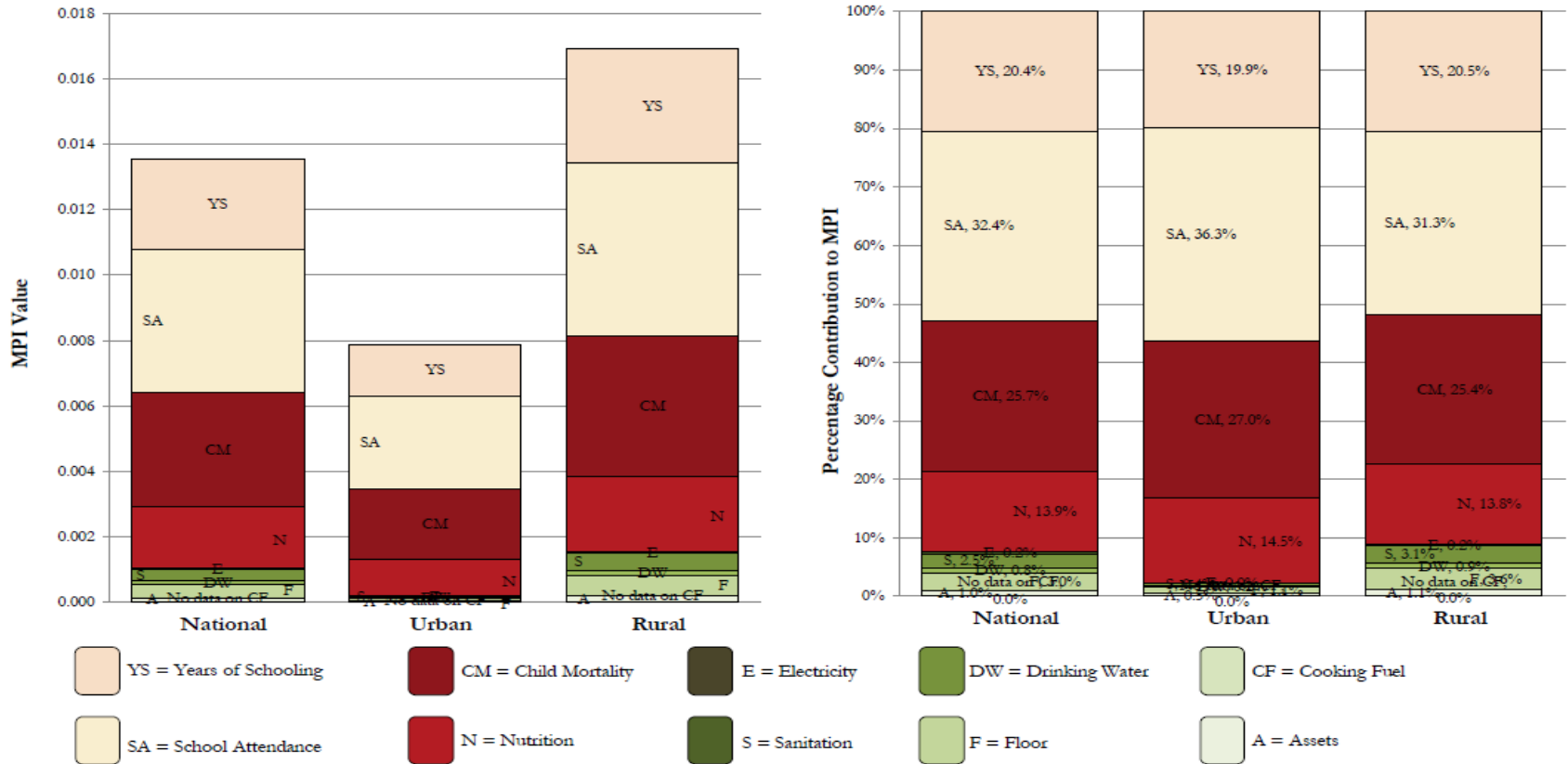
- Prevalence of multidimensional poverty in Egypt reached 3.6%, while the MPI reached 1.4% (prevalence weighted by the intensity of poverty).
- Marked differences between urban and rural areas.

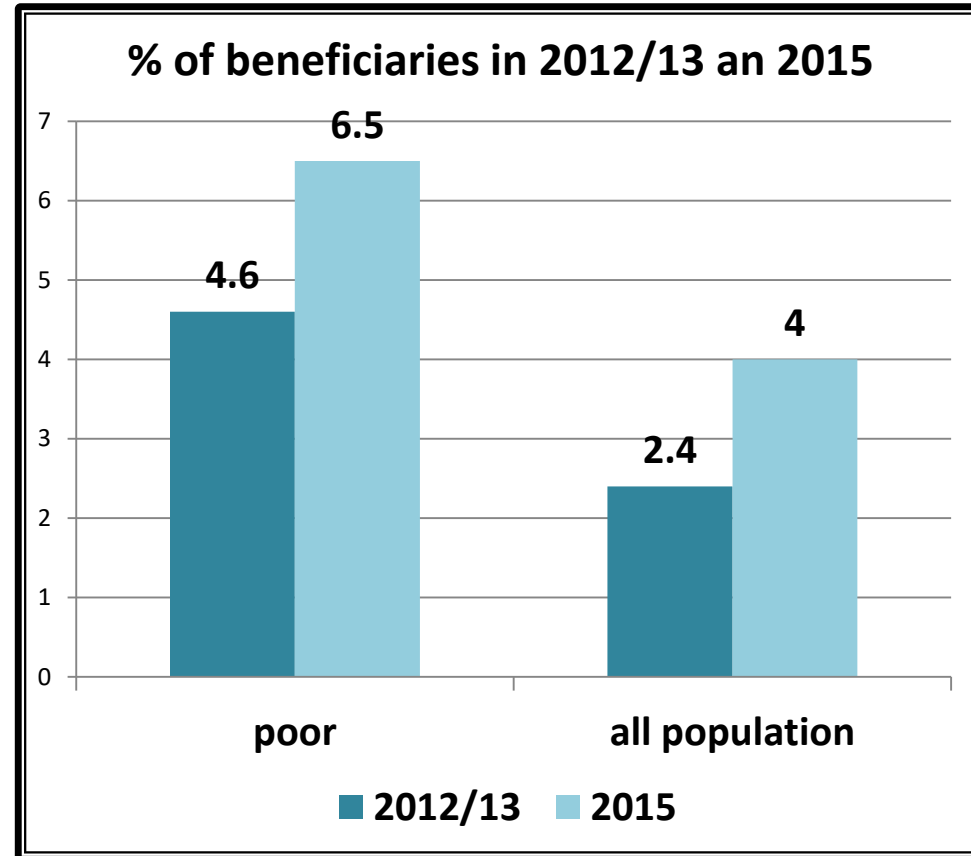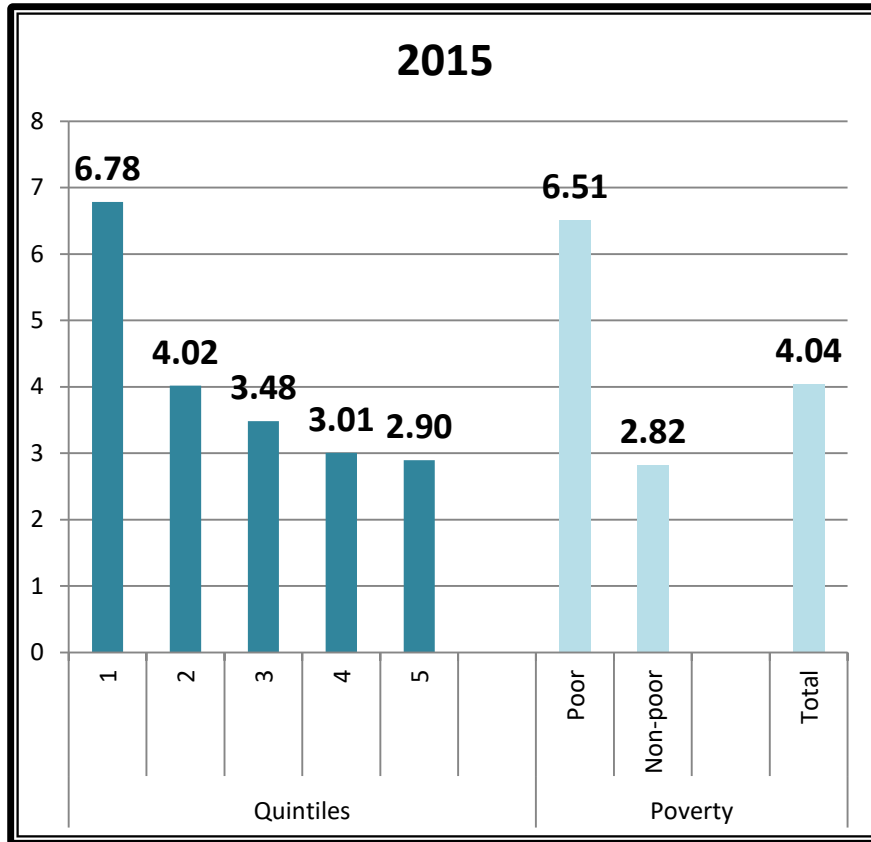# B. How Data was used for Assessment of existing targeting mechanisms

- Who benefits from cash transfers?
- Who benefits from government subsidies?

Cash transfers

Food subsidies

Direct Energy subsidies to households
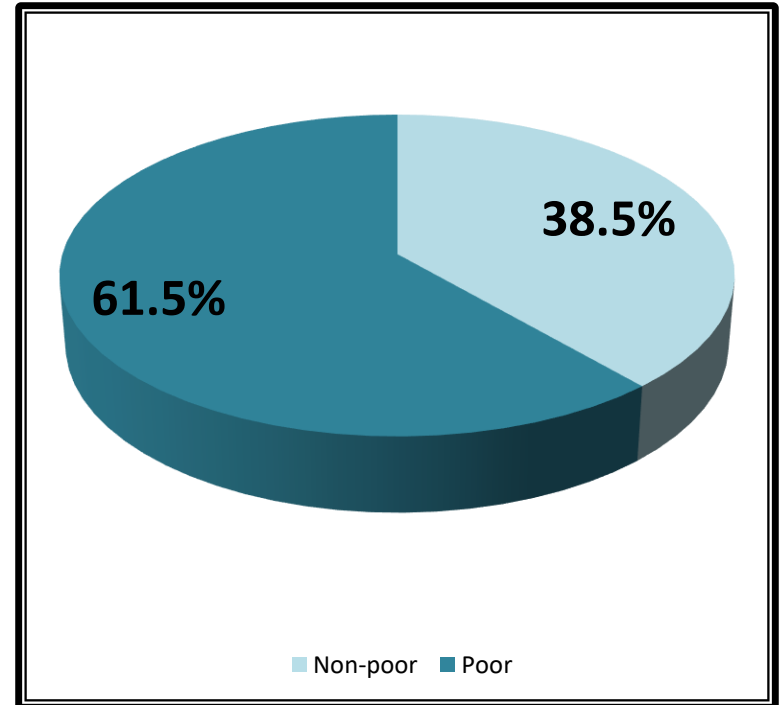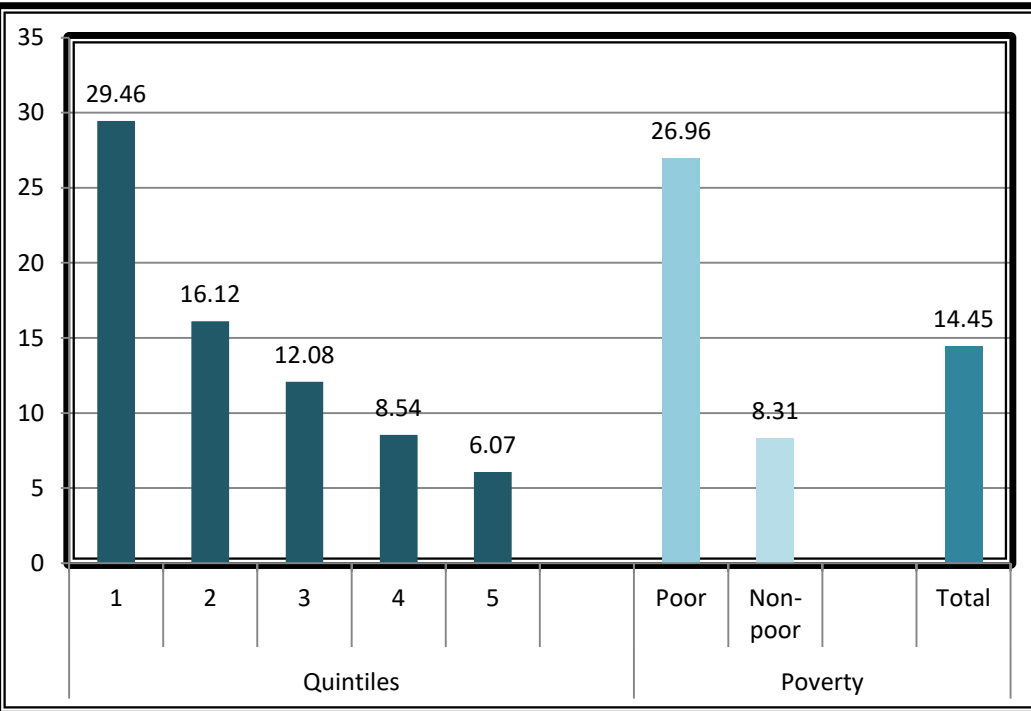
3-Assessment of existing social Solidarity pensions

2015

% of beneficiaries in 2012/13 an 2015

% of beneficiaries of security benefits directed to the poor have increased but some of the rich received some benefits.

1-Cash Transfers
% of direct and indirect beneficiaries from social solidarity assistance

38.5% of solidarity benefits leak to non-poor

Action was taken for better targeting through poverty mapping and PMT.

2-social insurance coverage

- Egypt's social security system suffers from inadequate coverage but has a significant impact on poverty reduction and the poverty gap.

- There is a need to extend social insurance coverage to temporary workers, non-regular workers and agricultural workers.

- Two-thirds of the population lives in families with no social insurance benefits. Consequently, they are unlikely to receive income if the family is exposed to shocks such as losing a member, retiring or being incapacitated.

- The ratio varies between urban and rural areas or between poor and non-poor. Social insurance programs cover less than a third of employees (36%). Poor working women have the lowest participation rate (9.6%) and only 3% of casual workers are covered by such insurance scheme.

Action Insurance bond were issued to provide insurance coverage for the marginalized groups, especially for workers in informal sector.

In 2017, It is savings bond for vulnerable groups, it provides compensation of 10 thousand pounds in the case of natural death, and 50 thousand of the death of an accident and up to 250 thousand pounds maximum.

3-Food subsidies
% of Ration cards beneficiaries

نسبة تغطية بطاقات التموين للأسر وفقاً لشرائح الإنفاق العشرية

الشريحة	%
الشريحة العاشرة	٧٧.٤
الشريحة التاسعة	٨٧.٤
الشريحة الثامنة	٩٠.٧
الشريحة السابعة	٩٠.٠
الشريحة السادسة	٩١.٢
الشريحة الخامسة	٩١.٧
الشريحة الرابعة	٨٩.٩
الشريحة الثالثة	٩٣.١
الشريحة الثانية	٩١.٢
الشريحة الأولى	٩١.٩

نسبة مساهمة الدعم من اجمالي الاستهلاك السنوي للأسر على الطعام والشراب وفقا لشرائح الإنفاق العشرية

| الشريحة	%
الشريحة العاشرة	4.2
الشريحة التاسعة	5.6
الشريحة الثامنة	6.5
الشريحة السابعة	6.8
الشريحة السادسة	7.0
الشريحة الخامسة	7.4
الشريحة الرابعة	7.7
الشريحة الثالثة	9.0
الشريحة الثانية	8.8
الشريحة الأولى	10.5

4-Overall energy consumption

- Average absolute per capita energy exp. rises strongly with income

- Energy exp. as share of total relatively even across quintiles: ~2.7%

- Gasoline only important to higher-income quintiles; LPG and electricity most important for bottom three quintiles; NG only substitutes LPG (cooking) for urban & higher-income HHs
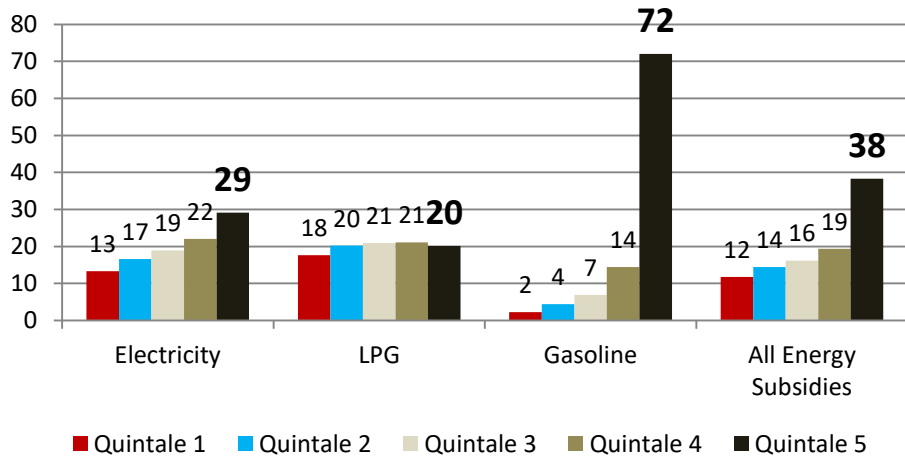
Absolute expenditure (LE) on energy
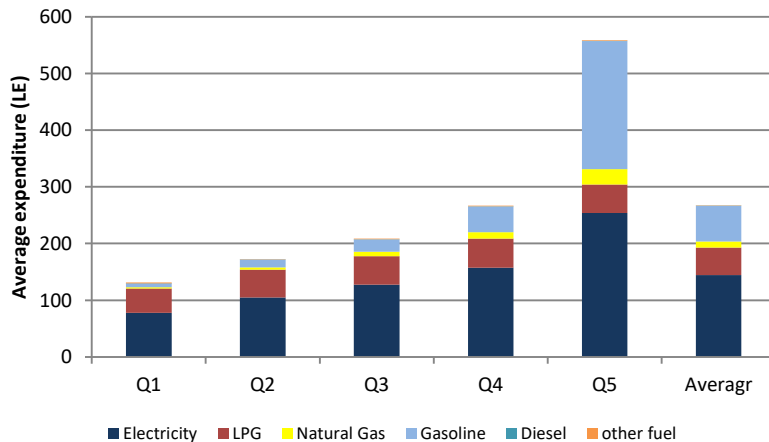
Share (%) of total expenditure on energy
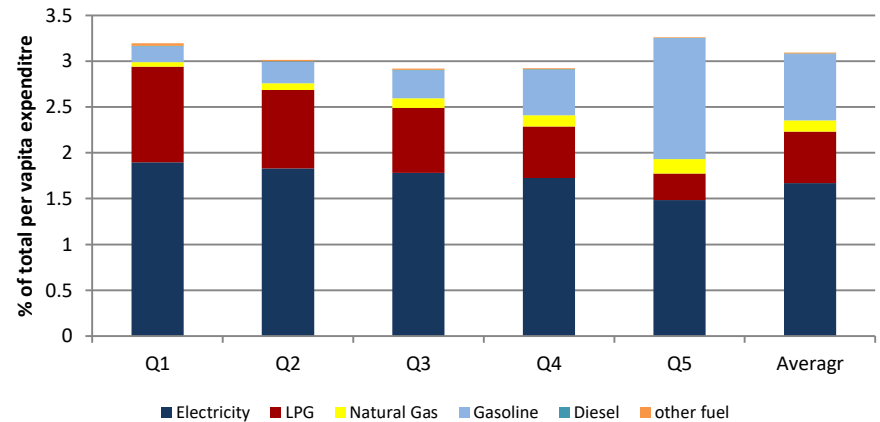
Distribution of Energy subsidies, 2015

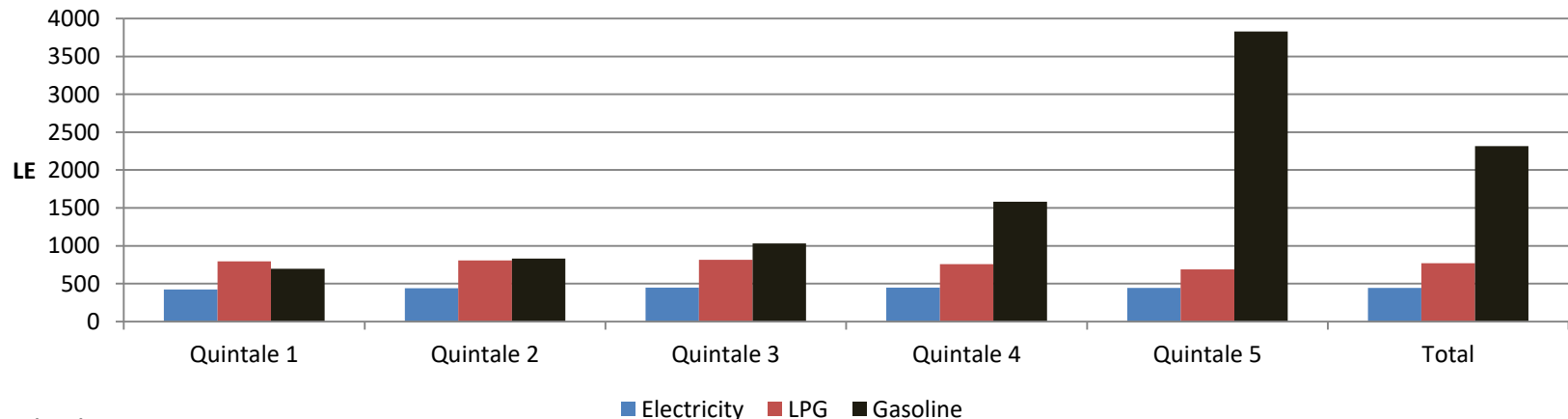## Distribution on Energy Subsidies by Quintiles

LPG subsidies is most evenly distributed

Richest get 38% of the total energy subsidies – subsidy design is regressive

Gasoline are most disproportionately targeted towards rich

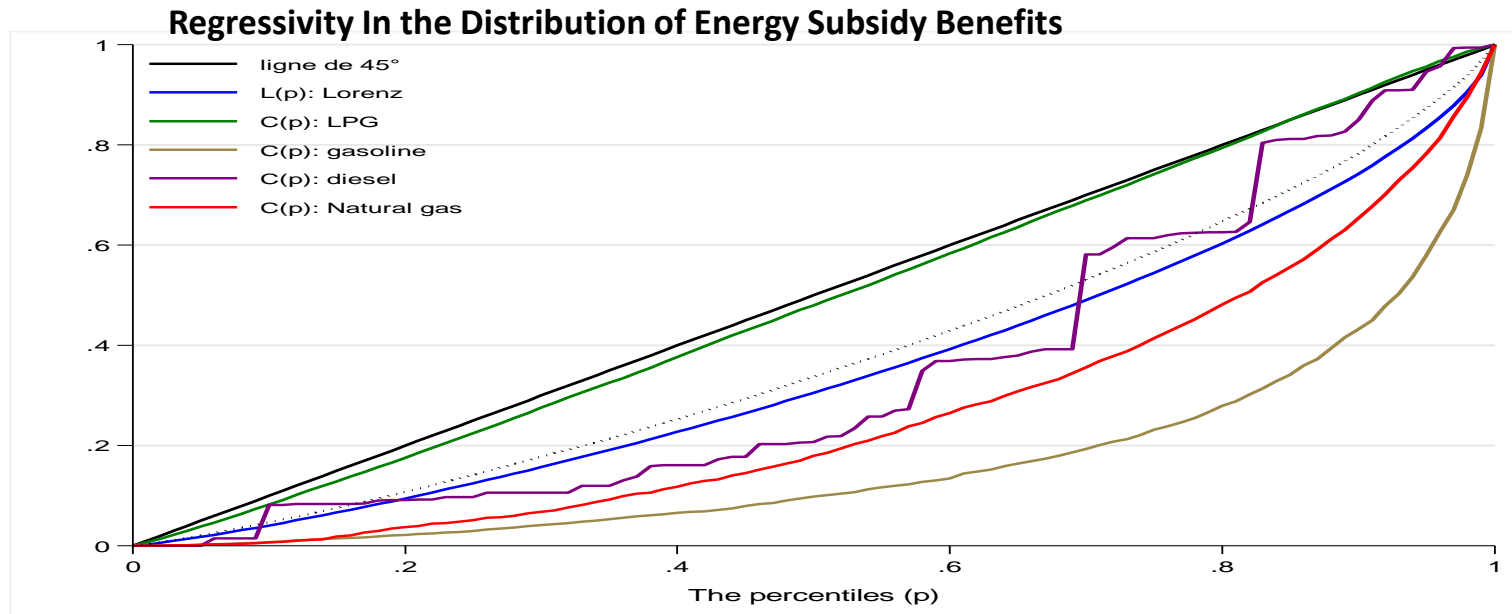## Average Direct Benefits from energy subsidies, 2015

Fuel Subsidy is regressive

Biggest energy consumers are biggest beneficiaries of untargeted subsidies, so energy subsidies generally regressive.

Gasoline is the most regressive: very low.

Regressivity In the Distribution of Energy Subsidy Benefits

C. How Data was used to Evaluate Impact of social programs

How much impact do/will they have on poverty?

1-Impact on poverty status: Distribution of direct beneficiaries before and after receiving Social Solidarity Pensions, 2013
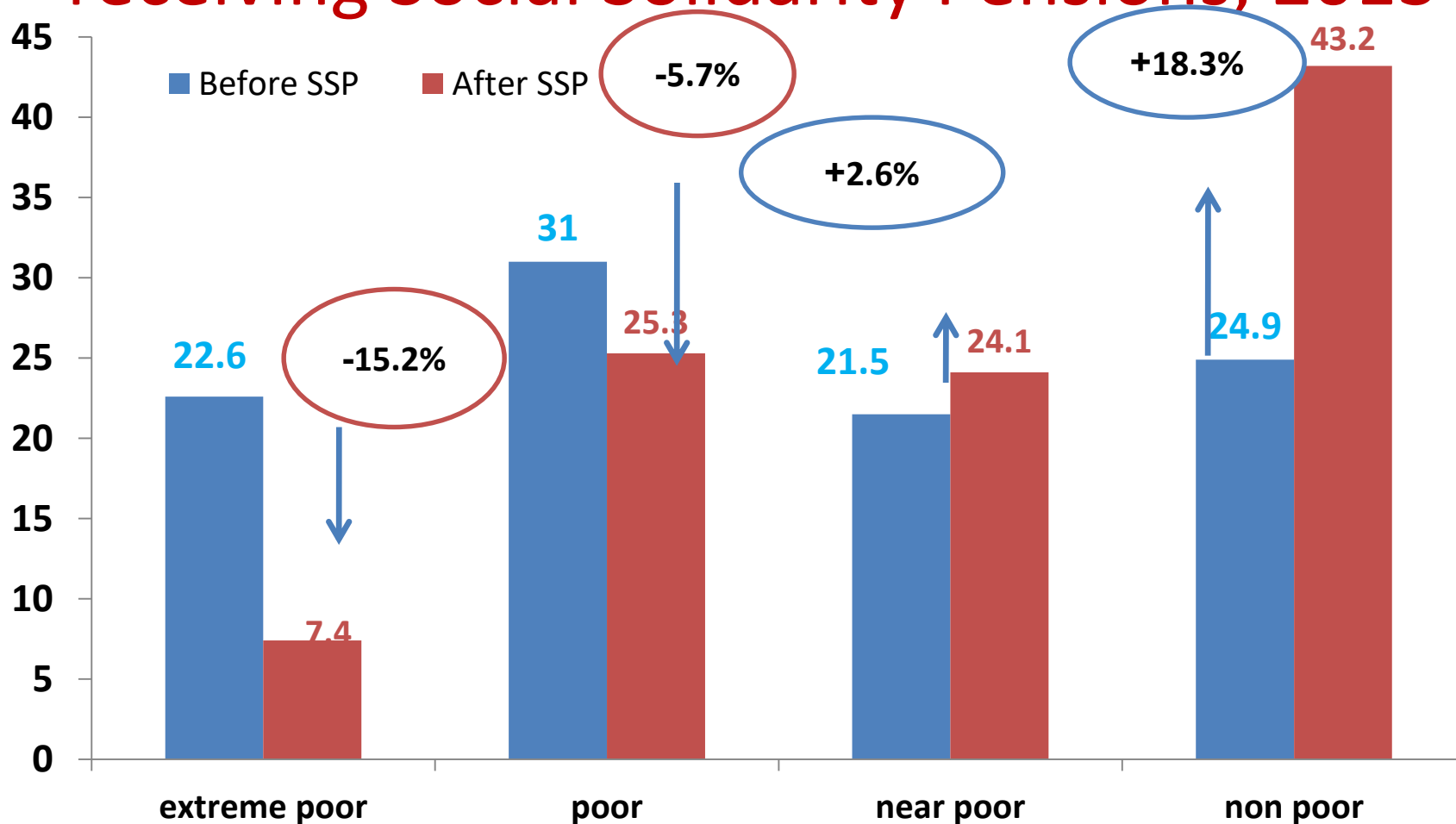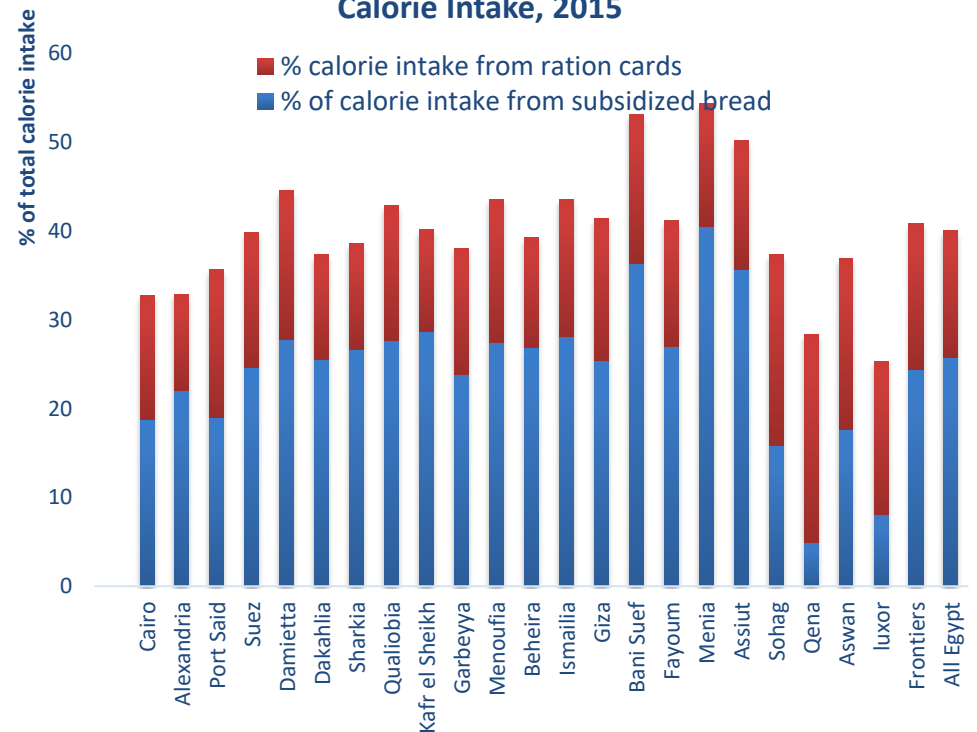
2-Impact of food subsidy

Impact of Food Subsidy on Income Poverty rates

Region	Actual in 2015	removal of Subsidy
Urban Govs	15.11	18.25
Urban Lower	9.67	12.74
Rural Lower	19.71	25.27
Urban Upper	27.40	31.77
Rural Upper	56.70	61.87
Urban Frontier	19.27	22.04
Rural Frontier	28.95	37.64
Total	27.76	32.33

Contribution of Food Subsidy Program to Total Calorie Intake, 2015

% of total calorie intake

- % calorie intake from ration cards
- % of calorie intake from subsidized bread

Cairo, Alexandria, Port Said, Suez, Damietta, Dakahlia, Sharkia, Qualiobia, Kafr el Sheikh, Garbeyya, Menoufia, Beheira, Ismailia, Giza, Bani Suef, Fayoum, Menia, Assiut, Sohag, Qena, Aswan, luxor, Frontiers, All Egypt

3-Impact of simultaneous removal of subsidies to all energy sources

Fuels	Δ Well-being						Δ poverty rate	Δ GINI
	Q1	Q2	Q3	Q4	Q5	Avg.		
Automotive fuels								
Gasoline	-0.20%	-0.30%	-0.40%	-0.60%	-1.40%	-0.80%	0.30%	-0.30%
Diesel	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Residential cooking fuels								
LPG	-8.20%	-6.60%	-5.40%	-4.20%	-2.10%	-4.20%	4.60%	1.00%
Natural gas	0.00%	0.00%	-0.10%	-0.10%	-0.10%	-0.10%	0.10%	0.00%
Electricity								
Electricity	-5.00%	-4.60%	-4.30%	-4.00%	-3.00%	-3.80%	3.30%	0.30%
Combined reforms								
All fuels	-13.40%	-11.50%	-10.10%	-8.90%	-6.60%	-8.90%	8.40%	1.00%

Overall Result with Mitigation Measures

- According to the mitigation policies, the living standards decreases by almost half of what is observed without adopting mitigation policies.

- Overall, the cost of living decreases by **5%**, compared to **9%** when not implementing any mitigation scenario.

- For simultaneous reform of all fuels, the poverty rate increases by 8.4 percentage points without mitigation measures, and by only 4 percentage points when mitigation measures are implemented.

- As poor households receive larger benefits than the better off, change in Gini Index is increased by a negligible value.

Changes in poverty and inequality measures (in percentage points)

	P0	P1	Gini
Without mitigation	8.38	2.89	1.04
With Mitigation	3.96	1.25	0.19

D. How Data was used for Targeting the poor

- Poverty map

Poverty map reviews the geography of welfare levels at a smallest administrative level (eg village level). It also reviews various dimensions of living standards such as poverty, education, health, malnutrition, employment, income, and housing.

- Proxy means testing

The application of PMT to target the poor depends on household characteristics and uses six criteria to identify the target groups: residence, head of family characteristics, household characteristics, remittances, financial flows of family members, characteristics of housing unit and family property.
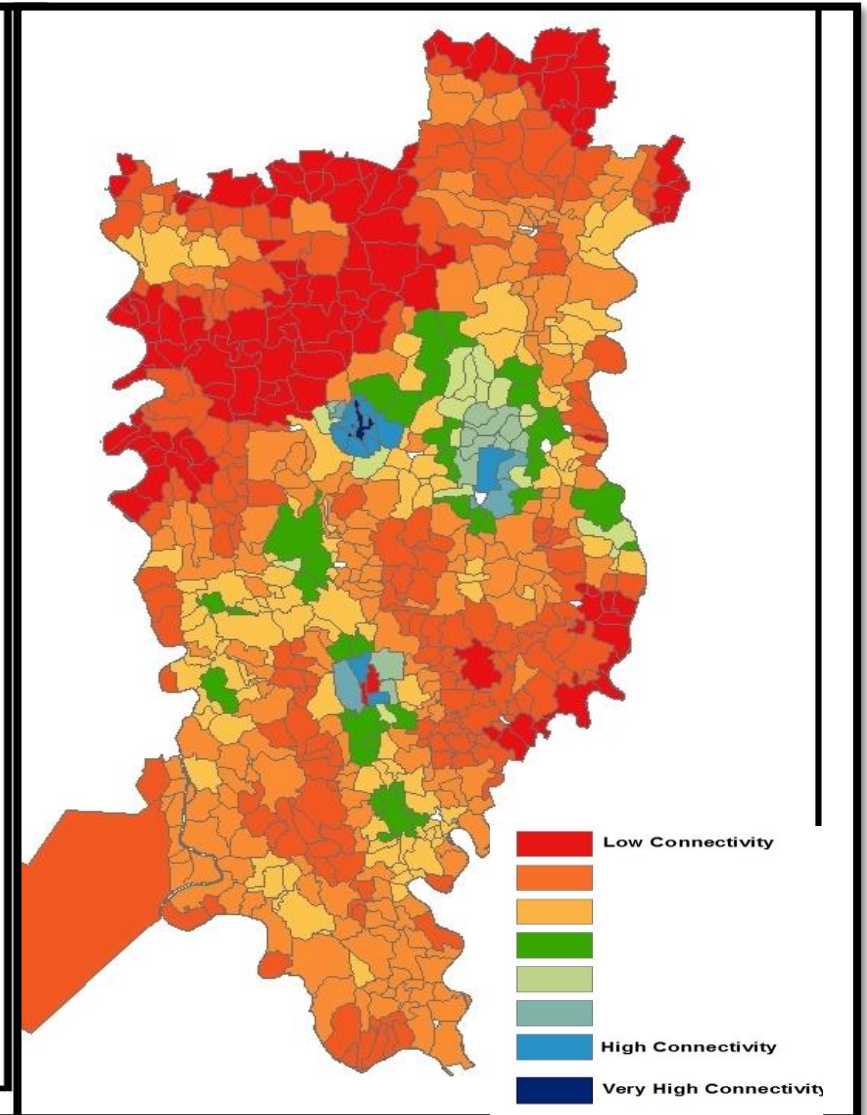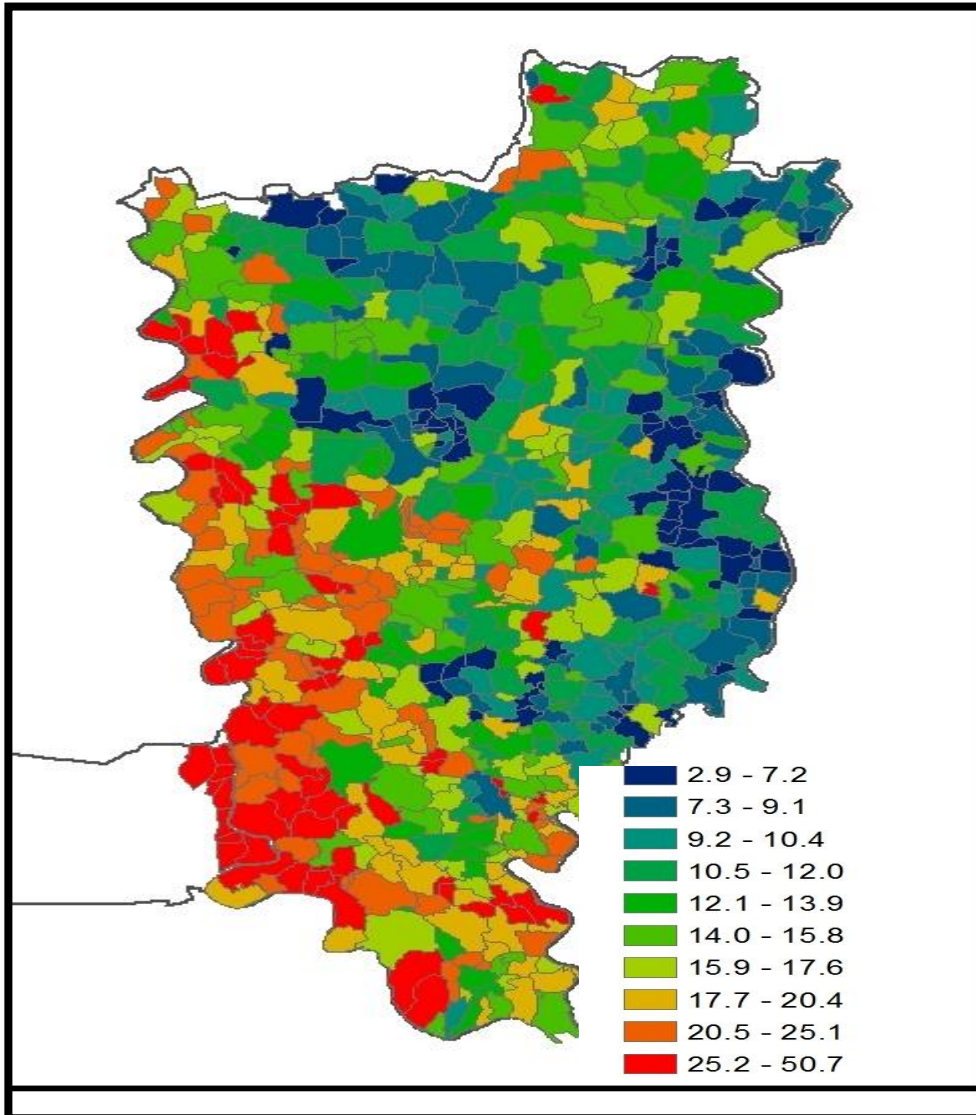
1-Poverty map

- A poverty map for 2013 was developed that assess the geography of welfare levels at smallest administrative level (eg at the village level). It also combines various dimensions of living standards such as poverty, education, health, malnutrition, employment, income, and housing.

- Poverty maps rank of villages or districts in rural areas and urban according to the proportion of the poor and the number of poor in each village and characteristics of the population and housing conditions.

- These maps were updated using 2017 census.

- Poverty maps have been used by the Social Fund for Development to select the poorest districts where labor-intensive emergency program was implemented. They are also used in micro and small enterprises program.

Gharbia and Menofia Governorates

% of the poor

Secondary Roads connectivity

Legend (% of the poor):
- 2.9 – 7.2
- 7.3 – 9.1
- 9.2 – 10.4
- 10.5 – 12.0
- 12.1 – 13.9
- 14.0 – 15.8
- 15.9 – 17.6
- 17.7 – 20.4
- 20.5 – 25.1
- 25.2 – 50.7

Legend (Secondary Roads connectivity):
- Low Connectivity
- High Connectivity
- Very High Connectivity

Example for programs using poverty map

The labor-intensive emergency program

The ELIIP was launched in October 2012.

The project is implemented through the Social Fund for Development with the support of the World Bank.

The project aims at creating short-term employment opportunities for unemployed unskilled and middle-skilled workers and providing basic infrastructure services (ELIIP) in various areas, including rehabilitation of houses and schools, clearing and grazing of grassland, protection of the Nile River, paving roads, etc....

SFD used the poverty map for 2013 as well as self-targeting as targeting mechanisms to reach eligible poor.

2-Proxy means testing

- It derives a composite index of variables that are highly correlated of living standards.

- Instead of asking households about their income or consumption to determine eligibility for social assistants, the composite index is used.

- At the initiative of the Ministry of Social Solidarity, a mathematical formula (proxy means test) was developed for the application of the livelihood test to target the poor based on the characteristics of the family. Six criteria are used to identify the target groups: residence, head of household, family members, remittances, Housing and family property. PMT was integrated with geographical targeting in order to identify the beneficiaries of programs of "Takaful and Karama" in poor districts.

- Takafol and Karama program used PMT that was developed in 2015

- In 2018, an updated PMT was derived that overcome the old PMT shortcomings.

Results
Targeting Efficiency

Cut off point=5636 (lower poverty line)   (%)

	Model 1	Model 2	Model 3	Model 3	Model 4
% of Covered population	27.15	26.94	27.12	27.12	26.78
Distribution of Covered population					
poor	75.99	76.10	76.06	76.06	76.41
near poor	19.95	19.91	20.05	20.05	19.59
non poor	4.07	3.99	3.90	3.90	4.00
Targeting Indicators					
under covered poor	32.31%	32.75%	32.34%	32.34%	32.89%
Leakage	24.01%	23.90%	23.94%	23.94%	23.59%

"Takaful and Karama" program

- The Ministry of Social Solidarity has adopted a program of "Karama" to help the elderly and the disabled through the disbursement of monthly transfers to them with the aim of creating a social and fair protection network targeting elderly poor. Monthly assistance is paid to the elderly over the age of 65 and the disabled who do not have an insurance pension or have a pension less than the social security pension. The program aims to help and improve the lives of 3 million families over the next three years.

- Takafol program includes the provision of financial assistance of 350 pounds per person per family, with the payment of monthly assistance to each student in the family of 80 pounds for the primary student and 100 for middle school students and 140 for the secondary maximum of 3 students on condition of attending school.

"Takaful and Karama" program

- It reached 1,700,000 households in June 2017, in addition to 1,700,000 families supported by the security assistance system.

- It aims at Improving health and nutrition indicators in the 0-6 age group, enrollment and attendance indicators in the 6-18 age group and improving reproductive health indicators, in collaboration with ministries and stakeholders.

- Review the targeting rules based on recent indicators of poverty, reform policies of the support system and the government's directions for the development of integrated social protection programs. Accordingly, all beneficiaries will be reviewed with all the cash support programs offered: "Social Security" and "Takaful and Karama".

- Although support is targeted to eligible families, it is directed specifically at women to ensure optimal guidance for the family and to contribute to their economic and social empowerment.

School feeding program

- The Government of Egypt invests USD 110 million per year in the National School Feeding Program, which reaches 12.5 million pupils. Household food security is very fragile. Fluctuating food prices can cause severe shocks since the average Egyptian family spends 40 percent of their income on food. WFP School Feeding activities complement this national program.

- Geographical targeting is used to identify priority areas for this program