

Egypt Within the Sustainable Development Goals One and Two of the United Nations: Overview and Recommendations Thereof

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Abstract

The objective of this article is to (1) posit indicators to measure the performance of Egypt in achieving United Nations' Sustainable Development Goals one, to end poverty in all its forms and two, zero hunger, and (2) develop policy recommendations with regards to reducing poverty. Research methods include a systematic macro-process, general to narrow analysis, offering indicators and policy recommendations for governments to follow in achieving the sustainable development goals on poverty. The article is significant since it links between macroeconomics of poverty, an analysis of the quality and quantity of research conducted on the topic, the poor economics individual perspective, examples of pre and post-covid sustainable development goals one and two actual performance. Conclusions convey that poverty alleviation requires a combined public, private, and institutional collaboration to enhance the poor community capacity building, domestic resource mobilization techniques, efficient resource allocation and an awareness of the importance of implementing the sustainable development goals.

Keywords: sustainable development goals, poor economics, SciVal, poverty, domestic resource mobilization, community capacity building

JEL Classification: D601, I32, I38

1. Introduction

The objective of this article is to (1) suggest performance indicator methods of Egypt, a low middle income country as classified by the World Bank, in achieving United Nations' Sustainable Development Goals SDG1, to end poverty in all its forms and SDG2, zero hunger, and (2) embed the implementation of policy recommendations with regards to reducing poverty. The article is significant since it offers a series of interlinked indicators pushing towards the achievement of SDG 1 and SDG 2 including traditional macroeconomic indicators, quality and quantity research indicators conducted on Egypt's SDG 1 and 2, governance indicators in terms of efficient resource allocation, domestic resource mobilization and community capacity building, the poor individual Banarjee and Duflo's poor economics perspective, and actual performance indicators.

The 81st United Nations Geneva Conference in June 1994 highlighted poverty, a then-new concept, as a threat to individual security and to national security. During the conference several participants proposed solutions to poverty, with a highlight on how social development embeds itself within the reallocation of scarce resources (given the continuous growth of populations) not necessarily to the poor but to the poor that have potential to be productive. In order to level up to the status of an advanced country, poverty became an encumbrance goal for emerging countries (World Bank, 2014). The interconnection between poverty and hunger was institutionalized in the UN's Millennium Development Goals (MDGs), and later reiterated in the Sustainable Development goals, (SDG1), and (SDG2). The United Nation's 2030 Agenda for Sustainable Development provided a plan of comprehensive action linking between the people, the planet, and prosperity to progress towards the goal of leaving no individual and/or country behind.

Researchers, governments and experts share enthusiasm for the SDGs in eradicating poverty and enhancing sustainability (Proulx, Ruckert and Labonté 2017). The Arab Forum for Environment and Development FED 2017 report argues that innovative methods rather than the traditional methods are required to achieve SDGs. The economics of poverty has been traditionally discussed in a broad manner, with addressed questions that have had no

concrete answers i.e. what causes poverty? Is democracy beneficial for the poor? Does foreign aid reduce poverty? Jeffrey Sachs (2004), adviser to the UN, put emphasis on the poverty trap, where poor countries are doomed to remain poor because of initial “landlocked and unproductive” circumstances that require “large investments” with “no way of paying for such investments.” Poor economics, a new mindset, developed by Banarjee and Duflo (2011) recommends people to “abandon the habit of reducing the poor to cartoon characters and take the time to really understand their lives, in all their complexity and richness.”

2. Material and Methods

Research methods, at the macro-level, sets several integrative and systematic, general to narrow processes including an (a) analysis of previous literature on SDGs 1 and 2, sustainability and poverty (b) testing SDG awareness and implementation by analyzing the quality and quantity of research conducted in that area (c) testing efficient resource allocation through an analysis of macroeconomic and sustainability indicators for Egypt (c) testing resource mobilization through an analysis of public funding on SDG 1 and 2 (d) testing for community capacity building by focusing on the poor individual, poor economics, and the actual performance of the government. The article offers a set of policies and recommendations .

Data, extracted from previous literature, theoretical frameworks, country specific statistical data is used.. Reports from the United Nations, World Bank, previous empirical studies, and SDG reports such as (1) The Sustainable Development Goals Report 2017, (2) SDGs: Are the Rich Countries Ready? (3) SDG Index and Dashboards Report 2017: International Spillovers in Achieving the Goals are also utilized.

Egypt is selected as the country case study due to its economic significance as one of the key players in the Middle East and a country of high potential in achieving sustainability (Poshakwale and Qian 2012).

3. Literature Review

The literature review, on an academic level, revealed the existence of gaps for the topics covering SDG1 and SDG 2 indicators in Egypt. One of the limitations while conducting this research was the difficulty in finding literature and/or previous empirical studies concerning the evaluation of the performance of SDGs. The literature review analyzes the concepts of sustainability, the different poverty alleviation techniques discussed in previous literature which could be applicable to Egypt as a case study, and a final analysis of SDG evaluation methods.

Sustainability and Sustainable Development

The concept of sustainability varies in its operational terms. **Sustainability** is a springboard of “needs, development, generational equity” dictating into “economic efficiency, environmental protecting and social justice goals” (Brundtland 1987). According to Herman Daly (1996), sustainability is classified into ecological, economic, political, social and cultural sustainability. Ecological sustainability has an effect on the other types of sustainability (1) questioning the rate of harvesting over the rate of nonrenewable resources regeneration (2) questioning the rate of waste generation i.e. pollution over the assimilative capacity of the environment (Barmerger et al 2016). Sustainability linked with resilience creates a system capable of maintaining its basic functions, resisting shocks, recovering quickly and effectively from catastrophes. In other words, resilience accompanied with sustainability enables countries to survive (World Commission on Environment and Development 1987). **Sustainable Development SD**, a concept derived as an outcome of the Rio +20 Summit, is development that satisfies present needs without compromising the needs of future generations (Fernando 2003). Progress towards sustainability should be met with a set of achievable goals that require targets and indicators, taking into consideration variations in countries capacities and development levels (Feijoo et al 2020).

Sustainable Development Goals SDGs

Despite the continuous focus on poverty alleviation and prosperity, the United Nations **Sustainable Development Goals SDGs**, are a reflection of the growing concerns of the future generations, with the need for social inclusion, ensuring that no one is left behind (Feijoo et al, 2020). Holden et al (2017), debated that setting a standard definition for sustainability would have made the operationalization of SD through the SDGs simpler to implement given the original purpose of SDGs as a mainstreaming on sustainable development at all levels and dimensions (Janouskova et al. 2018).

The coronavirus pandemic crisis COVID-19 (Note1) has questioned whether the march towards sustainability has been effective so far or not, specifically in containing the pandemic (United Nations Report Shared Responsibility and Global Solidarity 2020). In line with that, Mendelson (2020), argued that there was a high degree of unawareness and world commitment with regards to the SDGs before the pandemic crisis. According to Eissa (2020b), the

COVID-19 outbreak has proved the dependency between poverty, inequality, health outcomes, and unemployment via job security, , all being part of the SDGs; in other words, the COVID-19 pandemic has reshaped the importance of awareness of SDGs (Mendelsen 2020). Managing scarce resource to provide resilience, is a poverty alleviation technique. Priority setting by building resilience, comparing marginal benefits to marginal costs, avoiding ineffective strategies are steps in building a resilient state (Eissa 2020b).

Community Capacity Building CCB

This section is based on previous studies that have developed recommendations and techniques for reducing poverty in various countries.

Community capacity building CCB, one of the poverty alleviation techniques, supports the achievement of the sustainable development goals. CCB is an enabling process focusing on the poor individual, to develop skills, knowledge, and competencies in order to sustain their own lives (Noya et al 2009). Policy makers play the participatory role in building the human capacity of the poor” (Saab and Sadik 2016).

CCB is more related to Banarjee and Duflo’s (2011) concept of poor economics; individual security through welfare economics is the responsibility of policy makers, to ensure the pride of poor individuals by confidence building in both man power i.e. health and brain power i.e. education. Banarjee and Duflo 2011 confined quantitative indicators to literacy rates, mortality rates, employment rates etc. but in order to avoid transferring poverty characteristics from one generation to the next, and to avoid the poverty trap, a mutual understanding between the government and the poor is required. Individual security is based on an understanding of the rationale behind the trade-offs the poor are facing and about gaining trust and confidence in governmental activities towards poverty alleviation. Avoiding poverty gaps requires an upgrade in skills through vocational training (with education greatly inhibiting the transmission of poverty. Measurements include human development indicators in health and education include the average years of education (15 +), average years of university average years of post-graduate studies, vocational training especially in basic English and computer skills is required.

Various models that support CCB have been discussed in various literature. ABCD models, were introduced to support sustainable rural development leading towards policies focusing on enhancing the capacities, skills, assets of the lower income individuals (Kretzmann et al 1993). The Ford Foundation, a good example by Kretzmann et al 1993, of the implementation of the ABCD model, guaranteed the construction of individuals through the acquisition, development, improvement and transfer of skills across generations. This occurs through (a) financial holdings of the low-income people and whether they are able to sustain their living or not (b) social bonds and relationships, whether the low-income people are isolated or are receiving security and support (c) human assets such as marketable skills whether low-income retain a payable employment. O’Leary et al. (2006) developed the model for the development of listening skills, comprehending issues of capability and power of the poor individual, learning not to judge. Another model to achieve CCB is the provision of routine informational and supportive campaign on essential welfare benefits that offer either new or missing pieces of information to the poor using credible and official delivery systems be it television advertising campaigns (Banarjee and Duflo 2011). In Egypt, “Virus C and Obesity Campaign” were propagated on television ads in 2017 (WHO 2017). Performance indicators include the number of visitors to such campaigns, the reduction of illiteracy measurements.

Domestic Resource Mobilization Techniques

The implementation of SDGs involves the commitment towards the achievement of domestic resource mobilization DRM at the international level, public-private level, and the poor individual level. Advanced countries becoming aware of the limitations and scarcity of their resources, have started focusing on domestic resource mobilization DRM, limiting their international cooperation to lower income countries (Nnadozie et al. 2017). DRM in emerging countries gained momentum to improve efficiency and sustainability, through the use of domestic savings in terms of funding sources rather than through external borrowing to finance these countries (Biekpe et al 2017). According to Ashour & Ibrahim (2017), DRM provides the emerging countries with flexibility, positive externalities, and a sign to foreign investors willing to augment the inflow of external resources.

From a sustainable development perspective, DRM integrates between both the public sector and the private sector in mobilizing resources for productive use to assure financial access to small and medium enterprises (Biekpe et al. 2017). On the individual level, according to Banarjee and Duflo (2011), the government plays the resource mobilizer through “power defaults” assisting the poor in proximity of factors to services, in regulatory framework easiness such as opening saving accounts in official financial institutions, and additional inclusion in the system. Egypt’s governance objective, for instance, is to promote security, transparency, and effectiveness to better align governance

with public expectations (Bardhan 1997). Government effectiveness is measured by the World Bank's Governance Effective Index, International's Corruption Perception Index. Improving governance creates a more productive economy with higher government revenue (Bardhan 1997).

4. Performance Indicator #1: SDG Awareness and Implementation

Research Methods

The article used SciVal (Note 2), a tool provided by El Sevier to measure different entities and evaluate the research performance of the world and Egypt within the scope of the SDG1 and SDG2. SCI data analytics and performance metrics are based on SCOPUS (Note 3) database, the world's largest abstract and citation database of peer reviewed literature indexing the scholarly documents from more than 2400 titles from over 5000 publishers. The product team of SciVal have created predefined research areas in SciVal to help end-users gain a better understanding of the research done by various countries, institutions and researchers in each SDG. The research areas are based upon the results from expert curated Scopus queries. Full details of the methodology and results for each search query are freely available on Mendeley (Note 4).

Research performance in this context is based upon the research output of the selected entity whether it is the world, a country, an institute or an actor. A three dimensional approach is applied where the first dimension is the volume of the scholarly output, the second is the quality of journals in which the articles are published and the third dimension is the impact measured by the citations received by the scholarly output.

The quality of the journals is measured by the journal quartile, where Q1 represent the top 25% of journals within their respective fields, Q2 journals represent the 26% to 50%, Q3 journals represent the 51% to 75% and Q4 represent the 76 to 100% rank of journals within their respective fields. The impact of the research output is measured by citations received by the publications, compared to the citations received by similar publications having the same age, document type and subject area. The field weighted citation impact FWCI is the metric provided by SciVal which normalizes the citations received by an article to those expected from similar documents in the same field. In this case, a FWCI of one represents the world average, meaning the citations received are as expected compared to the world average, a value smaller than one means that it is below the world average and vice versa.

In this study, the time period of interest was the past complete five years plus the current incomplete year i.e. 2014-2019.

Research performance in Egypt with regards to SDG1: No poverty

The overall research output of the world within SDG1 for the years 2014 to 2019 is 12464 (as of 14/12/2019) where the FWCI is 1.08 and 44.6% are published in Q1 journals, 23.9% in Q2, 8.1% in Q3, and 13.4% in Q4. During the five complete years, there has always been a year on year increase in the output, with 2369 publications in 2018 and 1951 publications in 2014. The top five countries to the field in terms of scholarly output are the United States, United Kingdom, India, China, and Australia with 2905, 1596, 728, 695, and 670 publications respectively. Egypt is the 75th on the list in terms of scholarly output with a mere 22 publications, the average FWCI of those 22 publications is 0.52 i.e. in average the citations received are half than the expected compared to the world average. Regarding the quality, 50% of the output is published in Q1 journals, 25% in Q2 journals, 12.5% in Q3 journals and 12.5% in Q4 journals. There is no clear institution within Egypt leading research within SDG, with the highest one being the American University in Cairo AUC with four publications, three from Cairo University, two from the National research center, to from Damamhur University with all other institutions on the list having one publication.

Research Performance in Egypt with regards to SDG2: Zero Hunger

The overall research output of the world within SDG2 for the years 2014 to 2019 is 100570 (as of 14/12/19) where the FWCI is 1.15 and 52% are published in Q1 journals, 18.9% in Q2 journals, 16.1% in Q3 journals, and 13.0% in Q4. During the five complete years of this period, there has been a year on year increase in scholarly output with 20343 publications in 2018 and 14159 publications in 2014. The top five countries to this SDG in research output are United States, China, India, United Kingdom and Brazil with 19540, 16770, 8131, 6484, and 5321 publications respectively. Egypt is 31st on the list with 970 publications. The average FWCI of these 970 publications is 1.03 i.e. 3% above the world average. Regarding the quality, 41.1% of the output is published in Q1 journals, 18% in Q2 journals, 28.4% in Q3 and 12.4% in Q4 journals. Top five institutions in Egypt active in this SDG include the National research Center, Cairo University, the Agricultural research center, Zagazig University and Ain Shams University with an output ranging from 261 to 264 publications. However, none of them have a FWCI larger than one, with values ranging from 0.51 to 0.94. Other Egyptian institutes with noticeably high FWCI are Kafr el Sheikh University (scholarly output of 40 and FWCI of 1.77), Suez Canal University (39 and FWCI of 1.55), Tanta

university (32, and FWCI 3.03), Benha University (31, and FWCI 1.98) and Al Fayoum University (29 and FWCI of 2.22)

It is noticeable that the publications of Egypt that have international collaboration have a larger FWCI than those without. 44.1% of the publications have international collaboration with 1.39 FWCI. 20.8% have only national collaboration, 24.2% only institutional collaboration and 10.8% singled authored publications, with respective FWCI of 0.78,0.89 and 0.33.

Policy Recommendations to Raise SDG1 & SDG2 Awareness

1. The scholarly output of Egypt within this SDG1 and SDG 2 is too small to draw any meaningful conclusions. Therefore, we recommend more funds, more awareness, more capacity building activities.
2. Academic institutions and research centers supported by the Egyptian government are expected to provide research grants, funds, in order to increase the number of quality publications on the SDGs and their implementation. International collaboration is also recommended. Successful indicators include an increase in the number of research papers indexed internationally. The development of a governmental research center specializing in SDG targets in Egypt is also essential.

5. Performance Indicator #2: Efficient Use of Resources

Efficient use of resources is necessary in order to achieve and assess SDG 1 and 2 but this was somehow difficult to assess given the lack of studies whether empirical and/or theoretical on achieving SDG 1 and/or SDG2. Efficient use of resources in this context is conducted by identifying the gaps in SDG within the current and forecasted macroeconomic performance indicators and by offering performance evaluation techniques applicable to SDGs 1 and 2. In comparison to 2019 where according to the SDG Index and Dashboard for the Arab Region Report, Egypt was somehow “achieving track” with regards to SDG1 but in stagnation when referring to SDG2 (2019), the 2020 Sustainable Development Report confirmed Egypt’s progress to the 83rd worldwide out of 166 states, moving up nine spots. In comparison to other lower middle income countries, the SDG index for Egypt 2017 was relatively higher, 64.9 relative to Bangladesh 56.2, Congo 50.9, Nepal 61.6, Mauritania 51.1, and India 58.1. According to Sachs et al. (2019), countries such as Egypt have experienced great SDG success however in comparison to global regions, progress remains modest.

Macroeconomic Indicators

As seen in table one, Egypt’s GDP grew at around 5% per year, reaching a peak in 2008 of 7.2% while per capita growth increased at an average of 3% per year. Egypt’s GDP is forecasted to more than double reaching \$ 577 billion by 2030, growing at a 5 to 6 % annual increase. Table Two displays a decline from 7.4% in 1990 to 1.3% in 2015, in the population percent living on less than \$1.90 per day, poverty is expected to decline by 2030 in relative and absolute terms. Projections on population growth imply that in 2030, 16.7 million Egyptians could still be suffering from poverty with a living of less than 3.10 \$ a day accompanied by a growing middle-class group as shown in Figure one.

Table 1. Current and forecasted GDP growth rates (MENA Region)

Country	GDP growth rates %		GDP per Capita growth rates (%)	
	2000-2010	2017-2030	2000-2010	2017-2030
Egypt	4.9	5.3	3.0	1.9
Algeria	3.8	2.2	2.4	0.2
Lebanon	4.4	1.9	2.5	0.8
Jordan	6.1	2.9	2.7	1.1
Morocco	4.7	3.5	3.4	1.6
Malaysia	5.0	5.2	3.0	2.3

Source: Data from IMF (2018), Source: Sustainable Development Goals Report : Egypt 2030 (2018).

Table 2. Poverty indicators in Egypt (Current and forecasted)

Poverty rates	Percent of Population			Headcount Millions		
	1990	2015	2030	1990	2015	2030
Less than \$1.90 per day	7.4	1.3	0.66	4.2	1.2	0.82
Less than \$3.10 per day	37.9	22.3	13.7	21.8	20/9	16.7
Current national poverty line	NA	27.3	17.2	NA	25.6	21.1

Source: World Bank 2017, Sustainable Development Goals Report: Egypt 2030 (2018).

Poverty rates in 2011 US dollars in Egypt as a percentage of the population and headcount millions in 1990, 2015, and 2030.

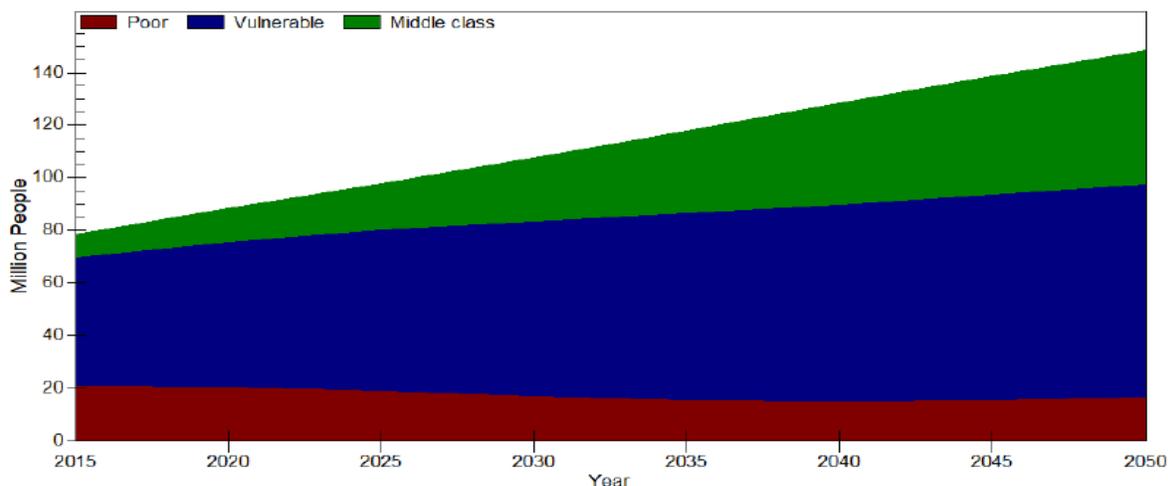


Figure 1. Egypt's class income distribution 2015 to forecasted 2050 in millions of people (Vulnerable: \$3.10 <earnings <\$10 per day, poor <\$3.10)

Source: Sustainable Development Goals Report: Egypt 2030 (2018).

Although there are projections that population will grow, there are also counter projections that GDP per capita will also grow, using the best fitted model is ARIMA 1,1,2. Forecasted models are useful since they can be fed into structural models simulating and enriching the policymaking process for promoting future economic growth (Eissa, 2020a).

Quality versus Quantity SDG2 Efficient Resources Allocation

With regards to SDG2, primarily, the stereotype that there is a link between poverty and malnutrition dictates countries to eradicate hunger SDG2 by blindly providing food with quantity being more important than quality, and thus a dictation of inefficient distribution of resources. This is in fact the traditional example of Sach’s poverty trap, that the poor cannot feed themselves and thus become less productive, and that keeps them poor. For that rational, governments increase food subsidies, to ensure that their citizens are not “hungry and thus not poor.” Although the Egyptian governments spends a high percent of its GDP on subsidies, both food and energy, around 2% and 6.5% of GDP over the period 2017-2018 (Ministry of Finance 2017-2018), the percentage of “malnourished” children in Egypt dramatically increased whether because of calorie deficiency or because of child obesity. In either case, this is an indicator that the rationale to eradicate hunger is not effective.

Second, the projection that Egypt's population is to expected grow to 122 million by 2030, means that per capita will most likely decline against limited supply of resources (Ezz and Arafat, 2015). The trade-off equates to high growth yields against shrinking water supplies, to reliance on imports to support the rising population is illustrated in Table Three. Forecasts imply a reduction in production to demand ratio for agriculture, energy, and water cubic foreshadowing an inefficient use of scarce resources to satisfy the demands of the rising populations.

Table 3. Supply and demand of SDG2 indicators agriculture, energy and water (2000-2015, forecast 2030)

Sector	Indicator	2000	2015	2030
Agriculture (Million metric tons)	Agricultural Production	70.3	100.7	116.7
	Agricultural Demand	81.3	124.3	167.9
	Production/Demand Ratio	0.87	0.81	0.69
Energy (billion barrels of oil equivalent)	Total Energy Production	0.369	0.537	0.705
	Total Energy demand	0.308	0.537	1.031
	Production/Demand Ratio	1.2	1	0.68
Water Cubic (Kilometers)	Water supply	NA	78	72.6
	Water demand	68.3	78	74.2
	Supply/Demand ratio	NA	1	0.98

Source: Sustainable Development Goals Report: Egypt 2030 (2018). Sources: FAO 2017, IEA 2017,

Evaluation Methods for SDG1 and SDG2

The traditional analysis of GDP and its forecasts are underpinning the problem of measuring poverty and SDG 1 and 2 performance. Indeed, it is inevitable not to use GDP growth rate as an indicator of economic growth. However, it should not be the only indicator. According to Abhijit Banerjee and Esther Duflo, "the GDP is an imperfect measure of human welfare. GDP2, a new suggested indicator, developed by Thomas Piketty, Emmanuel Saez, and Gabriel Zuckman, is recommended as a "complement to existing aggregate GDP reports" as it disaggregates the income growth of different groups in the population (2019).

Furthermore, in order to avoid running into inefficient resource allocation, leveled-evaluation tools are required to monitor the performance of Egypt within SDG 1 and SDG 2 parameters for poverty alleviation. According to Bamberger et al (2016), three levels of evaluation are to be managed: level one: national policies, level two: policies involving broad based programs of public and private partnerships and level three: policies involving projects with limited components. According to Rania Al-Mashat, Minister of International Cooperation, bilateral cooperation and multilateral collaboration are required through global collectivism in order to overcome global crises such as COVID-19 and at the same time to create a platform of shared experiences and partnerships in the execution of projects (Ministry of International Cooperation 2020, August 30). Evaluation approaches that could be applicable to Egypt are summarized in Table 4.

Table 4. Evaluation approaches to enhance the performance of SDG 1 and 2 and to alleviate poverty

Evaluation Approach	Assessment Objective	Evaluation Tools
Policy Evaluation	Assessment of the implementation of SDG1 and SDG2 in achieving developmental objectives, poverty alleviation.	Reliance on the Development Assistance Committee DAC Evaluation Criteria of the Organization for Economic Cooperation a) Relevance b) Efficiency c) Efficacy d) Impact e) Sustainability

Formative Evaluation	Assessment of consistent feedback to public and private stakeholders to enhance the implementation of poverty alleviation programs.	Qualitative, Quantitative and mixed methods approaches whichever is more convenient.
Developmental Evaluation	Assessment of progress and improvement through experiences and lessons learned for private and public stakeholders, enhancing future poverty alleviation programs through innovation.	Close collaboration between managers and evaluators to implement and adapt.
Summative Evaluation	Assessment of intended project goals attributed to evaluation the need for project intervention or not.	Qualitative, Quantitative and mixed methods approaches whichever is more convenient.

Source: The author extracted from (Bamberger et. al 2016, Patton 2011)

Policy Recommendations to use Efficient Allocation of Resources

A shift in mindset, in the formulation, implementation and evaluation of SDG 1 and SDG2 is required in order to alleviate poverty, enhance the given parameters and lessen the reliance on traditional macroeconomic indicators that are of course inevitable to rely on but can be pushed forward with an integration of approaches.

6. Performance Indicator #3: Domestic Resource Mobilization DRM

Domestic resource mobilization as stated earlier in the literature review involves providing levels of SDG 1 and SDG 2 financing schemes to ensure their implementation; one level is to enhance SDG implementation tangibly on the national level through multilateral cooperation among international agencies, ministries, and central banks. The second level is more specific involving the implementation of SDGs tangibly on the individual level, mainly through financial inclusion to alleviate poverty.

DRM Financing Schemes on the National Level to Implement SDG 1 and SDG 2

Financing SDGs involves a set of national challenges (Ashour & Ibrahim 2017). Primarily, a coordination framework between international agencies, ministries and central banks allows the successful implementation of SDG goals effectively. The availability of data and the information necessary to monitor and measure progress towards the achievement of these goals is further necessary. Table 5 provides a framework of DRM on the national and global levels for Egypt when implementing SDG1 and SDG2.

Table 5. DRM funding framework for the implementation of SDGs 1 & 2

Sources	National Level	Global Level
Financial Sources	Public private partnerships	Relief of Debt
	Revenue from domestic sources	Foreign Direct Investment FDI Official Development Assistance ODA
Sources that are not financial	Governance schemes	International dialoging frameworks
	Monitoring schemes on corruption, institutional capabilities	International collective data compiling and monitoring techniques
		Assessment of export capacity enhancement
		Assessment of remittances allocative enhancement in the economy.
		Regional partnerships

Source: The author from: Bhattacharya & Ali (2014)

Domestic resource mobilization through financial global funding has been pushed forward post-covid 19 with Minister of International Cooperation, Rania Al-Mashat, signing \$90 million agreements with the United States Agency for International Development USAID on six projects aimed (1) to build on improving student skills and training teachers in the education sector (2) to build on creating an educated workforce (3) to improve research, science, technology (4) to improve the efficiency of the rural and agricultural sector (5) to improve the health-welfare of the Egyptian individual through family planning programs, increasing sustainability and (6) to stimulate investment and trade, increasing labor productivity and raising individual standard of living (Ministry of International Cooperation (2020, August 30).

An example of a nonfinancial source of domestic resource mobilization is Egypt's Ministry of International Cooperation Global Partnerships for Effective Development Cooperation through global dialogues, coordination efforts with all multilateral and bilateral development partners on policies and strategies related not only to response efforts but more importantly to the recovery (Al-Mashat on Achieving Sustainable Development Goals amid Virus Crisis 2020)

Policy Recommendations for SDG 1,2 DRM at the National Level

Policy Recommendations for DRM are extracted from steps for SDG financing in Africa to be implemented as a model framework to Egypt (SDGC/A-The SDGs Center for Africa 2017).

1. A re-assessment of national and regional plans concerning the SDG 1 and 2 Agenda, pinpointing a coherent and holistic framework.
2. A re-evaluation of investment gaps implied by SDGs 1 and 2, led by the Ministry of Finance, focusing on individual sustainability factors such as health, education, agriculture, energy, and the environment.
3. A re-assessment of the techniques required to reduce investment gaps led by the Central bank and followed by development banks at all scales through international designs, innovation frameworks and developments in SDG alignment.

DRM Financing Schemes on the Individual Level to Implement SDG 1 and SDG: Financial Inclusion

To tangibly feel the alleviation of poverty and the enhancement of SDG 1 and 2, structural reforms post-covid-19 crisis, urged the pushing through to further advance into more progress towards financial inclusion and financial digitalization by the Ministry of International Cooperation, through policies targeting all groups, to increase financial literacy raising awareness that financial inclusion is an economic growth enabler. The Central Bank of Egypt has played a role in promoting and coordinating financial inclusion, considering it a strategic objective. Financial inclusion enhancing tools involve mobile wallets, cardless ATMs, international transfers, village savings and loan associations VSLA, nano finance (Federation of Egyptian Banks FEB and Federation of Egyptian Industries. (2017, September). In fact, financial inclusion is considered a national priority as dictated by one of the agendas of Egypt's Sustainable Development Strategy SDS: Egypt's Vision 2030 (Eissa & Rashdan 2020).

Policy Recommendations for SDG 1,2 DRM at the Individual Level

The embedment of tangible domestic resource mobilization involves policies that would ensure the implementation of both financial literacy and financial awareness.

7. Performance Indicator #4: The Individual: Community Capacity Building

In the narrower context, enhancing the skills of the poor individual as the core resource is vital according to the Poor Economics concept of Banarjee and Duflo. The poor individual community capacity building approach through various projects by the Egyptian ministries has placed the poor individual as the core, narrowing down welfare economics to the individual level. Table six provides several examples of community capacity building projects by various ministries in Egypt. Such projects could be evaluated using the project evaluation techniques discussed earlier in the paper.

Table 6. Government projects aimed improving human individual conditions/human capital (Pre-covid-19)

Project	Objective
The Bedouin Community Development National Project, in collaboration with the Ministry of International Cooperation, Saudi Fund for Development, and the Arab Fund for Economic and Social Development	This project is based on community capacity building, resource mobilization through international funding, purposed to enhance community capacity building, distribute resources efficiently and focus on the Bedouin individual, offering agricultural complexes, educational insituttions, housing units, clean water services (Ministry of International Cooperation 2020).
Three-year Advisory Program to increase women employment opportunities between the Ministry of International Cooperation and the International Finance Cooperation	This project offers efficient resource allocation placing women, as macro-critical in their participation (Al Mashaat 2020) to economic growth, stressing on private and public collaboration to ensure the welfare opportunities for women as individuals in the society and as part of the labor force.
Egypt Education Reform Program New Modalities in education for Current and future generations led by the Ministry of Education and Technical Education	The main objective is enhancing individuals with access to e-learning and technology based learning opportunities, especially post-covid crisis where scaling up-technology based learning became a priority, for example through the distribution of tablets and enhancing access to increasingly sophisticated digital resources through a state-of-the-art Learning Management System.
Social safety net programs such as Takaful and Karama cash transfers	The main objective of this program is to target approximately 2.25 million households (over 10 million citizens), with a total finance reaching \$900 million, focusing on economic inclusion.
Upper Egypt Local Development Program Collaboration between the government and private businesses	This project is aimed to improve the occupancy rates in industrial zones by 30% by improving local government capacity to better deliver services to citizens and improve local economic conditions in Qena and Sohag.
Household Gas Connections Project	This is aimed to provide 2.3 million rural households with reliable, lower cost, grid connected natural gas supply by 2021.
Sustainable Rural Sanitation Services Program	This brings sanitation services to 1,727,000 people living in highly polluted villages and satellite areas of the Nile Delta, through the construction of household connections and wastewater treatment facilities.
Inclusive Housing Finance Program	It aims to improve the affordability of low-income housing by strengthening the capacity of the Social Housing Fund, designing policies and coordinating programs.
Health Care Quality Improvement Project	This improves distribution to health care services, eradicating Hepatitis C and providing access to a basic package of health, nutrition and population services.
Innovation for Financial Access Inclusion	Using innovative financial inclusion methods, this allocates access to finance for micro and small enterprises using innovative financing mechanisms, focusing mainly on youth and women.

Source: the author after analyzing several sources. National Voluntary Review on the Sustainable Development Input to the 2016 High-level Political Forum (HLPF) on Sustainable Development

Policy Recommendations on the Narrower level: the Poor Individual through Community Capacity Building

1. We recommend progress in terms of awareness on the national and individual level towards the importance of the individual, his/her welfare status, skills, acquisition of knowledge and services.
2. Evaluation follow-up methods (policy evaluation, formative evaluation, developmental evaluation, summative evaluation) are recommended to ensure the activation and efficiency of the suggested projects.

8. Conclusion

Integrative human capacity building of the poor individual's character and the activities provided by institutions ensure integrated policy formulation, stronger cooperation and coordination among different policy makers, government entities, and economists. This paper provides a set of policies, evaluation techniques for the

implementation of SDG1 and SDG2 applicable to Egypt and elsewhere. In all levels, what is significant is understanding that poverty policies are based on trial-and-error, because they are based on the human rationale. Poverty alleviation requires a combined public, private, and institutional collaboration to enhance the poor community capacity building, domestic resource mobilization techniques, efficient resource allocation and an awareness of the importance of implementing the sustainable development goals.

Policy Recommendations to Raise SDG1 & SDG2 Awareness (Scholarly Output)

1. The scholarly output of Egypt within this SDG1 and SDG 2 is too small to draw any meaningful conclusions. Therefore, we recommend more funds, more awareness, more capacity building activities.
2. Academic institutions and research centers supported by the Egyptian government are expected to provide research grants, funds, in order to increase the number of quality publications on the SDGs and their implementation. International collaboration is also recommended. Successful indicators include an increase in the number of research papers indexed internationally. The development of a governmental research center specializing in SDG targets in Egypt is also essential.

Policy Recommendations to use Efficient Allocation of Resources (Traditional and Innovative Macroeconomic Indicators)

3. A shift in mindset, in the formulation, implementation and evaluation of SDG 1 and SDG2 is required in order to alleviate poverty, enhance the given parameters and lessen the reliance on traditional macroeconomic indicators that are of course inevitable to rely on but can be pushed forward with an integration of approaches.

Policy Recommendations for DRM at the National Level (SDG Financing & Non-Financing Global Sourcing)

4. A re-assessment of national and regional plans concerning the SDG 1 and 2 Agenda, pinpointing a coherent and holistic framework.
5. A re-evaluation of investment gaps implied by SDGs 1 and 2, led by the Ministry of Finance, focusing on individual sustainability factors such as health, education, agriculture, energy, and the environment.

Policy Recommendations for SDG 1,2 DRM at the Individual Level (Financial Inclusion)

6. A re-evaluation of resource mobilization and barriers to financial inclusion in order to enhance financial literacy and financial awareness to all groups of people.

Policy Recommendations on the Narrower level: the Poor Individual through Community Capacity Building

7. We recommend progress in terms of awareness on the national and individual level towards the importance of the individual, his/her welfare status, skills, acquisition of knowledge and services.
8. Evaluation follow-up methods (policy evaluation, formative evaluation, developmental evaluation, summative evaluation) are recommended to ensure the activation and efficiency of the suggested projects.

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Notes

- Note 1. Coronavirus disease 2019 (COVID-19), a type of coronavirus, started in early January 2020 in Wuhan, China, created a global pandemic.
- Note 2. www.scival.com
- Note 3. www.scopus.com
- Note 4. <https://data.mendeley.com/datasets/87+xkw8khs/1>

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