



IMPROVING REGIONAL AND RURAL DEVELOPMENT FOR INCLUSIVE GROWTH IN EGYPT

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Acknowledgements:

I would like to thank Abdessalam Ould Ahmed for providing excellent comments on an earlier version of this paper. I have also benefitted from my participation in the MENA Regional Dialogue on Family Farming that was organized in Tunis in November 2013 by the Food and Agriculture Organization of the United Nations (FAO). I am grateful to participants in this dialogue—particularly Nora Ourabah Haddad, Benoit Horemans, Nouredine Nasr and Mohamed Bengoumi—for very useful discussions that have helped me improve this paper.

Abstract:

This paper examines how economic growth in Egypt can be made more inclusive through a focus on rural development and reducing regional disparities. Nearly all of the extremely poor in Egypt live in rural areas and 83 percent of them live in Upper Egypt. The youth in those rural areas feel particularly excluded.

The paper proposes a three-pronged strategy for dealing with regional inequalities and reducing the rural-urban divide. First, there is a need to move to a more transparent and inclusive system for economic planning and the allocation of public expenditures. The poor and lagging regions have been receiving less than their fair share of public funds, and this would only change if the whole decision-making process for budget allocation is revised so that ordinary citizens, particularly the poor, have a greater say in budgetary allocations. Second, the approach to social protection and social safety nets needs to be modernized and made more sensitive to the needs of rural-dwellers. The current system that relies mainly on subsidized prices, especially for energy, does not properly target the rural poor. It is argued here that the rural poor would be better served by a system based on direct cash transfers similar to the systems used in Brazil and Mexico. Third, since most of the rural poor depend directly or indirectly on agriculture for their livelihoods, agriculture development and modernization focusing on support to small-holder farmers would be important for rural poverty reduction.

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INTRODUCTION

The Egyptian economy needs to start growing again, and the benefits from growth need to be more fairly distributed. Egypt was growing at a healthy rate of 5 to 7 percent during the 5-year period before the 2011 revolution. However, as Ghanem (2013) argues, growth was not sufficiently inclusive. The middle class did not benefit enough from growth and the proportion of Egyptians living on less than \$5 per day remained stagnant at about 85 percent. This is quite different from the experience of other emerging economies, such as Brazil and India, where percentage of poor fell dramatically during high-growth periods. Assaad and Barsoum (2008) show that youth felt particularly excluded as they suffered from a high unemployment rate of about 25 percent, and even those who found jobs usually ended up working in the informal sector where they typically earn less than \$4 per day and have no job security or social benefits.

There is also a spatial dimension to this lack of inclusiveness. About 57 percent of Egypt's population lives in rural areas. Rural poverty is three times higher than urban poverty and more than 80 percent of the extremely poor live in Upper Egypt, which is home to about half of Egypt's population.

Ghanem and Shaikh (2013) show that Egypt's economic situation deteriorated after the revolution as political instability and a sense of insecurity led to a decline in investment, capital flight and rising unemployment. By mid-2013 growth was down from 5 percent to about 2 percent, overall unemployment rose from 9 percent to 13.5 percent, and foreign reserves declined so that they barely covered 3 months of imports. The low international reserves made it more difficult to import, and the prices of many imported necessities, including food, rose rapidly. As usual it is the lower middle class and the poor, especially rural poor, who suffer most from the slow economy. That is why it is important that Egypt adjust its economic policies and adopts a strategy to achieve inclusive growth.

Several emerging economies (e.g., Brazil under President Luiz Inácio Lula da Silva) have succeeded in drastically reducing rural poverty. As described by Da Silva et al.. (2011), economies successful at reducing rural poverty have adopted a three-pronged strategy: (1) supporting institutional reforms that ensure that the rural poor have a greater voice in economic decision making, (2) developing agriculture and agro-processing so as to enhance rural livelihoods, and (3)

putting in place targeted social protection programs that mainly consist of cash transfers to the rural poor. This paper presents an analysis of Egypt's experience in rural and regional development and compares it with international experiences. It argues that reforms along the lines that were adopted in Brazil could help improve rural incomes and reduce regional disparities in Egypt.

The remainder of the paper is divided into six sections. The first describes Egypt's rural space and its agricultural sector as well as the evolution of rural development policies over time, the second presents the data on regional inequalities, the third deals with the allocation of public spending, the fourth analyses social safety nets, the fifth discusses agricultural policies and the sixth concludes by looking at what donors can do to support inclusive growth through regional and rural development.

EGYPT'S AGRICULTURE AND RURAL SPACE

Egypt has been an agricultural country for millennia, with agricultural and peasant society forming the basis of Egyptian civilization. Even today more than half of the population is rural. The country's area is about one million square kilometers, but 97 percent of it is desert. Therefore, nearly all of the population lives on 3 percent of the land which is in the Nile valley South of Cairo (Upper Egypt) and its delta (Lower Egypt). Thus, land and water availability are important constraints on agriculture and rural development. Arable land per person is about 0.05 hectares, one of the lowest in the world, and water availability is limited to Egypt's quota of Nile water.

Abaab et al. (2000) describe Egyptian agriculture as a special case in the Mediterranean region. It is a very intensive irrigated agriculture with two or three plantings every year. Rural space in Egypt consists of about 5,000 villages built along the Nile and the cultivated areas around them, which are in turn surrounded by desert. The typical agriculture production unit is a small family farm, with about 75 percent of farms being less than one hectare. Family members typically have multiple activities: agriculture, animal production and off-farm employment. Most farm families have cows or water-buffalos, with an average of two animals per family. There are very little industrial or service activities in rural areas. Hence, employ-

ment for small farmers typically means wage labor on one of the larger farms nearby.

Historically, Lower Egypt has always been more developed than Upper Egypt. Lower Egypt's proximity to major ports on the Mediterranean has encouraged trade and the export of agriculture products. It has also led to the development of industry. Nearly all of Egypt's textiles industry, which started growing in the mid-19th century, is in Lower Egypt.

Because of the need to centrally manage the country's irrigation system, the Egyptian state has been heavily involved in regulating agriculture since the days of the Pharaohs. Starting in the 1950s, the government adopted a very interventionist policy and regulatory framework. The state controlled all crop areas, and farmers were not left free to plant what they wanted. The rent of agricultural land was also fixed by the government. It also controlled all farm-gate prices, which were typically 40 to 60 percent below international prices. By paying farmers a low price for their output, the government could then ensure inexpensive food for the urban centers. In a sense, like in most developing countries, the government was implicitly taxing farmers to subsidize city dwellers. This all changed with the de-regulation that began in 1986. Now farmers are free to produce what they want and sell it at market prices, and the market for agricultural land has been liberalized.

LARGE REGIONAL VARIATIONS IN POVERTY AND OPPORTUNITIES

In spite of the deregulation, the probability of being extremely poor in Egypt is still nearly four times higher for people living in rural areas than for those in urban areas. Table 1 shows the poverty headcount index using three poverty lines. The line for extreme poverty is defined by the cost of buying sufficient food. That is, the extreme poor are defined here as those who cannot afford to buy a minimum food basket. The table shows that 6.7 percent of the population of Egypt is extremely poor. The figure for urban areas is only 2.6 percent while that for rural areas is 9.6 percent. That is, nearly one out of every 10 rural inhabitants in Egypt is extremely poor and food insecure.

Table 1 also shows the incidence of poverty using two other poverty lines. The lower poverty line is based on a basket of goods and services that is considered by the government to be the minimum. According to this

lower poverty line 22 percent of Egypt's population is poor, but rural poverty is 30 percent—which is nearly three times higher than the incidence of poverty in urban areas. The World Bank has developed a high poverty line in order to help identify the near-poor. Using this higher poverty line yields a national headcount index of 41.2 percent, and a rural poverty rate of 52.7 percent, about double the urban poverty rate.

In addition to the rural-urban differences, poverty in Egypt also varies by region. In analyzing the incidence of poverty it is useful to divide Egypt into four regions: (1) metropolitan Egypt, which includes the large cities especially Cairo and Alexandria, (2) lower Egypt, which includes the fertile delta region north of Cairo, (3) upper Egypt, which includes the Nile valley south of Cairo, and (4) borders regions, which include the desert areas along the border with Libya and in the Sinai Peninsula. Each of those regions (except the metropolitan region) is divided into rural areas and urban centers.

Table 1: Poverty in Egypt, 2011 (% of total population)			
	People Living Under Extreme Poverty Line	People Living Under Lower Poverty Line	People Living Under Upper Poverty Line
Urban	2.6	10.6	24.6
Rural	9.6	30.0	52.7
Total	6.7	22.0	41.2

Source: World Bank (2011)

Table 2 shows that Upper Egypt represents a special problem. It has about 50 percent of the country's population, but hosts 83 percent of the extremely poor and 67 percent of the poor. The problem in Upper Egypt is especially serious in the rural areas. Urban Upper Egypt has 11.6 percent of Egypt's extremely poor and 11.3 percent of the country's poor. On the other hand, rural Upper Egypt has 71.5 percent

of the extremely poor and 55.8 percent of the poor. Lower Egypt has less poverty. About 30 percent of Egypt's population lives in Lower Egypt and the region is home to 13.7 percent of the country's extreme poor and 27.6 percent of the poor. However, it is important to note that the vast majority of the poor and extremely poor in Lower Egypt also live in rural areas.

Other measures of welfare give similar results. For example looking at health indicators, 15 percent of urban women do not receive any ante-natal care. In rural areas that figure is 33 percent. Comparing education

data, 43 percent of women in rural Upper Egypt are illiterate compared to 20 percent in urban Upper Egypt. The illiteracy rate for women in rural Lower Egypt is 31 percent.

	Extreme poverty	Poor	Near poor	Share of population
Metropolitan	2.8	4.6	9.1	17.0
Lower Egypt	13.7	27.6	44.7	31.1
Upper Egypt	83.1	67.1	45.0	50.3
Borders	0.4	0.7	1.3	1.5
Total	100.0	100.0	100.0	100.0

Source: World Bank (2012)

Table 3 compares the human opportunity index (HOI) for rural and urban Egypt. This index was developed at the World Bank based on the idea that outcomes in terms of income and consumption are affected by the opportunities available to people, and particularly children. The concept behind the index is that all people need to be given an equal opportunity in life. Thus, the index measures access to variables that affect a person’s economic opportunity like education, health care, access to clean water, non-crowded housing, et cetera. As can be expected, the aggregate index for urban dwellers (80) is higher than the aggregate index for rural dwellers (70). This implies that the difference in observed income and consumption, between urban and rural areas, is partly due to lack of access to some basic services that compromise rural-dwellers’ life opportunities.

Table 3 also presents the various components of the rural and urban HOI scores. As can be expected, urban

areas seem to offer better opportunities in nearly every aspect measured by the index. However, the biggest difference seems to be in the area of sanitation services, where the rural index is only 17 compared to an urban index of 74. Both urban and rural areas score very poorly in the area of post natal care, with a score of 33 for urban areas and 24 for rural ones.

The HOI index can be aggregated into four groups describing access to different types of services: education (primary, secondary, et cetera); adequate housing (water, sanitation, et cetera); early childhood (pre and post-natal care, immunization, et cetera); and nutrition (wasting, stunting, et cetera). Table 4 presents those four aggregate HOI scores for the five regions of Egypt. The table shows that while Upper Egypt lags most in terms of education and adequate housing (particularly access to sanitation), the border areas lag most in terms of early childhood development and nutrition.

Table 3: Human Opportunity Index in Egypt, 2009		
	Urban	Rural
Primary Education	88	85
Secondary Education	69	60
School Attendance (Age 9-15)	92	87
Water	96	85
Sanitation	74	17
Lighting Energy Source	100	98
Cooking Energy Source	99	97
Non-Overcrowding	64	55
Telephone	84	64
Assisted Birth	93	79
Post-Natal Care	33	24
Pre-Natal Care	87	73
Immunization	85	85
Non-Wasting	74	75
Non-Stunting	72	67
Non-Underweight	88	82
Aggregate Index	80	70

Source: World Bank (2012)

Table 4: Aggregate HOI in Egypt by Region, 2009				
	Metropolitan	Lower Egypt	Upper Egypt	Borders
Education	76	78	70	77
Housing	89	77	68	75
Early childhood	77	69	65	55
Nutrition	77	77	75	65

Source: World Bank (2012)

ALLOCATION OF PUBLIC INVESTMENT

Public spending appears to reflect political realities rather than a desire to reduce regional inequalities. Table 5 shows that Metropolitan areas with 17 percent of the population receive nearly 34 percent of public investment, although they have lower poverty rates than the rest of the country. Upper Egypt—with about half of the population and the vast majority of

the extremely poor—only receives 25 percent of public investment. This probably reflects a desire to keep the big cities relatively satisfied to avoid demonstrations and unrest that could jeopardize political stability. Prioritizing the welfare of relatively better-off urban dwellers, and hence neglecting rural areas, is a common phenomenon in developing countries with weak institutions where the rural poor are unable to participate in economic decision-making.

	Total	Electricity	Water	Education	Health
Metropolitan	33.6	6.4	16.9	30.4	32.1
Lower Egypt	30.3	20.0	53.9	35.6	32.4
Upper Egypt	25.6	29.7	20.9	30.2	30.9
Borders	10.4	43.9	8.4	3.9	4.6
Total	100.0	100.0	100.0	100.0	100.0

Source: World Bank (2012)

The cross-sector allocation of public investment also appears to need revision. For example, the border areas receive a disproportionate amount of public investment given their share of population and poverty. Nevertheless, this could have made sense if the investment was directed at early childhood development and nutrition, sectors in which the border areas are lagging. However, as Table 5 shows, the disproportionate share of public investment in border areas has been directed at the electricity sector, rather than health or education. Similarly, there is pressing need for investment in sanitation infrastructure in Upper Egypt, a sector that has been long neglected; and in post-natal care across the whole country.

Problems with the geographic and sectoral allocation of public investment reflect the non-inclusive way in which planning is carried out and the lack of a real link

between plans and actual expenditures. Sakamoto (2013) analyzes the planning process in Egypt and compares it with good practices in successful economies of East Asia. He argues that a new approach to both planning and thus allocation of public spending is needed. The planning process needs to include representatives of different ministries as well as the private sector and civil society. Beneficiaries of public expenditures, particularly the poor, need to have a voice in the decision-making process. There is also a need to better coordinate activities of the various line ministries and to put in place a mechanism that links plans to actual expenditure decisions.

Egypt needs a transparent and inclusive planning system that allows a societal dialogue on economic issues and building a consensus around key priorities. The absence of such a system creates an environ-

ment where corruption can develop and weak implementation is tolerated. The experiences of Japan, Indonesia and Malaysia with inclusive planning demonstrate how inclusiveness goes hand-in-hand with economic growth and poverty reduction. As argued by Sakamoto (2013), Japan's Economic Planning Council, Malaysia's implementation monitoring mechanism and Indonesia's participatory planning process during its democratic transition are examples that could be adapted to the Egyptian context.

Brazil also provides an example of inclusive planning. When Luis Ignacio Lula da Silva was elected president of Brazil, fighting hunger was one of his top priorities for achieving social justice. Therefore, he cre-

ated a National Food and Nutritional Security Council (Consea), which is a good example of an inclusive economic institution. It had 59 members, 17 government representatives and 42 members representing civil society, and was chaired by a civil-society representative. The council met on the premises of the presidency and made their recommendations directly to President Lula. Because the problem of hunger is inter-sectoral in nature the council had a broad membership so that all sectors of the economy were represented. Consea was also conceived as a tool to provide voice for those suffering from hunger and to improve cooperation between government and civil society. Under Consea and President Silva, Brazil was extremely successful in eliminating hunger.

SOCIAL PROTECTION AND SAFETY NETS

The relatively large numbers of extremely poor people, mostly concentrated in rural Upper Egypt, are not being reached by the existing social safety net system (SSN). Egypt's SSN accounts for a substantial share of public spending, but does not have a commensurate impact on poverty and human development. Much of the spending goes to universal fuel subsidies (about 7 percent of GDP), which benefit the rich more than the poor and distort resource allocation.

Bread subsidies cost Egypt about 1.5 percent of GDP. According to World Bank (2011), in the absence of food subsidies poverty in Egypt would have been significantly higher—31 percent instead of 22 percent. However, the World Bank study also shows that the cost of food subsidies could be greatly reduced if leakages were eliminated and coverage narrowed to those who really need it.

Cash transfers to the poor and vulnerable represent only 0.1 percent of GDP. Those non-subsidy SSN programs are largely fragmented, poorly targeted and limited in scope. Currently, there is no cohesive SSN system that can adequately protect the growing number of the poor, provide mitigation against some of the adverse impacts of economic reform programs and be scaled up in times of crisis.

Egypt should consider reforming the fuel subsidies system, improving governance and financial viability of key energy sector actors, replacing untargeted subsidies with an efficient and well-targeted social safety net system and providing immediate protection to the poor and the vulnerable hard-hit by the deteriorating economic conditions and subsidy reforms.

The objective should not be to eliminate universal subsidies to reduce overall spending, but rather to replace them with more effective mechanisms that target the extremely poor. The net effect on the budget deficit could be zero. Nevertheless, reductions in fuel subsidies will need to be carried out carefully. The fact that in Egypt 57 percent of the fuel subsidy goes to the top two-fifths of the income distribution can be misinterpreted; the vast majority of this group lives on just \$4 to \$10 per day. Thus, the vast majority of those two top quintiles should be classified as either middle class or even poor, but certainly not rich. Moreover, the 57 percent figure implies that 43 percent of the subsidy benefits people who live on less than \$4 a day. Therefore, notwithstanding the regressive nature of the subsidy, it seems clear that reducing or eliminating it will hurt the middle class, and therefore will be politically difficult to implement.

This is not a new problem. When President Anwar Sadat tried reducing subsidies in Egypt in 1977, there were massive street riots and he was forced to reverse the decision. President Habib Bourghiba in Tunisia faced the same problem. In 2011, Nigeria tried eliminating fuel subsidies; but, faced with massive protests, the government was compelled to restore them in part. Jordan too faced street riots in 2012 when it lowered fuel subsidies.

A change in the social protection system from untargeted subsidies to targeted social protection would require a broad national dialogue and consensus building. The objective needs to be clearly stated as using the huge resources that are currently channeled to untargeted subsidies in a more efficient way to help the poor.

There are developing countries (including Ghana and Indonesia) that have succeeded in reducing energy subsidies and replacing them with better targeted mechanisms. Egypt can draw important lessons from these experiences. Vagliasisdi (2012) studied 20 developing countries and found that they managed to reduce the average cost of energy subsidies in their budgets from 1.8 percent of GDP in 2004 to 1.3 percent in 2010—and that this, in turn, led to both a reduction in energy intensity and increased energy efficiency.

Programs that succeeded in reducing energy subsidies have usually included two features: compensatory measures to help the most vulnerable and a strong communications strategy to convince the public of the benefits. In Indonesia, President Megawati Sukarnoputri tried to implement energy price reforms in 2003, but was faced with stiff opposition and had to roll back the program. Three years later President Susilo Bambang Yudhoyono tried again, starting with a public information campaign that clearly identified the benefits of the reform and the new safety net programs for the poor. The people were apparently convinced by the need for the reform and the government's commitment to protect the most vulnerable. He was able to reduce subsidies with little opposition.

In 2004, the government of Ghana launched a study on the impact of fuel subsidies. The study's steering committee included a variety of stakeholders (government officials, academics, company representatives, et cetera). By 2005, the government was able to use the committee's report to launch an information effort that subsequently reduced fuel subsidies by 50 percent. The study had detailed social mitigation measures and how to minimize backlash in order to achieve its end goal. As a result, the government knew how best to avoid public opposition on the issue and

how to communicate its policies to the public. In particular, the government clearly outlined how it plans to use the savings from the reduced fuel subsidies to provide targeted assistance to the poor.

Egypt may consider expanding the use of targeted cash transfer mechanisms. Those could be region specific, with different programs for Upper Egypt and Lower Egypt, but initially they need to focus on rural areas where nearly all the extremely poor live. Such programs could be conditional or unconditional depending on the region's context. For example, in Upper Egypt where 44 percent of women are illiterate cash transfers could be conditioned on girls' school attendance. Alternatively, they could be unconditional, only based on a means-testing system.

Egypt needs to move away from fragmented project-based social protection to a systemized approach. This means using common administrative mechanisms, unique beneficiary identification, common targeting techniques, common monitoring and evaluation systems, and integrated transfer modalities. Naturally, such a system needs to be built up gradually as administrative capacity is being built. A mechanism to avoid leakages and corruption, perhaps through a partnership with civil society, needs to be built in the design of the new system.

Egypt can benefit from Latin America's experience in this area, especially Brazil's *Bolsa Familia* and Mexico's *Progres-a-Oportunidades*. *Bolsa Familia* is the largest program in the world of its kind. It covers 26 million families, about 25 percent of the population. The program gives poor families (defined as living on less than \$55 a month) a transfer of \$13 per month per vaccinated child attending school up to a maximum of five children. It also provides a transfer of \$15 per month for each youth (16 to 17 years old) attending

school up to a maximum of two per family. In addition extremely poor families (defined as living on less than \$ 28 per month) receive a basic unconditional benefit. The money is transferred, preferably to the female head of household, through special debit cards issued by a publicly-owned bank.

Mexico's *Progres-Oportunidades* was created with the express objective of replacing price subsidies with a cash transfer program. Today it covers about 5 million families, representing 24 percent of Mexico's population and nearly all of the country's extremely poor. It operates in all of the country's 31 states with a budget of \$2.8 billion. Cash transfers are conditioned on changes in the recipient's behavior. Beneficiaries need to invest in their own nutrition, health and education. Progress is periodically measured through comprehensive evaluations of programs, operations and results.

The experience of Latin America shows that direct cash transfers can be used to achieve poverty reduction as well as development objectives. By providing

cash to poor families those programs help raise their consumption and get them out of poverty. It is a much more direct method than generalized price subsidies for products that can be consumed by the poor as well as the non-poor. By making part of the transfer conditional on school attendance or immunization the programs also encourage investment in human capital and thus help achieve long-term development objectives. There is also some evidence that recipients of cash transfers in rural areas tend to save part of it and use it for investments in productive physical capital.

Many of the cash transfer programs are also used to enhance women's social and economic empowerment. Many studies have shown that transferring money to women instead of men lead to an increase in family welfare, particularly improving children's education, nutrition and health. By putting cash in the hands of women programs like *Bolsa Familia* and *Progres-Oportunidades* have improved women's status within the household and enhanced their self-esteem and socio-economic empowerment.

DEVELOPING AGRICULTURE AND AGRO-INDUSTRIES

Agriculture is crucial for Egypt's economy and particularly for poor households. It accounts for around 14 percent of GDP, employs 30 percent of the labor force and is responsible for about 20 percent of total exports. Nearly 40 percent of the poor in Egypt rely directly on agriculture. All of the poor in rural areas are either directly or indirectly affected by agriculture. Therefore, agriculture growth and the resulting growth in the nonfarm rural economy would have significant poverty reduction effects. Development of the agricultural sector would also have strong equalization effects as it reduces the large income gaps between urban and rural areas and between Upper Egypt and the rest of the country.

Extreme land fragmentation is a key feature of Egyptian agriculture. About 40 percent of Egypt's agriculture is divided into parcels of less than 3 feddans (about 1.2 hectares). This fragmentation is increasing due to demographic pressures, inheritance laws that divide the land up among all surviving children and the lack of a well-functioning land market that allows land purchase to form larger and more economically viable parcels. According to the most recent agricultural census, the area of arable land divided into

parcels of less than 3 feddans has increased from 2.3 million feddans in 1980 to 3.0 million in 2000. Increasing fragmentation has two important direct effects. First, about 12 percent of prime agricultural land is being lost in separations and boundaries between very small parcels. Second, average farmer income has stagnated even though productivity and real income per feddan have been rising by about 1.7 percent annually for the last 30 years.

Water availability is a binding constraint for agriculture development and rural poverty reduction. Egypt's rural population has nearly doubled since 1980 while the Nile's water resources are more or less fixed at about 55.5 billion cubic meters per year. The government has tried to increase water availability through the treatment of drainage water for its reuse for irrigation and through the greater use of underground water. On the demand side, there are several efforts to improve irrigation facilities and plant varieties in order to reduce average water use. However, the government has resisted introducing cost recovery for irrigation water. Agriculture development and rural poverty reduction in Egypt will depend crucially on the modernization of the water and irrigation system and the introduction of new crop varieties that require less water.

	1980	1990	2007
Wheat	11.9	16.1	17.9
Maize	17.1	16.2	13.6
Rice	8.7	8.5	11.0
Cotton	11.2	8.5	3.8
Vegetables	9.3	9.2	8.7
Fruits	3.1	7.1	8.4

Source: Egyptian Ministry of Agriculture and Land Reclamation (2009)

As described earlier, the agriculture sector has gone through a series of liberalization efforts since the 1990s. These reforms included liberalizing the land market as well as product prices. Moreover, farmers are now free to decide on which crops to produce on their land and they follow market signals. This has led to a change in the structure of Egyptian agriculture. As shown in Table 6 the area under cotton (traditionally Egypt's largest cash crop and main export) declined from 11.2 percent of the total in 1980 to 3.8 percent in 2007; while the area allocated for wheat production and for fruits increased significantly.

The structure of the agricultural labor force has also been changing rapidly. The proportion of young people has increased, reflecting the overall demographic change in Egypt. Moreover there has been a huge increase in the number of university graduates with agriculture degrees. However, according to the Ministry of Agriculture (2009) the quality of new graduates has declined significantly. Education institutions are not producing graduates with the types of practical skills demanded by the labor market. The ministry has been trying to remedy this situation by developing special training programs in areas where labor supply is insufficient to meet the demand.

With limited land and water resources, agricultural growth and farmers' incomes depend crucially on increasing yields. Over the last three decades yields for many crops have increased at fast rates. Wheat yields doubled between 1980 and 2007. Yields for rice increased by 67 percent over the same period, and water consumption per unit was reduced by 25 percent. During the same period maize yields increased by 90 percent, sugar cane yields by 44 percent, tomato yields by 116 percent and strawberry yields by 673 percent. On the other hand, yields of some major crops—like cotton—remained stagnant, which could

explain farmers' decisions to reduce the area under cotton production. Future growth and rural poverty reduction will require a continued increase in yields through technological enhancement.

Livestock production (including poultry and fisheries) represents 40 percent of the value of total agriculture production in Egypt. Moreover, it is an important source of income for small and landless farmers. Landless farmers own 17 percent of all cows in Egypt, 6 percent of all water buffalos, and 25 percent of all sheep and goats. Moreover, 93 percent of all cows, 86 percent of all buffalos and 55 percent of all sheep and goats are owned by small producers who own less than 10 animals. Demand for livestock products is increasing rapidly as income increases. Therefore, this is a sector that can contribute significantly to rural poverty reduction.

Marketing—whether domestically or for exports—is a serious constraint to agriculture development and for increasing farmers' incomes. The majority of small holders continue to use the traditional marketing system known as *kerala*. Under this system the crop is sold in the field at a price per *feddan*. The buyer takes control of the product in the field and handles the harvesting, selection, grading and transportation. An obvious problem with this system is that it does not allow for much price differentiation to reflect quality. This also means that the farmer gets a lower share of the market value of the product as the buyer needs to be compensated for harvesting and grading. For example, in the case of many vegetables the farmer's share of the market price is only about 20 percent. As Egypt tries to expand its exports, and as the domestic market becomes more quality-sensitive, some buyers are trying to make changes to *kerala* by introducing some quality criteria.

Weak marketing, storage and transportation systems also lead to large post-harvest losses. The Ministry of Agriculture and Land Reclamation estimates that about 15 percent of all of Egypt's agriculture output is lost after harvest. This is about average for developing countries. However, given the very tight water and constraint that Egypt is facing and the fact that poor farmers need to make a living out of very small land parcels, every effort needs to be made to limit and reduce this waste.

As shown in Table 7, agro-industries, which could make an important contribution to value added and employment generation in rural areas, are not sufficiently developed. A very small portion of agricultural production goes through any form of transformation, processing, preparation or preservation. And most of the agro-processing that takes place in Egypt (70 percent according to Ministry of Agriculture estimates) occurs in the informal sector. Agro-processors in the informal sector do not follow quality or health-safety

	Output (million tons)	Share transformed (%)
Tomatoes	8.6	0.7
Potatoes	2.3	7.8
Other vegetables	9.4	1.8
Fruits	9.8	0.9
Meat and poultry	1.5	0.3
Milk	5.0	25.0

Source: Ministry of Agriculture (2009)

norms and sell their products cheaply in local markets. There are virtually no long-term contractual arrangements between farmers and agro-processors. The processors rely on buying what is available in the market, which may not always fully reflect their needs in terms of quality and quantity.

Although Egyptian agriculture has tremendous export potential, particularly to European and Gulf markets, export growth has been relatively slow and concentrated in a few traditional commodities; raw cotton, rice, citrus fruits and potatoes. The contribution of nontraditional products in which Egypt has a competitive advantage (including different fruits and vegetables, medicinal plants, cut flowers, et cetera) to export growth has been very weak. Export development has

been hampered by inadequate transport infrastructure, market information and quality assurance processes to ensure that health and safety standards are met. Moreover, the vast majority of small holders do not participate in export activities due to the lack of contractual arrangements between small holders and exporters as well as to the lack of attention to quality.

On the positive side, several examples show that when provided with adequate support small holders are able to meet quality standards and sell for export, thus considerably increasing their incomes. Some civil society organizations have been active in this area with good results. The SUN nongovernmental organization (NGO), which was created in 2002 and operates in Upper Egypt, is a good example. This NGO

works with small holders. It organizes them into associations and provides them with technical, managerial and marketing support. It links small holders to large producers and exporters through different contractual arrangements and out-grower schemes. In its first five years of operations it signed nearly 900 different contracts with exporters and agro-processors. It also prioritizes women participation in the program. By 2007 more than 12,500 small holders had joined SUN associations. They exported nontraditional products worth 85 million Egyptian pounds and estimate that participants' income rose by 60 million pounds.

The challenges facing Egyptian agriculture and rural development, as well as the opportunities, are well known and the Ministry of Agriculture and Land Reclamation has developed a comprehensive strategy for the sector until the year 2030. The strategy has six objectives: improve rural living standards and reduce poverty; increase the sector's contribution to national food and nutrition security; sustainably use natural resources; enhance land and water productivity; increase the sector's competitiveness on international and national markets; and improve the climate for agricultural investments.

The strategy presents a long-term vision and a large number of actions that need to be taken over the next 15 to 20 years to achieve it. In today's political environment in Egypt it is important to focus on a few short-term actions that can bring about fairly quick results. Moreover, since small-holder and landless farmers constitute the vast majority of rural dwellers as well as the majority of poor people, policies should target small producers and help them raise their productivity and improve their linkages to national and international markets.

Private investment in rural areas is important for enhancing livelihoods and employment. Receiving land titles is a major constraint, as it could take more than 10 years to obtain a title to agricultural land. This discourages investment and makes it difficult to use land as collateral for bank loans. Moreover, investors in both agriculture and agro-industries face very complicated procedures and are required to obtain permits and clearances from several different ministries and public entities. The Ministry of Agriculture's strategy includes actions to simplify procedures, encourage investment and facilitate access to credit. Those actions could be undertaken quickly and provide a signal that the government is serious about rural development.

Organizing small holders, providing them with extension services to increase productivity and improve quality and linking them with local super markets as well as exporters is an important way of raising their incomes and helping them get out of poverty. The SUN example discussed above demonstrates how civil society can play a key role in this area. However, this is just an isolated example and civil society's role in rural development has been quite limited. As shown by Kharas and Abdou (2012), government has not been encouraging those activities and the legal framework facing civil society organizations is very constraining. The Ministry of Agriculture's strategy recognizes the importance of developing the activities of rural NGOs and presents proposals on how to achieve that. It argues for new simplified legislation governing all rural NGOs. The Ministry is also willing to provide administrative as well as technical support to those organizations, and help linking them with agriculture research institutes and universities. Again, those are actions that can be started quickly to achieve early and tangible results.

Producer organizations are a special form of NGO that can play an important role in strengthening the governance system of the agriculture sector, and particularly in developing and supporting small holders. Problems caused by the large number of very small farms can be tackled through the development of strong producer organizations that group farmers together to ensure that their voice is heard in policy discussions, and also help enhance access to technology, inputs and markets. The lack of strong organizations representing small holders together with their low level of political participation may explain why

development strategies and policies tend to be biased in favor of urban activities. Independent and strong producer organizations could play an effective advocacy role and could help lobby politicians to promote the interests of farmers. Producer organizations could also play an important economic role, grouping farmers together to enhance their access to technology and inputs, and to improve market access and help them retain a larger share of value added. In fact, civil society organizations are often much better placed than government agencies to deliver extension and technical support to small farmers.

CONCLUDING REMARKS AND THE ROLE OF DEVELOPMENT PARTNERS

A strategy to achieve inclusive growth in Egypt cannot ignore the problems caused by regional inequalities and rural poverty. This paper proposed an approach to dealing with those issues that includes: (1) moving to a more inclusive system of planning and budget allocations that would ensure that more resources flow to lagging areas; (2) revising the social safety net system to rely more on cash transfers that are targeted to the poor; and (3) implementing agriculture policies that focus on supporting small holders and linking them to national and international markets.

Egypt's development partners have a great deal of experience in those areas and could provide important support to achieving inclusive growth through financing and knowledge sharing. The Japan International Cooperation Agency is already supporting a project on inclusive planning in Egypt. Implementation of this project would help in improving the allocation of public investment. The World Bank has done extensive work on social safety nets and can support reforms in this area. Several donors are funding agriculture development and could scale up their interventions and focus them on supporting small holders.

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ISSN: 1939-9383

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