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Building a Future Powered by Egypt's People: Navigating the Demographic Trends

Policy Paper

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Contents

List of Tables

List of Figures

I. Introduction

The vision of population-centered development as envisioned in the Programme of Action of the International Conference on Population and Development (ICPD) provides a perspective on the range of choices and investments that delivers benefits not just to some people, but to the entire population. The vision focuses on implementing advancements in healthcare and fueling education, which then empowers communities to create sustainable livelihoods. The UNFPA's 2023 State of World Population "8 billion Lives, Infinite Possibilities, the case for Rights and Choices" introduced the concept of demographic resilience and described it as "the ability of a system to adapt to, anticipate and thrive amid demographic changes." The report calls for States to "better understand these changes to ensure they have the skills, tools, political will and public support to effectively mitigate potentially negative effects for individuals, societies, economies and the environment, and harness the opportunities that come with demographic change for people, prosperity and the planet[1]." The 30th anniversary of the ICPD in 2024 is a moment to remind us of the critical importance of its agenda, which champions people-centered development, rights, and choices for all. The world is undergoing unprecedented changes economically, socially, geopolitically, demographically, and environmentally, and how we deal with them will define our common future.

Demographic resilience is an aspiration that involves the ability to predict demographic shifts, understand their implications and develop policy responses that are based on evidence and human rights[2]. The approach of demographic resilience prepares for such changes to ensure that the needs and rights of everyone in a society are adequately met. This approach is an alternative to demographic engineering which is seeking to control natural trends either in developing or developed countries.
The UNFPA report suggests a toolkit to promote resilience amid demographic change, that includes:

1) Use population data to plan ahead.
2) Understand the ways in which demographic trends will impact the economy and the need for new social policies.
3) Interrogate the human rights implications of potential policy responses.
4) Support the fertility preferences and aspirations of people.
5) Assure universal access to sexual and reproductive health and rights.
6) Enable young people to build a future in a place of their choice.
7) Establish family policies that help to build strong, diverse and resilient families.
8) Advance gender equality and women empowerment.
9) Promote more inclusive societies.
10) Promote the inclusion of migrants.

The purpose of this policy paper is to shed light on the demographic trends, key challenges related to demographic trends, current efforts being made in the country to address these challenges and propose the ways to build a future powered by the people that promotes demographic resilience for reaping the demographic dividends within the Egyptian context with a focus on the governorate level.

[1] UNFPA (2023)
[2] UNFPA: Demographic Resilience and Sustainable Development.

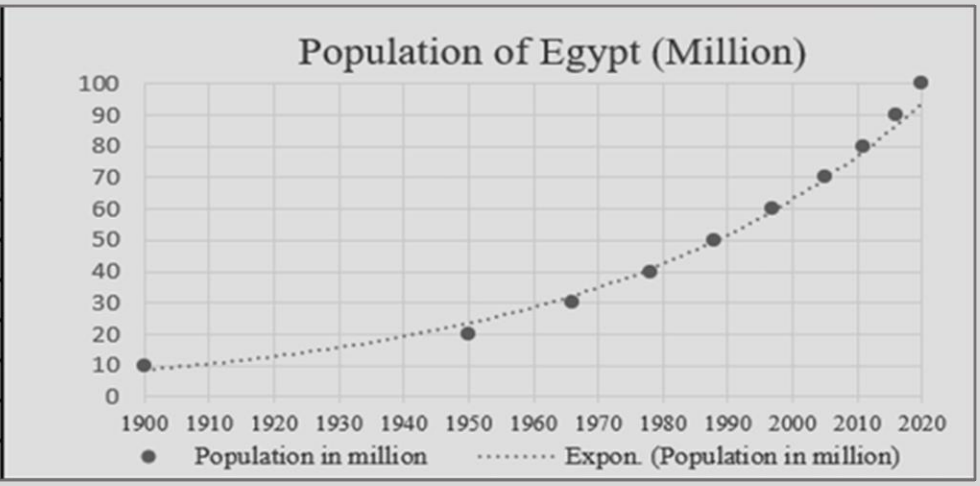
II. Demographic trends

a) National level

On the national level, the population of Egypt is increasing exponentially, as the total population doubled more than six folds during the 20th century from 10 million to 64 million and continued its increase to hit 105 million in 2023. As illustrated in Table 1, it took Egypt 50 years to move from 10 to 20 million (between 1900 and 1950). The following 10 million took only 16 years (1950 to 1966). The trend continued to accelerate at a faster pace as it took only 8 years to grow from 60 to 70 million and 4 years to grow from 90 to 100 million. The population increase was mainly driven by fertility.

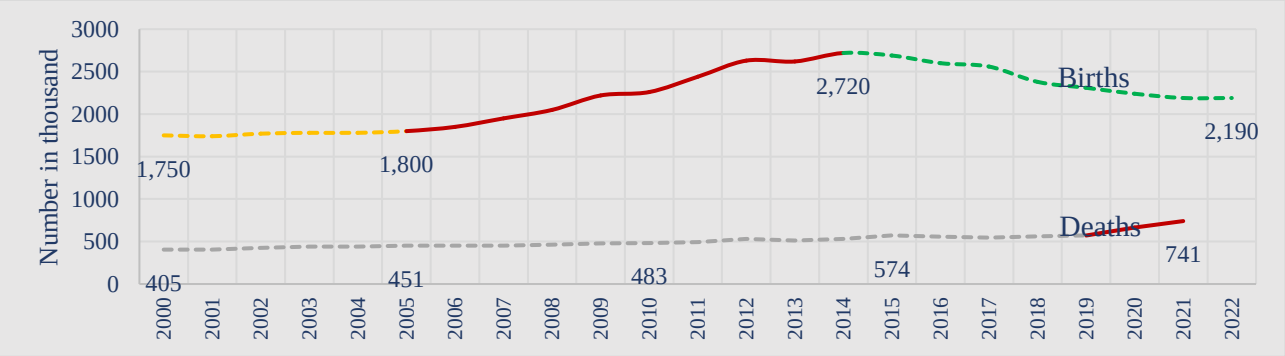
Table 1: Population of Egypt, 1900 to 2020

Year	Population in million
1900	10
1950	20
1966	30
1978	40
1988	50
1997	60
2005	70
2011	80
2016	90
2020	100



Due to a commitment to address population growth, Egypt succeeded in reducing the total fertility rate from 5.3 child per woman in 1980 to 4.4 child per women in 1988. The decrease continued as the TFR reached 3 child per woman in 2008. However, the 2014 data indicated an alarming reversal, as the TFR increase to 3.5 child per woman, i.e., the same level of 2000. Recent data based on the Egypt Family Health Survey revealed a decrease to 2.85 child per woman. The findings are consistent with the trend in the number of births (Figure 1), as it illustrates an increase that peaked to 2.7 million births in 2014 followed by a consistent decrease reaching 2.2 million births in 2022.

Figure 1: Number of births and deaths, Egypt 2000 to 2022

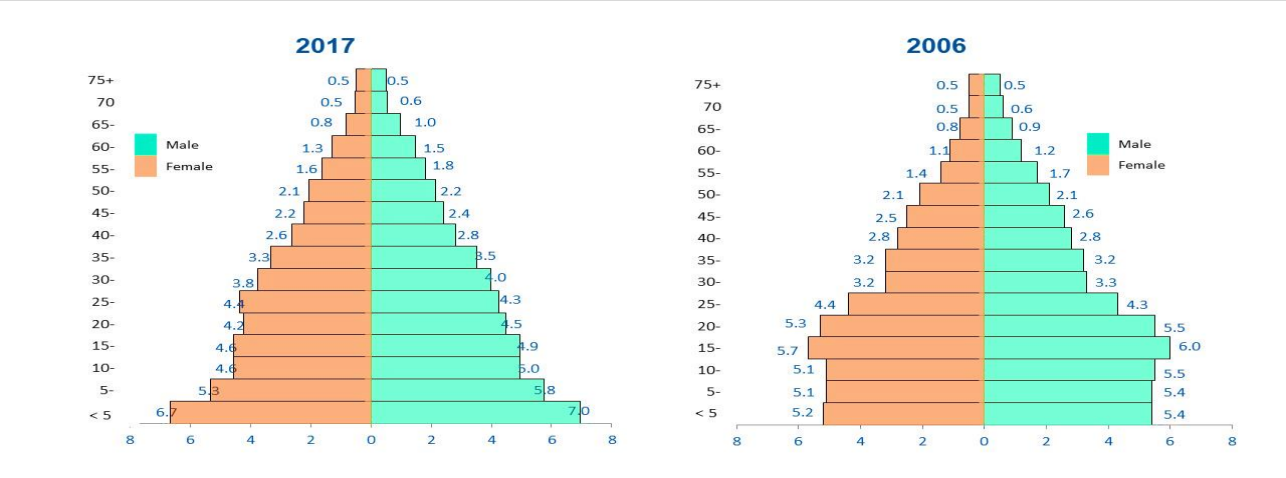


Source: CAPMAS (2022).

Mortality was stable in Egypt at less than 600 thousand deaths per year, however, COVID-19 raised the number of deaths to reach 741 thousand deaths in 2021.

Despite this positive achievement, Egypt's population will continue to grow due to population momentum, i.e., an increase in its population size driven by its young age structure. The wide base of the 2017 population pyramid (Figure 2) suggests that Generation Alpha[i] outnumbers older generations and is then expected to contribute to future population growth when it enters reproductive age which makes adopting a moderate reproductive behavior by youth crucial for promoting demographic resilience. The population pyramid reflects a young population structure as percent of elderly 65+ is below 4% of the total population.

Figure 2: Population pyramid, Egypt 2017 and 2006



Determinants of population growth include reproductive health and women empowerment indicators. A comparison of reproductive health indicators in 2014 and 2021 data points out to a reduction in TFR[ii], in desired fertility rate and an increase in CPR (Table 2). On the other hand, unmet need increased and median months between births was constant, suggesting more attention to be given to improving family planning and reproductive health services and introducing more programs that advocate for longer spacing period between births.

Women empowerment indicators are also central to achieving demographic resilience as the reproductive role of the women is competing with its productive role in society, this is particularly relevant to employment. As presented in Table 2, the percentage of currently employed women in reproductive age was low in both 2014 and 2021, as only one in every 6 women are currently working. A moderate improvement was observed, however there is a long way to go to reach a level of employment that will contribute positively to demographic resilience. However, the significant increase of females using computer and internet is signaling to a window of opportunity for expanding female employment. The fact that recent trend indicates a decrease in female genital mutilation is indicating that new generations is likely to gain a higher level of empowerment.

Table 2: Reproductive health and women empowerment indicators, 2014 – 2021

	Indicator	2014	2021	
Reproductive health	Total fertility rate	3.5	2.85	↗
	Contraceptive Prevalence rate	58.5	66.4	↗
	% with unmet need	12.3	13.8	↘
	Median months between births	36.7	37.6	→
	Total desired fertility rate	2.8	2.14	↑
Women empowerment	% female currently employed	15.5	16.3	↗
	Median age at first marriage (25-49)	20.8	20.8	→
	% females not using computer or internet at least once per week	85.3	53.7	↑
	% current and expected prevalence of FGM among daughters (0-19)	56.3	27	↑

↑	Significant improvement: > 20%	→	Stagnation: change -5% to +5%
↗	Moderate improvement: 5% -20%	↘	Moderate deterioration: -20% -5%

A further analysis of fertility trends focusing on the age-specific fertility rates (Table 3) indicates that fertility is peaking when mothers are in their twenties. This was consistent across the three rounds of the surveys EDHS 2008, EDHS 2014 and EFHS 2021. It should be noted that the 2021 TFR is almost equal to the fertility level observed in 2008 and the ASFR's points out to an equal pattern of fertility when comparing 2008 to 2021.

Table 3: Age-specific fertility rates per 1,000 women

Age	EDHS 2008	EDHS 2014	EFHS 2021
15-19	50	56	50
20-24	169	213	170
25-29	185	200	169
30-34	122	134	112
35-39	59	69	53
40-44	17	17	13
45-49	2	4	2
TFR	3.0	3.5	2.9

Impact of female education on fertility is giving mixed signals. Results of EDHS 2008 and EDHS 2014 showed minor differences in TFR, while recent results of EFHS 2021 showed that the higher the education the lower is the TFR. Females with some primary education have on the average one more child compared to females who completed secondary (Table 4).

Table 4: Total fertility rate by female education, Egypt 2008-2021

	EDHS 2008	EDHS 2014	EFHS 2021
No education	3.4	3.8	3.4
Some primary	3.2	3.5	3.6
Primary complete/some secondary	3.0	3.5	3.1
Secondary complete/higher	3.0	3.5	2.6

b) Sub-national level

Analysis on the national level tends to mask subnational disparities and is not indicative in addressing the goal of "no one left behind", hence analysis on the sub-national level was carried out to complement the national perspective. Available data from census and household surveys allow the calculation of indicators on place of residence (Urban Governorates - Urban Lower Egypt - Rural Lower Egypt - Urban Upper Egypt - Rural Upper Egypt - Frontier Governorates). Indicators can be also calculated on the governorate levels. However, these indicators might suffer from inconsistency and from high sampling error especially in frontier governorates where population is relatively low.

Fertility level by place of residence (Table 5) indicates discrepancies. The TFR ranged in 2021 from 2.2 child per woman in Urban Governorates to 3.6 child per woman in Rural Upper Egypt. The same pattern was observed in previous rounds of the Demographic and Health Surveys. More investment to Rural Upper Egypt to address development programs in general including RH/FP programs and female empowerment programs were always on the top of the list of suggestions of several policy papers. A fresh look is urgently needed to introduce innovation to make these development programs especially leveraging Hayat Karima and Takafol and Karama national programs.

Table 5: Total fertility rate by place of residence.

	EDHS 2008	EDHS 2014	EFHS 2021
Urban Governorates	2.6	2.5	2.2
Urban Lower Egypt	2.6	3.0	2.4
Rural Lower Egypt	3.0	3.6	2.8
Urban Upper Egypt	3.0	3.2	2.5
Rural Upper Egypt	3.6	4.1	3.6
Frontier Governorates	3.2	3.9	3.4
Egypt	3.0	3.5	2.9

Fertility level is associated with contraceptive prevalence rate as data from the three rounds of the household surveys show that the CPR tends to be higher in Urban Governorates and lower in Rural Upper Egypt (Table 6.) The discrepancy in unmet needs suggests the need to bridge the gap in Upper Egypt and particularly in Rural Upper Egypt.

Table 6: Contraceptive prevalence and unmet needs by place of residence.

	Contraceptive prevalence rate			Unmet needs (%)		
	EDHS 2008	EDHS 2014	EFHS 2021	EDHS 2008	EDHS 2014	EFHS 2021
Urban Governorates	65	63	71	5.9	11.1	12.6
Urban Lower Egypt	66	63	70	6.4	10.9	13.3
Rural Lower Egypt	64	64	72	7.7	10.3	11.1
Urban Upper Egypt	62	59	63	8.0	13.5	14.9
Rural Upper Egypt	48	47	57	15.4	17.0	17.5
Frontier Governorates	60	55	65	10.0	11.0	12.2
Egypt	60	59	66	11.6	12.6	13.8

To conduct a comprehensive analysis on the governorate level, available indicators on the governorate level were reviewed. The following indicators were selected to reflect different aspects of demographic changes that need to be subject to adaptation, anticipation and thriving, i.e., to achieve demographic resilience: (1) Total fertility rate, (2) Contraceptive Prevalence rate, (3) Percent of females with unmet needs, (4) Percent of females working currently, (5) Median age at first marriage, (6) Percent of females not using computer or internet at least once per week, (7) Median months between births, (8) Total desired fertility rate, and (9) Gross domestic product. As presented in Table 7, indicators vary across governorates and the level of discrepancy varies across indicators with greater variation in economic status (per capita gross domestic product), followed by women empowerment (percent of female currently working, and percent of females using computer or internet), then RH/FP indicators (unmet needs, desired TFR, TFR, and CPR.)

Table 7: Discrepancy in indicators among governorates

Indicator		Egypt	Range		Coefficient of variation
			Min	Max	
TFR	Total fertility rate	2.85	1.84	4.38	21.7
CPR	Contraceptive Prevalence rate	64.7	44.8	74.9	12.9
UMN	% with unmet needs	13.8	6.9	22.4	27.7
%FW	% female working currently	16.3	4.1	27.6	**34.5**
AM	Median age at first marriage	20.8	19.4	22.4	4
%FDI	% females not using computer or internet at least once per week	53.7	25.2	84.4	**30.2**
SD	Median months between births	37.6	28.8	46.6	10.1
TDFR	Total desired fertility rate	2.14	1.32	3.59	23.4
GDP	Gross domestic product	65,314	19,811	244,243	**89**

The rank of governorate was computed for each indicator, and a color code was given accordingly by assigning the green dot to the best third, the yellow dot to the second third, and the red dot to the worst third. In the following step the ranks assigned were summed up for each governorate to form the composite index (CI). Similarly, the color code (green, yellow, and red) was assigned to each governorate based on the total ranks, i.e., the green color was assigned to the best third, the yellow to the following third, and the red to the worst third. Data were organized in a dashboard which classify the 25 governorates

(according to governorates' available data) into three categories according to the level of demographic resilience. Annex I includes the values of the dashboard indicators. The contrast between Port Said and Assiut is illustrated in Table 8 for selected key indicators.

Dashboard of indicators reflecting demographic resilience at the governorate level

	TFR	CPR	UMN	%FW	AM	%FDI	SD	DTFR	GDP	CI
Cairo	●	●	●	●	●	●	●	●	●	●
Port Said	●	●	●	●	●	●	●	●	●	●
Suez	●	●	●	●	●	●	●	●	●	●
Alexandria	●	●	●	●	●	●	●	●	●	●
Damietta	●	●	●	●	●	●	●	●	●	●
Dakahlia	●	●	●	●	●	●	●	●	●	●
Sharqia	●	●	●	●	●	●	●	●	●	●
Qalyoubia	●	●	●	●	●	●	●	●	●	●
Kafr El-Sheikh	●	●	●	●	●	●	●	●	●	●
Gharbia	●	●	●	●	●	●	●	●	●	●
Menoufia	●	●	●	●	●	●	●	●	●	●
Beheira	●	●	●	●	●	●	●	●	●	●
Ismailia	●	●	●	●	●	●	●	●	●	●
Giza	●	●	●	●	●	●	●	●	●	●
Beni Suef	●	●	●	●	●	●	●	●	●	●
Fayoum	●	●	●	●	●	●	●	●	●	●
Menia	●	●	●	●	●	●	●	●	●	●
Assiut	●	●	●	●	●	●	●	●	●	●
Sohag	●	●	●	●	●	●	●	●	●	●
Qena	●	●	●	●	●	●	●	●	●	●
Aswan	●	●	●	●	●	●	●	●	●	●
Luxor	●	●	●	●	●	●	●	●	●	●
Red Sea	●	●	●	●	●	●	●	●	●	●
El-Wadi El-Gedid	●	●	●	●	●	●	●	●	●	●
Matrouh	●	●	●	●	●	●	●	●	●	●

Demographic resilience at the governorate level.

● High	● Medium	● Low
1) Port Said	9) Ismailia	18) Luxor
2) Alexandria	10) Giza	19) Fayoum
3) Cairo	11) Kafr El-Sheikh	20) Beni Suef
4) Suez	12) Red Sea	21) Matrouh
5) Damietta	13) Menoufia	22) Menia
6) Qalyoubia	14) Dakahlia	23) Qena
7) El-Wadi El-Gedid	15) Beheira	24) Sohag
8) Gharbia	16) Sharqia	25) Assiut
	17) Aswan	

Table 8: Selected key indicators, Port Said vs. Assiut.

Indicator	Port Said	Assiut	Egypt
Total fertility rate	1.84	3.77	2.85
Total desired fertility rate	1.32	2.88	2.14
Median age at marriage	22.30	20.40	20.80
Median duration since last birth (months)	41.10	31.10	37.60
Contraceptive prevalence rate	60.70	50.80	64.70
% females with unmet needs	12.60	22.40	13.80
% Females currently employed	19.80	9.70	16.30
% women not using computer or internet at least once a week	25.20	69.40	53.70
Gross domestic product per capita (L.E.)	244,243	26,266	65,314

III. Population and sustainable development:

A comprehensive population analysis should not ignore the relation between population and sustainable development. Sustainable development in Egypt can be assessed using the SDG dashboard (Figure 3). The dashboard classifies countries according to two dimensions: the level of challenge they are facing (major – significant – remaining – achieved) and the trend of improvement they are achieving (decreasing – stagnating – moderately improving – on track or maintaining SDG achievement). As illustrated in the dashboard, Egypt is facing major challenges with six sustainable development goals, namely goals 2, 3, 8, 14, 15, and 16. The trend shows moderate improvement in two out of the six goals while it is stagnating in the other four goals. In addition, the country is facing significant challenges with seven goals (4, 5, 6, 7, 9, 11, and 17). Two of those goals are on track, four are moderately improving and one is stagnating. The trend differs among those goals, Egypt is on track in one of them, is moderately improving in four goals, is stagnating in two goals, and is decreasing in one goal. Challenges are less accentuated with four goals.

Figure 3: Sustainable development goals dashboard and trends, Egypt 2023[3]

		CHALLENGE LEVEL		
TREND		Major	Significant	Remaining
↓	Decreasing			SDG 1
→	Stagnating	SDG 2, SDG 14, SDG 15, SDG 16	SDG 17	
↗	Moderately improving	SDG 3, SDG 8,	SDG 5, SDG 7, SDG 9, SDG 11	SDG 13
↑	On track Info. unavailable		SDG 4, SDG 6	SDG 10 &12

Indicators used to produce the dashboard are reviewed and indicators that are more relevant to population issues are listed along with the challenge level and the trend (Table 9.) The total number of indicators was 26 indicators. In general terms, Egypt faces less challenge and is improving in six indicators reflecting 1)

[3] Sachs, J. et al (2023)

maternal mortality, 2) under-five mortality, 3) demand for family planning satisfied by modern methods, 4) gender gap in education, 5) production-based nitrogen emissions, and 6) feeling safe. On the other hand, Egypt is facing major challenges, and its performance is declining in two indicators: 1) gender gap in labor force participation, and 2) government spending on health and education. Other indicators show a less challenging level with a performance that is moderately improving or stagnating.

Table 9: SDG's indicators that are more relevant to population issues

SDG	Indicator	Value	Year	Challenge level	Trend
1	Poverty headcount ratio at $3.65/day (%)	10.5	2023	●	→
3	Maternal mortality rate (per 100,000 live births)	16.8	2020	●	↑
	Mortality rate, under-5 (per 1,000 live births)	19	2021	●	↑
	Adolescent fertility rate (births per 1,000 females aged 15 to 19)	46.9	2019	●	↗
	Births attended by skilled health personnel (%)	97.1	2021	●	NA
4	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	36.7	2019	●	NA
5	Demand for FP satisfied by modern methods (% of females 15-49)	80	2014	●	↑
	Ratio of female-to-male mean years of education received (%)	104.1	2021	●	↑
	Ratio of female-to-male labor force participation rate (%)	22.2	2022	●	↓
	Seats held by women in national parliament (%)	27.7	2021	●	↑
8	Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	27.4	2021	●	→
	Unemployment rate (% of total labor force 15+)	7	2023	●	↑
9	Population using the internet (%)	72.1	2021	●	↑
	Mobile broadband subscriptions (per 100 population)	61.4	2021	●	↑
	Expenditure on research & development (% of GDP)	1	2020	●	↗
12	Production-based SO2 emissions (kg/capita)	8.8	2018	●	NA
	Production-based nitrogen emissions (kg/capita)	15.1	2018	●	↑
13	CO2 emissions from fossil fuel combustion and cement production (tCO2/capita)	2.3	2021	●	→
16	Population who feels safe walking alone at night in the city or area where they live (%)	85	2022	●	↑
	Birth registrations with civil authority (% of children under age 5)	99.4	2014	●	NA
	Access to and affordability of justice (worst 0–1 best)	0.5	2021	●	→
17	Government spending on health and education (% of GDP)	3.9	2020	●	↓
	Statistical Performance Index (worst 0–100 best)	79.6	2022	●	↑

Source: Sachs, J. et al (2023). Sustainable Development Report 2023 Implementing the SDG Stimulus. Sustainable Development Solutions Network. https://s3.amazonaws.com/sustainabledevelopment.report/2023/sustainable-development-report-2023.pdf

Population and sustainable development are interlinked. Conceptually, sustainable development should be people centered and inclusive. An evidence-based approach to assess the linkage between population and

sustainable development can be achieved through the composite index for ICPD-based SDG dimensions called "Population Development Composite Index-PDCI" which was recently introduced[4]. It represents an attempt to promote a people-centered sustainable development agenda through a tool quantifying and tracking achievements made towards the ICPD and related Sustainable Development Goals (SDGs) from a population dynamics lens. It is founded on the principle that individuals are the center of SDG implementation, and that any success towards the SDGs must be evidenced by a positive change in the lives of people, while ensuring that "no one is left behind". PDCI is structured based on thematic pillars of ICPD PoA beyond 2014, this global framework recognizes the crucial linkages between population and sustainable development for reducing poverty, bridging inequality, and improving the standard of living and the impact on population, resources, and environmental degradation. Consequently, PDCI was structured around five sub-indices reflecting the ICPD pillars, namely: 1) Dignity and human rights, 2) Sexual and reproductive health, 3) Place and mobility, 4) Governance and accountability and 5) Sustainability.

The objective is to have population and development issues mainstreamed across several goals captured throughout a single index. The index provides a quick assessment of how a country is performing in comparison with its peers. It allows countries to benchmark themselves using a single holistic measure that encompasses Population and Development based SDGs. Benchmarking for Egypt was conducted against the median of the Arab countries. Results of the composite index and its sub-indices showed that Egypt's rank is 10 out of the 22 Arab countries and is nearly 7% above the median of the region. Comparing sub-indices shows that Egypt is above the median by nearly 14% for sexual and reproductive health, for place and mobility and for sustainability. On the other hand, Egypt was slightly below the median for dignity and human rights, and, for governance and accountability, which suggests focusing on these two areas.

The goal of resilience cannot be achieved without gender equality. The importance of gender equality is often highlighted as a prerequisite for resilience and development in high-fertility settings. But it is no less critical in low-fertility settings. The latest research shows that gender inequality is a long-term barrier to economic growth irrespective of population growth rates (Santos Silva and Klasen, 2021)[5]. In the Egyptian context that is very true and is more relevant when geographical inequalities are considered simultaneously, as Egyptian women are less empowered in rural areas especially in Upper Egypt.

Localizing the SDGs on the governorate level was recently implemented, by trickling down goals on the national level to the governorate level to reinforce implementing plans and carrying out monitoring and evaluation at the local level[6]. Furthermore, this approach can promote decentralization and increase citizens participation. The list of indicators is comprehensive and includes nearly all the indicators listed in Table 9. Governorates achieving the targets will be reaching demographic resilience and will be more likely to reap demographic dividend.

Also, sustainable urbanization is a driver for balanced development, generation of value, wealth and the creation of a better quality of life for all. It is a megatrend, unstoppable and irreversible. In Egypt, cities are seen as engines of economic growth as they account for 80% of GDP. The urban population is not evenly distributed among the cities, where 56% are concentrated in Cairo and Alexandria. Cairo is a megacity and the largest metropolitan area in Africa and the Middle East, and the main driver behind the

[4] Osman, M. and Abouel Dahab, I. (2020).
[5] UNFPA (2023)
[6] Girgis, H. (2020).

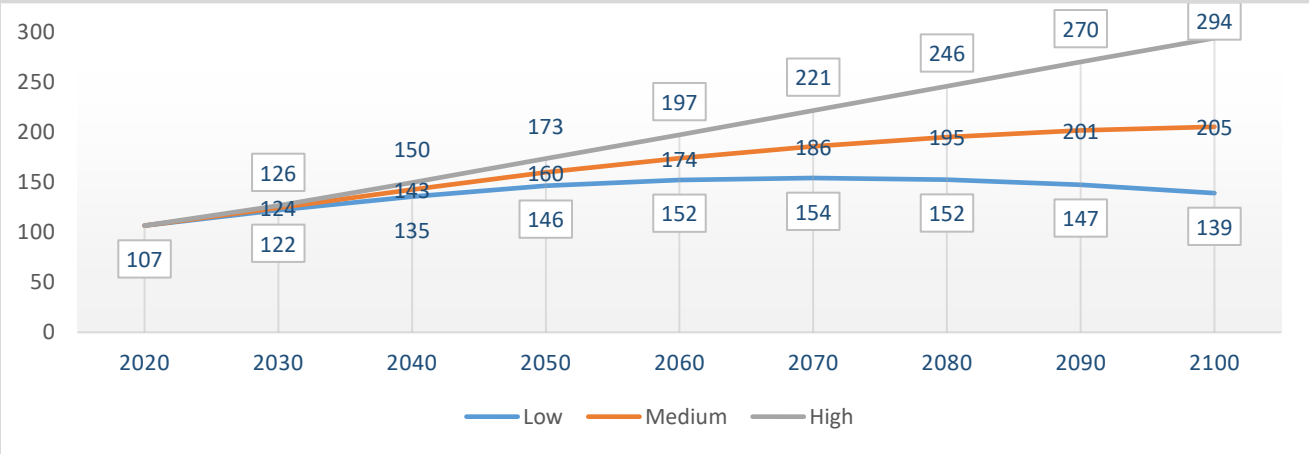
Egyptian economic development. Unprecedented, the Government of Egypt succeeded in expanding the inhabited total area to reach 10.49% in 2022 from 6.8% in the past. In turn, this reduces the inhabited density to 984.8 person/km2. Urban data disaggregation is key to advancing inclusive and equitable urban development. Monitoring and preparing for projected shifts in the demographic composition of the country is worth considering. As the population ages, urban planning and service delivery must adapt to meet the needs of older persons.

IV. Population projections and demographic dividend

a) National level

The United Nations Department of Economic and Social Affairs (UNDESA) publishes periodical population projections for all countries assuming three scenarios: high variant, medium variant and low variant. According to the 2022 population projections, the population of Egypt is expected to reach nearly 200 million in 2060 and nearly 300 million in 2100 if it follows the high fertility scenario. This scenario seems unlikely given the limited natural resources including water and agricultural land. A more likely scenario, even though gloomy, is the medium variant scenario which suggests that the population will reach 174 million by year 2060 and 205 million by the end of the century. The low variant scenario implies that the population will continue to increase at a slower pace to peak at 154 million in 2070 and then to start decreasing to reach 139 million by the end of the century (Figure 4.) Even though this is the best future scenario, it is challenging, as it requires adapting to demographic changes, anticipating implications on sustainable development, and thriving aspired well-being amid demographic changes.

Figure 4: Population projections, Egypt 2030-2100



Source: UNDESA (2022)

The UNDESA population projections assumed that the TFR will decrease in the three scenarios, but with different pace, reaching 2.2, 2.6 and 3 children per women in 2030, and reaching 1.8, 2.3 and 2.8 in 2050. Accordingly, the number of births will start to decrease if the low variant scenario reaches less than 2 million in 2050 while it will reach nearly 3.5 million if the high variant scenario is realized. The gap between the two extreme scenarios in 2030 (758 thousand births) will increase over time to exceed 1.5 million births in 2050 which will be reflected in a huge increase in public expenditure on education and health (Table 10). The fact that the TFR is showing a decreasing trend is supporting that Egypt might

follow a future scenario that is close or lower than the medium variant scenario suggested by UNDESA. The highest the demographic resilience the more likely that Egypt will be closer to the low fertility variant.

On the other hand, the percentage of elderly (65+) is expected to increase under all scenarios. By 2030, the percentage is expected to reach 6% if the low scenario takes place and will be slightly lower if the medium (5.9%) or the high (5.8%) scenario is realized. The percentage of elderly will increase to 7.5% in 2040 and to 9.8% in 2050 assuming the medium variant scenario is realized, which will add a burden on social protection programs.

Accordingly, the burden of the population growth measured by the dependency ratio is higher under the high variant scenario. As shown in Table 10, the six-point difference (57.5 – 51.7) between the two extreme scenarios in 2030, will double by year 2050 (60.0 – 47.0.) Adopting the low variant scenario will contribute to a higher GDP growth. Because of high dependency ratio, the economy lost an estimated LE 150 billion in 2019 GDP (El-Saharty 2022.) Furthermore, large savings in public expenditure were forgone in health, education, and housing, amounting to a cumulative loss of more than LE 93 billion in real terms (El-Saharty 2022.) Egypt can obtain large economic gains by improving demographic resilience. This can be done if reversing the increasing fertility level continues in the future. Sustaining the decreasing fertility level will help reap demographic dividend opportunities. Policies to slow population growth should be complemented with socioeconomic development interventions that improve human capital and empower women.

Table 10: Population projected results, Egypt 2030, 2040 and 2050.

		Year	Low variant	Medium variant	High variant
Assumption:	Total fertility rate	2030	2.24	2.64	3.04
		2040	1.91	2.41	2.91
		2050	1.75	2.25	2.75
Projected results:	Population	2030	122.1	124.3	126.4
		2040	135.4	142.5	149.6
		2050	146.2	159.6	173.3
	Number of births	2030	2,126	2,505	2,884
		2040	2,169	2,741	3,318
		2050	1,918	2,649	3,466
	Number of deaths	2030	703	708	713
		2040	883	889	896
		2050	1,079	1,087	1,095
	Population doubling time	2030	61.1	49.1	41.3
		2040	75.1	54.6	43.7
		2050	125.6	72.6	51.7
	Dependency ratio	2030	51.7	54.6	57.5
		2040	45.4	52.1	58.8
		2050	47.0	53.7	60.0

Source: UNDESA (2022)

b) Sub-national level

Population projections on the governorate level are not available and might be problematic given the inconsistency in the trend of indicators measured on the governorate level. This might be due to a relatively large sampling error for estimates or for changes in the administrative boarders of governorates.

Furthermore, traditional population projection models don't include external factors or shocks, such as climate change risks. Climate change is likely to have an impact on population mobility between governorates within Egypt. According to Egypt's Climate Risk Country Profile[7], seven governorates are at risk of coastal flood (Alexandria, Port Said, Damietta, Dakahlia, Kafr El-Sheikh, Beheira and Red Sea.) The total population of the seven governorates reached 23.8 million in 2017[iii] which represents nearly 25% of the total population of Egypt. It is worth mentioning that the total population of these seven governorates increased on average by 2.1% annually between 1996 and 2017, which is like the population increase in the rest of the country. The risk attributed to these seven governorates suggests that part of the population might move in the next decade due to limited economic opportunities or due to natural disasters. Coastal floods are not the only environmental risks facing Egypt as irregular heavy rains that lead to floods are happening in many areas of the country.

As an alternative to formal population projections on the governorate level, insights are provided based on three dimensions: demographic resilience, demographic dividend, and climate change risks. The composite index developed in this paper was used as a proxy for demographic resilience, the percentage of children below 15 to the total population was used as a proxy for demographic dividend, and the risk of coastal flooding was used as a proxy for climate change risks. The classification of the governorates according to demographic resilience and demographic dividend is relative. Governorates falling in the lowest third were assigned a green code, in the middle third were assigned a yellow code, and in the highest third were assigned a red code. Annex 2 shows percentage of population below 15 years and above 65 years based on 2017 Census.

A mapping on the governorate level was consolidated in Table (11) to relate demographic resilience (expressed as the composite index), demographic dividend (expressed as the percentage of the population below 15), and climate change risks (expressed as the risk of coastal flooding). As shown in the Table, three governorates are good performers in the three dimensions (Cairo, Gharbia and El-Wadi El-Gedid). However, relatively good performers with demographic resilience and demographic dividend might be at risk of climate change (Alexandria, Port Said and Damietta), and, on the other hand, poor performers on demographic resilience and demographic dividend are not at risk of coastal flood (Upper Egypt).

[7] World Bank (2020)

Table 11: Mapping demographic dividend, demographic resilience and risk of climate change on the governorate level.

Governorate	Demographic dividend[iv]	Demographic resilience[v]	Risk of climate change[8] *risk of coastal flood*
Cairo	🟢	🟢	🟢
Alexandria	🟢	🟢	🔴
Port Said	🟢	🟢	🔴
Suez	🟢	🟢	🟠
Damietta	🟢	🟢	🔴
Dakahlia	🟠	🟠	🔴
Sharqia	🟠	🟠	🟠
Qalyoubia	🟠	🟢	🟢
Kafr El-Sheikh	🟠	🟠	🔴
Gharbia	🟢	🟢	🟢
Menoufia	🟠	🟠	🟢
Beheira	🟠	🟠	🔴
Ismailia	🟠	🟠	🟢
Giza	🟠	🟠	🟢
Beni Suef	🔴	🔴	🟢
Fayoum	🔴	🔴	🟢
Menia	🔴	🔴	🟢
Assiut	🔴	🔴	🟢
Sohag	🔴	🔴	🟢
Qena & Luxor	🔴	🔴	🟢
Aswan	🟢	🟠	🟢
Red Sea	🔴	🟠	🔴
El-Wadi El-Gedid	🟢	🟢	🟢
Matrouh	🔴	🔴	🟠

The insights provided in this section can be indicative for decision makers in government or in the private sector when allocating resources for new projects or for the extension of old projects. Developing population strategies on the governorate level that go beyond business as usual in population planning is strongly advised.

Historical trend does not indicate a significant change in Egypt's urban-rural population composition. This doesn't rule out rural to urban migration but suggests that the impact of such migration was masked by a higher fertility level in rural areas. The Government of Egypt embarked lately on several mega projects in urban areas including developing slum areas, expanding highways, and building the new administrative capital. With large investments in urban development, Egypt is expected to witness a redistribution in its population.

[8] World Bank (2020)

V. Challenges

Based on the previous analysis, several gaps are deterring Egypt from reaping the demographic dividend. These gaps are outlined as follows:

Service Delivery Gap	Gender Gap	Governance Gap
Communication Gap	Social norms Gap	Equality Gap
Sustainability Gap	Research Gap	Information Gap

Governance gap:

The Egyptian government adopted policies aiming at reducing fertility level since 1962. The first population policy was issued in 1973. During the last half century, population policies were reviewed periodically. In 2014, as a reaction to the fertility reversal and population growth, the government launched a new strategy (the Egypt National Population Strategy 2015–2030). The strategy came as well as a reflection of the Egypt's 2014 Constitution, that included for the first time an article related to population growth. Article 41 states that "The State shall implement a population program aiming at striking a balance between population growth rates and available resources; and shall maximize investments in human resources and improve their characteristics in the framework of achieving sustainable development[9]".

The strategy emphasized that there are two main population challenges facing the country: the reversal of the steady state of fertility decline, and the persistence of geographic disparities in population and development indicators. Aligned with Egypt's aspirations, ENPS 2015–2030 was built on political commitment and multisectoral collaboration. It was founded on human rights, social justice, government accountability, and respect for citizens.

A revision of the 2015-2030 Population and Development Strategy was launched to cover the period 2023-2030. The new revision took into consideration the recent decreasing trend in fertility, the presidential initiatives and mega projects, climate change risks and influx of migrants and refugees. It adopted a vision to achieve "Social and Economic Well-being for All Citizens" and a mission to achieve "a balance between population and development through enhancing reproductive health, empowering women, investing in youth, improving education opportunities, and raising awareness about population issues within a comprehensive framework that ensures the efficiency, effectiveness, and transparent implementation of population policies." The strategy adopted the same five pillars included in the 2015-2030 strategy, namely, Ensuring Reproductive Rights, Human Capital Investment, Women's Empowerment, Education and Learning, and Communication and Media for Development. In addition to two cross cutting pillars: Governance and Environment (see strategic objectives in Box 1.)

[9] Constitution of The Arab Republic of Egypt 2014.

Box 1 The National Population and Development Strategy 2023-2030. Strategic Objectives.	
Pillar 1	Ensuring Reproductive Rights
Objectives	1) Enhance the availability and accessibility of reproductive health and family planning services. 2) Achieving comprehensive and sustainable improvement in reproductive health for all. 3) Enhancing the quality of reproductive health and family planning services. 4) Ensuring the effective allocation of financial resources for the sustainability of family planning services and activities. 5) Developing strategies and procedures aimed at ensuring the readiness of family planning and reproductive health programs to effectively manage emergencies and crises, while adapting and responding in an organized and efficient manner. 6) Ensuring the flow and utilization of data for making decisions regarding the planning and the implementation of reproductive health, family planning, and population programs. 7) Enhancing legal & policy frameworks to improve reproductive health and population characteristics.
Pillar 2	Human Capital Investment
Objectives	1) Building the capacities of adolescents and youth and enhancing their participatory role in the community. 2) Empowering Adolescents and Youth. 3) Ensuring care and protection for the Elderly. 4) Maximizing the utilization of the Elderly's capabilities.
Pillar 3	Women's Empowerment
Objectives	1) Empowering women holistically in health, social, economic, and political aspects. 2) Amending policies and legislations to empower women. 3) Enhancing women's role in environmental conservation and sustainable development
Pillar 4	Education and Learning
Objectives	1) Increasing the enrollment rate in pre-university education. 2) Reducing school drop-out rate. 3) Enhancing the vocational education and aligning it with the needs of the community and the job market. 4) Reducing Illiteracy Rates. 5) Integrating population issues into the educational process.
Pillar 5	Communication and Media for Development
Objectives	1) Achieving social and economic change through awareness and education about population and development issues. 2) Community participation from all sectors of the State (governmental, private, local authorities, civil and volunteer society, etc.) to effectively and impactfully provide population awareness and understanding to all segments of society. 3) Building the capacity of media professionals involved in population-related matters.

The objectives of the 2023-2030 Strategy are leveraging the recent decrease in fertility. Integrating inequality in population and development strategy is important as it ensures a focus on the most vulnerable. However, the issue of inequality and social justice was highlighted in Egypt's 2030 Vision, as a separate pillar.

The new population strategy along with the strong political will open a window of opportunity to end instability, fragmentation, and rapid turnover in leaderships. Furthermore, strengthening the governance and monitoring and evaluation under the leadership of the National Population Council can allow for better synchronization between sectoral strategies and the population strategy, can foster coordination between stakeholders, complementarity, and accountability. Extra steps should be considered to strengthen the governance model on the sub-regional level.

Service delivery gap:

The recent decrease in fertility level is a positive sign that needs to be sustained. However, the stagnation of the unmet needs is pointing out to "low hanging fruits" that can reduce the fertility level further. Comparing the TFR and the total desired fertility rate (TDFR) overtime is consistent with the stagnation in unmet needs level. The analysis of the EDHS 2014 and the EFHS 2021 indicates that TWFR is lower than the actual TFR. Even though the two rates decreased overtime, the difference remains constant at 0.7 child per women[vi]. The equal gap between the desired and actual fertility level, when calculated in relative term, shows that in 2014, the actual fertility was 25% higher than the desired fertility, while in 2021, it was 33% higher[vii]. According to the EFHS 2021, the gap between TWFR and TFR is wider in Upper Egypt (0.86 child per women) which is consistent with the high level of unmet needs (16.8%). Furthermore, no change in spacing between births was observed between 2014 and 2021 in Upper Egypt, even though the median number of months since preceding birth increases in all other regions. These findings suggest that closing the service delivery gap by providing reproductive health services that are affordable, accessible, and meet international standards of quality can help sustain the fertility transition and priority setting based on regional disparities can make interventions more effective.

It should be noted that, if the population program succeeds in modifying the reproductive behavior to adopt smaller number of children, the demand on FP/RH services is likely to increase. Given the gloomy economic conditions facing Egypt, financial resources allocated to family planning and reproductive health might be at stake, which might impact an increase in unmet needs and can curb the recent improvements in reducing fertility level.

Additionally, chronic challenges are still prevalent including: integrating family planning services within the continuum of sexual and reproductive health, shortage of health care professionals in the public sector (especially female doctors), insufficient health units that provide FP/RH services (especially in rural and remote areas) and improving the supply chain of FP methods in MOHP outlets[10].

Improving quality of FP care can be achieved by scaling up on-the-job training of service providers, rectifying providers' misconceptions about FP methods, introducing more woman-controlled family planning methods into the public sector, and exploring mechanisms that encourage primary care providers to stay in the public sector[11].

Sustainability gap:

The Government of Egypt launched several strategies contributing to sustainable economic growth including Vision 2030 and National Climate Change Strategy 2050 along with a set of initiatives such as 1) the Nexus of water, Food and Energy (NWFE) Program, 2) Action on Water, Adaptation, and Resilience (AWARe) initiative, and 3) the National Initiative for Green Smart Projects in Governorates.
The population issues need to entangle with environment in a more comprehensive way as risks related to the environment are impacting population dynamics. Risks such as water availability, food insecurity, sea level rise, and extreme heat have disproportionate impacts on different segments of the population and on different geographical locations. They are associated with poverty and are particularly impacting the life of disadvantaged groups including women, children, elderly, and people with disability. Underscoring

[10] El-Saharty (2022).
[11] Abdel-Tawab et al. (2020).

population dynamics in all relevant sectoral strategies should be strictly followed to bridge the sustainability gap.

A risk map for climate change should be made available for planners and developers, in the public and private sectors to inform investment decisions and avoid displacement of population due to climate change risks / disasters. Such a map should be integrated in population planning and population distribution.

Box 2: Egypt National Climate Change Strategy 2050

Egypt's National Climate Change strategy (NCCS) is designed to consolidate all aspects of climate change in one document to be a basic reference that ensures the integration of climate change dimension into general planning of all sectors in the country. It was developed at the request of the National Council for Climate Change.
The strategy includes five goals and sets directions to achieve each objective:

Goal 1: Achieving Sustainable Economic Growth and Low-Emission Development in Various Sectors
Goal 2: Enhancing Adaptive Capacity and Resilience to Climate Change and Alleviating the Associated Negative Impacts
Goal 3: Enhancing Climate Change Action Governance
Goal 4: Enhancing Climate Financing Infrastructure
Goal 5: Enhancing Scientific Research, Technology Transfer, Knowledge Management and Awareness to Combat Climate Change.
Source: https://climate-laws.org/document/egypt-national-climate-change-strategy-nccs-2050_d3b1

Information gap:

According to the UNFPA State of the World Population Report[12], the starting point for achieving demographic resilience is data, as policymakers need accurate demographic data to "understand their population's trends and, critically, the underlying causes for demographic developments." Furthermore, they also need the "expertise to analyze these developments in all their complexity, including examining the societal structures and conditions that fuel demographic change, like gender relations and marginalization of different groups of people".
This argument applies to Egypt. With the current positive trend in decreasing fertility, stakeholders need a flow of information that is periodical, independent, transparent, and relevant to the current context. Data need to be properly disaggregated to allow for interventions that reduce inequalities and assure that no one is left behind. Urban data disaggregation is key to advancing inclusive and equitable urban development. Monitoring and preparing for projected shifts in the demographic composition of the country is worth considering.

This should not be limited to official statistics, as monitoring and evaluation (M&E) should be distant from government bodies responsible for service delivery. M&E of programs should not stop at the level of outputs and should evaluate outcomes and impact. Barriers to data sharing contributing to weak M&E should be removed.

[12] UNFPA (2023)

Gender gap:

For the first time, a National Strategy for the Women's Empowerment was launched in 2016[13]. The Strategy is aligned with the UN Sustainable Development Goals (SDGs), and it echoes Egypt's Vision 2030. The Strategy includes four pillars: Political Empowerment, Economic Empowerment, Social Empowerment, and, Protection Against All Forms of Violence, and it also includes a comprehensive module for monitoring and evaluation (M&E) with a set of indicators and targets for 2030 to strengthen accountability.

Economic empowerment is the main challenge facing women empowerment. Despite the closing of the education gender gap, female labor force participation is significantly lower than males. When employed, women are more likely to work in the informal economy. If employed in the formal economy, they are more likely to get a lower wage and are less likely to be promoted. In a labor market that is structured along gender lines, the bias in favor of men limits women's participation in certain sectors, occupations, and positions[14].

Social norms and traditional values (Box 3) play a role in stereotyping the role of women, as domestic (unpaid) work burden for married women does not decrease when they join the labor market. Violence against Women (VAW), in addition of being a human rights violation, results in lost employment and productivity and comes with social and economic costs. Early marriage has declined but remains common in rural Upper Egypt. It has negative consequences on health, educational attainment and is positively associated with low labor force participation.

Women empowerment is highly related to population dynamics. The high rate of female illiteracy, early marriage and early childbearing, and multiple pregnancies are limiting women's empowerment. The competition between the women's productive role and their reproductive role seems to fall in favor of the later which limits the role of women in the public space.

Box 3 Attitude of Egyptians towards the role of women in society

- 3 out of 4 Egyptians believe priority should be given for men in case of limited work opportunities.
- 62% of Egyptian think that marriage is more important for a girl than work.
- 97% of Egyptian families refuse to seek external assistance to take care of children.
- 62 % of Egyptians believe that the mother does not have the right to seek the help of caregivers for her children so that she can go out to work.
- 87% believe that children suffer when the mother goes out to work and seeks the help of a caretaker.
- 54% believe that women should not work as a judge.
- 3 out of 4 Egyptians believe that the main reason that let women work is financial needs.

Source: Baseera Center, Public opinion polls on gender norms 2018 - 2023.

Social norms gap:

Reproductive health norms can be defined as attitude related to the number of wanted children, the timing of childbearing, and contraception use. Comparing results of the EDHS 2014 and EFHS 2021 showed that

[13] http://ncw.gov.eg/wp-content/uploads/2018/02/final-version-national-strategy-for-the-empowerment-of-egyptian-women-2030.pdf
[14] World Bank (2018)

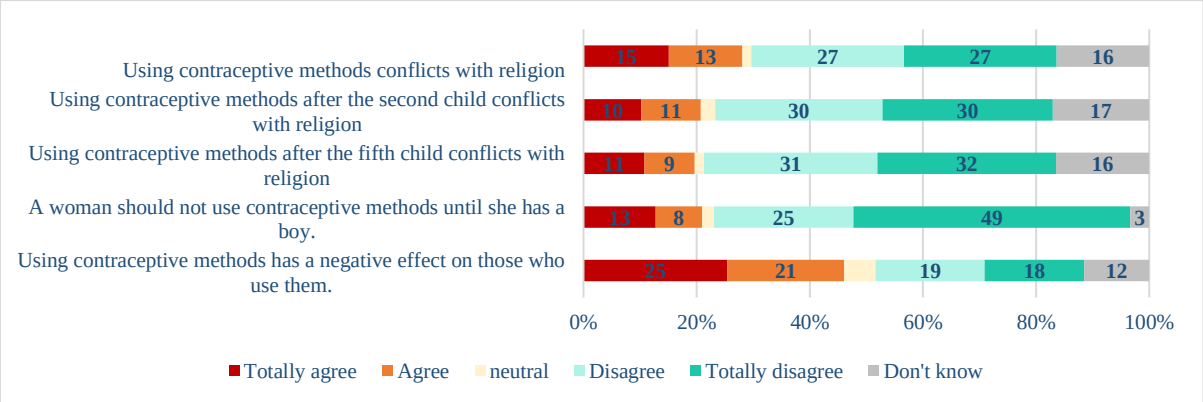
the total desired fertility rate decreased from 2.8 child per women to 2.1 child per women. The determinants of such an unprecedented shift in fertility preference need to be fully understood. However, the success of a fertility transition towards adopting a smaller number of children depends heavily on accessibility, affordability, and quality of service of FP/RH programs.

A recent perception survey on attitude of Egyptians towards contraceptive use (Figure 5) indicates that conservative values are linked to contraceptive use. The perceived conflict between religion and contraceptive use was evident as 28% agree or strongly agree with the statement "using contraceptive methods conflicts with religion". When probing the subject by conditioning the answer to the number of children, 21% said the there is a conflict between religion and using contraceptives after the second child. The attitude seems to be non-sensitive to parity, as a similar percentage had the same response when asked about their opinion on the statement "Using contraceptive methods after the fifth child conflicts with religion". It is important to mention that one in every six respondents said that they don't know whether there is a conflict between religion and contraceptive use, suggesting a stronger communication strategy addressed to this segment of the population.

A similar percentage (21%) don't agree on using contraceptives until the birth of a baby boy. An alarming finding is in the large percentage (46%) of respondents agreeing on the statement "Using contraceptive methods has a negative effect on those who use them". The fact that nearly half the respondents have a negative attitude on a general statement that does not identify the nature of the negative effect suggests the need for increasing the awareness of the public on the nature and risks of negative effect of contraceptives.

A more comprehensive approach is needed when addressing social norms that go beyond fertility preferences to consider gender norms at large. Gender norms[15] are ideas about how men and women should be and act. These rules are learnt early in life and set up a life cycle of gender socialization and stereotyping, which suggests more interventions addressed to youth and children. Furthermore, these set of norms impact level of women empowerment in a society and have influence on early marriage, early childbearing, gender-based violence against women and girls, and female genital mutilation. At large norms set up the balance between the productive and the reproductive of women in the society. Addressing social norms should engage multiple stakeholders including community leaders, religious leaders, and influencers.

Figure 5: Attitude towards using contraceptives in Egypt, 2023



Source: Baseera Center

[15] https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=search&hook=norms&fullsearch=1

Research gap:

Egypt has invested heavily in data collection across the last five decades. Several household surveys are relevant to the population issues and have contributed to creating knowledge and shaping policies. More resources need to be channeled to fully utilize available data and provide a better understanding of the recent declining fertility. The following gaps are worth considering:

- ✯ Analytical research based on recent data to update stakeholders on issues related to population including the determinants of fertility, impact of internal migration, impact of inflow of migration/displacement, and demographic profile of communities exposed to climate change risks.
- ✯ Developing more efficient and effective governance model for population issues on the national and sub-national levels.
- ✯ Designing additional programs to leverage the mega projects to maximize the demographic dividend.
- ✯ Periodical and independent monitoring and evaluation reports on FP/RH services accessibility, affordability, and satisfaction.
- ✯ Periodical monitoring of attitude towards desired fertility, spacing, and contraceptive usage.
- ✯ Quantitative and qualitative research on attitude towards small families among youth.

A full list of research gaps should be developed (and revised periodically) on a participatory basis including all stakeholders.

Equality gap:

The Egyptian constitution states that "Society is based on social solidarity. The State shall achieve social justice and provide the means to achieve social interdependence, in order to ensure a decent life for all citizens, as regulated by law[16]." This article was reflected in Egypt's Vision 2030 which confined its second strategic goal to "Social Justice and Equality." This goal focuses on social protection, women empowerment, geographical inequalities, inclusiveness and equal opportunities.

Regional disparities in women's illiteracy, age at marriage, unemployment, fertility, and health outcomes persist, with Upper Egypt lagging behind. Developing integrated programs that consider rural/urban divide and Upper Egypt/Lower Egypt divide is crucial in achieving a more inclusive and sustainable development. To achieve this goal, Egypt embarked on a number of mega projects that focus on deprived areas and on disadvantage segments of the population, including Takafol and karama project, Hayat Karima presidential initiative, and The National Project for Development of the Egyptian Family (Box 4).

[16] The Constitution of Egypt (2014), Article 8

Box 4 The National Project for Development of the Egyptian Family

The project aims to enhance the quality of life for citizens and families in general by improving population characteristics. It also focuses on empowering women and supporting their economic and social rights, while combating all forms of violence against women and harmful practices they may face. The project encompasses five pillars:

1. Economic Empowerment: Targets the empowerment of women aged 18-45 to achieve their financial independence.
2. Services: Aims to reduce unmet needs for family planning methods and make them accessible to everyone free of charge.
3. Culture, Awareness, and Education: Aims to raise citizens' awareness of the fundamental concepts related to the population issue, as well as its economic and social implications.
4. Digital Transformation: Aims to digitize and connect all services provided to Egyptian families to ensure provision of comprehensive data and information for the project. It also ensures efficient project management to achieve the desired objectives.
5. Legislation: Aims to establish a governing legislative and regulatory framework for population-related policies, addressing certain negative phenomena such as child labor, child marriages, and unregistered births.

Communication gap:

The findings of the EFHS 2021 points out to the fact that one in every two young Egyptians (15 to 29 years old) was not exposed to any message related to family planning whether through traditional or social media. The percentage is higher among young females (57%), among youth with no education (71%), and among youth living in Upper Egypt (63%). Advocacy and communication campaigns remain a key tool to promote equality, smaller family norms and spacing between births, which will increase the demand for FP/RH services. However, a more holistic approach should address norms and behaviors as well that negatively impact women's ability to play an active role in society.

The new population strategy would benefit from an updated communication strategy that go beyond business as usual by integrating social media and leveraging innovation and creativity of young men and women. With different social groups using different social media platforms, segmentation is crucial. Messages should be carefully developed to address diversity within the society.

Communication activities should also be evidence-based and should benefit from recent data on information gaps among stakeholders regarding family planning methods, source of services, and counseling. A key success factor will be to engage men and youth and increase their participation in debates related to FP/RH.

VI. Roadmap

Recommendations on the national and local levels are suggested to bridge the above-mentioned gaps.

Gap	How to bridge the gap?
Service Delivery Gap	✯ Increase CPR in Upper Egypt. ✯ Reduce unmet needs. ✯ Improve the quality of FP/RH services.
Communication Gap	✯ Use a mix of methods and medium appropriate for different segments of the target population. ✯ Develop an evidence-based communication strategy. ✯ Create a shift in the mindset of all stakeholders to prepare society to the jobs of the future.
Sustainability Gap	✯ Secure funding for FP/RH programs and for communication activities. ✯ Political will on the national and local levels. ✯ Local production of family planning methods.
Gender Gap	✯ Increase Female Labor Force Participation. ✯ Increase safety of working environment. ✯ Foster care economy.
Social Norms Gap	✯ Strong advocacy programs to engage men and youth. ✯ Integrate advocacy for adopting small family norms with women empowerment.
Governance Gap	✯ Increase efficiency and effectiveness of Population Council of ministers. ✯ Stronger link between NPC and stakeholders. ✯ Integrate population policy to other sectoral policies including climate change.
Equality Gap	✯ Leverage National projects in disadvantaged communities. ✯ Leverage social protection programs. ✯ Support NGO's and local community associations. ✯ Include all stakeholders in the planning, monitoring, and evaluation process. ✯ Address the persistence of geographical inequalities in population and development indicators
Information Gap	✯ Improve quality and solve inconsistency of data on the local level. ✯ Periodical measurement of awareness and attitude towards population issues. ✯ Effective, independent and transparent M&E.
Research Gap	✯ Knowledge on relationship between population and environment, impact of mega project on population dynamics, … ✯ Invest in further analysis of recent available data. ✯ Better governance model for population programs

VII. Advocacy Messages

- Despite the recent decrease in fertility level, the population of Egypt will continue to grow to reach at least 146 million in 2050. However, maintaining a lower fertility level will help Egypt make progress in achieving demographic resilience and reaping the demographic dividends.
- Empowering women can be achieved if their reproductive goals and rights are achieved by providing reproductive health services that are affordable, accessible, and meet international standards of quality.
- The productive role of women can be fostered throughout avoiding discrimination in labor market, combating violence against women, and adopting family-friendly policies that support and promote women's participation in the labor force.
- Social norms play an important role in impacting contraceptive use, as nearly half of women belief that using contraceptive methods has a negative effect on users, which suggest focusing on raising the awareness of women especially young women about use of contraceptives.
- Integrating demographic trends and risks of climate changes in designing and planning mega projects is crucial and should receive the attention of policy makers on the national and sub-national levels.
- The focus on deprived areas and on disadvantage segments of the population, throughout Takafol and Karama project, Hayat Karima presidential initiative, and The National Project for Development of the Egyptian Family Developing should continue, as integrated programs that consider rural/urban divide and Upper Egypt/Lower Egypt divide are crucial in achieving a more inclusive and sustainable development.
- Advocacy and communication campaigns remain a key tool to promote smaller family norms and spacing between births, which will increase the demand for FP/RH services. Communication activities should be evidence-based. Such activities can leverage the increasing proportion of women using the internet and should benefit from recent data on information gaps among stakeholders regarding family planning methods, source of services, and counseling. A key success factor will be to engage men and youth and increase their participation in debates related to FP/RH.

VIII. Annex 1

Dashboard of indicators reflecting demographic resilience at the governorate level.

Calculations

	TFR		CPR		UMN		%FW		AM		%FDI		SD		DTFR		GDP		CI	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Cairo	2.25		66.80		14.20		21.40		21.70		36.70		41.90		1.54		187,256		55	
Port Said	1.84		60.70		12.60		19.80		22.30		25.20		41.10		1.32		244,243		46	
Suez	2.33		66.00		8.20		14.10		22.30		31.90		40.60		1.70		154,646		60	
Alexandria	2.10		70.80		10.30		16.90		22.40		32.90		39.60		1.51		104,355		46	
Damietta	2.13		66.50		11.70		18.10		20.70		33.30		42.30		1.50		69,909		64	
Dakahlia	2.65		66.80		14.40		19.10		20.30		44.70		40.10		1.91		42,860		107	
Sharqia	2.65		68.10		12.20		13.90		20.60		51.80		38.80		2.13		39,537		119	
Qalyoubia	2.42		72.60		9.60		18.70		21.20		41.30		39.50		2.03		56,998		71	
Kafr El-Sheikh	2.55		67.30		14.70		20.10		21.10		52.30		40.80		1.97		41,957		95	
Gharbia	2.54		69.20		12.10		27.60		21.20		45.40		39.80		2.02		32,874		82	
Menoufia	2.63		70.20		13.80		18.80		20.80		53.40		40.70		2.23		34,346		106	
Beheira	2.99		74.90		6.90		10.20		20.80		68.20		38.50		2.02		43,552		114	
Ismailia	2.63		64.60		13.10		20.30		21.70		44.30		40.90		2.09		65,076		85	
Giza	2.54		66.80		11.90		18.10		21.00		53.00		38.70		1.72		83,695		91	
Beni Suef	3.59		65.90		14.20		13.80		19.70		68.90		37.00		2.49		25,420		174	
Fayoum	3.67		64.90		14.10		14.20		19.40		76.00		36.30		2.47		34,255		173	
Menia	3.25		60.00		17.50		16.00		19.70		76.20		37.20		2.52		21,745		183	
Assiut	3.77		50.80		22.40		9.70		20.40		69.40		31.10		2.88		26,266		205	
Sohag	3.68		45.30		22.30		10.30		20.10		60.80		32.60		2.67		19,811		200	
Qena	3.46		44.80		19.70		8.70		20.60		59.50		33.50		2.73		23,215		194	
Aswan	2.92		52.50		17.10		13.10		21.90		55.90		39.40		2.42		47,954		140	
Luxor	2.89		56.00		11.80		10.30		21.10		64.50		36.60		2.42		34,665		145	
Red Sea	3.14		66.30		15.30		16.50		21.40		35.20		46.60		2.54		195,802		102	
Wadi El-Gedid	2.48		67.30		14.10		27.40		21.50		46.00		42.70		2.16		65,813		73	
Matrouh	4.38		53.70		10.40		4.10		20.00		84.40		28.80		3.59		229,846		175	

TFR	Total fertility rate
CPR	Contraceptive Prevalence rate
UMN	% with unmet needs
%FW	% female working currently
AM	Median age at first marriage

%FDI	% females not using computer or internet at least once per week
SD	Median months between births
TDFR	Total desired fertility rate
GDP	Gross domestic product
CI	Composite index for demographic resilience

IX. Annex 2

Census 2017

	Population Below 15	Population 65+	Total Population	% population below 15	% population 65+
Cairo	2,560,423	461,938	9,539,673	26.8%	4.8%
Alexandria	1,527,204	246,588	5,163,750	29.6%	4.8%
Port Said	204,009	45,055	749,371	27.2%	6.0%
Suez	234,386	29,786	728,180	32.2%	4.1%
Damietta	506,873	58,793	1,496,765	33.9%	3.9%
Dakahlia	2,205,472	279,928	6,492,381	34.0%	4.3%
Sharqia	2,546,798	257,404	7,163,824	35.6%	3.6%
Qalyoubia	1,933,528	172,468	5,627,420	34.4%	3.1%
Kafr El Sheikh	1,151,656	131,893	3,362,185	34.3%	3.9%
Gharbia	1,621,348	217,847	4,999,633	32.4%	4.4%
Menofia	1,495,567	172,612	4,301,601	34.8%	4.0%
Beheira	2,169,645	220,463	6,171,613	35.2%	3.6%
Ismailia	464,957	43,171	1,303,993	35.7%	3.3%
Giza	3,025,732	260,696	8,632,021	35.1%	3.0%
Beni Suef	1,210,770	112,771	3,154,100	38.4%	3.6%
Fayoum	1,433,061	114,696	3,596,954	39.8%	3.2%
Menya	2,043,498	211,622	5,497,095	37.2%	3.8%
Assiut	1,609,854	159,102	4,383,289	36.7%	3.6%
Sohag	1,881,385	184,045	4,967,409	37.9%	3.7%
Qena	1,125,422	127,249	3,164,281	35.6%	4.0%
Aswan	495,603	56,983	1,473,975	33.6%	3.9%
Luxor	397,788	56,844	1,250,209	31.8%	4.5%
Red Sea	130,190	9,718	359,888	36.2%	2.7%
New Valley	80,044	10,828	241,247	33.2%	4.5%
Matrouh	175,483	8,168	425,624	41.2%	1.9%
North Sinai	175,803	10,417	450,328	39.0%	2.3%
South Sinai	40,141	1,728	102,018	39.3%	1.7%
Total	32,446,640	3,662,813	94,798,827	34.2%	3.9%

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Endnotes:

[i] Born between 2010 and 2025, the size of Generation Alpha in Egypt is estimated as 36.2 million taking into account the registered number of births 2010 to 2022 and assuming that the number of births in 2023 and 2024 is the same as 2022.
[ii] The decrease in fertility level can be partially explained by a decrease in marriage rate from 10.8 per thousand in 2010 to 8.6 per thousand in 2021.
[iii] Calculated by the author based on the results of the 2017 census.
[iv] Based on the percentage of population below 15 to the total population.
[v] Based on the composite index of demographic resilience.
[vi] TFR in 2014 = 3.5, TWFR in 2014 = 2.8, TFR in 2021 = 2.85, TWFR in 2021 = 2.14.
[vii] If all unwanted births were averted, this would have roughly reduced the number of births in 2022 by 730 thousand births.