



Generation 2050: Turning Iraq's Demographic 'Gift' into an Economic Window of Opportunity



Dr Amjad Rabi

28 May, 2022

Working Paper WP/2022/01

Copyright © International Labour Organization 2022

First published 2022

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organization may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organization in your country.

Title: Generation 2050: Turning Iraq's Demographic 'Gift' into an Economic Window of Opportunity, Baghdad, 2022.

ISBN: 9789220374856 (**Web PDF**)

Also available in Arabic:

العنوان:

جيل 2050: تحويل «هدية» العراق الديموغرافية إلى نافذة اقتصادية للفرص ، بغداد، ٢٠٢٢.

ISBN: 9789220374849 (Web pdf)

This publication was funded with the financial support of the European Union. Its contents are the sole responsibility of the authors and do not necessarily reflect the views of the European Union. The findings, interpretations and conclusions expressed in this paper are those of the author and do not necessarily reflect the policies or views of ILO or of the United Nations. This is a working document. It has been prepared to facilitate the exchange of knowledge and to stimulate discussion. The text has not been edited to official publication standards and ILO accepts no responsibility for errors.

The designations employed and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers. Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

Information on ILO publications and digital products can be found at: www.ilo.org/publns. For ILO publications in Arabic, please contact:

ILO Regional Office for Arab States

P.O.Box 11-4088 Riad El Solh 1107-2150

Beirut - Lebanon

Website: www.ilo.org/arabstates

Contents

1. Introduction and Summary	2
2. Iraq's Demographic Developments	2
3. Demography Transition and Economic Growth Path	8
3.1. Labor Market Issues	9
3.2. Social Protection Issues	10
3.3. Labor Productivity Issues	13
Reference	16
List of Tables	
Table 1: Annual Population Change in thousands, 1990 – 2020	4
Table 2: Length of Demographic Dividends, Years, Selected Countries	7
Table 3: Speed of Aging, Years, Selected Countries	8
List of Figures	
Figure 1: Total Fertility Rates, Child per Woman, 1950 – 2050	2
Figure 2: Total Fertility Rates, Child per Woman, Iraq and Selected Countries, 2020	3
Figure 3 Under 5 Mortality, Deaths per 1000 lives, 1950-2050	3
Figure 4: Life Expectancy in years, 1950-2050	4
Figure 5: Population Pyramid, 1980 - 2050	5
Figure 6: Number of Dependents per 100 Persons of Working Age (15-64), 1950-20100	5
Figure 7: Population Growth Rates by Major Age Groups, per cent, and Demographic Window	of
Opportunity (start and end period), 2000-2100	6
Figure 8: Post-Working Population as Percent of Total Population, 1950-2050	7
Figure 9: Economic Growth Decomposed	8
Figure 10: Labor force Participation Rates (left graph) and Unemployment Rate	
(right graph), 2021	9
Figure 11: Population by Working Status, Millions, 2022	9
Figure 12: Public Wage Bill and Public Employment, Selected Countries, 2020	10
Figure 13: Iraq's Matrix of Social Protection, 2022	11
Figure 14: Number of Females to 100 Males, 2020-22	11
Figure 15: Integrated Social Old-Age Protection System	13
Figure 16: Firm-level's Total Factor Productivity (TFP), Arab Countries, 2011-2019	14
Figure 16: Human Capital Index, Country Comparisons, 2018	14

1. Introduction and Summary

This paper was prepared for a presentation at the national symposium titled "Iraq 2050: Economically Productive and Socially Protected", organized Jointly by Ministry of Planning, the ILO, 'Al Malooma' – Information Centre for Research and Development, and funded by the EU, Baghdad May 28, 2022.

Over the past few decades, Iraq has been enjoying a relatively favorable demographic environment characterized by working age population growing at a higher rate than the overall population. However, Iraq has not been very successful in translating this demographic window of opportunity into a sustained economic growth path, poverty reduction, and achievement in non-income dimensions. Nevertheless, Iraq is still at early stage of its demographic window of opportunity. Moving forward, this paper presents areas that Iraq should focus on to unleash an economic growth path to achieve a vision of economically productive and socially inclusive nation by 2050.

It is to be noted that the data limitation as Iraq census data go back to decades ago. Nevertheless, it illustrates with best available statistics and country comparisons important key features of Iraq's underlying population dynamics and the consequences and opportunities in Iraq's path to development.

2. Iraq's Demographic Developments

According to the 2019 revision of the World Population Prospects, Iraq's population was estimated to have reached 42.165 million in 2022. Over the last 10 years, Iraq's population grew at a rate averaged 2.97 percent annually, which is significantly higher than that of Middle-Income Countries (1.09 percent) and that of the West Asia (1.84 percent). By 2050, the growth rate will remain positive at 1.45 percent (UN, 2019).

The pattern of strong but declining natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. Compared with 1950, Total Fertility Rate (TFR) decreased by almost 60 percent, from 8.11 children per woman to 3.45 children per woman in 2022. It is expected to decline further and reach 2.61 children per woman by 2050 (UN, 2019).

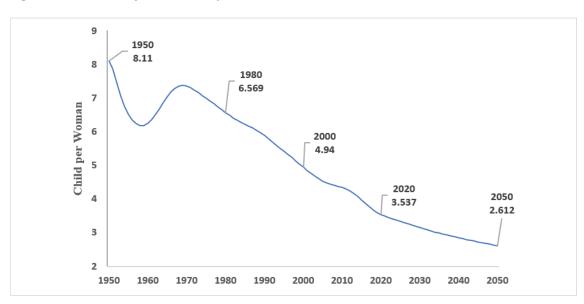


Figure 1: Total Fertility Rates, Child per Woman, 1950 - 2050

Source: Based on data from (UN, 2019)

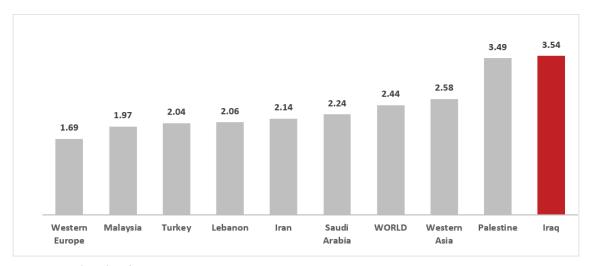


Figure 2: Total Fertility Rates, Child per Woman, Iraq and Selected Countries, 2020

Source: Based on data from (UN, 2019)

The second factor, the mortality rate, has shown improvement over the same period. The Under-Five mortality rate declined significantly from a rate of 365.0 deaths per 1,000 live births in 1957 to 26.3 deaths per 1,000 live births in 2020. Life expectancy at birth, therefore, increased steadily and reached 70.8 years as of 2020, more than double the life expectancy in 1950 (34.9 years-old). It is expected to increase further and add 4.5 more years by 2050 (UN, 2019).

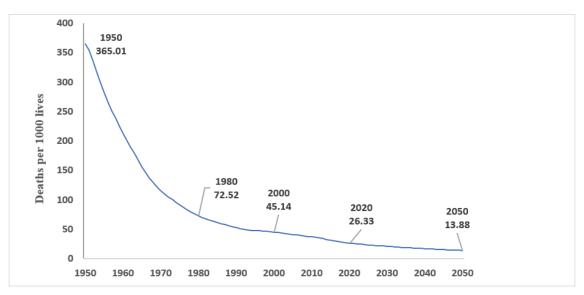


Figure 3 Under 5 Mortality, Deaths per 1000 lives, 1950-2050

Source: Based on data from (UN, 2019)

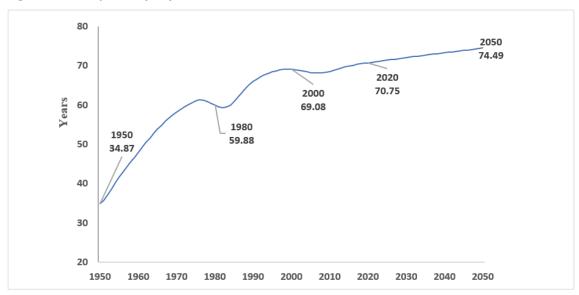


Figure 4: Life Expectancy in years, 1950-2050

Source: Based on data from (UN, 2019)

In additional to the natural population change (fertility and mortality), net migration has also shaped a key feature of Iraq's demographic characteristics. For instance, the 5-years period between 2005 and 2009, an average of 240 thousand Iraqis left Iraq annually (a total of 1.2 million in this 5 years-period).

Table 1: Annual Population Change in thousands, 1990 – 2020

	Annual chane in thousands											
Period	Population change	Birth	Death	Net Migration								
1990-1995	527.26	694.04	122.27	-44.52								
1995-2000	661.04	786.96	125.21	-0.70								
2000-2005	693.82	870.02	140.25	-35.96								
2005-2010	547.75	947.48	159.74	-239.99								
2010-2015	1126.45	1053.40	168.29	241.34								
2015-2020	955.25	1107.98	180.40	27.67								

Source: Based on data from (UN, 2019)

Combining these factors together (fertility, mortality, and migration), the population structure has changed over the past few decades. Nevertheless, Iraq's young population continues to be the main demographic feature that most characterizes Iraq's population. However, the broad base of the population pyramid is getting smaller while the midsection of Iraq's population pyramid is expanding.

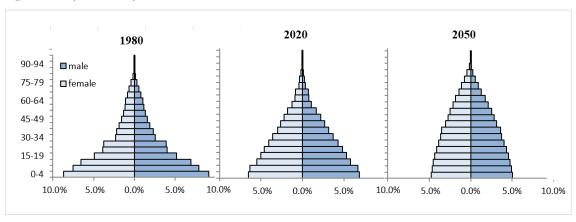


Figure 5: Population Pyramid, 1980 - 2050

Source: Study calculation based on data from (UN, 2019)

The population dynamics discussed earlier has three main potential consequences:

First, the young dependency ratio (the ratio of children under 15 years of age per working-age person) and the total dependency ratio (ratio of children under 15 years and elderly over 65 year-old per working-age person) have been both decreasing in Iraq, though still high at 69.94 dependents (children under 15 and elderly over 65) for every 100 working-age persons as of 2020 (UN, 2016).

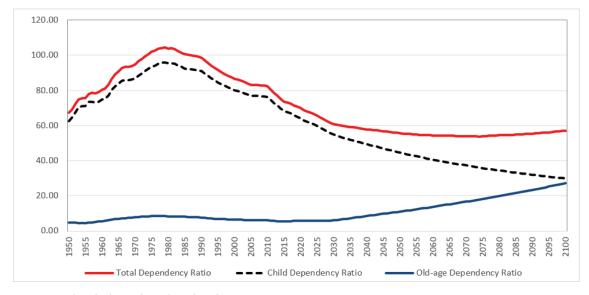


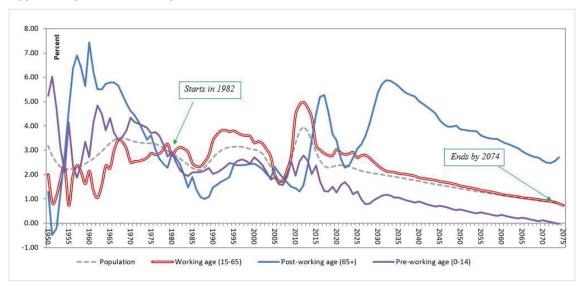
Figure 6: Number of Dependents per 100 Persons of Working Age (15-64), 1950-20100

Source: Study calculation based on data from (UN, 2019)

Second, the likelihood of steady and possibly increased population growth, despite the declining fertility rate. This phenomenon is known as the "demographic momentum," which occurs due to the fact that more women are in their reproductive years. This might come into effect in the near future in Iraq, and will translate into an increase in the pace of the population growth.

Third, the expansion of the mid-section of the population pyramids and the declining dependency ration in Iraq signals that Iraq is enjoying what is widely referred to as the "demographic window of opportunity". This occurs when the working-age population expands at a higher rate than the general population, since the expansion of the working-age population, and the concomitant enlargement of the labor force, can present a favorable condition for sustained economic growth path if the country creates sufficient jobs to absorb the rapid entry to the labor marker (discussed later).

Figure 7: Population Growth Rates by Major Age Groups, per cent, and Demographic Window of Opportunity (start and end period), 2000-2100



Source: Study calculation based on data from (UN, 2019)

In comparison of other countries at different level of development, the length of Iraq's demographic window of opportunity is remarkable.

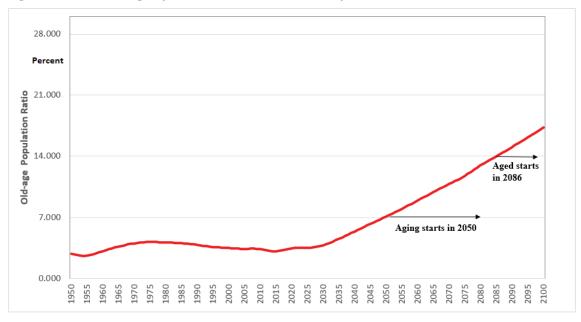
Table 2: Length of Demographic Dividends, Years, Selected Countries

	Ye	ar	Length																			
	Start	End	Length		Th	ie P	erio	od o	of D	em	ogr	ap	hic	Dev	ide	end	S					
Japan	1930-35	1992	60														91					92
South Korea	1966	2013	47									88					<u> </u>					
Taiwan	1963	2014	51																			
Hong Kong	1961	2010	49	-7.50														65	64			
Singapore	1964	2012	48	57-62						55	54		55		59	52				55	56	
China	1965	2010	45		47 51	49	48	45	45	П				45		JZ						
Thailand	1968	2013	45						П					П								
Malayasia	1964	2019	55											Ш								
Indonesia	1971	2025	54											Ш								
Philippense	1964	2052	88											Ш								
Nepal	1991	2046	55											Ш								
Viet Nam	1969	2014	45	-	S	Ξ	S	С	⊒	Z	=	P	z	<	2	ш	S	<u> </u>	P	=	D.	=
Myanmar	1968	2027	59	Japan	Taiwan South N	Hong Kong	Singapore	China	Thailand	Malayasia	Indonesia	Philippense	Nepal	Viet Nam	Myanmar	Egypt	Somalia	Yemen	Palestine	Libya	Bangladesh	Iraq
Egypt	1989	2041	52	_	ž a	6	por	_	and	yas	nesi	pe	_	Van	ma	-	<u>a</u>	ä	tin		lad	
Somalia	2009	2100	91		Taiwan South Korea	gn	ø			₽.	D	nse		د	=				U		h	
Yemen	1991	2056	65		_																	
Palestine	1991	2055	64																			
Libya	1978	2033	55																			
Bangladesh	1978	2034	56																			
Iraq	1982	2074	92																			

Source: Study Calculation based on data from the UN (2019). For Japan. Taiwan, South Korea, Singapore, Thailand based on Oizumi (2013).

Fourth, as a result of falling fertility rate and longer life expectancy, Iraq's population transition will shift gears from youthful to aging at certain point. The author's calculation indicates that Iraq will be considered as an 'aging nation', defined when post working population (65+) constitute 7 percent of the total population, by 2050. Nevertheless, it will not be considered an 'aged nation, defined when post working population (65+) constitute 14 percent of the total population, until 2086.

Figure 8: Post-Working Population as Percent of Total Population, 1950-2050



Source: Study calculation based on data from UN (2019)

In comparison of other countries, the speed of aging expected in Iraq will be rapid. While it took France, for instance, 115 years to move from aging to an aged phase, Iraq is projected to do it in only 36 years. However, it seems that the fast-aging society is a common feature of today's developing countries across different regions.

Year Length 7% 14% Transition From Aging to Aged Population Japan South Korea Taiwan Hong Kong Singapore China Thailand Malayasia Myanmar Indonesia Philippense Vietnam Nepal Oman Yemen Libya Palestine Iraq

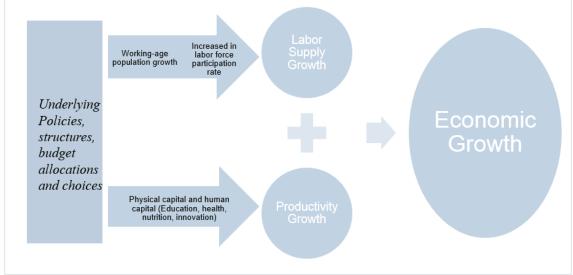
Table 3: Speed of Aging, Years, Selected Countries

Source: Study Calculation based on data from the UN (2019). For Japan. Taiwan, South Korea, Singapore, Thailand based on Oizumi (2013).

3. Demography Transition and Economic Growth Path

The neoclassical long-run path of economic growth model decomposes economic growth into two components: the growth rate of the employed population and growth of labor productivity.

Figure 9: Economic Growth Decomposed



While Iraq has started to benefit from its demographic gift, it has not been successful in translating the demographic window of opportunity into sustained economic growth path, and along the way providing opportunities for Iraqis to access rights (education, health, etc.) and move out of poverty. To actualize this shift and achieve a 'big push' in development will depend on Iraq's ability to generate sufficient jobs, accomplish an inclusive labor market for all Iraqis, extend protection not only to public civil servants but to all workers, and achieve improvement in labor productivity.

3.1. Labor Market Issues

While the expansion of the working-age population, and the concomitant enlargement of the labor force, can be the driver for sustained economic growth, Iraq's inability to create sufficient jobs to absorb the rapidly growing labor force has led to waves of social unrest. Youth (age 15-24) unemployment is especially alarming estimated at 32.1 percent and 62.1 percent for male and female labor force participants, respectively (ILO, 2017)This age and gender dimension to the unemployment ratios in Iraq is coupled with the low participation rate of female citizens in the labor market, currently at only 10.6 percent in comparison with male labor for participation at 68 percent (ILO, 2017).

Figure 10: Labor force Participation Rates (left graph) and Unemployment Rate (right graph), 2021

Source: based on data from (UN, 2019) and (ILO, 2017)

These two factors (low participation rates among female citizens and high unemployment rate) have not allowed Iraq to translate the demographic gift into an economic window of opportunity. Out of the 25.214 million in the working age population, only 9.010 million employed (UN, 2019), (ILO, 2017).

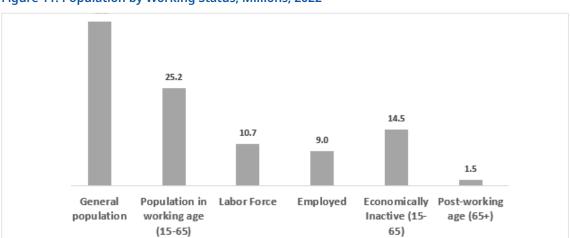


Figure 11: Population by Working Status, Millions, 2022

Source: Study calculation based on data from from (UN, 2019) and (ILO, 2017)

Despite this large pool for potential employment, the share of the employment in the private sector remains low at only 61.6 percent of those employed (37.9 percent of employment is in the public sector) (ILO, 2017). The increased demand for public sector demand is driven by the generosity of employment benefits in the sector, which disadvantages the private sector's employability it preferred over that of the private sector, resulting from an elevated wage bill compared with peer countries (IMF, 2021).

Figure 12: Public Wage Bill and Public Employment, Selected Countries, 2020

Source: (IMF, 2021)

One of the decent work deficits relates to the limited social security coverage for private sector workers. Informal work is generally characterized by decent work deficits, including low wages, limited rights at work, and weak job and income protection. This is especially applicable to the case of Iraq, where main feature that characterizes Iraq's labor market is the high degree of informality. Reports suggest that about two out of three workers have informal job (ILO, 2017).

3.2. Social Protection Issues

Iraq's system of social protection, which is one of the oldest in the Arab world, covers mainly two distinct groups of the population: public employees and the poor. As for the first group, the public employees, the "State Employees' Pension Fund," provides a relatively good level of social security protection for civil servants; the military and security forces as well as employees in state-owned enterprises. However, reports have pointed out to design issues that limit its long-term fiscal sustainability. For instance, the statutory retirement age of 50 is low, and the replacement rate is high with the minimum full-career pension obtained after 15 years of service.

The second group covered by the social protection system in Iraq includes the poor and vulnerable Iraqis, who are targeted by several programs, most importantly the social safety net and the Public Distribution System. Despite of this many programs targeting the poor, reports highlighted the significant coverage limitation that resulted in many deserving poor not receiving the intended benefit.

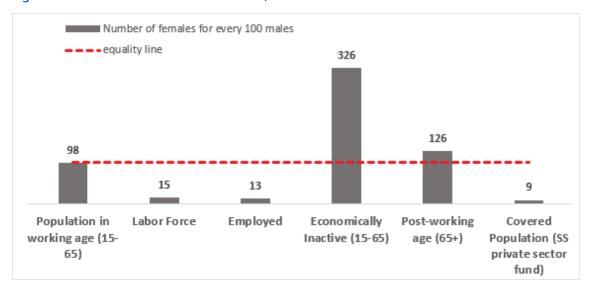
Apart from the two groups, coverage of other working adults and their families, including persons in the private sector especially those in unstable forms of wage employment and the self-employed, is practically nonexistent.

Figure 13: Iraq's Matrix of Social Protection, 2022

	Family Benefit	Old-age	Survivor	Disability	₩ork Injury	Unemploy - ment	Sickness	Maternity	Health Care	
Civil Servants	SI	SI	SI	SI	SI	-	SI	SI	PP	
Private Employees	_	SI	SI	SI	SI	_	-	_	PP	
Self-employed	-	-	-	-	1	-			PP	
Unpaid worker	_	_	_	_	1	-	_	_	PP	
Economically inactive	-	-	-	_	ı	-	-	_	PP	
Poor/Vulnerable		MT+IK								
SI: Social Insurance		MT: Means-tested Benefit PP: Publica								

While the Social Security Law No. 39 of 1971 and amendments stipulates that all workers covered by the Labor Law No. 37 of 2015 should be members in the Pension and Social Security Fund for Workers, a small fraction is covered (estimated at less than 10 percent of the private sector). The discriminatory labor market in Iraq discussed earlier (see 10) has resulted in unequitable outcomes and differential coverage rates between male and female labor force participants. For instance, reports indicated that for every 100 males covered by the Pension and Social Security Fund for Workers, only 8.7 females are covered.

Figure 14: Number of Females to 100 Males, 2020-22



Source: Study calculation based on data from from (UN, 2019) and (ILO, 2017), and (MOLSA, 2020)

The Government of Iraq has realized the need to create flexibility in the labor market and allow greater movement of the workforce between the public and private sectors. This requires fairness and reducing the preferential benefits gap between the public and private insurance systems and at the same time, making both systems more sustainable, efficient, and comprehensive in coverage to achieve justice and equity for future generations. A key milestone is Irag's ratification of Convention of Social Security Minimum Standards (C102) (Law No. 3 of 2021 in the Official Gazette of Iraq in 2021). With the ratification of C102, ensuring compliance with its normative framework has now become a legal obligation. Closing the coverage gap, discussed earlier, becomes a priority while at the same time ensuring long term sustainability and intergenerational equity. A strategic approach to achieve the objective of extending social security and close the coverage gap should be through a systematic, evidence-based, country-specific coordinated actions to address bottlenecks and impediments to access social security at both the demand and supply sides. At the supply side, the legislative reform that extends social security coverage to workers in the private sector is instrumental. In this regard, two draft social security laws for the private sector workers are in the process of enactment. They will cover both federal and KRI and currently in the respective Parliaments. The two laws will replace the current Social Security Law No. 39 of 1971 and amendments. If passed, it is hoped that the draft laws will introduce many changes that will bring Iraqi social security legislation closer to meeting the minimum requirements of the C102. Most important features include: extending coverage to workers in the informal sector, self-employed, and business owners. It also introduces new benefits to all workers in the private sector (formal and informal) such as maternity and unemployment, which is added to old-age pension, survivor and disability pensions, work-related injuries, and sickness benefits.

In parallel to the legislative reform, the cumulated experience in many countries highlights the need to address capacity of authorities to implement the law, which includes short-term benefits (maternity, unemployment) for the first time in addition to extending coverage to hard-to-reach groups of workers in unstable forms of wage employment and the self-employed. Efforts needs to be taken specifically to address this supply-side bottleneck to upgrade the institutional capacity that allows for more efficient delivery of services (social security, social protection, employment) and ensure readiness to respond to the plans for extending social security in the informal sector.

At the demand side, it is important to raise awareness among workers about the rights. In addition to workers, awareness among business owners and employers on the functions of risk and financial management from employers' perspectives (the use of insurance as opposed to exclusively employer-financed benefits) is essential. Further, the awareness should also cultivate broad-based support for social security coverage among the broader Iraqi public to create broad support and community involvement for the reform agenda. In addition to awareness raising, addressing the issue of capacity to pay contributions is a key to ensure the demand for social security. The draft laws committed that tax funding is channeled to subsidize contributions for the long-term branch of protection (pension, survivors, and long-term disability) for eligible workers in the informal economy.

Both demand and supply interventions must be supported by data-driven concrete evidence to identify country-specific, scalable and operational set of solutions that can be presented for inclusive national dialogue with all partners to arrive at the optimal mix of policy options that maximizes societal outcome within the fiscal envelop of the nation. For instance, creating synergy between the two branches of social protection (social assistance and social security) to close the coverage gap in old-age income security through constricting an old-age Social Pension Floor that consolidates fragmentation into a coherent, effective, and impactful system of social protection. This modality of creating synergies between the social assistance and social security can be extended to other benefits for more optimal and effective allocation of resources.

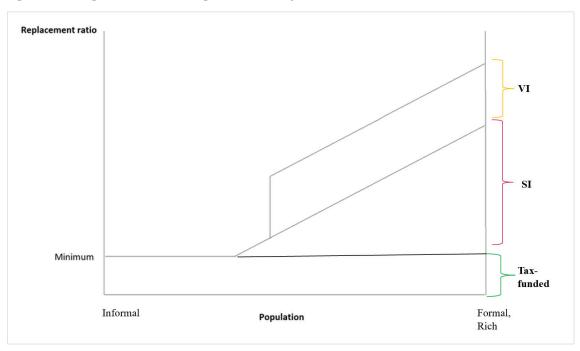


Figure 15: Integrated Social Old-Age Protection System

In the horizontal dimension, a coherent Social Old-Age Protection Floor containing a basic social security guarantee, which is provided at minimum level to ensure universal access to old-age pension. The vertical dimension accounts for the progressive achievement of higher levels of protection that combines the floor with the social security systems (for both civil servants and workers in private sector) in Iraq. By better coordinating, and emphasis on creating synergies between contributory and non-contributory programs, the overall integrated system will be more effective to not only reduce inequality, but also enhance economic security for the entire old-age population while maintaining incentive structure for saving and participation in the labor market within Iraq's overall fiscal envelope.

3.3. Labor Productivity Issues

While the demographic dynamics in Iraq highlights strong growth of working age population, which increases the supply side of labor that can be used to fuel economic growth if sufficient jobs are created, productivity is instrumental driver for long-term growth path towards the convergence with high-income economies. Nevertheless, Iraq's productivity lagged behind peer countries.

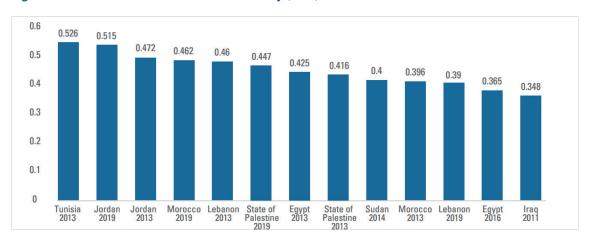


Figure 16: Firm-level's Total Factor Productivity (TFP1), Arab Countries, 2011-2019

Source: (ILO & ESCWA, 2021)

More alarming, the Human Capital Index, which measures the productivity of the next generation of workers relative to the benchmark of complete education and full health, for Iraq is significantly lower than what is expected for the level of income.

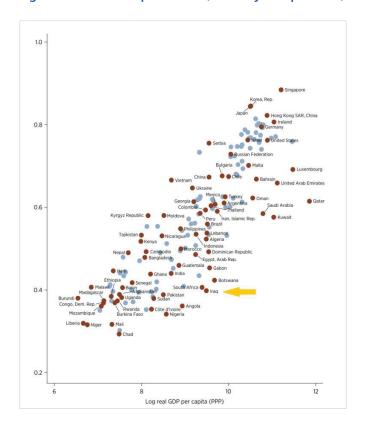


Figure 17: Human Capital Index², Country Comparisons, 2018

Source: (World Bank, 2019)

¹ TFP measures the level of efficiency in production. A higher value of TFP is associated with both higher capital and labour productivities. Additional information regarding the calculation of TFP is available at Towards a Productive and Inclusive Path: Job Creation in the Arab Region (ilo.org)

² The human capital index ranges between 0 and 1. The index is measured in terms of the productivity of the next generation of workers relative to the benchmark of complete education and full health. An economy in which the average worker achieves both full health and full education potential will score a value of 1 on the index. GDP = gross domestic product; PPP = purchasing power parity. For further explanation, please visit World Development Report 2021: Data for Better Lives (worldbank.org)

To unleash productivity potential, investments in both infrastructure and labor skills set are key. It is important to highlight that investment in infrastructure must be matched with continuous upgrading of the skill sets of labor force participants to maintain high level of labor productivity to complement the demographic gift to unleash economic growth path that enables Iraq to converge with high income economies. In fact, rising labor productivity accounted for at least half of GDP per capita growth in most OECD countries from 1990 to 2000 (OECD, 2017).

To unlock labor productivity, and therefore economic growth, education is instrumental. There are three possible justifications:

- 1- Causal chain flowing from schooling, to skills, to greater worker productivity, to increased growth of national income.
- 2- The role of education in enhancing innovation in the economy as a whole (endogenous theories of growth).
- 3- The innovation dimension but more from the diffusion than creation perspective, seeing an educated population as crucial for the spread of new processes, products and technologies.

Iraq being at early stage of its demographic window of opportunity, as discussed earlier, highlights that its ability to address the quality of its labor force is at the center of making best use of its demographic gift. There is also an urgent need to raise quality of education to create the match between the skills sets and the modern labor market requirement. Creating avenues for everyone to improve their skills, creating vocational pathways, placing an emphasis on technical skills and higher order thinking, and providing opportunities to meet Iraq's growth needs by developing skills for the right jobs. This particular issue (small percentage of labor force with relevant skillsets) has an inequity dimension: with accelerated improvements in modern technology, those with skills tend to benefit more, and the less skilled are left behind. Faced with scarcity, competing employers will continuously increase wages to those with skills, widening the income gap in the labor market.

Reference

ILO & ESCWA. (2021). Towards a Productive and Inclusive Path. Beirut: UN. Retrieved from https://www.ilo.org/beirut/publications/WCMS_817042/lang--en/index.htm

ILO. (2017). Key Indicators of the Labour Market 2015 . Retrieved 2011, from http://www.ilo.org/

IMF. (2021). Iraq: 2020 ARTICLE IV CONSULTATION, STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR IRAQ. Washington, D.C.: IMF . doi:file:///C:/Users/amjad/Downloads/1IRQEA2021002%20(1).pdf

OECD. (2017, April). Education at a Glance 2009. Retrieved from http://www.oecd.org/edu/skills-beyond-school/educationataglance2006-home.htm

UN. (2019). Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2020 Revision, CD-ROM Edition.

World Bank. (2019). The World Development Report (WDR) 2019: The Changing Nature of Work. Washington D.C.: World Bank. Retrieved from https://www.worldbank.org/en/publication/wdr2019





