Targeting and Effectiveness of the Food Subsidy Program in Egypt to reach the Poor

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ABSTRACT

In Egypt, food subsidy program contributes greatly to social stability, yet there exist academic and political tendencies to reform the current system in the interest of a more effective targeting based system to reach the poor. Since the 25th January 2011 Egyptian Revolution, a significant attention has been directed to reform the general food subsidy system in favor of the poor. Egypt provides a case of a country with a large food subsidy program. However, it that has been relatively claimed by the government and international organisations to be expensive and ineffective in targeting the poor. Accordingly, measuring the targeting performance of this program is very crucial. It is a way to assess the targeting outcome of one component of antipoverty interventions. Most of the previous studies address the problem of leakage and under-coverage rates of the Egyptian food program exclusively from an econometrical approach. However, a mixed approach method is developed in this study to better explain the Egyptian food subsidy program and explore how the governance structure of the subsidy system might play an important role in assessing the effectiveness of this food program. This method generates both a statistically reliable measure of the magnitude of the targeting performance as well as a greater depth of understanding of how the program is ineffective in achieving better targeting outcomes. Additionally, understanding the actual targeting mechanism would help the policy makers to improve its effectiveness, and would ultimately support a more comprehensive reform to provide an effective social protection scheme.

Introduction

The Middle East and North Africa (MENA) region has been experiencing a spontaneous revolutionary wave, the "Arab Spring", demanding for greater resources equality and re-distribution of them among the whole society. For instance, on January 25th 2011 in Egypt, the protest calls for an end to poor economic conditions, injustice and corruption (Houissa, 2010).Therefore, the Arab spring highlight some key challenges in the MENA region include high poverty rates, reform of subsidy systems, growing inequalities, social injustice, and other challenges that have already been existing from long time ago (O'Sullivan et al. 2012; Drukan 2011; Korotayev & Zinkina n.d. 2011; Breisinger et al. 2011; Campante & Chor 2012; Singerman 2013; Ross 2008; Ross 2012; Bellin 2012; Hinnebusch 2006; Beck & Hüser 2015; Costello et al. 2015).

The MENA region continues to suffer from poverty although a large portion of governments' expenditures is spent on Social Safety Net (SSN) (Sdralevich et al. 2014). In 2008, 2.7 percent of the MENA population were below US$1.25 (the lowest a-day poverty line) and approximately 13 percent were under US$2 a-day. Additionally, many suffered from several forms of deprivation, including malnutrition (Ncube, M., Anyanwu, J. C., & Hausken, 2014). Yet, three-fourths of MENA's budgets devote a food subsidy section amounting to 0.7 percent of MENA's GDP in 2011 (Sdralevich *et al.*, 2014). Considering the period of 2005 to 2013, the Egyptian food subsidies were on average of 6 percent of the total government expenditure which amounted to 2 percent of its GDP. In 2013 77% of the population benefitted from the subsidy program (CAPMAS 2013). While food subsidies contribute greatly to social stability in Egypt; On the other hand, there are academic and political tendencies to either reform or abandon the current system for a more effective targeting-based system (World Bank 2010; Sdralevich et al. 2014). Therefore, the effectiveness of the SSN (focusing on food subsidies) in reaching the poor remains in question (World Bank 2010; CAPMAS 2013). Consequently, identifying and shielding the poor against all challenges is a threat for policy makers (Van Eeghen and Soman, 2007). Hence, the issue of addressing the social agenda regarding the Social Safety Net Programs (SSNP) in the MENA countries has become a matter of national and international concern.

An attractive tool for poverty alleviation is targeting; however, the choice of the appropriate targeting method is debatable (Grosh et al., 2008). Targeting is the process of selecting eligible households and screening out ineligible ones (Sabates-Wheeler, Hurrell and Devereux, 2015). Although the principles of targeting are well established in the literature and there is an apparent consensus of targeting the social provision (Besley & Kanbur 1993); however, little is known about targeting costs (Houssou and Zeller, 2011). Therefore, many arguments emerged between academics, policy makers and international organizations on the appropriate method to reform food subsidies which is evident in the case of Egypt (World Bank, 2010; Sachs, 2012). This is a major challenge to the political and social stability facing its policy makers on reforming the system without steering public dissatisfaction (Ramadan and Thomas, 2011). Thus, selecting a targeting method should take into consideration the country's special circumstances to effectively reach the poor. Governments should work on designing, monitoring and evaluating SSN interventions (Coady et al. 2004).

Programs of food subsidies in Egypt are designed to assist the food insecure. They are based on the assumption that it is easy to identify the targeted households. But in fact, targeting is very complex task to be designed and implemented. The academic literature about targeting in Egypt has offered some help to professionals, but not enough. Most of research of assessing the targeting performance of the Food Subsidy Program (FSP) has been addressed exclusively from an econometrical approach. Consequently, there has been little practical research to shed light on the targeting complexity in Egypt. Thus, the aim of this paper is to better understand Egypt's FSP and explain the ineffectiveness of targeting outcomes. The paper employs a novel combination of quantitative and qualitative approaches. Egypt provides a case of a country with a large food subsidy program that has been relatively claimed by the government and international organisations that is expensive and poorly targeted to the poor (World Bank, 2005, 2010; CAPMAS, 2013; WFP, 2013). Accordingly, measuring the targeting performance of the food program in Egypt is very crucial; it is considered as an exercise in assessing the targeting outcome of one component of antipoverty interventions.

Mixed methods research is a suitable approach that may yield to positive benefits in measuring the targeting performance of certain program. Some literature have supported the use of mixed method as it has the potential to provide a greater depth of information and broader scope which is not possible when utilising singular approaches(Dennis, Fetterman and Sechrest, 1994; Creswell, 2013; Almalki, 2016). This enables the paper to develop more grounded and contextualised explanations for the relative effectiveness of targeting strategies. The paper suggests that a combined quantitative descriptive analysis and qualitative method is very useful for assessing similar schemes in other countries. Hence, the qualitative analysis is used to assess the current targeting FSP in terms of factors that might contribute to inclusion and exclusion errors through exploring and better understanding the application process of the FSP and the enrolment of the beneficiaries.

The paper is organized as follows. The first section presents a background framework of the FSP and practical underpinnings on the interconnectedness between the program objective in reaching the poor households and its actual performance. The second section delineates the research background, data and methodology. Subsequently, this paper presents the methodology for analyzing the current situation of the targeted food program in terms of leakage and under-coverage rates. It, also, tries to understand the role of the institutional capacity in the context of the current targeted subsidized food program challenges in Egypt. Then, the paper sets out, more specifically, using the qualitative analysis in better understanding the FSP current targeting performance.

Economic perspective: Egypt in the global context

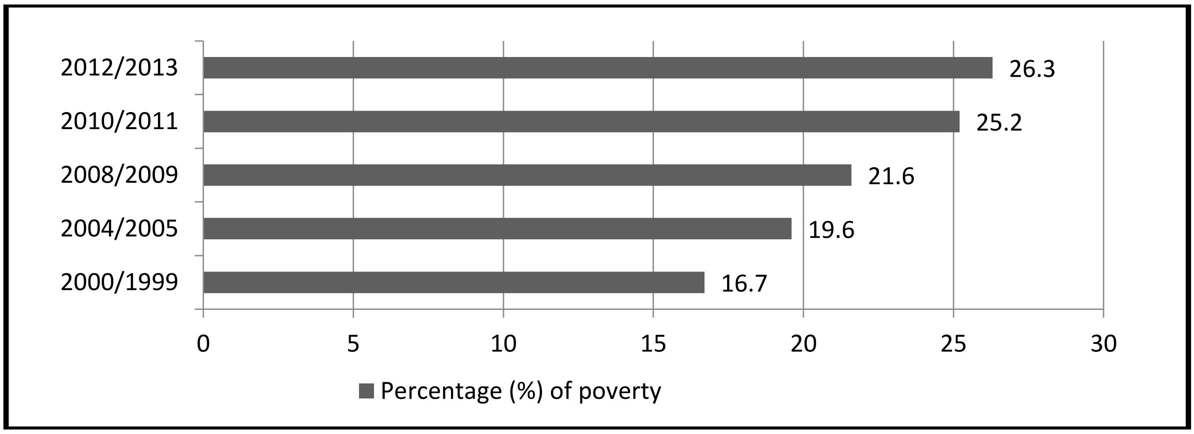
Egypt is considered a middle lower income country. Egypt has suffered from some successive crises that have occurred for its economy since 2005. Among the consequences of the financial crisis are; high inflation, low salaries and the 2008 bread crisis; widespread flour deficiencies, long queues, and fistfights in the road due to corruption and incompetence of President Mubarak regime (Sachs, 2012). There has been a lengthy political transition of Egypt after the 25th Revolution 2011. The Egyptian economy in 2016 faces three main challenges. First, the economy suffers from macro-economic imbalances especially the exchange rate realignment and fiscal consolidation. According to the Central Bank of Egypt (CBE) monthly indicator report for December 2016, the official exchange rate for the Egyptian pound against the US dollar has slipped from 8.88 a dollar to almost LE 20, this devaluation of the currency is amounted to around 55 percent loss of its value. Since Egypt is the 45th largest importer economy in the world, according to the WTO 2016 report, this massive instability causes market imbalance for the prices of the necessities commodity. Moreover, the Food and Agriculture Organisation (FAO, 2016) report shows that Egypt remains the world largest wheat importer. The wheat imports for 2016/17 are estimated at 11.5 million tons. Therefore, this instability of the exchange rate causes major problems and imbalances in the market.

Second, according to CAPMAS,(2013;2016) and WFP (2013), statistical figures call up the state of Egypt's food security, poverty, and malnutrition, with poverty increasing as shown in ***Figure 1*** from around 17 to 28 percent from 2000 to 2016. The poverty rate increases around 69 percent from 2000 to 2016. This is despite the fact that the population growth rate from 2000 till 2016 has only increased 34 percent. This means the number of the poor people has increased more than the double for the same period (CAPMAS, 2016). Since the food subsidies program forms a major component of the government poverty alleviation strategies. Hence, continuous fiscal support to the poor through food subsidies failed to decrease or curb the poverty rate but rather poverty witnessed such a rapid increase. Thus, this creates a space for investigating the program effectiveness in reaching the poor and its success in achieving better targeting outcomes.

The social situation agenda in Egypt remains to a concern. The high spike of inflation in 2016 is expected to be one of the reasons for the poverty increase rate. The prices of items have been raised with high import component, especially the food products (CBE 2016, World Bank Memo 2016). To mitigate the impact of the rising inflation and protect the poor, the government has decided to increase the amount of the monthly allowance of the Food Smart

Card (SC) from LE15[1] (US$ 1.7) in 2013 to LE18 (US$2) in June 2016 then to LE29 (US$3) in March 2017 and finally to LE50 (US$5.6) in July 2017 (World Bank Memo, 17) . The economy suffers from high levels of poverty, inflation rates and spatial disparities in health, education and employment outcomes (Abdel-khalek, 2014). Finally, the fiscal deficit is estimated to be around 12 percent of the GDP in 2016 (International Monetary Fund, 2017). The government is trying to bring up the growth of the GDP through implementing structural reforms to boost the growth in all sectors and strengthen the SSN to be better protect the poor and vulnerable groups. The IMF reached an agreement with the Egyptian government on a 3 year US$12 billion to implement structural reforms on three main fronts: first, liberalisation of the exchange rate; second, fiscal consolidation and finally, enhancement for the social protection system (World Bank 2016, IMF 2016).

Figure 1 Percentage of poverty in Egypt from 2000 till 2013



Source: Central Agency for Public Mobilization and Statistics report (CAPMAS, 2013)

Economic Dynamics of the present FSP: Post- 25th January Revolution program description

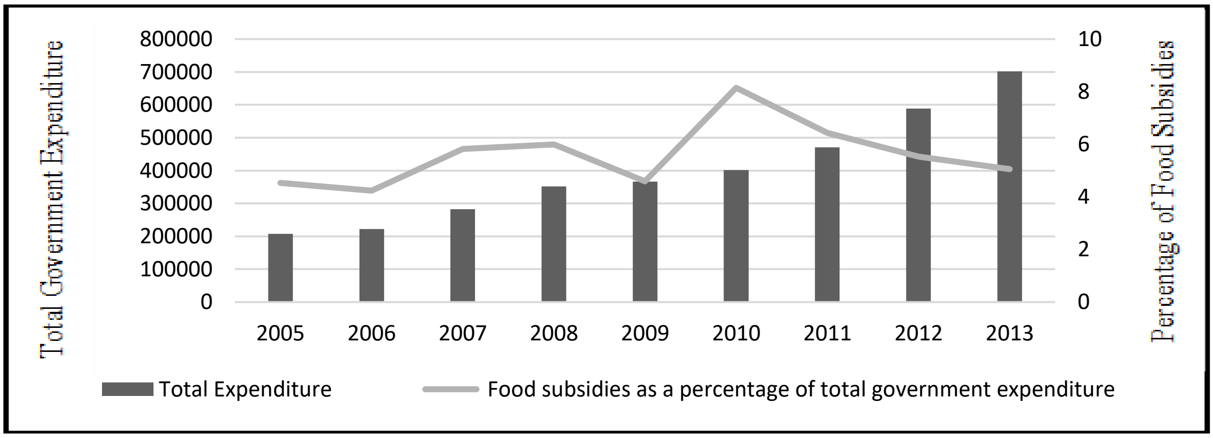
Given the political sensitivity challenge of reforming the existing system, the government has chosen a gradual reform from the old ration paper-based RC system to the SC system registered through the National ID number. The current system is composed of subsidizing the bakeries that distribute the *Baladi Bread* and the RSs (*Tamween*) that sell the subsidized commodities to the beneficiaries. On one hand, in 2014, the Egyptian government has introduced some changes to the *Baladi Bread* system by introducing an output-based financing approach to improve the supply chain. This approach is based on subsidizing the actual number of the loaves of bread that are distributed by the bakeries to the beneficiaries instead of the old system which subsidises the flour sacks for bakeries to produce the bread in an attempt to offset the black market and smuggling in the old system. Every beneficiary, in the new system, has a maximum of 5 loaves of bread per day. If a household beneficiary with 4 individuals registered on the SC does not take his whole monthly bread quota of 600 loaves (if he only takes 100 loaves), then the unused *Baladi Bread* quota (500 loaves) is converted into points (500 loaves= LE50= US$5.6). These converted points can be used to buy commodities from the RS. Thus, encouraging the beneficiaries to consume less of the *Baladi Bread*. Moreover, the government has introduced changes to the RSs (*Tamween*) by introducing an allowance-based system. In the old system, each beneficiary is given a specific

[1] Using the official exchange rate of the CBE and the World Bank Indicator (US$ 1=8.88)

quota of subsidized low-quality commodities (cooking oil, rice, sugar and macaroni) to buy from a specific RS. This old system subsidises the products in the RSs (*Tamween*) themselves according to the number of beneficiaries that are recorded in the Ration Office (RO) ledger. Thus, if the beneficiary does not take his quota, the RSs' sellers sell them in the black market. The new SC system is now opened to all beneficiaries to buy from any RS and the subsidised commodities are being distributed to each RS according to his selling ledger account. Beneficiaries are provided with a monthly allowance of LE18 (US$2) for each individual in June 2016. Using this allowance, each beneficiary is free to buy any commodity from a bundle of more than 52 commodities (World Bank, 2015).

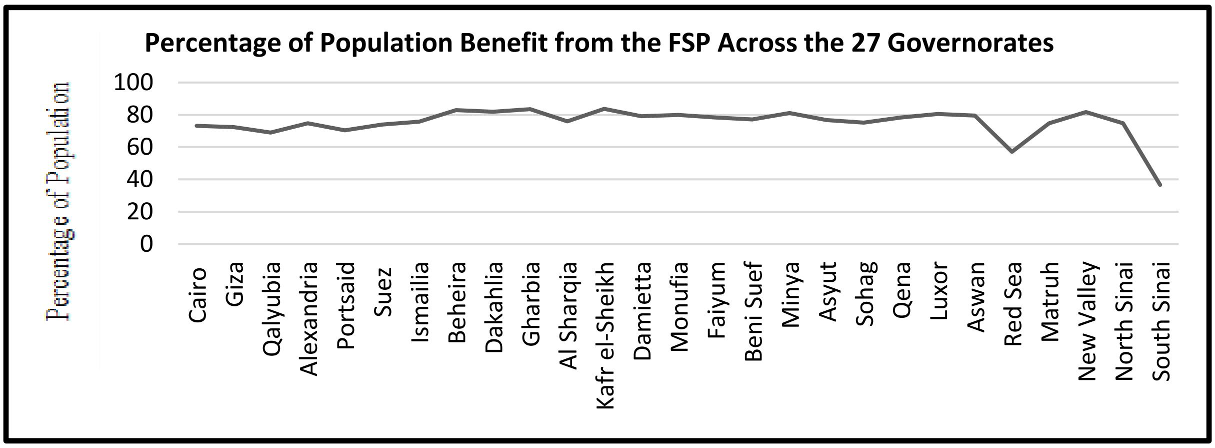
Egypt's Ministry of Supply and Internal Trade (MSIT) has been making an effort to improve targeting to ensure the effective food subsidy allocation to the poor. The percentage of food subsidies from the total government expenditure between 2005 to 2013 is on average 6 percent as shown in ***Figure 2***. ***Figure 3*** shows approximately 77 percent of the population receive the program benefits. However, not all of them are poor households. In 2010, a World Bank study shows that the program shields the poor from the impact of food price inflation, however the system is poorly targeting the beneficiaries. The study finds a subsidized flour leakage reaching 31 percent of wheat flour supplied to bakeries. Moreover, the three subsidized commodities: oil, sugar and rice record the following leakage rates 31.4 percent, 20 percent and 11.4 percent respectively. Therefore, the government should ensure proper resource allocation such that the benefit is focused and received only by the targeted groups. (Alderman et al. 1982; Ahmed & Bouis 2002; Ahmed et al. 2002; World Bank 2005; WFP 2009; World Bank 2010; CAPMAS 2013; Sdralevich et al. 2014).

Figure 2: Food Subsidies from the Total Government Expenditure



Source: Researcher calculations based on Ministry of Finance of Egypt, Financial Monthly bulletin, various issues from 2005 till 2013.

Figure 3: Percentage of population benefit from food subsidies



Source: Researcher calculations based on Ministry of Supply and Internal Trade Egypt, report 2014

Regarding the eligibility criteria to be enrolled in the food program, they are very loose and hard to assess. One of the criteria of decree #15 for 2011 is: "Individuals with chronic illnesses and those with special needs". This criterion, however, does not specify a list of the chronic diseases to be eligible. Other loose criteria are, for instance, temporary seasonal employment, workers in farming profession, street vendor. There are no specific lists or records for them within the MSIT system. Moreover, there are no clear records for specific invalidity cases. Consequently, I cannot use those criteria to measure the targeting performance, in terms of leakage and under-coverage, of the food subsidy program. Therefore, to assess the effectiveness of this program, this paper aims to focus the analysis on the specified objective using the poverty measures rather than the applied criteria to be included in the program.

Data and Methodology

I develop a mixed approach method to the problem of identifying the households who are eligible for the food subsidy program. The paper design combines both the descriptive quantitative and qualitative research methods, which is appropriate to address the research objectives. The purpose of using this method is to assess the effectiveness of the FSP targeting mechanism; through exploring the factors that may contribute to the inclusion and exclusion errors that cannot be solely identified and comprehended from quantitative data.

The first step in this descriptive quantitative uses the cost of basic need approach by using the cross sectional data of the latest released representative national Household Income, Expenditure and Consumption Survey (HIECS), conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS) of Egypt for 2012/13 after applying the new smart card system, to assess the leakage (error of inclusions) and under-coverage (error of exclusions) of the current targeting system for the FSP across the twenty seven governorates. This approach is the most commonly used method (Haughton and Khandker, 2009). The basic needs approach to poverty assessment has gained highest acceptance among the developing countries. Using the basic needs approach to establish a minimum threshold of consumption expenditure necessary for achieving minimum standards of living. To establish this threshold a bundle of the basic needs is chosen that reflects local perceptions of what constitutes poverty. The

CAPMAS calculated the poverty line by first estimating cost of the basic food bundle needs; this gives the food poverty line (e.g., food that gives 2100 kilocalories per person). Then, it estimates the allowance for basic non-food goods and services for every neighborhood. Summing up both the food and non-food allowances to get poverty line. Taking into consideration, the cost of the food commodities and non-food goods changes according to the geographical areas (UNHCR/UNICEF/WFP/WHO 2004; Hamanou et al. 2005; Haughton & Khandker 2009; WFP 2016). Poor households are those whose consumption expenditure falls below the poverty line.

The basic need poverty line is given by

$Z^{BN}= Z^{F}+Z^{NF}$

Z^{BN} is the Basic Need poverty line

Z^{F} is the Food component

Z^{NF} is the Non-Food component

Z^{BN} is calculated in the HIECS for each household, comparing it against each household expenditure to identify who is poor or non-poor. Based on this approach, I identified the poor and non-poor households then calculated the leakage and the under-coverage rates of the food program. Given the results of this analysis, it is important to shed light on these results by exploring and understanding the underlying causes of such inclusion and exclusion errors, using a qualitative approach.

Most of the previous studies address the problem of leakage and under-coverage of the general food program in Egypt exclusively from an econometrical approach. The second step of my analysis is to expand beyond the quantitative descriptive findings based on Cost of Basic need approach to answer why the leakage and under-coverage of the current Egyptian food subsidy program occurs by exploring how the program targets the beneficiaries. Therefore, exploring why and how this leakage or under-coverage of the program may occur, primary qualitative data collection is needed that involves two elements: key informant interviews; managers and employees of the Ration Offices (ROs). Semi –structured and key informant fifteen interviews have been conducted with both the managers and local employees inside the ROs. The analysis of interview transcripts, research notes and observations is conducted using inductive thematic analysis to explore and understand how the current food subsidy system works in the selected field sites.

My qualitative research study is based in Cairo governorate. The vertical hierarchical structure of Egypt’s government consists of three levels. The first level is composed of 27 governorates. The second sub-divisional administrative level contains more than 300 districts. Finally, the third sub-divisional level includes more than 200 cities and 3000 villages. The study generates insight and deep understanding of the FSP, purposive sampling is employed. Purposive sampling involves selecting the participants within the ROs which provides the rich data information to analyse (Patton, 2002). Open-ended questions are used in fifteen interviews. Moreover, observation is used to see all the relevant factors and actors that surround and describe the current food subsidy program inside the ROs which are responsible for processing the FSP applications. Additionally, researcher note is used in observing ten neighborhoods in Cairo. An inductive approach is used to overview the operational guidelines in comparison with its application for the food subsidies program. Hence, reflecting the way in which the government addresses the basic constituents of the program and their execution. Thematic analysis is common across many qualitative methods with the sphere of social sciences (Merton 1975; Braun & Clarke 2013). Thus, this analysis method is employed in the study to explore and understand the factors that might draw the underlying causes of the exclusion/under-coverage and inclusion/leakage errors of the food program.

Measuring Food Subsidy Targeting Performance in Egypt: current situation

The cost of basic need approach helps in assessing the targeting performance of food subsidies in Egypt, by comparing the leakage/error of inclusion and under-coverage rates/error of exclusion of this program. There are two errors of targeted food subsidy program, using the HIECS for a sample of 7528 household heads families that compose 32732 individuals in Egypt. Analysis of targeting is presented graphically. By using the poverty line (Z^{BN}), 6337 out of the 7528 households benefit from food subsidies. Of these 6337 households, 4920 are non-poor (i.e, they are located above the poverty line) and 1417 are poor. Both the 1417 poor households included in the program and the 1061 non-poor households excluded are treated as successful targeting. The 4920 non-poor households are error of inclusion, while the 130 poor households are treated as error of exclusion. Therefore, the leakage rate is approximately 78 percent and the under-coverage rate is around 9 percent. ***Figure*** 4 shows the total expenditure on the Y axis, while the X axis represents the lower poverty line for them. All the triangle shape represents the food subsidy program beneficiaries (Ration Card Holders 'RC'), while the circle shape shows the households who do not benefit (Not having Ration Card 'NRC'). At the same level of total expenditure, some household heads benefit from the food subsidized program while others do not. For more accurate analysis, per capita expenditure is used across the whole sample as shown in ***Figure*** 5. Thus, I would argue that, this figure can point out that at the same level of per capita expenditure, there is an obvious mis-targeting for the food program, some household heads benefit from the intervention and others do not.

Figure 4: Total yearly expenditure for all households that hold and do not hold Ration Cards in 2012/2013.

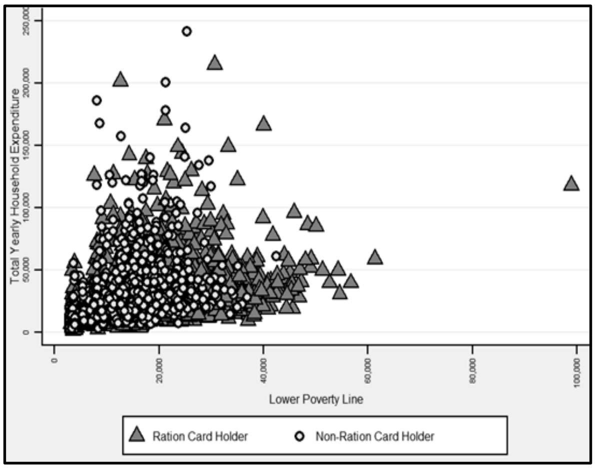
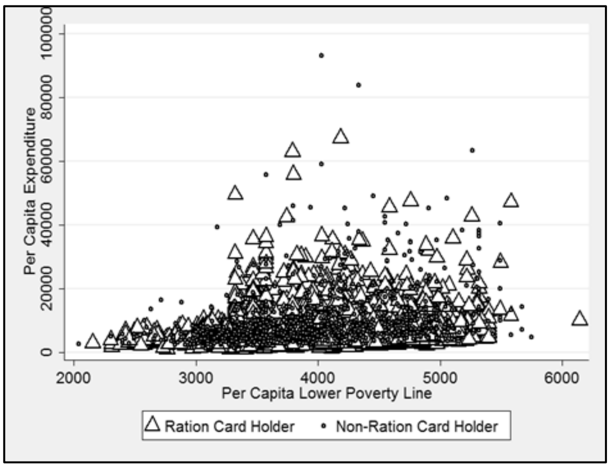


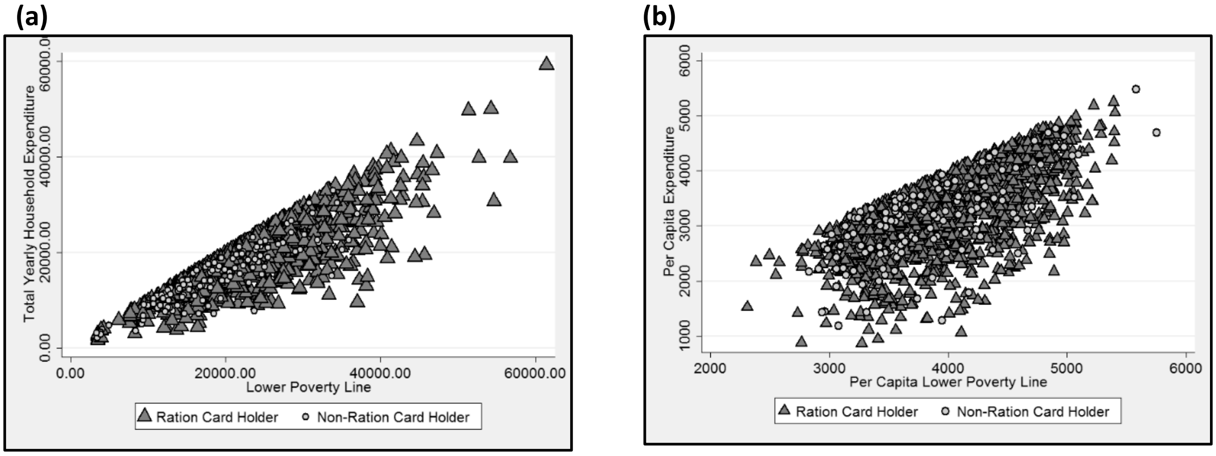
Figure 5: Per Capita expenditure for all households that hold and do not hold Ration Cards in 2012/2013



Source: Researcher's calculations based on CAMPAS HIECS

The basic framework can be further extended to highlight the program' errors of inclusion and exclusion graphically. The whole sample of 7528 households is classified into poor and non-poor and quantified into included and excluded from the program. ***Figure 6 (a)*** shows the total expenditure among the 1547 poor households, in addition to the distribution of ration card holders. All households in ***Figure 6 (a)*** are classified as poor, since their total expenditures fall below the poverty line. The triangle shapes represent 1417 households among the poor holding ration cards (i.e successful targeting). The circle shapes, however, represent 130 poor households who are not card holders. Additionally, ***Figure 6 (b)*** represents poor households' per capita expenditure; Since the discrepancies of the program can be better seen through it. Similarly, to ***Figure 6 (a),*** households are identified as poor if their per capita expenditures fall below the per capita poverty line. It depicts an evident exclusion error; where at the same level of per capita expenditure, some household heads benefit from the program while others do not.

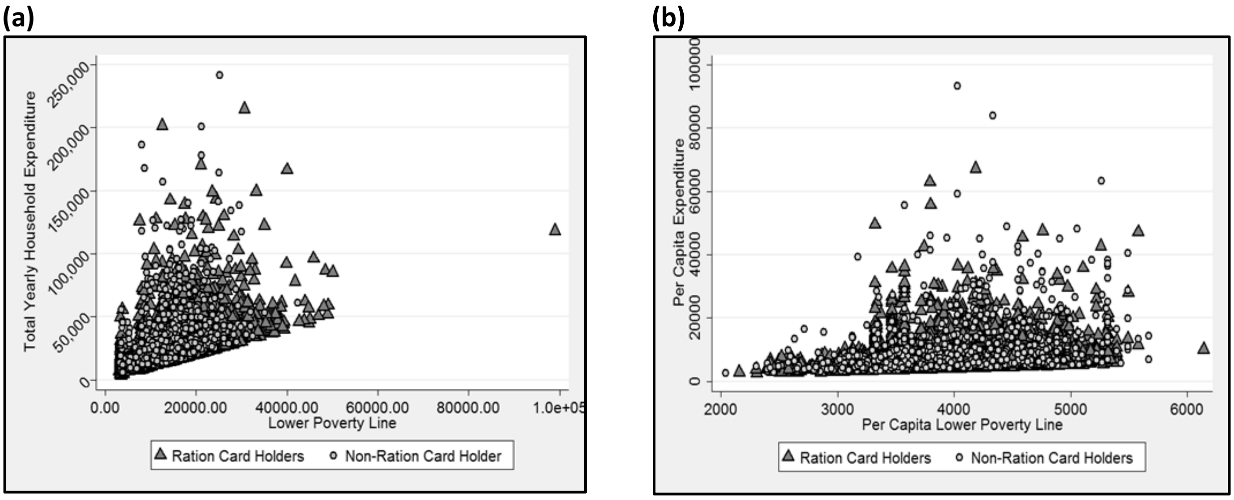
***Figure* 6** (a) Total expenditure for poor households that hold and not hold Ration Cards
(b) Per Capita expenditure for poor households that hold and do not hold Ration Cards



Source: Researcher's calculations based on CAMPAS HIECS Survey 2012/13

Figure 7 (a) shows the total expenditure for the 5981 non-poor households and the distribution of the ration card holders. They are classified as such because their total expenditures exceed the poverty line. The1061 non-poor households who do not receive benefit represent successful targeting. Contrastingly, the 4920 non-poor households benefitting from the program are considered as inclusion errors which is approximately 78 percent. This is a significant leakage for an effective program. Furthermore, ***Figure 7(b)*** represents per capita expenditure for non-poor households. At the same level of per capita expenditure, the program succeeds in excluding non-poor households while it erroneously includes a significant number of non-poor.

Figure 7: (a) Total expenditure for non-poor households that hold and do not hold Ration Cards (b) Per Capita expenditure for non-poor households heads that hold and do not hold Ration Cards



Source: Researcher's calculations based on CAMPAS HIECS Survey 2012/2013

Measuring the FSP performance reinforces earlier outcomes about mis-targeting in terms of errors of inclusions and exclusions among the whole sample. The research also shows that the non-poor households are mostly deriving the intended benefits from the program. Although there are errors of exclusion that raise the question about the underlying causes of such errors. The findings on mis-targeting among the beneficiaries provide additional justification for the need of reforming of the effectiveness of the FSP targeting mechanism in reaching the poor. Thus, addressing the possible underlying causes and factors for these errors are better implicit through conducting qualitative analysis.

Qualitative Analysis for the FSP

The main six bodies that regulate the FSP, organised by hierarchical structure, are Ministry of Supply and Internal Trade (MSIT), Directorates of Supply and Internal Trade (DSIT), Supply and Internal Trade Administrative Departments (SITAD), Ration Offices (RO), Ration Shops (RS) and Bakeries. The largest body by law is the MSIT responsible for distributing the benefits of the FSP. It inspects and supervises the twenty-seven Directorates across the twenty-seven governorates. Every Directorate oversees a group of Administrative Departments located in the neighbourhoods within each governorate. Within each governorate, every neighbourhood has an Administrative Department empowered by the MSIT to supervise several ROs. The Administrative Departments are authorised to manage and inspect both the ROs, RSs and bakeries. The Ration Offices are responsible to process the enrolment applications in the FSP and inspect several Ration Shops.

The selected research site is Cairo governorate, the capital city. Based on the latest HIECS 2012/13, it has the largest number of households' data in the survey. According to Cairo Directorate, Cairo has 40 neighborhoods with 37 Administrative Departments, 68 Ration Offices and 1163 Ration Shops as per 2016. Using the HICES data 2012/13, Cairo has an estimated 63 percent inclusion error and 22 percent exclusion error. Using the latest official poverty map conducted by the CAPMAS, the neighborhoods have been divided into five quintiles based on the per capita expenditure of each neighborhood. The first quintile is the poorest quintile with the lowest per capita expenditure while the fifth quintile is the richest. Interviews inside the ROs are conducted in lowest per capita expenditure neighborhoods in every quintile, except the fifth quintile; the selected ROs are located in the richest per capita neighborhoods. Two ROs are selected for every quantile. Thematic analysis is used to assess the current targeting FSP that contribute to a better understanding of the underlying factors and mechanisms that might cause inclusion or exclusion errors.

Qualifications, Roles and Perceptions of ROs' Managers of FSP

Several interviews shed light on the inefficient selection process of RO managers which can be a potential explaining factor to inclusion and exclusion errors. Additionally, few managers complain of low motivation which can negatively affect overall performance. Firstly, promotion to be an office manager is largely determined by the amount of time spent in the FSP bodies regardless of the managerial experience and soft skills. One employee respondent has complained that he does not have the skills to deal with beneficiaries and applicants

> *"Previously, I was an inspector of the FSP (inspecting bakeries and shops) .....to deal directly with beneficiaries/applicants you should have special skills and unfortunately I do not have it. This causes a lot of problems in my RO".*

One employee has reported the lack of employees' engagement in the RO

> *"I am the one who is responsible to receive the Smart Ration Cards, distribute them, process all the application requests, supervise the RSs and settle their account. We are three here in this RO and I am processing nearly everything".*

Moreover, most interviewees have mentioned the problem of the insufficient resources. One respondent has noted

> *"I do not have any office supplies; files, pens, papers….".*

Therefore; promoted managers may not have the know-how to delegate the tasks efficiently, effectively oversee their employees or resolve conflicts. This problem is further exacerbated by high workload coupled with low man-power and insufficient office supplies; leading to low productivity, loss of resources and process inefficiency.

These factors can highly exhaust and demotivate managers that may fuel arguments between RO, subsidy beneficiaries and applicants. More specifically, given the aforementioned challenges, managers with soft skills or managerial experience have the capability to resolve conflicts that may arise between applicants and the ration office. For example, ROs may face a lack of credibility due to the inconsistency of the MSIT announcements of receiving the Smart Ration Card and the actual experienced delays. Thus, presence of managerial soft skills is crucial to resolve these conflicts. Otherwise applicants may despair and cease to continue the application process due to high private costs and lack of trust.

The Qualitative interview analysis shows a variation in the job perception among managers and employees inside the ROs. Most of the ROs' employees of the poorest quantiles (1st, 2nd and 3rd) would like to either quit, resign or get retired from their job. However, the perception of employees in the richest quantiles (4th and 5th) are pleased from their jobs. This difference between the highest and lowest quantiles is on the grounds that the poorest quantiles face more challenges than the ones located in the richest quintiles. One of these challenges is the concentration of the number of poor households in these geographical settlements. For instance, a RO in a poorest quantile serves around hundred thousand of households, unlike a RO in a richest quantile serves around twenty thousand households. Thus, the number of applicants and beneficiaries that are registered in the RO in the poorest quintiles is extremely enormous in comparison to the richest quintiles, this might be one of the reasons of the perception variations of the managers across ROs.

FSP Application Process and Document Verification

First the applicants/beneficiaries hand the documents to the RO. Then, the employees file these requests and send them to the neighbourhood Administrative Department. One manager confirms that

> *"We collect the required documents of each case. What matters is the presented documents with the required stamps to be handed to the two committees".*

One of the major impediments of the application enrolment process is the heavy reliance on the presented documents. One manager states that all the employees in the ROs are not allowed to change any of the stated criteria of FSP enrolment written out in the MSIT decrees

> *"We cannot change any of the eligible criteria. We only follow the MIST decrees".*

Thus, the RO does not have any authority to assess the potential new applicants or verify the presented documents across different independent data base checks. Following to collection of file requests, a first committee is held at the neighbourhood Administrative Department wherein the RO manager is one of the members. The second one is held at Cairo Directorate. A respondent at a RO quotes that

> *"Enrolment decisions are taken outside the ROs".*

The decision to enrol new applicants in the FSP is verified and determined by two committees. However, relying on the presenting documents can lead to obvious mistargeting outcomes. One respondent states *that*

> *"The committees rely on the presented documents and verify, for instance, if there was a missing stamp or not".*

This method may unlikely work well, as some households earns their income from informal sectors, having their saving in form of assets owned or other non-financial forms. Also, cheats and manipulations may occur. Therefore, this approach can be considered as one of the major factors that may contribute to inclusion and exclusion errors.

Furthermore, some mangers complain about cases where the operational guidelines are not clear enough. They mention that they reply on experience to find solutions for unclear cases the guidelines did not specify.

> *"The decrees and the operational guidelines are not clear in some cases, so we use our experience or sometimes we have no clue what to do"*

a manager and employee have noted. They mention an example that they could not have dealt with, a case of a male household who married to two wives and he gives his Smart Card to one wife and the other one complains that she never gets the FSP benefit. Some employees clearly note that the decrees sometimes are not detailed enough about the operational guideline they should follow. Loss of resources might occur and, therefore, errors could arise.

Procedures within Ration Offices and Accessibility Control

Within the ROs that process the applications, implement, administer and supervise some tasks of the FSP, there must be adequate administrative and technical capacity to process, administer and assess the system. For the administrative capacity, procedures of requests for applications should be proceeded within the ration office using both computer and paper based system. However, one RO manager mentions

> *"We only process all the requests through paper-based procedures. I am not sure why we are not like other ROs".*

Hence, there is variation across the ROs regarding the procedures implemented within them. In regard to the paper system, some ROs do not have enough employees to record the application requests. Therefore, one employee in that RO might assign a work that has to be done by two employees in another RO. Therefore, excess work load might cause loss of resources which could attribute to major errors and imperfections of the program.

For the technical capacity, the MSIT are likely to include the Directorates, Administrative Departments, ROs and Smart Card Companies at both the national and the sub-national levels. The Smart Card companies are owning the software that run within the ROs across the governorates. Some ROs have only one computer and usually they are called Old-RO. Other ROs have around four to five computers and are called New-ROs. Surprisingly, some ROs' computers are outside them,

> *"Our computers are located at the Administration Department"*

a manager reports. So, the applicant/beneficiary must visit the RO and the other place where these computers are located, in this case the private costs increased for processing the application. MSIT has given the responsibility of the computer access only to the head of the RO, however, some head of ROs are computer illiterate. So, they have decided to assign the computer work to one of the employees inside the office or sometimes they unofficially hire a young man/woman who is computer literate. An employee describes

> *"Our manager does not know how to deal with computers software programs that's why she assigned me the data entry work".*

A diversion is observed and noticed across the ROs in implementing the procedures. Therefore, this variation should pinpoint a gap in the system application and implication of the whole process.

All ROs' and Administrative Departments' computers are connected to Smart Card companies. Through staff training at all levels, technical capacity should be created to enhance the data collection and processing of the program. However, some managers and employees complain that the training was not sufficient to run the software efficiently. A manager notes

"I do not think the training is good to run this software".

Another employee claims that when he was initially hired, he finds that his manager has done a lot of errors in the data entry

"My manager knows little about running computer software and has done a lot of data entry errors and I spent two months re-entering the data".

Henceforth, technical training from the Smart Card companies must provide the ROs managers and employees the required computer skills first and then train them extensively on how to use the software. More importantly is the follow up and the regular checks that those companies should conduct to make sure the managers have the required skills. Otherwise, a major data entry errors, inaccuracies and omissions might take place causing inclusion and exclusion errors.

The ROs always face computer technical problems and the companies are responsible to assist them. Some of the technical problems are, for instance, computers break down, system software program is down, slow internet connectivity that lasts long time to operate a single transaction and causes long queues in front of the ROs. Most of the employees and managers complain about how unhelpful the companies are when they face these technical problems. Deliberately companies' weak technical support, in particular, across ROs has been associated with dissatisfaction of applicants and beneficiaries due to the long queues. Supervisory personnel from the Smart Card companies' facilities must provide the necessary technical support, social communications and interpersonal skills to instruct the ROs' managers with respect to all the technical challenges and issues they face.

Some Targeting Criteria are More Open to Abuse than Others

Some managers in the poorest quantiles states that targeting criteria are not well-defined, one manager states that

"All targeting criteria are loose and need to be changed".

They suggest that FSP should be phased out and salaries and pensions should be increased instead. One respondent claims that the FSP criteria are outdated. She argued that the benchmark criteria are the minimum wages/pensions set by the court from FY2005 and has questioned how they are still being used until now. Other managers in the richest quantiles regarding the targeting criteria assure that

"All of them are important.."

a manager reports. Additionally, they have pointed out that the beneficiaries should get this benefit to lift up their standard of living. Some attribute the need to distribute this benefit to cope with inflation, others complain of low salaries in Egypt. The variation of responses usually is related to the numerous problems the ROs face. In the poorest settlements, the managers sometimes stress about the dire need of delivering this benefit to the poor. However, they point out that the private costs and the delays of delivering the Smart Ration Cards and other challenges let them suggest phasing out the system and select another method to deliver the benefit to the targeted households. Some managers in the poorest quantiles mention that non-poor households can pay private costs, unlike the poor ones.

> *"Poor households complain about the private costs they pay. However, you might find non-poor ones who can even hire someone to finish their application requests"*

a manger has clarified. Those managers try to make explicit how the program benefit is not received by the poor households. Thus, the richest quantiles as mentioned earlier face less problems and challenges than the poorest ones.

The vast majority of the respondents in the poorest and richest quantiles at the ROs have stated that the case named as '*Separation from Parent's card'* is more open to abuse than other cases. An employee describes this case as an inherited Smart Card system. One employee asserts that

> *"The Separation from parent's case represents an inheritance of the FSP benefit".*

Despite the decree of eligibility issued by the MSIT to have a new Smart Card, this case is exempted from any assessment, unlike other cases. Applicants can register their family members to be included on the Smart card. Therefore, in this case, ineligible households can easily access the FSP. This case might represent a significant and major underlying factor for inclusion errors.

Tracking Beneficiaries Financial Conditions and Recertification

The FSP system does not have any discretion of how beneficiaries become recertified for continued eligibility. Obviously from the number of visits conducted at different ROs across Cairo governorates, it has been observed that there are not any files or procedures to track the financial conditions of the beneficiaries. When the employees have been questioned whether they are tracking the conditions of the FSP beneficiaries, all of them have replied that they are not allowed to do so. Therefore, those beneficiaries who have been benefited from the FSP a long time ago and their financial status has changed, they are currently still being able to benefit from the program. One respondent employee states

> *"No, we do not track any changes for the household circumstances. Once, the beneficiary is register in the FSP, s/he is given the benefits without any track for his circumstances. Moreover, those who are enrolled since the 70s are automatically recorded in the new system, no matter how much his/her salary is now".*

Because the program has set some loose targeting criteria, there is not any incentive to track and recertified the beneficiaries to ensure they poor households receive the benefit as the program's objective states. Therefore, high inclusion errors are determined.

Overall Current Targeting Performance

All the interviewee responses about the performance of the FSP are iteratively similar. They say that the overall current targeting performance allows non-poor households to benefit from the program rather than the targeted ones. They clearly mention that there is no follow up on the household's circumstances. Therefore, some current beneficiaries who have been enrolled in the FSP for more than 10 years, some became rich enough and should not be eligible anymore. They say, for instance, it may be known that a certain beneficiary's income exceeds the eligibility threshold, however, they do not have the authority to exclude him/her from the program. A respondent mentions that

> *"Some beneficiaries are benefited from the FSP and they are currently working in good jobs with high salaries".*

Another interviewed manager complains that

> *"Some merchants/owners for a business have Smart Cards. These beneficiaries registered on the system long time ago prior to starting their businesses. The problem is that we all knew that they should not be eligible for the FSP. However, they could access the benefit as long as they have previously registered. The MSIT should track changes of the financial status and refine the number of beneficiaries".*

This raises an important question regarding the comprehensibility of the operational FSP guidelines. Therefore, absence of these cases in the program guidelines is a major loophole contributing towards massive inclusion errors. On the other hand, some employees point out that the eligible households sometimes prefer not to access FSP as they might be unable to pay the private cost. Therefore, the FSP may fail to include eligible households. Hence, exclusion errors occur.

Conclusion

Despite the continuous governmental efforts to achieve better FSP's targeting outcomes; the study exposes significant inclusion errors along with exclusion errors. They shed light on the need to improve the FSP's governance structure. Therefore, it is crucial to identify and minimize these errors since these subsidies account for a major part of Egypt's SSNP, both in terms of costs and coverage for more than 70 years. It has experienced an ideological transformation in providing food subsidies, dating back to World War II, when the government has decided to introduce rationing with the aim to serve as a social safety net to manage the price increase and scarcity of resources as a result of the war. As the history has shown that the FSP involves a risky political trade-off that always lack the vision on how to target and reach the poor households. These subsidies consider as a fiscal burden on the government budget, so they should be better targeted to the poor to serve the government program's objective. The government of Egypt and the international organizations have claimed about the poorly targeting mechanism of the FSP. Thus, better targeting of the poor may be an important step, especially they are vulnerable to any price shocks. In 2013/14, 77 percent of the population benefit from the FSP, however, only around 26 percent of the population are poor in 2013. The eligibility criteria to be enrolled in the food program is very loose. Subsequently, the FSP in its current shape, ends up benefiting the non-poor households without entirely addressing the poor.

Based on the quantitative analysis, the FSP targeting performance highlights results about mis-targeting in terms of errors of inclusions and exclusions, using HICES 2012/13. The findings show that the non-poor households are mostly deriving the intended benefits from the program. Additionally, there are errors of exclusion that raise the question about the underlying causes of such errors. The outcomes of mis-targeting among the beneficiaries provide further rationalisation for the need of reforming the system. Perhaps the most preferred FSP targeting strategies in moving towards more pro-poor policies that can better affect and reach the poor is first to better understand the targeting mechanism.

A successful and feasible FSP reform requires an understanding of the enrolment process of its beneficiaries; thereby enabling introduction of better targeting schemes given the country's current context. Consequently, this could help the policy makers and practitioners in reforming the FSP design and implementation. The quantitative analysis does not clarify how and why the FSP mis-targeting occurs, it only quantifies the targeting errors. Therefore, understanding the current targeting mechanism and addressing the possible factors that might influence the system are crucial for introducing any reform. However, some factors cannot be explained numerically. The qualitative study shows some challenges facing the FSP. They can be tackled through setting more comprehensive guidelines, tightening targeting criteria, verifying and assessing eligibility, resource planning and allocation, capacity building and promotion-system restructuring. First, the operational guidelines of the FSP used by the central government and local staff should be clarified, modified and developed to be more comprehensive. Second, the MSIT must set precise and tight targeting criteria since they are currently loose and more open to abuse. Third, verifying the eligible household is not an easy task. Henceforth, targeting mechanism could combine both subjective and objective information to verify and assess eligibility. Therefore, reducing the massive leakage of the program and improving the targeting outcome, however, it is costly but will increase the value for money. Furthermore, a significant source of leakage is represented in cases of '*Separation from Parent's card'* that are exempt from any assessment and automatically are enrolled in the system. Additionally, refining and screening out the ineligible households require the local staff to track the beneficiaries' financial condition for validation and recertification of their eligibility. Forth, the government should reallocate the budget resources to ensure provision of sufficient supplies inside the ROs to enhance service delivery. Moreover, in each RO, the supply of local staff has to be in sync with the beneficiaries and applicants demand to reduce the workload and prevent long and crowded queues. Fifth, it is crucial, also, to develop technical and administrative capacity capabilities to improve FSP's IT resources and provide better staff training. Finally, under the current system employees are more inclined to become disengaged from being productive, therefore, promotion based on seniority needs to be restructured. The findings show the complexity of the mechanism of the system that are beyond the quantifiable errors. There are numerous factors that might affect the targeting process and contribute to the evidence of better understanding the underlying factors and mechanisms that might cause inclusion or exclusion errors.

The overall result that combines qualitative and quantitative methods integrates into visually expressive picture that enable the decision makers to deeply understand key attributes of the FSP system. Hence, the findings from both quantitative and qualitative approaches complement each other. They generate both a statistically reliable measure of the magnitude of the targeting performance as well as a greater depth of understanding of how and why the FSP is not effective in reaching the poor. Additionally, understanding the actual targeting mechanism of the FSP would help the policy makers to improve its effectiveness, and would ultimately support a more comprehensive reform to provide an effective social protection scheme. Taking this fact into account, targeting, however, can cause political instability and decrease the political support against the program. Therefore, designing and implementing a FSP reform with political support and rethinking of the inclusion and exclusion errors are key issues. To overcome this negative consequence, Grosh et al. 2008 suggests that if the rationale behind the reforms is well clarified in advance to avoid the public dissatisfaction. Hence, in implementing a reform for the FSP, a communication strategy is important to guarantee its success.

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