Palestine 2030

Demographic Change: Opportunities for Development

Full Report
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State of Palestine
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Research and Writing Team
Dr. Youssef Courbage, Lead Consultant, Institut National d'Etudes Démographiques, Paris
Dr. Bassam Abu Hamad, Consultant, Al-Quds University
Dr. Adel Zagha, Non-resident Research Fellow, Palestine Economic Policy research Institute –MAS. Professor of Economics, Birzeit University

Reviewed by
Palestinian Central Bureau of Statistics
Dr. Majdi Malki, Dean of Faculty of Arts and Professor of Sociology at Birzeit University
Dr. Michael Hermann, Senior Adviser on Economics and Demography, UNFPA, NY

Edited by
Ms. Charmaine Seitz

Translation into Arabic
Dr. Malek Qutteina

Design and Printing
TURBO Design

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Foreword

I would like to express my sincere gratitude to UNFPA and the UN more broadly as well as the National Population Committee for this important study. *"Palestine 2030- Demographic Change: Opportunities for Development"* underscores the need for policy makers to take into account the medium and longer term implications of demographic trends at the sector level. We must not only understand the challenges that the "youth bulge" in our population presents, but the opportunities provided by a growing, educated, motivated, young work force.

Within Government, we certainly acknowledge the contribution to evidence-based policy that this study provides and will aim to ensure that we work productively with the Palestinian and international research communities to ensure that planning and decision-making are informed by demographic study.

So yes, it is essential that we understand and reflect demographic trends and realities in our planning for health, education, transportation and all our socio-economic sectors. At the same time, we need to underscore how demographic reality amplifies the threat that occupation imposes. If we do not have access to our natural resources and cannot freely export our goods, where will the future jobs for our youth come from? Palestine's youth is Palestine's future and they must be given the right to shape their own futures. The world can only gain by unleashing the vast, creative potential of our young men and women. Let us take advantage of Palestine's potential demographic dividend by welcoming the free, independent State of Palestine and its citizens into the international community of nations.

Rami Hamdallah
Prime Minister
State of Palestine

Foreword

It is my great pleasure to introduce the "Palestine 2030 – Demographic change: opportunities for development" study. It is the first report that provides comprehensive evidence and understanding of the linkages between population dynamics and development and where Palestine stands in terms of demographic transition.

The study demonstrates how population trends and dynamics play a powerful role in development and therefore must be factored into planning and policy decision. It is clear that long term planning in Palestine is hampered by the decade long occupation and dependence on foreign assistance. Nevertheless by taking a long term view of Population Dynamics, I firmly believe that we can influence socio-economic development positively. Palestine and its people will benefit from this vital planning and forecasting tool.

The present analysis focuses particularly on the demographic impact on key sectors such as Health, Education and the Labor Market. However, I am pleased that the core work has already been completed to do further analysis in other relevant sectors such as Energy, Water, Environmental Protection, Social Welfare and many more. I would like to invite interested partners to work with us in the coming years to complete the analysis in other areas relevant to the future of Palestine.

The study has been a labor of academic and intellectual passion which evolved as a result of close cooperation between UNFPA, the Prime Minister's office and National Population Committee. I am honored to express special thanks to lead researcher Dr. Youssef Courbage from Institut National d'Études Démographiques, whose academic credentials have ensured the highest level of methodological rigor and practical applicability. Special thanks also go to the team of Palestinian researchers Dr. Bassam Abu Hamad from Al-Quds University and Dr. Adel Zagha from Birzeit University and Palestine Economic Research Institute (MAS). Of course, the study would not have been possible had it not been for the excellent data available from Palestinian Central Bureau of Statistics. I would also like to express my sincere appreciation to the UN Resident Coordinator Office for the financial support.

It is my hope that the study will stimulate a vibrant discussion among policy makers, including the international community on how to best leverage financial and human resources to build a better future for all Palestinians.

Anders Thomsen
UNFPA Representative
State of Palestine

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List of Acronyms

ASFR	Age-specific fertility rate
DHS	Demographic and Health Surveys
DOP	Declaration of Principles
FDI	Foreign direct investment
GDP	Gross domestic product
GNP	Gross national product
GBV	Gender-based Violence
HDI	Human Development Index
ICHR	Independent Commission for Human Rights
ICJ	International Court of Justice
IEA	International Association for the Evaluation of Children's Progress
ITC	International Trade Centre
IUD	Intrauterine Device
LFPR	Labour Force Participation Rate
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
MICS	Multiple Indicator Cluster Surveys
MIGA	Multilateral Investment Guarantee Agency
MOH	Ministry of Health
MOEHE	Ministry of Education and Higher Education
NCDs	Non-communicable diseases
NIS	New Israeli Shekel
OCHA	Office for the Coordination of Humanitarian

Affairs	
oPt	occupied Palestinian territory
OECD	The Organization for Economic Cooperation and Development
OEE	Output elasticity of employment
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PIPA	Palestinian Investment Promotion Agency
PLO	Palestine Liberation Organization
PMA	Palestine Monetary Authority
SITC	Standard International Trade Classification (SITC)
SITC	Standard International Trade Classifications
SMAM	Singulate mean age at marriage
TFR	Total fertility rate
TIMMS	Trends in International Mathematics and Science Study
TVET	Technical and vocational education and training
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Fund for Population Activities United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund United Nations Children's Fund
USD	United States Dollar
WHO	World Health Organization

Terminology

Area C: As part of the 1995 interim Oslo II agreement, the West Bank (except East Jerusalem) was divided into three administrative areas; referred to as Area A, B and C. Area A has full Palestinian civil and security control, Area B has full Palestinian civil control and joint Israeli-Palestinian security control and Area C has full Israeli civil control and control over security, planning and construction. Area C surrounds Areas A and B of the West Bank, and is mostly located in the eastern part of the West Bank along the Jordan Valley, and in the western and central parts of the West Bank. It constitutes over 60% of the West Bank and is fundamental to the contiguity of the West Bank and the viability of the Palestinian

Separation Wall: A barrier of 25-foot-high concrete walls, fences, ditches, razor wire, groomed sand paths, an electronic monitoring system, patrol roads, and a buffer zone. Israel has been constructing the Separation wall since 2002, with the stated aim of preventing violent attacks by Palestinians inside Israel. The vast majority of the Barrier's route deviates from the Green Line and runs within the West Bank, separating Palestinian communities from the rest of the West Bank and contributing to the fragmentation Palestine. On 9 July 2004, the International Court of Justice (ICJ) issued an Advisory Opinion on the Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory. The ICJ stated that the sections of the Barrier route that run inside the West Bank, including East Jerusalem, together with the associated gate and permit regime, violated Israel's obligations under international law.

Green Line: The 1949 Armistice line (West Bank, including East Jerusalem and the Gaza Strip).

"Palestine", "State of Palestine", "occupied Palestinian territory": In this report the terms "Palestine", the "State of Palestine" and "occupied Palestinian Territory" have been used interchangeably depending on context. Specifically the term "occupied Palestinian territory" refers as a whole to the geographical area of the Palestinian territory occupied by Israel since 1967. The terms "Government of Palestine", "Palestinian government", "Palestinian Authority" have been used interchangeably. Consequent to the adoption of resolution 67/19 by the United Nations General Assembly on 29 November 2012, Palestine was accorded the status of non-member observer State in the United Nations. As a result, Palestine can generally be referred to as a State or Country, and its authorities can generally be identified as the Government of Palestine.

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The Prime Minister's Office, the National Population Committee and UNFPA would like to extend their gratitude to the research team led by Dr. Youssef Courbage from Institut National d'Études Démographiques, with contribution by Dr. Bassam Abu Hamad from Al-Quds University, the Palestine Economic Research Institute (MAS)and Dr. Adel Zagha, from Birzeit university for their expertise and tremendous work which led to the production of a quality analytical report. Special thanks are extended to Dr. Majdi Malki from Birzeit University, Mr. Michael Hermann from UNFPA and the technical team from the Palestinian Central Bureau of Statistics (PCBS) for their technical review.

Finally, this study would not have been possible without the access to and availability of high quality data provided by the Palestinian Central Bureau of Statistics (PCBS) and the financial contribution of UNSCO.

Executive Summary

Proper development planning can only take place with a thorough understanding of demographic needs and projections. As such, this study lays out the context and milieu for the State of Palestine's population projections, then goes on to estimate how many people the state will be expected to provide for through 2050. Population projections are made for various key groups (women, children, youth, refugees and the elderly), while identifying critical issues related to their growth and significance in society and the economy. Projections are also made for key regions: the West Bank, Gaza Strip, Area C, the various governorates, and East Jerusalem as a part of the West Bank.

Over the next two decades, the change in the population age structure in Palestine opens a window of opportunity for economic growth and development. Such demographic change offers both opportunities and challenges. It will affect the availability of resources for development and the demand for public services. Sound policies will determine how Palestine manages demographic change towards development and investment in the growing young and working age population, providing better education, health services and youth and women's empowerment, and offering a foundation for growth, among other policies.

The key challenge to achieving this demographic gain is the ongoing Israeli occupation and the severe restrictions on the movement of both people and goods, which result in highly fragmented and distorted local economies with limited capacities for growth. Such complexity and uncertainty have also affected Palestinians' ability to establish long-term policies and plans. Until there is a permanent peace agreement, political instability and the occupation will remain the primary obstacles to making development gains.

The capacity of the Palestinian economy to cope with the size of the population and age structure, taking into consideration a high fertility rate, rapid population growth, and a young population, is governed largely by its labour market and employment. Employability and investment in human capital (such as health and education) also play an important role in this process. Given that 60% of the land, 80% of the water, and East Jerusalem (which constitutes 15% of the Palestinian GDP) remain under Israeli control, the Palestinian economy has very limited room for growth.

Poverty remains a continuous challenge in the Palestinian context, staying high at 26% and on the increase. This trend has resulted from erratic and declining economic activity, low wages, loss of employment opportunities due to the closure, reduced employment generation capacities of the public and private sectors, and restricted access to natural resources, as well as declining and unstable employment opportunities.

1. Palestine's demographic transition

Palestine's demographic transition particularly its fertility component, continues to lag behind that of many Asian countries, including Arab countries, in spite of some favourable development indicators such as high literacy. Fertility, which was extremely high in the 1970s, has been cut by half, which stands at 4.1, while remaining significantly higher in the Gaza Strip (4.5) than in the West Bank (3.7), although now decreasing more rapidly in the Gaza Strip.

The classic disaggregation by large age groups – youngsters (0-14 years of age), adults (15-64 years), elderly (65 years and over) – shows that in the long run, the Palestinian demographic transition has led to a large, although decreasing share of youngsters and a low but almost constant proportion of the elderly. It is true that the proportion of youngsters below 15 years old has fallen: it was around 50% at the beginning of the 1980s and has now dropped to 39%. However, it remains relatively high. Concomitantly, the 'youth bulge' (i.e. the proportion of the 15-29-year-olds to the total or the adult population) has skyrocketed in absolute and relative terms reaching 30% in 2014.

Socioeconomic determinants of fertility, very universal marriage, early marriage, and a low contraceptive prevalence rate, especially for modern methods of contraception (used by 44%), are the main proximate determinants of the present level of fertility. Household wealth also plays a significant role. But it is mainly education, particularly female education that determines the fertility rate. The dramatic decrease in fertility that follows when education levels improve from primary to secondary and then to higher education is a common pattern in Palestine. Hence, population growth and structure for the next 35 years will be mainly influenced by educational progress in Palestine.

Other socioeconomic factors play a minor role (for example, female employment is still rare for economic and sociocultural reasons) to the extent that they hardly appear in demographic surveys. Hence the paradox is that more numbers of highly educated women – often with more education than their male counterparts – are kept outside the labor market, where their contribution is needed. Urbanization and internal migration also play a minor role since the country has been almost completely urbanized and that might have been considered a "village" in the past now benefits from all the attributes of life in towns and cities.

2. Population projections for 2030, and 2050

According to the most likely scenario, the total size of the population in Palestine would double from 4.75 million in 2015 to to 6.9 in 2030 and to 9.5 million in 2050. This doubling will happen notwithstanding the fact that fertility is slashed by half during this same period, from 4.06 to 2.17 children per women. This ineluctable doubling is the result of the population momentum that is well-engraved in the population age-sex structure, and the fact that even a decline in fertility will not prevent an ever-increasing number of births due to the arrival of large female age-cohorts at reproductive age. This implies that socioeconomic sectors will need to cope with the growing population and its needs.

In the Gaza Strip, fertility will decrease but remain above replacement level, from 4.51 to 2.41 in 2050, whereas in the West Bank it will decrease from 3.74 to replacement level over the same period. Hence, Gaza's population growth due to higher fertility and built-in population momentum will more than double (multiplication by 2.5), from 1.9 to 4.8 million in 2050, unlike the West Bank which will see growth from 2.9 to 4.7 million. Although growth will be high in the West Bank, it will be less dramatic. Ultimately, in 2050, Gaza's population (50.3%) will slightly exceed that of the West Bank (49.7%) and will remain younger on average.

Registered refugees constitute a very important segment of the Palestinian population in the State of Palestine, making up half of the total population according to UNRWA estimates for 2015 and PCBS extrapolations of the trends from the last two censuses, 1997 and 2007. There are high regional variations: in the Gaza Strip, 67% of residents are refugees compared with 25% in the West Bank. The total number of registered refugees in Palestine

will increase from a bit more than two million in 2015 to three million in 2030. By 2050, the projected refugees will reach almost 4.5 million, a multiplication by 2.25. This finding has significant meaning for social, educational, economic and political approaches, but also for humanitarian aid that refugees receive. It is no surprise that refugees in the Gaza Strip, which already represent a very large share of the population, will increase at a greater rate than in the West Bank: a multiplication by 2.4 compared with two.

Yet, a more optimistic picture emerges from the age-pyramid, which will be drastically modified due to a decrease in the proportion of youngsters below age 15, whose share is expected to decrease from 39% now to 35% in 2030 and to 25% in 2050. The proportion of elderly will double over the same period, from 2.9% to 7.7%, whereas their size in absolute terms will be multiplied by 5.3. Still this is far from an 'aging' of the population, with all its implications for health care and social protection. The critical dramatic increase in the working age population (15-64 years old) from 58% in 2015 to 61% in 2030 and 67% in 2050, opens a window of opportunity for economic gain if invested well in youth and women's empowerment.

3. Population growth and the labour market

In a fast-growing country like Palestine, population growth is a major component of the supply of manpower. The active-age population, those older than 15, would grow from 2.9 million in 2015 to 7.2 million in 2050 (thus a multiplication by 2.5). This transformation of the age-structure and the relative decrease of dependents compared with the active population generates an opportunity for demographic dividend (an opportunity for boosting economic growth), but must be accompanied by socioeconomic measures to be effective.

Recent trends show that labour force participation has remained almost constant for males but increased significantly among females, rising 70% from 2001 to 2014 for those 25-54 years of age. Assuming an increase in female participation from its present low rate of 19% to 28% in 2030 and 32% in 2050, a level that is more in line with social and economic development and gender equity, while keeping the rates of participation of adult males – which are already very high, approaching the maximum – at their present level, the rate of increase of the labour force will be high in the next three decades. This obviously depends on women's entry into the labor force, but also takes into account anthropological and economic constraints, which counteract female activity.

By 2030, the size of the labour force in Palestine is expected to increase by one million from 1.3 million workers to 2.3 million in 2030. By 2050, the labour force will include 3.8 million potential workers. This is due to the big push of youngsters into the labour market. A growing female participation rate will be the main agent of this increase. Nevertheless, females' share in the labour force will remain rather modest: there will be more than two active males for every active female.

Considering the demographic changes in population size and structure, and the increase of participation rates mainly among women, the number of jobs that should be created per annum will increase from 58,000 now to 72,000 in 2030-35, where they will level off at 76,000 in 2045-50. But job creation will have also to take into account the large reserves of unemployed and under-employed also awaiting the creation of jobs.

The increase in the active population as compared to the total population is meaningful in terms of demographic dividends. The economic dependency ratio (that is, the ratio of economic dependents to active population) provides a better vision of the burden

represented by dependency. Hence, whereas in 2015 there were more than 3.5 dependents for each active person, this economic dependency ratio will fall to 2.5 in 2050. This trend is likely to enhance savings and investments and boost economic growth, if accompanied by adequate policy measures. However, the very high rate of unemployment, reaching 26% in 2015, remains a major obstacle. Many males and females who are willing to work cannot access the labour market. This is especially true for youth aged 15-24, for whom the unemployment rate was 41% and for women, with 39% unemployment. There are also significant numbers of persons who are considered employed, but are in fact underemployed (6.2% in 2014).

4. Population growth and education

As for other functional groups of the population, the school age population will grow under the impact of demographic factors and improvement of the enrolment rates at all levels of education from pre-primary to university for both males and females. Hence, the school age population from 4 to 22 years will increase from 2.1 to 3.1 million in 2050. This is a slower rate than for the total population, since expected fertility decrease will slow down the number of births, and subsequently the numbers of the school age population a few years later. By 2030, almost two million students aged 4-17 will be enrolled in schools and almost 400,000 students will be enrolled in tertiary education. The impact of demographic transition, therefore, does materialize earlier in education than in other socioeconomic sectors. Educational enrolment will grow only moderately in the West Bank but be multiplied by 2.8 in the Gaza Strip. There will be 1.2 million enrolled in school and university in Gaza as much as in the West Bank in 2030.

With expected improvements in quality of education as reflected by the pupil-to-teacher ratio, the number of teachers required in Palestine will grow rapidly, almost doubling by 2050 for pre-primary and secondary levels, and with greater demand in the Gaza Strip than in the West Bank. By 2030, an additional 32,000 teachers will be required, 9,000 more in West Bank and 23,000 more in the Gaza Strip. In Gaza, the number of pupils per school is presently more than twice that of the West Bank, meaning it requires greater and increasing investment. Maintaining the current ratios, 1,650 new schools will be required in Palestine by 2030, 750 of them in the West Bank and 900 in the Gaza Strip.

5. Population growth and health

Health services should proactively respond to the change in the population size and composition. Population doubling between 2015 and 2050 will have serious implications for health facilities, personnel and resources. Changes in population structure imply changes in the healthcare services that will be needed in the years ahead, especially among those most at risk: children, women of reproductive age, and the elderly. Congruently, the numbers of children 0-15 years will increase, but slightly. This calls for strengthening child health services, investing more in screening, immunization, nutrition, accidents prevention, psychosocial services, school health and disability. Females in the reproductive age groups (15-49 years) will maintain a near-constant share of the population at one-fourth. This implies the need to ensure access to appropriate quality reproductive health services. Most importantly, the elderly (65 years and over) will almost double their share in 2030. As a result, there will be more clients with non-communicable diseases and more multiple health problems that are common among elderly people.

Population growth, aging, and the resultant change in disease patterns, together with the use of expensive medical products are contributing to a rise in health care costs. These demographic changes are placing intense stress on the system as it tries to hold down expenditures and, at the same time, increase access and improve quality. This comes on top of a scarcity of resources and overreliance on donor resources. The **total expenditure on health** in Palestine was 1.4 billion US$ in 2014. With the doubling of the population in 2050, the health expenditure will at least double, assuming that per capita spending remains constant.

Health personnel density is relatively fair, but still less than in some countries of the region. Therefore, health personnel densities should increase in the future. In 2014, there were 7,510 physicians at a rate of 1.7 physicians per 1,000 inhabitants. By 2030, the number of physicians needed would increase to 11,700 to meet the growing demand for health services, while maintaining the current ratio. If density is improved at 3.3 per 1,000 people, however, the needs will be 16,200 physicians in 2030 and 30,500 in 2050.

Nurses play an integral role in the healthcare system; they have been recognized as the heart of healthcare. Although it has been significantly improved (almost doubled) in the past 15 years, nurse proportions by population are low with approximately 29 nurses per 10,000 people. To maintain the current ratio of nurses, the number of nurses would have to increase from over 13,100 to 20,800 nurses in 2030. With improvements, on the other hand, the projected needs are 34,500 nurses in 2030.

In 2030, Palestine would require an additional 36 hospitals and almost 350 primary health care centres to meet population needs. Currently, the Ministry of Health (MoH) manages 31.3% of the total hospitals and hosts 54.9% of the total hospital beds in Palestine. NGOs manage 42.5% of hospitals, which contain 33% of the total beds (1,967). UNRWA covers a great deal of refugee needs, especially in Gaza. In 2014, the total number of beds was 5,939. Overall bed population rate in 2014 was 1.3 per 1,000 inhabitants (1.3 in the West Bank and 1.4 in the Gaza Strip), to cope with population growth and with emerged needs for hospital services, Palestine is in need of 11,000 beds in 2030, and, the number of needed beds will triple in 2050. It is worth mentioning that hospital services are very expensive and attention should be paid to the cost-effectiveness of providing extra beds.

6. Demographic dividend and change in age structure: Opportunity for economic growth

The demographic transition, with its accompanying declining fertility and large young population entering the working age group, presents Palestine with a window of opportunity that can be harnessed into demographic dividend.

It would be remiss, however, to ignore the strangulation of the Palestinian economy by the on-going Israeli occupation and the Palestinian government's lack of control over international trade and natural resources (water, natural gas, etc.), including the large strategic areas of Area C and the Gaza Strip, the latter of which remains under closure. With continued occupation, the capacity of the local economy to create jobs and activate more people as effective producers is likely to remain low, thus limiting the realization of demographic dividend. However, within the limited margin of manoeuvre available to the Palestinian government, Palestinians can make an effort to reap some of the fruits of the demographic transition.

A favourable age structure with a larger working age population (61% of the total population in 2030), offers some advantage for GDP per capita. Given fixed output per worker, labour force participation rates, and unemployment rates, a rise in the share of the working-age population will lead to an increase in output per capita. This 'demographic gift' is what is described as the *first demographic dividend*. The demographic window of opportunity is already open for Palestine and will likely remain open beyond 2045, as the working age population grows more than other age groups. However, due to the high unemployment rate in Palestine and the low participation rate of women in the labour force, a high proportion of the working age population is comprised of ineffective producers. The proportion of effective workers to effective consumers in Palestine is 25%. This is defined as the support ratio, which increases as fertility rate decreases and as more young people enter the labour force and become effective producers. The support ratio is projected to increase to 30%, as fertility decreases to 2.9 and as more young people enter the labour force and become effective producers.

Given population projections but maintaining the current high rate of unemployment, the proportion of effective producers will multiply by three between 2015 and 2050, while effective consumers will shrink by two. Accordingly, the support ratio will increase to 30% in 2030 and to 34.5% in 2050. The total dividend for the entire period is expected to mean a 31.7% increase in the GDP per capita, **a 1% increase in GDP per annum**.

If unemployment decreases gradually to the natural rate of 7%, the support ratio will increase to 41% with **1.5% increase in GDP per annum**. This illustrates projected economic gains from the structural change in the age structure, but also shows how crucial it is to reduce unemployment to enhance the first demographic dividend and produce a higher projected GDP per capita. Therefore, policies to increase employment rates especially among the youth must be prioritized.

Similarly, the second demographic dividend presents a window of opportunity, the realization of which depends on how the society supports its elderly. As the population ages, the burden placed on families and governments will increase relative to GDP. But through the second dividend, increased numbers of middle-aged workers may substantially raise capital relative to GDP if policies encourage workers to save for their retirement. Therefore, Palestine could move forward to create a social security fund system that will mobilize private savings.

7. Conclusion

The change in population age structure in Palestine can create a virtuous circle of economic growth and therefore, should put human capital investment at the centre of development strategies. Palestine is still in an early stage of demographic dividend, which is expected to end in 2045. Palestine will need to ensure productive employment for its expanding labour force, and policies should address investment in human capital and in job creation, especially for youth and women. Realizing a demographic dividend requires multiple intersecting investments to empower, educate and employ young people.

- ## Youth are the hope for future of Palestine.

Enabling young people and adolescent girls in particular to achieve their potential and enjoy their human rights are key to harness demographic dividend. To achieve this, policies are

essential to reduce early marriage and early childbearing, increase access to quality health care and quality education so to provide equal opportunities for job security. In addition, promote strategies for youth employment with equal access for young males and females to productive employment and active citizenship.

• Women empowerment a major agent for demographic dividend

Policies are essential to advance gender equality and promote women's employment and social protection, including elimination of all forms of gender-based violence and discrimination. Also, investment in improving access to quality reproductive health services including family planning is essential to fulfil unmet need and expand access to choice, allowing women and couples to decide on timing, number and spacing of children.

• Other Recommendations

1. Policy-makers, health planners and programmers need to consider the supply-demand chain in health and education services. The increase in the population size and the change in the population structure should be adequately considered and responded to in terms of the deployment of human resources and non-human resources, including facilities, and most importantly in securing financial resources.
2. Strengthen the relationship and linkages between the educational system, labour market and business world. The inadequacy of the current outputs of the educational system and the unmet needs of the labour market is obvious.
3. The capacity of the Palestinian labour market to absorb a rising supply of labour is limited due to the Israeli occupation and limited access to foreign markets. Directing and supporting banks in granting loans for investments and business start-ups rather than for consumption would support productive investment and increase the demand for labour.
4. Increase women's labour participation by designing work programs for them and establishing business incubators that employ women.
5. To cope with the growing demand for health services, it is essential to improve efficiency in health care provision for reduced duplication and improve quality of services. And re-orient health expenditures towards more cost effective preventive interventions.
6. Address the social determinants of health and respond to the epidemiological changes; including rise in accidents, gender-based violence, mental health and NCDs.
7. Sexual and reproductive health and rights is a very crucial domain that requires further attention to reduce mortalities and morbidities. Ensuring appropriate preconception and antenatal care, safe delivery, standardized post-natal care and family planning services are essential.
8. The focus should be on health promotion and policy formulation to address the major problems of NCDs through primary prevention, screening, detection and appropriate management. Policies that promote healthy lifestyles, healthy diet, exercise, obesity control and ending smoking are essential.

9. Due to the strategic importance of population matters in Palestine, maybe more than in any other country in the region, enhancing knowledge on this subject by increasing the number and quality of studies and researches is essential.

10. There is an urgent need to improve the civil registration system to produce timely statistics on vital events: births deaths, marriages, divorces, etc., which are as essential as censuses and surveys.

11. A permanent think tank devoted to the study of population matters in the present geopolitical context and the strategic importance of demography for Palestinians should be implemented.

12. Among the neglected determinants of fertility, female employment which did not receive much attention should receive more attention, especially since this might be the key for future progress, in population issue and sectoral development. In this connection, further studies based on censuses and surveys should reassess its role in fertility and mortality levels and trends.

13. Although international migration has been a foremost issue namely with the exodus of the Palestinians in 1948. To enhance the interrelations between the homeland and its diaspora, a demographic and socio economic survey of the Palestinians in the world should be done.

14. Areas of extreme vulnerability like Area C in the West Bank and the annexed East Jerusalem should receive special attention. Their demographic estimates and forecasts are rather shaky and should be improved and their living conditions including housing reassessed.

Chapter 1

Country Situation



A. Geopolitical context: Occupation and its development impact

Geography of Palestine

State of Palestine consists of the West Bank (5,655 km including East Jerusalem) and the Gaza Strip (365 km, with a coastline of 40 km), with a total population of 4.8 million, of which 2.9 million live in the West Bank, concentrated in urban areas and 1.9 million live in Gaza.

Mandatory Palestine was divided in 1949 between Israel, Jordan and Egypt. In the Arab-Israeli war of 1967, Israel occupied the West Bank and the Gaza Strip, and annexed East Jerusalem. The Oslo Accords signed between the Palestine Liberation Organization (PLO) and Israel in 1993 divided the West Bank into three administrative divisions – Areas A, B and C. Under the Oslo framework, the PA was given full civil and security control of Area A and civil control of Area B where it is also responsible for public order. Area C is under administrative and military control of Israel. This arrangement was meant to last for five years pending negotiations on a final status agreement to be reached by 1999. A final status agreement has not yet materialized.

From United Nations Country Team, "Common Country Analysis 2016 - Leave No One Behind: A Perspective on Vulnerability and Structural Disadvantage in Palestine".

In 1993, the Government of Israel and the Palestine Liberation Organization (PLO) signed the Declaration of Principles on Interim Self Governing Arrangements of 1993 or the DOP, initiating a process whereby Israel ceded administration of the most populated areas of the territory to Palestinian security and civil control while leaving the issues of Jerusalem, refugees and borders to final status negotiations. The Palestinian Authority (PA) was established to administer those areas (with the exception of East Jerusalem) and manage the economic relations of the West Bank and the Gaza Strip until talks had finalized. However, a final agreement between the parties was never concluded, and the second *Intifada* erupted in September 2000, resulting in sweeping incursions and a major Israeli military operation into West Bank cities during late March and early May 2002.

In August 2005, Israel withdrew its military forces and evacuated Israeli settlements from the Gaza Strip. While agreements governing the movement of people and goods in and out of the territory were signed, these were superseded by a closure of the territory that remains in place and severely limits access. Israel has since undertaken three major military operations against the Gaza Strip, the last one in July 2014 in which 2,131 Palestinians were killed,110,000 internally displaced and 18,000 housing units destroyed or severely damaged leaving 108,000 people homeless.[1]

1 OCHA, Gaza Emergency Situation Report (September 2014)

After the signing of the DOP, the number of Israeli settlements in the West Bank increased dramatically. Since 1967, Israel has established 150 settlements in the West Bank (including East Jerusalem) with an estimated number of more than 600,000 people (at close 2015). In other words, the number of settlers has almost tripled in 20 years[2], as shown in the following map.

Map I.1
Land Allocated to Israeli Settlements in the West Bank, 2012

Israeli Settlements

- Fenced or Patrolled Areas
- Municipal Boundary
- Regional Council

Barrier

- Constructed / Under Construction
- Planned



Source: OCHA. Available at http://www.ochaopt.org/documents/ocha_opt_settlements_factsheet_december_2012_english.pdf

The interim accords assigned the Palestinian government limited powers and resources. The Palestinian Authority has responsibility over all public goods provision for the Palestinian population, but very little control over natural resources and no authority over water and foreign trade management. On-going political instability and long-lasting restrictions on movement, access, and trade are the main obstacles to development in Palestine. These limitations have negative effects upon the potential growth of the Palestinian economy and population and are summarized below:

2 WFP, WFP Palestine Brief 2015. Available: http://unispal.un.org/pdfs/WFPBrief_300615.pdf

- **lack of authority over international borders** puts the mobility of people and good practically under the Israeli control. At the same time, this fact makes the Palestinian government dependent upon the tax clearance system whereby Israel determines when and how much to remit to the Palestinian government out of the import duties, VAT revenues and other taxes it collects on the Palestinian Authority's behalf.
- **Limited authority over taxation and the** *de facto* **absence of a national currency** leaves the Palestinian government with little control over monetary policies that could stabilize the economy, stimulate economic growth, or create enough jobs for a growing population.
- **Limited authority over natural resources** has resulted from Israeli restrictions encompassing water, electricity, the sea, minerals, and so on. As a result, the Palestinian government has to buy the bulk of its water and electricity needs from Israel, which at times (and without discussion or transparency) debits the bill from the tax revenues it collects for Palestinians. After Palestinians built an airport in the Gaza Strip, Israeli air raids during the second *Intifada* destroyed it entirely. Israel's refusal to build a seaport in Gaza and on-going limitations on sea access affecting fishing and transport boats has resulted in the landlocked territory, reducing the opportunities for growth.
- **Limited jurisdiction over land**, particularly areas designated as C in the West Bank and the access-restricted areas (ARA) in the Gaza Strip where most agricultural lands are located, has hindered the pursuit of a Palestinian agricultural policy. In fact, since 1994, the contribution of the agricultural sector to Palestinian GDP and employment has declined rapidly, with farming becoming an increasingly less viable economic activity. Many land parcels have been converted from agricultural lands into building areas as the process of urbanization commenced on a larger scale creating a land bonanza for landowners, but not necessarily poor peasants.
- **Limited territorial contiguity** with the Israeli military controlling entry to and exit from urban centres and rural areas has made it difficult if not impossible to enforce laws and regulations and increased the risk of investment, evaporating the dreams of achieving growth and prosperity for the Palestinian people.

Consequent to the adoption of resolution 67/19 by the United Nations General Assembly on 29 November 2012, Palestine was accorded the status of non-member observer State in the United Nations. The Palestinian-Israeli conflict continues and it does not appear that a political solution is on the horizon in the near future.

B. Economic context: Labour and human capital

The capacity of the Palestinian economy to cope with the size of the population and age structure, taking into consideration a high fertility rate, rapid population growth, and a young population, is governed largely by its labour market and employment. Employability and investment in human capital (such as health and education) also play an important role in this process.

Given that 60% of the land, 80% of the water, and East Jerusalem (which constitutes 15% of the Palestinian GDP) remain under Israeli control, the Palestinian economy has very limited room for growth. The PLO agreed to live with these limitations up to no later than September 1999 when a final status was to be agreed upon; more than two decades later, they have become a major hindrance to development.

In particular, the following elements are crucial to the development process:

- the magnitude and nature of the economy, economic sectors and diversification of the economy and how these together affect its employment generation capacity;
- the investment climate;
- investment in employment generation and employability;
- investment in education and health; public expenditures in health and education;
- economic dependency ratio and labour productivity; and
- poverty and available social protection and social benefits and welfare schemes within the available limited resources.

It is also important to consider political and economic variables that affect economic growth and employment creation in Palestine and can better reduce poverty in a sustainable manner. This discussion begins by looking at the nature of the economy, its structure and contribution to employment of the labour force.

1. The Palestinian economy: Magnitude, nature, diversity and growth

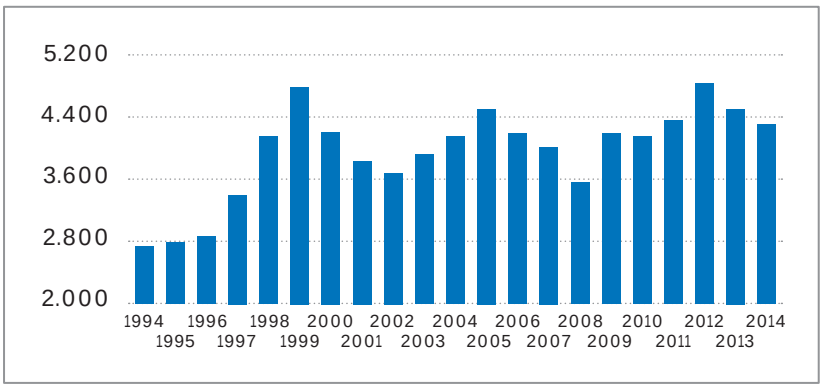
The Paris Protocol

In the spring of 1994, the State of Israel and the PLO agreed on the Protocol of Economic Relations, also referred to as the Paris Economic Protocol (or PEP for short), to govern their economic relations. The PEP enveloped the Palestinian economy into Israel's through a customs union and regulates customs, taxes, labour, agriculture, industry and tourism. It also establishes that the Palestinian economy would use the New Israeli Shekel (NIS), with no currency of their own. The PEP was never fully implemented as envisioned, but continues to form the basis of economic relations between the State of Palestine and Israel.

The Palestinian economy is highly dependent on the Israeli economy. A plethora of military orders, market mechanisms, and the PEP itself have been complementary tools that Israel used to make the Palestinian economy grow on its periphery. As a result, the Palestinian economy fluctuates according to the business cycle in Israel, as well as Israeli political and military measures against Palestinians that in turn either reinforce the business cycle or counter it.

In terms of magnitude, the Palestinian gross domestic product (GDP) grew from a low of USD 2.8 billion in 1994 to USD 12.7 billion in current prices in 2014. Around 80% of the value added produced by the Palestinian economy is generated in the West Bank. Income per capita reached around USD 3,000. On the basis of purchasing power parity (PPP) for purposes of international comparison, it grew from USD 2,722 in 1994 reaching a peak of USD 4,834 in 2012 before dropping back to USD 4,302 in 2014. Figure I.1 shows the trend of the GDP per capita in PPP during 1994-2014. In 2014, GDP per capita in the Gaza Strip was 55% lower than it was in the West Bank.

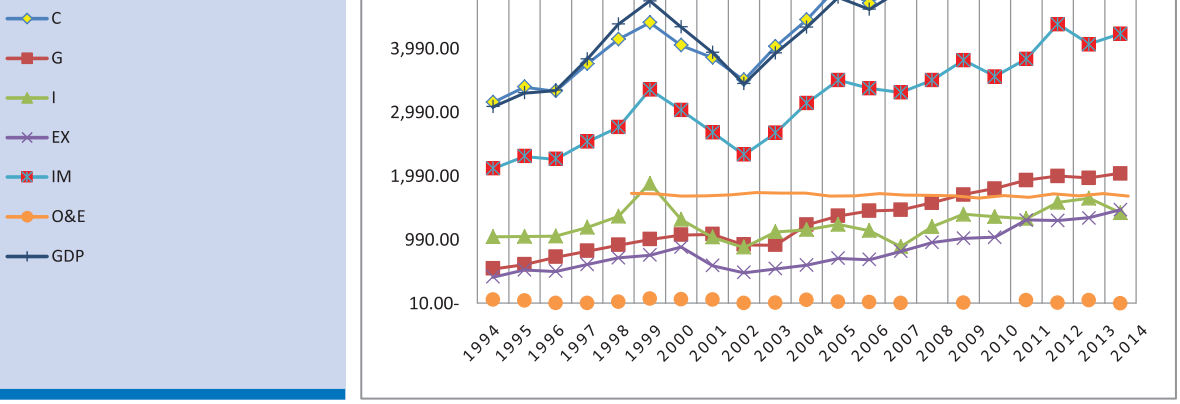
Figure I.1
GDP per Capita (USD) in Palestine in Purchasing Power Parity, 1994-2104



Source: http://www.theglobaleconomy.com/Palestine/GDP_per_capita_PPP/ (accessed 22 March, 2016, cites World Bank).

The structure of the Palestinian economy shows that Palestinians have a high propensity to consume. Private consumption (C) remains very high, rivalling the GDP and in certain years exceeding it. When government expenditure on goods and services (G) is added to C, final consumption exceeds the GDP in all years – in other words, Palestinian society is living beyond its means in a situation that is not sustainable in the long run. This consumption drive has contributed enormously to the imbalance between exports (EX) and imports (IM) of goods and services. Thus, it has resulted in a high trade deficit that reached its peak of 58.7% of GDP in 2004 and started to decline almost steadily after, to reach 37% in 2014. Gross capital formation (I) remained almost stable over this period reflecting stagnant investment; it reached its peak of 39.5% of GDP in 1999 and started to decline steadily thereafter, with a trough of 18% in 2007 and fluctuating around an average of 21.7% for the rest of the years before reaching a new trough of 19% in 2014. Government expenditures on goods and services (G) increased from a low of 16.5% of GDP in 1994 to a peak of 29.7% in 2007, then declining to 27.2% in 2014. Nevertheless, this also reflects the fact that the Palestinian government spends more than it collects in tax and non-tax revenues, depending on the generosity of the donor community. Figure I.2 below captures these trends.

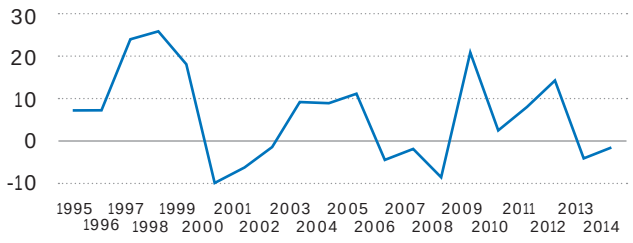
Figure I.2
GDP and its components, 1994-2014, in million USD of constant prices (base year 2004)



Note: (1) O&E is the term of omissions and errors, which is a balancing item.
(2) The data excludes East Jerusalem.
Source: Based on data from the PCBS, http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/a-naexpcon-1994-2014.html (accessed 20 March, 2016).

Since 1994, starting from a low base, the compound annual growth rate of GDP has been 4.5%. The average value was 5.93% with a minimum of -9.88% in 2000 when the second *Intifada* erupted and the Israeli military incursion took place, and continued on to 2005 and a maximum of 25.9% in 1998. Figure I.3 depicts the growth rate in real GDP for the period of 1994-2014. However, the average annual growth rate of GDP per capita during this period has been only 0.95%[3].

Figure I.3
Growth Rate of Real GDP over the period of 1994-2014



Source: available at http://www.theglobaleconomy.com/Palestine/Economic_growth/ (accessed 22 March 2016)

3 Dividing the GDP growth rate by the investment-to-GDP ratio yields the inverse of the incremental capital-output ratio, $ICOR^{-1}$, which means what an additional unit of capital can yield in additional units of output (or real GDP). It is therefore a measure of the productivity of capital. In years of negative growth rate rates (2000-2002, 2006-2008, and 2013-2014), this means a reduction in real GDP despite a positive investment-to-GDP ratio. For the period of 1995-2014, there is a general trend of declining $ICOR^{-1}$. This means the efficiency of the economy had declined and it did decline from a high of 5.35 in 1995 to a low of 1.48 in 2012. Again, this means that the economy needed one additional unit of capital to increase GDP by 5.35 units in 1995 and it declined by far to 1.48 extra units of GDP in 2012.

The Palestinian economy is dependent on Israeli demand for goods and labour, and increasingly on foreign aid and remittances from Palestinian workers abroad (including those who work in Israel and the Israeli settlements). In recent years, growth has been driven by expansionary fiscal policy funded by donor aid, and has mostly been in government service, trade, real estate and non-tradable sectors.

On the other hand, the Palestinian economy is service-oriented with a small limited industrial base and a declining agricultural sector. Figures I.4 and I.5 compare the structure of the GDP, based on constant prices of 2004, for the 20 years following 1994. The transformation of the economy is evident and can be summarized as follows:

(a) The agricultural sector declined from 12% to 4% and in absolute terms from USD 361.2 million in 1994 to USD 286.4 million in 2014;

(b) Industry and mining including the water and electricity sector declined from 23% to 15% although it increased in terms of absolute value from USD 705.9 million in 1994 to USD 1105 million in 2014;

(c) The construction sector increased in value from USD 218.7 million in 1994 to USD 547.3 million in 2014 and its contribution to the GDP remained constant. It reflects the booming construction of an urbanization process and the fact that it is the most secure investment in a politically unstable environment; and

(d) The services sector (both private and public) increased in terms of absolute value and relative importance from USD 1,795 million in 1994 to USD 5,514.3 million in 2014, and from 58% to 74% of GDP, respectively.

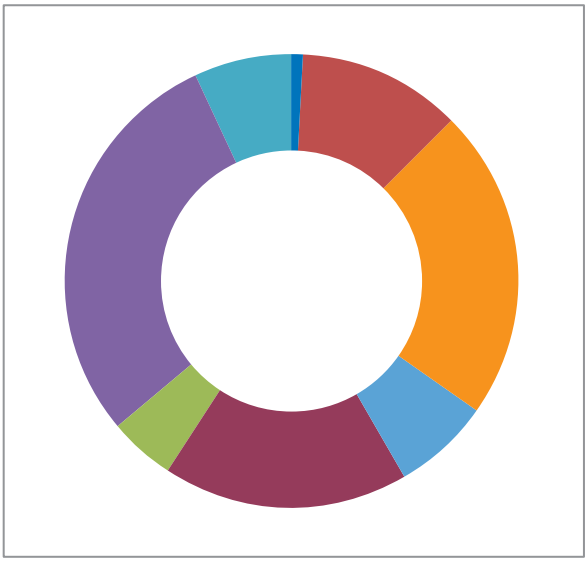
(e) On one hand, this reflects the growing importance of the public sector as manifested in public administration, security and taxes that together increased from 8% in 1994 to 26% in 2014.

(f) On the other hand, the private service sector declined slightly in relative importance from 50% in 1994 to 48% in 2104 but its absolute value increased from USD 1,547.9 million to USD 3,525.6 million, respectively[4]. In addition to wholesale and retail trading, transportation and storage, the private sector increased its contribution in absolute values in banking, insurance, and information and telecommunications (ITC). These three subsectors grew from USD 33.5 million in 1994 to USD 707.2 million in 2014.

4 It is worth mentioning here that the contribution of education and health subsectors to the GDP were 7.3% and 3.4% in 2014, respectively.

Figure I.4
Structure of the GDP in 1994, in constant prices with base year 2004

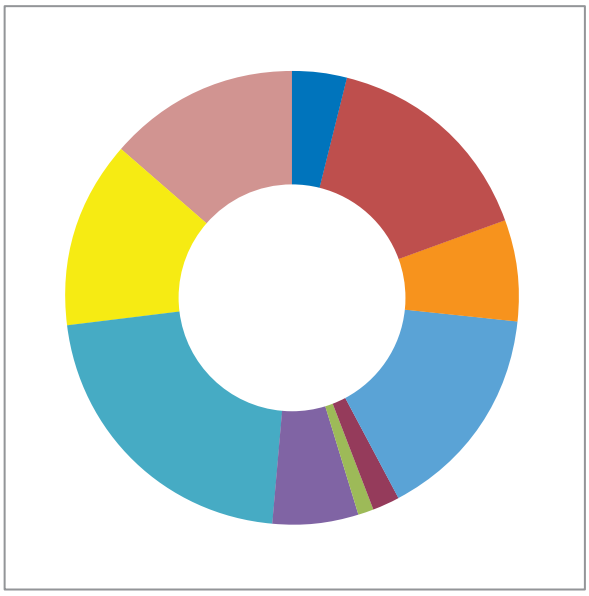
- Custom duties and VAT on Imports, 1%
- Agriculture, Fishing & Forestry, 12%
- Industry, Mining, Water & Electricity, 23%
- Construction, 7%
- Wholesale and retail trade 18%
- Transport and Storage, 5%
- Financial Intermediation and Insurance net of indirect financial intermediation, 0%
- Other Services (inter alia health and education), 30%
- Public Administration & Defense, 7%



Source: Based on data from the PCBS, http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/a-naexpcon-1994-2014.html (accessed 20 March, 2016).

Figure I.5
Structure of the GDP in 2014, in constant prices with base year 2004

- Agriculture, Fishing & Forestry 4%
- Industry, Mining, Water & Electricity 15%
- Construction 7%
- Wholesale and retail trade 15%
- Transport and Storage 2%
- Financial Intermediation and Insurance net of indirect financial intermediation 1%
- ITC 6%
- Other Services (inter alia health and education) 21%
- Public Administration & Defense 13%
- Custom duties and VAT on Imports 13%



Source: Based on data from the PCBS, http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/a-naexpcon-1994-2014.html (accessed 20 March 2016)

The Palestinian economy depends mainly on the export of stones and marble, but pharmaceutical products, footwear, and furniture are gaining weight. However, it is important to mention that Israel remains the main export destination, with more than 90% of Palestinian exports going to Israel. More than 75% of its imports are either from Israel or through it, which manifests the dependency of the Palestinian economy on Israel. In addition, the export of labour services mainly to Israel and to some degree to the Arab Gulf states remains important. Table 1.1 lists the most important 10 exports in two periods.

Table I.1
Top 10 Palestinian export products, 2002-2004 and 2008-2010 averages

Top Export Products (2002-2004)					Top Export Products (2008-2010)				
Rank	Product code SITC (Standard International Trade Classification,, 5 digit)	Product description	Value USD	Share in Exports (%)	Rank	Product code (SITC 5 digit)	Product description	Value USD	Share in Exports (%)
1	66135	Building stone, unworked	2,427,769	11.7	1	66135	Building stone, unworked	59,362,246	10.1
2	66134	Marble etc., worked	22,552,280	9.6	2	66134	Marble etc., worked	27,846,716	4.8
3	66122	Portland cement	6,171,426	2.6	3	28233	Remelting iron/steel ingots	23,33,511	4.0
4	82123	Mattress rubber/plastic	5,567,500	2.4	4	89311	Plastic sacks, bags, cones	21,630,989	3.7
5	68421	Aluminum bars/rod/prof.	5,180,999	2.2	5	85131	Rubber/plastic footwear n.e.s.	15,956,166	2.7
6	64293	Medicaments. n.e.s. retail packs	4,935,435	2.1	6	54293	Medicaments. n.e.s. retail packs	15,585,601	2.7
7	63512	Wood pallet etc.	4,549,546	1.9	7	63512	Wood pallet etc.	12,049,905	2.1
8	89311	Plastic sacks, bags, cones	4,255,200	1.8	8	823155	Wood bedroom furniture	11,865,000	2.0
9	65319	Woven synth fil fab n.e.s.	3,994,476	1.7	9	68421	Aluminum bars/rod/prof.	11,513,574	2.0
10	69119	Iron/steel structure n.e.s.	3,455,825	1.5	10	09899	Misc. food preparations n.e.s.	9,921,799	1.7

Source: International Trade Centre calculations based on 5-digit Comtrade, Standard International Trade Classification Revision 3 trade data, International Trade Centre, Ministry of National Economy and Paltrade Centre, the State of Palestine National Export Strategy 2014-2018, p. 13.

In terms of employment[5], the Palestinian labour force in 2014 amounted to 1.255 million individuals of which 337,595 persons or 26.9% were unemployed, with a disproportionate effect on youth (ages 20-24) of which 45.6 were unemployed. In addition, the workforce is expected to significantly expand in the coming years as 47.1% of the population of the West Bank and Gaza is currently below the age of 18. The labour force is relatively well-educated, boasting a high literacy rate, with high technology penetration and familiarity with overseas markets. Wages are low relative to Israel, but higher than other neighbouring

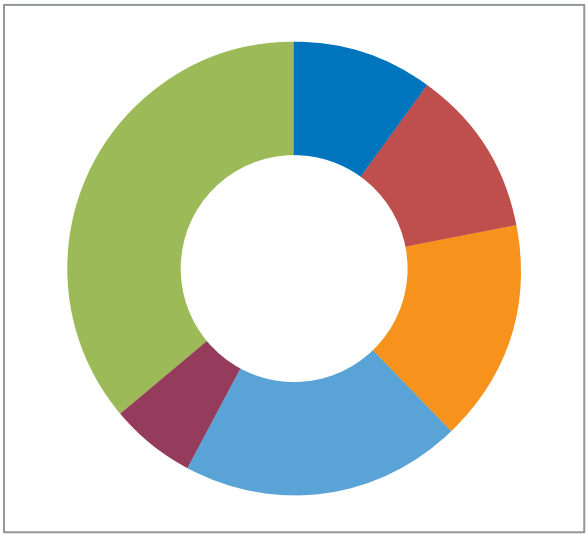
5 See Palestinian Bureau of Statistics, Labour Force Survey, 2014, Available at http://www.pcbs.gov.ps/Downloads/book2120.pdf, p. 22.

Arab countries. In January 2013, the PA implemented the first Palestinian minimum wage, set at NIS 1,450 (USD 389) per month[6].

The total labour participation rate (LFPR) in 2014 was 45.8%, improving since 2000 when it was 41.6%. The overall low participation rate reflects the small proportion of all females in working age that are in the labour market; in 2014 only 19.4% of women are economically active, up from 12.9% in 2000. The male LFPR in 2014 was 71.5%. Most working Palestinians, 67.7%, are waged employees. The public sector accounts for a significant proportion of wage employment. Palestine faces a chronic unemployment problem. Since 2001, the unemployment rate has been above 20%, with an average of 24.7%. In 2014, the unemployment rate was 26.9%. The employment situation coupled with low incomes produces high poverty rates. More than one-quarter (25.8%) of Palestinians live below the national poverty line. In the West Bank, the poverty rate is 17.8%, while in the Gaza Strip conditions are more dire, with poverty affecting 38.8% of the total population. Extreme poverty affects 7.8% of the West Bank population, and 21.1% of those living in the Gaza Strip.

The distribution of those employed over economic sectors does not reflect the various sectors' contribution to the GDP. There is low average labour productivity in agriculture, construction and services. Some 88.8% of all employed persons were working in Palestine, while the rest were employed in Israel and the Israeli settlements. In 2013, the PCBS estimates the average daily wage at USD26 for male workers and USD21for female workers. Figure I.6 summarizes the sectoral distribution of the employed persons.

Figure I.6
Sectoral Distribution of Employed Persons, 2013



Source: Available at http://www.pcbs.gov.ps/site/lang__ar/881/default.aspx#LabourA

6 According to the PCBS, 38.9% of the employed persons in the private sector are being paid wages below the minimum wage rate. This constitutes some 126,400 workers of whom 42,500 are in the West Bank and 83,900 are in the Gaza Strip whose monthly average wage rate is 734 NIS, which is only 50% of the minimum wage rate. The Ministry of Labour organizes campaigns to ensure compliance with the law. See Palestinian Bureau of Statistics Labour Force Survey, Second Quarter 2016, available at http://www.pcbs.gov.ps/portals/_pcbs/PressRelease/Press_Ar_LFSQ22016A.pdf , p. 6.

Regressing the unemployment rate against the number of schooling years shows that a one year increase in the number of schooling years among males would result in a decline in the unemployment rate by 0.6%. Among females, a one year increase in the number of schooling years would result in an increase in the unemployment rate by 2%. This suggests that educated females stay longer in the labour market while seeking employment as opposed to less educated women who are discouraged to continue looking for a job. Unemployment rate declines with age. It is the highest (40.2%) among people aged 15-24, 37.3% at 25-34 and declines to 12.2% at 35-44, 8% at 45-55 and 2.2% at 55-64[7]. The older the person, the more settled he/she is and the less the chance of being unemployed. Unemployment is also highest among graduates of teacher training and education science, followed by humanities, social sciences, journalism and information, and business administration with the least being among graduates of law. There are marked differences between the West Bank and Gaza Strip. Table I.2 below summarizes

The Palestinian economy has low numbers of job openings relatively to new entrants into the labour force. Therefore, graduates have to wait in order to get a job either locally or in the Arab Gulf states, especially in areas of engineering, accounting and business administration, including finance sciences. Opportunities in the Gulf are declining, however, due to the drop in prices of crude oil and austerity measures taken by these states.

7 See Palestinian Bureau of Statistics, Labour Force Survey, 2014, available at http://www.pcbs.gov.ps/Downloads/book2120.pdf, pp. 121-122

Table I.2
Unemployment rate and average daily wage in New Israeli Shekel (NIS) for waged graduates who hold an associate diploma certificate or more in Palestine, by specialization, region and sex, 2014

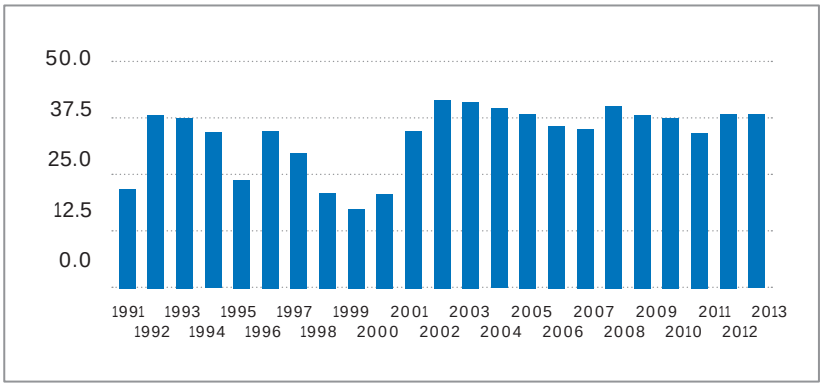
Specialization	Average Daily Wage in NIS by Region			Unemployment Rate by Sex			Unemployment Rate by Region		
	Gaza Strip	West Bank	Palestine	Total	Females	Males	Gaza Strip	West Bank	Palestine
Teacher Training and Education Science	87.3	99.0	96.1	50.8	61.5	20.3	64.2	43.5	50.8
Humanities	92.8	115.7	106.5	33.5	48.4	13.6	46.3	17.6	33.5
Social and Behavioural Science	86.3	122.7	110.7	37.7	57.1	18.3	43.4	32.7	37.7
Journalism and Information	72.6	106.5	88.3	36.9	55.1	29.9	43.3	22.7	36.9
Business and Administration	76.4	111.4	101.9	31.3	49.2	22.3	44.8	22.6	31.3
Law	116.9	167.0	152.8	9.7	24.5	7.3	16.0	5.4	9.7
Life Sciences	88.8	123.7	109.6	39.1	62.1	11.0	34.2	43.4	39.1
Mathematics and Statistics	105.9	113.8	110.3	37.6	51.6	14.6	44.2	28.6	37.6
Computer Science	61.6	103.4	97.6	31.4	52.7	20.5	52.0	25.2	31.4
Engineering and Engineering Occupations	80.1	140.0	120.8	29.2	63.8	21.0	40.6	19.9	29.2
Architectural and Construction	87.0	145.9	120.8	23.0	30.3	21.8	34.5	12.8	23.0
Health	99.0	131.3	117.6	24.4	32.6	18.7	37.4	13.1	24.4
Personal Services	87.1	125.9	112.6	38.6	57.2	28.6	37.3	39.5	38.6
Other Specialization	92.1	119.8	110.4	27.6	50.3	13.2	32.1	23.9	27.6
Total	**87.9**	**118.2**	**108.0**	**33.9**	**52.2**	**19.2**	**44.1**	**25.7**	**33.9**

Source: PCBS, Labour Force Survey, 2014, available at http://www.pcbs.gov.ps/Downloads/book2120.pdf

Youth unemployment is high, averaging 33.6% for Palestine during 1991-2014 with a minimum of 17.4% in 1999 and a maximum of 41.7% in 2002, and remained high 37.5% during 2005-2013. This frustrates youth, and when prolonged, it opens the door to negative behaviours including crime, drugs, and violence in the family besides the lost opportunities for productivity. Figure I.7 depicts trends in youth unemployment for the ages 15-24. The relative short duration of high hopes for peace had an obvious positive impact in significantly

reducing this kind of destructive unemployment, which was at its low in 1999, six years after the DOP was signed.

Figure I.7
Unemployment rate among youth 15-24 years, 1991-2013



Source: Available at http://www.theglobaleconomy.com/Palestine/Youth_unemployment/ (accessed 22 March 2016)

2. Investment climate

The Law for the Encouragement of Investment (Law Number 1, 1998) and its amendments introduced in 2011 and most recently in 2014 offer a series of incentives and incentive contracts on the basis of capital invested, geographic location, and the labour force employed. It fully exempts investors from income tax according to the amount of investment and/or local professional labour force hired for a variable number of years. It guarantees free transfer of foreign currency and the repatriation of income generated in Palestine. The law applies uniformly to all investors, irrespective of their nationality. Projects in tourism and health and education are granted an additional exemption from custom duties and purchasing taxes on furniture, tools and electronic equipment and electronics supplies required for renovation every five years (under certain conditions within a period of two years from obtaining the approval on the purchase list and quantities). Amendments to the law promote ICT software and hardware development by basing incentives on human capital instead of fixed assets (if the company has at least five professional employees), and provides additional tiered tax incentives for projects. To benefit from investment incentives, investors must apply to the Palestinian Investment Promotion Agency (PIPA), and present it with a completed investment application and feasibility study. PIPA is composed of both public and private sector members.

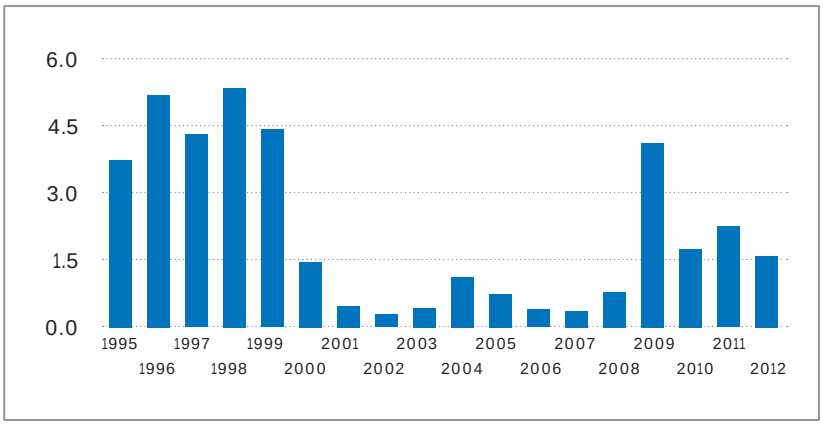
PIPA was established in 1998 as an independent agency, pursuant to the promulgation of the Investment Law. PIPA facilitates cooperation between the private sector and the government, thereby creating and maintaining a more competitive investment environment. The Palestinian minister of national economy chairs the board of directors and a representative of the Ministry of Finance acts as his/her vice-chairperson. The amendments to the law give additional authority to PIPA to create incentive packages targeted to individual business needs. Under the new law, if any step in the business registration process takes longer than one month, PIPA can intervene and issue a business license or registration on its own authority, and also has the discretion to discontinue all new incentives after April 2013 (but not retroactively) with cabinet approval.

The World Bank, via a USD 26 million fund administered by its Multilateral Investment Guarantee Agency (MIGA), provides guarantees in the form of insurance against political risk for private investments in the West Bank and Gaza Strip. Under the terms of the fund, investors who are nationals of companies incorporated in a MIGA member country, or who are Palestinian residents of the West Bank or Gaza Strip, are eligible to obtain guarantees for up to 15 years. The fund currently has the capacity to issue guarantees for up to USD 5 million per project.

A draft competition law has been prepared, and in 2012, it was submitted to the legislative process. Under its mandate, and until the law is approved, the Ministry of National Economy has formulated an action plan to enforce the law.

Despite these helpful tools, continued Israeli control over the entry of people and goods to Palestine and the unstable political climate have deterred any substantial inflow of foreign direct investment (FDI) from the Palestinian Diaspora or elsewhere. Foreign investment remains low by regional and international standards. Figure I.8 depicts the trend of the FDI in Palestine as a percentage of GDP. It averaged around 4% during the second half of the 1990s but dropped significantly to negligible levels during 2000-2009, returning to 4% in 2009 but plummeting again thereafter to remain around 1.5%.

Figure I.8
Foreign direct investment (FDI) in Palestine as a percentage of GDP from 1995-2012



Source: Available at http://www.theglobaleconomy.com/Palestine/Foreign_Direct_Investment/ (accessed 22 March 2016)

Also, Palestine continues to rank poorly in the World Bank's "Ease of Doing Business" category, receiving a ranking of 143 out of 189 in 2015[8], down from 138 in 2014, which was notably lower than the Middle East and North Africa average of 107. Although this ranking has slightly improved over 2013, moving to 143, it still reflects a number of structural weaknesses that are pertinent for the efficient functioning of the private sector. Some of these are more relevant to the general ease with which one may operate a business, however, others have a direct impact on export competitiveness. Regardless, all of them contribute to either diminishing or stimulating the growth, investment, and sales potential of private enterprise. The World Bank (in 2012) said Palestine ranked reasonable well in 10 areas. The best were paying taxes (62), protecting investors (80), getting electricity (87) and enforcing contracts (88). The remainder were registering property (122), trading across borders (123), dealing with construction permits (131), starting a business (143), getting

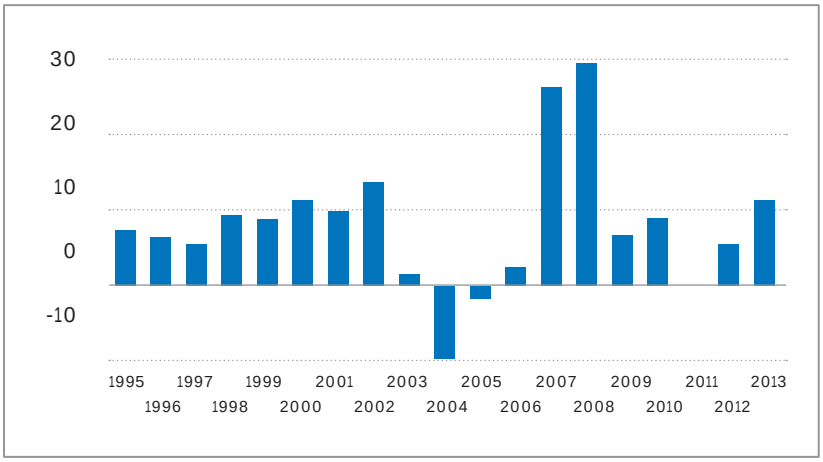
8 US Department of States,West Bank and Gaza Investment Climate Statement 2015, p.4 (June 2015),.

credit (165), and resolving insolvency (189)[9]. Some of these, such as the issue of trading across borders, are directly impacted by Israeli policies, as the Palestinian government has no control over the borders. However, on others, the intervention of the Palestinian Government could create a more business-friendly climate.

3. Investment in employment generation and employability

Employment generation is a function of investment, which is determined significantly by the level of savings. When savings become low, grants from donor countries can cover the gap in financing either expansions of existing plants and housing units or new additions to these. However, it is important to know where the new investments go to see their impact on the productivity of working persons. On the other hand, it is also important to know if the technology embodied in these new investments is appropriate in terms of being capital-intensive or labour-intensive. Figure I.9 depicts the fluctuation in the savings ratio expressed as a percentage of GDP for 1995-2013. It grew from a low of 6% in 1997 to about 14% in 2002 but declined significantly in 2003 and reached a trough of -10% in 2004. It then soared high levels of 27% and 29% in 2007 and 2008 before declining to reach 11% in 2013.

Figure I.9
Savings-to-GDP Ratio (in percentage) for 1995-2013

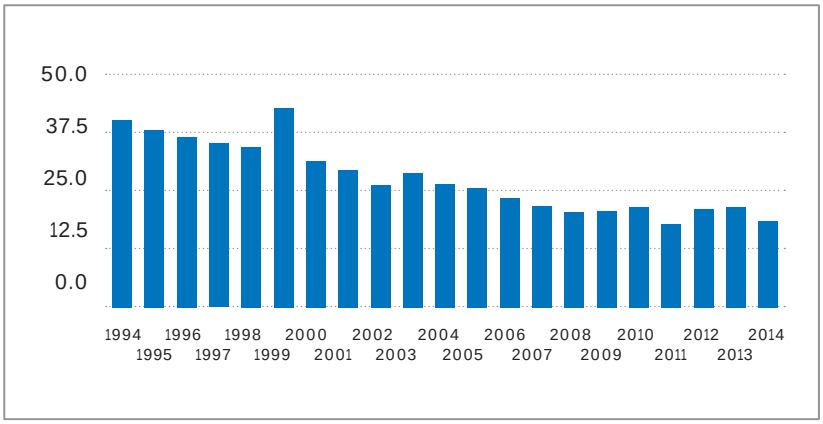


Source: Available at http://www.theglobaleconomy.com/Palestine/Savings/ (accessed 22 March 2016)

Notwithstanding this trend, and thanks to grants received from the donor community, the investment ratio remained positive and above 25% of GDP until 2005, after which it declined below 25%. With the exception of 1999, the general trend of the investment ratio is now declining. Coupled with the eruption of the second *Intifada* and internal political tensions, this decline in the investment ratio explains the declining growth rate of the real GDP (see Figure I.10 below).

9 The World Bank "Doing Business: Measuring Business Regulations Report," (2012) quoted in: International Trade Centre calculations based on 5-digit Comtrade, SITC Revision 3 trade data, ITC, Ministry of National Economy and Paltrade Center, the State of Palestine National Export Strategy 2014-2018, p. 27.

Figure I.10
Investment-to-GDP Ratio (in percentages), 1994-2014



Source: Available at http://www.theglobaleconomy.com/Palestine/Capital_investment/ (accessed 22 March 2016)

As previously mentioned, most investments went to three service subsectors – telecommunications, banking and insurance, and construction sector. These subsectors are characterized by low productivity. Output elasticity of employment (OEE) describes how elastic employment is with regards to the growth of the economy. If OEE is above unity, it means that for each 1% increase in the real GDP, employment increases by more than one. Worldwide, for 160 countries, the average OEE for 1995-1999 was 0.38 and for 1999-2003 it fell to 0.30[10]. The corresponding values for Palestine were 0.59 and 0.73. For the Gaza Strip, OEE was 1.18, which suggests some resemblance to Middle East and North Africa (MENA) labour markets, where elasticities were higher than one for MENA countries during the same periods. Given the growth rate of GDP, an OEE > 1, that is, with employment growing faster than output, implies that average labour productivity is actually declining, most likely because new entrants into the labour force are less productive than previously employed persons (i.e. new entrants have a lower marginal productivity). There were seven years when GDP declined compared to its previous annual level and the OEE was negative. This appears to be because the economy could not absorb the additional labourers and unemployment jumped with average productivity declining from previous levels.

Prior to 2010, the new entrants into the labour force averaged between 30,000-35,000 annually; afterwards, average new entrants jumped to 70,000 and reached a peak of 100,000 in 2014[11]. The employment capacity of the economy is far smaller. This, of course, explains the supply side of the unemployment problem. On the demand side, growing industries such as ITC, banking, and insurance are becoming more labour-saving while the industrial sector (including construction) is not growing sufficiently to absorb a growing labour force. The resulting higher unemployment rate is difficult to cope with and its repercussions on poverty and cost of alleviation will be higher. This will also hinder attempts to achieve the Sustainable Development Goals (SDGs).

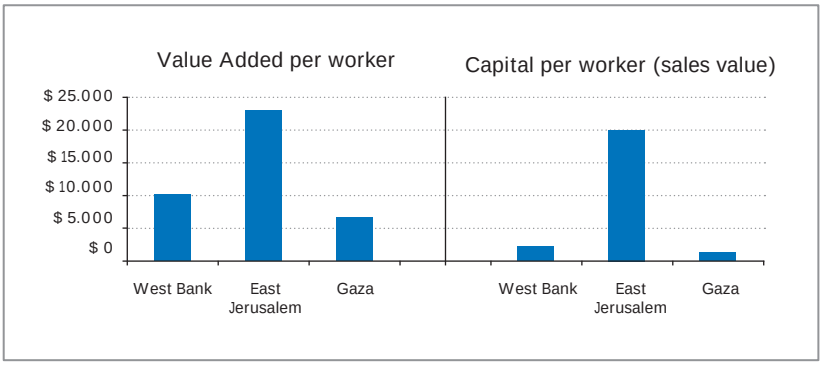
There are also marked differences in labour productivity between the West Bank or East Jerusalem and the Gaza Strip, mainly because firms in Gaza are less able to invest in capital goods or have had their capital destroyed in the repeated military operations. Figure I.11 depicts these differences.

10 Kapsos, Steven. "The Employment Intensity of Economic Growth: Trends and Macroeconomic Determinants." International Labour Office. Employment Trends Unit, Employment Strategy Department. (December 2005).

11 See http://www.pcbs.gov.ps/Downloads/book2120.pdf, table 1, page 57.

Figure I.11
Labour Productivity in the Gaza Strip, West Bank and East Jerusalem, 2010

USD per worker (2009 US$)



Source: The World Bank, 2014. West Bank and Gaza Investment Climate Assessment: Fragmentation and Uncertainty, quoted in the World Bank, Economic Monitoring Report to the Ad Hoc Liaison Committee (September 22, 2014), p. 7.

4. Investment in education and health

"Spending on education and health of the population is an investment because a healthy and educated population is definitely more productive than one otherwise."

Government expenditures on social services, including health; primary, secondary, and a limited intervention in tertiary education; women's affairs; prisoners; and support for the families of those killed in the conflict increased from about USD 350 million in 1997 to USD 1,500 million in 2013, constituting 30% and 40% respectively of total government expenditures. In the government budget of 2016, with allotments for education and health being almost equal, they constitute about 28% of total government current expenditures as opposed to 30% allotted to security and police. Nevertheless, government expenditures on security and police per capita (in constant prices of 2004) increased from about USD 100 in 1997 to a peak of USD 200 in 2007 and remained at USD 200 in 2013[12]. The corresponding figures per pupil increased from USD 200 in 1997 to a peak of USD 400 and then declined to USD 350 in 2013. The pupil-teacher ratio declined from 29.4 in 1995 to 21.8 in 2014. A regional comparison indicates that Palestine's pupil-teacher ratio remains above that of Lebanon (14), Jordan (15.6), and Tunisia (17). The average number of pupils in the classroom remained nearly constant at about 37 over the period 1994-2002 but started to decline after that, dropping to 30 in 2014.

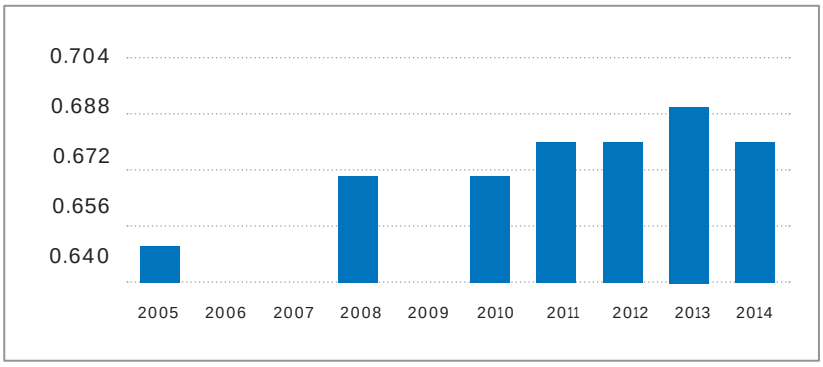
On the other hand, government expenditures on healthcare per capita in constant prices of 2004 increased from about USD 38 in 1997 to a peak of USD 60 in 2010 before declining consistently to about USD 50 in 2014. The number of hospital beds per 1,000 inhabitants increased from 1.2 in 1997 to 1.4 in 2000 and then declined to 1.3 in 2010. Comparatively speaking, Palestine is better situated than Egypt (0.5 beds per 1000 inhabitants). Morocco (0.9), and Jordan (1.2) but is far below Tunisia (2.1) and Lebanon (3.5).

12 Omar Abdel Razeq, (2016), Assessing the Fiscal Policy of the Palestinian National Authority, Palestine Economic Policy Research Institute (MAS), Ramallah.

Spending on education and health of the population is an investment because a healthy and educated population is definitely more productive than one otherwise.

These developments are captured in the Human Development Index (HDI). Palestine improved in HDI from a low level of 0.65 in 2005 to more than 0.69 in 2013 and 0.68 in 2014. Figure 12 depicts the development in the HDI during 2005-2014.

Figure I.12
Human Development Index of Palestine, 2005-2014



Source: Available at http://www.theglobaleconeconomy.com/Palestine/human_development/ (accessed 22 March 2016).

5. Economic dependency ratio and labour productivity[13]

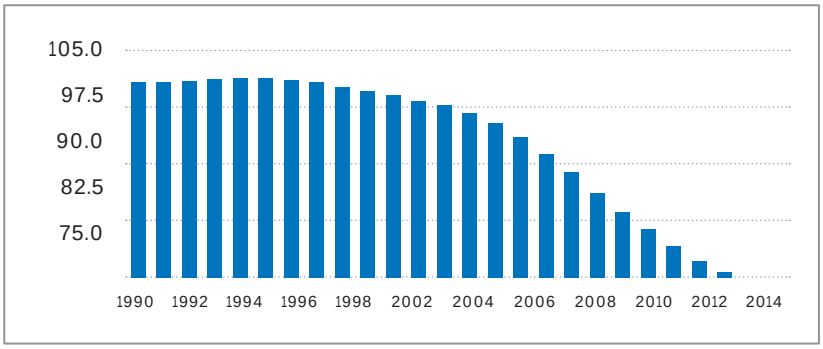
Palestine's dependency ratio[14], which reflects the proportion of children and elderly in society, declined constantly from 101.3% in 1997 to 74.8% in 2013. There are marked differences between the West Bank and Gaza Strip, with the dependency ratio being higher in the latter, but the gap between them is shrinking. In 1997, the ratio was 94.7% for the West Bank and 114.5% for the Gaza Strip, while in 2013 it decreased to 69.5% for the former and 84.1% for the latter[15]. Figure 13 depicts the trend of the dependency ratio during 1990-2013. This declining trend will have positive effects that could be captured by the population dividend in the future.

13 The issue of labour productivity was discussed in Section B above.

14 A measure showing the number of dependents, aged zero to 14 and over the age of 65, to the total population, aged 15 to 64.

15 See Palestinian Bureau of Statistics, "Palestinians at the End of Year 2006." Available at http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/end_year06e.pdf, and http://www.pcbs.gov.ps/Portals/_PCBS/Downloads/book2028.pdf, pp. 38-39

Figure I.13
Palestine's Age Dependency Ratio, 1990-2014



Source: Available at http://www.theglobaleconomy.com/Palestine/Age_dependency_ratio/ (accessed 22 March 2016)

6. Poverty, social protection, benefits and welfare

Poverty remains a continuous challenge in the Palestinian context, staying high and on the increase. This trend has resulted from erratic and declining economic activity, low wages, loss of employment opportunities due to the closure, reduced employment generation capacities of the public and private sectors, and restricted access to natural resources, as well as declining and unstable employment opportunities in Israel.

In 2011, the poverty line in Palestine was set at a monthly budget of NIS 2,293 for two adults and three children, while the extreme poverty line is NIS 1,832. Accordingly, the poverty rate that year reached 25.8%, with much higher rates in the Gaza Strip (38.8%) than in the West Bank (17.8%). Moreover, 47.6% of Palestinians had a monthly income below the national poverty line (again with marked differences between the West Bank at 35.6% and the Gaza Strip at 67.1%). As for extreme poverty, 12.9% of Palestinians suffered from it in 2011 based on their family monthly consumption pattern with much higher rates in the Gaza Strip (21.1%) than in the West Bank (7.8%). However, 36.4% of Palestinians have a monthly income that is below the extreme poverty line, of whom 24.3% are in the West Bank and 55.9% are in the Gaza Strip[16].

There are many programs intended to alleviate poverty in the State of Palestine. These include the following[17]:

1. Programs to Combat Poverty:

    - **Special Hardship Cases Program (SHCP):** This is the largest program in terms of coverage and budget; it targets poor families, individuals and vulnerable groups such as children and women at risk and the elderly. It provides cash or/and in-kind assistance to 50,500 cases in Palestine. The European Union is financing regular cash assistance for these cases, at NIS 1,000 per case, once every three months, regardless of the number of the case members. Overall cost of the program is around €9.2m per quarter.

16 See "Il Bi'a wa il-tanmiya il-mustadama fi filistin, 2014." Available at http://www.pcbs.gov.ps/Downloads/book2095.pdf

17 Ministry of Social Affairs, "The Palestinian National Program for Social Protection: Cash Transfer Strategy" (2010), pp. 6-9.

- **Social Safety Net Reform Program (SSNRP):** The benefit that a family gets under this program consists of a lump sum of NIS 200 for each family, regardless of its size, needs or poverty level. An extra amount of NIS 28 per family member is added, provided that the maximum benefit does not exceed NIS 500 per month per family, i.e. around USD 125. The program is financed by the World Bank and amounts to about USD 5 million a year for around 5,000 families. Together, the SHCP and SSNRP only met the needs of 56,000 families while the overall number of poor below the extreme poverty line was estimated at 150,000 families.

- **Emergency Assistance Program:** This program targets families or individuals who incur income difficulties/shortages resulting from sudden shocks or unexpected emergencies and supports them in meeting their emergent needs (such as house burning or destruction by the military or settlers or the damages resulting from war or incursions). Its budget for 2010 was NIS 1 million.

2. Programs for Economic Empowerment:

- **Deprived Families Economic Empowerment Program (DEEP):** This program aims at empowering poor families/vulnerable groups who are near the poverty line to establish small income-generating activities/businesses. During its first two years of operations in 2008 and 2009, some 5,100 families have been helped through sponsored microenterprises at an overall cost of USD 26 million. About 3,300 families received small project grants, because they fall under the absolute poverty line. The total amount disbursed under this component was USD 20 million (the average grant was USD 5,000). In the second component, around 1,800 families received loans totalling USD 5.8 million (an average loan of $3,587), which is repayable.

- **Fund for the Rehabilitation of Persons with Disabilities:** This fund sponsors the rehabilitation and economic empowerment of persons with disabilities through small income generation businesses. The project benefits from an amount of USD 1.01 million. It is estimated that about 250 persons with disabilities have benefit from the fund.

- **Rehabilitation for Persons with Disabilities Program:** This program targets people with disabilities. It provides protection, care and rehabilitation services either directly through the Ministry of Social Development (MoSD) and/or through a referral system for services purchased from other service providers in civil society. The rehabilitation services include prosthetic devices (wheelchair or walking sticks) and training, rehabilitation, and supervision of government departments and the NGOs providing services for persons with disability.

- **Social Care and Defence:** This program targets the elderly and provides them with limited care and institutionalization services in MoSD centres or through the supervision and coordination of services of civil society institutions. The MoSD provides elderly individuals with cash and in-kind assistance, health insurance, and prosthetic devices. The MoSD also provides capacity building and vocational rehabilitation services for youth; social care and defence for delinquent teenagers; and adoption for orphans. The program also offers preventive and curative services for drug addicts and aims to reduce crime and other negative phenomena such as begging in the society. The cost of these services is provided through MoSD/Palestinian government budget allocation.

- **Family and Child Care and Protection Program:** This program aims at empowering and protecting women, especially those who are subject to violence, through programs offered directly by the MoSD (mainly awareness raising, skill training, protection and education). The program coordinates with civil society organizations and supervises services for quality assurance. The MoSD also targets children through a child protection network and provides activities directed at their parents, e.g. raising awareness about children's rights and methods of dealing with them. MoSD coordinates with other service providers on programs and projects for them. It supervises nurseries and regulates their work; it offers and regulates an alternative parent care service for children missing parent care. The resulting costs are provided for via MoSD/Palestinian government budget and the budgets of civil society organizations.
- **Enhancement of Partnership with Charitable Organizations Program:** This program supervises the work of civil society and charitable organizations that work in the social welfare field and regulates its work. It supports charitable organizations by purchasing services from them. The number of charities supported is 1,200 (700 in the West Bank and 500 in the Gaza Strip). MoSD tracks the services provided by sharing and/or receiving monthly data, thus avoiding overlap.

Overall, the resources to finance these programs come from foreign donor funds and therefore their long-term sustainability is questionable. Without real development and expansion of the economy's employment opportunities, poverty will remain a challenge of growing magnitude.

7. Progress towards international agreements and goals

Israel's protracted occupation, characterised by ongoing violence and severe restrictions on the movement of both people and goods, has resulted in highly fragmented and distorted local economies that are overwhelmingly dependent on external aid.[18] Such complexity and uncertainty has affected the Palestinians' ability to set long-term policies and plans. The occupation remains the primary obstacle to reaching international benchmarks and making development gains.

While Palestine is considered by the United Nations Development Programme (UNDP) to be in the medium human development category, the Palestinian people remain highly vulnerable. The *Indicators of the MDGs in Palestine* published by the PCBS (2014) and the *National Report on Assessing the Achieved Progress in Implementing the Action Plan of the ICPD 1994* published by the Ministry of Planning and Administrative Development (October 2012) clearly illustrate the impact of the occupation on Palestinian development opportunities. Progress is apparent in some social areas, for example in targets like vaccination rates, mortality rates, and illiteracy and education attainment. However, other targets such as poverty, employment, economic growth, food insecurity, and access to water fall far behind social indicators (see below). The variability in poverty rate and gap, for example, illustrates how sensitive these benchmarks are to political instability. The remaining deficiencies are serious and require the marshalling of numerous policies and vast resources to move to an economy characterized by massive job creation.

18 WFP, WFP Palestine brief 2015, Available: http://unispal.un.org/pdfs/WFPBrief_300615.pdf

On the other hand, Palestine is facing rapid population growth. Such demographic change offers both opportunities and challenges in achieving the 2030 Development Agenda. Although demographic change is not the only driver that shapes the economy, it has effects on the availability of resources for development and on the demand for public services. Sound policies will determine how Palestine manages demographic change towards eradicating poverty and investment in the growing young and working age population, with better education, health services and women's empowerment offering a foundation for growth, among other policies. Will Palestine be able to make progress towards the 2030 Development Agenda while under occupation? Until there is a permanent peace agreement, political instability and the persistent restrictions on movement, access and trade will remain key obstacles to development.

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Palestine's Progress on the Millennium Development Goals

One can see direct achievements in Palestine related to each of the eight Millennium Development Goals. Specific statistics from the PCBS illustrate the challenges of achieving these goals.

Goal 1 is to eradicate extreme poverty and hunger.

- In Palestine, the poverty rate was still high at 25.8% in 2011: higher than its lowest level of 20% in 1998 but lower than its highest level of 34.5% in 2006. The poverty gap was still high at 6% in 2011, but it is lower than its peak of 9.8% in 2007.
- The share of the poorest quintile in national expenditures was still low at 10.2% in 2011, little improvement over its 2007 level.
- The employment ratio to population remains low at 33%.
- The good news is that the frequency of underweight children below the age of five years has decreased substantially from 0.7% in 2010 to a low of 0.2% in 2014. The same is true for the severe underweight problem among these children, which also dropped from 4.9% in 2004 to 1.4% in 2014.

Goal 2 is to achieve universal primary education.

- The net enrolment rate in primary education reached 93.6% in 2016, almost the level achieved back in 2007/2008. The rate had declined between those time periods.
- The ratio of pupils who start the first grade and continue until the end of primary school is almost universal at 99.1% in 2013/2014 but slightly lower than its previous constant level of 99.4%.
- The literacy rate among the population aged 15-24 years has increased and remained constant at 99.3% since 2011.

Goal 3 is to promote gender equality and empower women.

- The female-to-male ratio among pupils in primary schools remains high at 98% from 2005/2006 through 2013/2014. Female-to-male ratio among pupils in secondary schools exceeded one and increased constantly to 1.25% starting in 1999/2000. Female-to-male ratio among students at institutions of higher education also exceeded one and consistently increased to 1.49 in 2013/2014.
- The share of women in paid jobs in the non-agricultural sectors remained low at 16.4% in 2013 down from its peak of 18.8% in 2009.
- The ratio of women in the PLC increased from 5.7% in 2005 to 12.9% in 2006. Although no elections were held after 2006, the ratio increased to 13.2% in 2013.

Goal 4 is to reduce child mortality.

- The child mortality rate among children below five years of age declined from 33.2% in 1990-1994 to 21.7% during 2009-2013.
- The infant mortality rate declined from a high of 27.3% in 1990-1994 to 18.3% in 2009-2013.
- The ratio of children vaccinated against measles who reached the age of one year increased from a low of 49 in 1996 to a high of 99.1% in 2014.

Goal 5 is to improve maternal health.

- The ratio of births that are performed under supervision of professional health employees is almost universal and increased from 94.6% in 1996 to 99.4% in 2014.
- The ratio of the prevalence of contraceptives from 45.2% in 1996 to 57.2% in 2014 and an existing disparity is closing between the West Bank and Gaza Strip.
- The ratio of births among adolescent girls declined rapidly from a high of 114 per 1000 in 1994 to 48.4 in 2012-2014. In the Gaza Strip, it declined from a high of 144 to 66.5 for the same period.
- Antenatal healthcare coverage is almost universal for one visit but increased up to 95.5% in 2014 for the best result of four antenatal visits. Uncovered healthcare needs declined to a mere 11% in 2014.

Goal 6 is to combat HIV / AIDS, malaria and other diseases.

- The percentage of women aged 15-24 years who correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission stands at 7.7%.

Goal 7 is to ensure environmental sustainability.

- The percentage of land areas covered by woods increased slightly but remains low at 1.68% in 2014.
- Per capita CO2 emissions seem to be constant at 1.04 metric tons in 2011 as compared to 1.09 metric tons in 2002.

- The percentage of population with access to an improved source of water is almost universal and increased from 80% in 1995 to 97.5% in 2013.
- The percentage of people with access to sanitation facilities is almost universal.

Goal 8 is to develop global partnerships for development.

- Telephone landlines per 100 inhabitants increased from 6.1 in 1998 to 9.5 in 2013.
- Mobile phones per 100 inhabitants increased rapidly from 2.6 in 2000 to 72.9 in 2013.
- The number of Internet users per 100 inhabitants increased tremendously from a low of 5.4 in 2000 to 53.7 in 2013.

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C. Socio-cultural context: Gender and patriarchy

While considered by the UN to be in the medium human development category, the Palestinian people remain highly vulnerable. The Israeli occupation has contributed to loss of life, land, and livelihoods, increasing numbers of refugees and internally displaced people, weak social networks, psychological and emotional difficulties, poor housing and sanitation, and high poverty rates. Internecine violence has put additional stress on Palestinian society. These cycles of political instability combined with prolonged Israeli occupation continue to negatively affect the lives of Palestinians, including community and population dynamics. For instance, the role of political fertility resulting from the conflict with Israel (i.e. political attitudes that encourage fertility) can't be excluded. Also, the absence of a strong local social protection system increases dependency on male siblings in securing the needs of elderly parents, which results in larger families. The following sections address some of the main cultural influences upon population and demography, with special attention to gender issues that can deeply impact fertility.

1. Social and cultural norms

Cultural norms largely determine how people react, interact and behave and thus have a strong impact on family dynamics. These cultural norms are not static, and are influenced by economic, educational and social factors.

Traditional Arab culture maintains a strong hierarchy with a sacred obedience for the figurehead, older age people, especially males. This narrows the space given for younger people, youth, and women. The same applies to the household decision-making process where paternal authorities are usually unchallengeable. The traditional and still-prevalent family model sees men as the household's main breadwinners and source of protection, and women as dependent housewives and the primary care-givers and nurturers. The

gender obstacles and ingrained expectations of women's role in society hinder employment participation in the labour force.[19]

This same culture maintains a strong commitment to the institution of marriage. The median age of marriage among females is 20.3 years (24.0 years among males). Currently females that are married (15 years and above) make up 56% of all females (54% among males). Those who are divorced (1.6% among females and 0.3% among males) or widowed (6% among females and 0.6% among males) are much more likely to be female. The majority of households are nuclear (84.5%), a characteristic that is less prevalent in Gaza (79%) than in the West Bank (87.4%)[20]. The percentage of extended families is progressively declining (now 12.2%). Most families live in houses of high density and limited privacy, with negative implications, especially for females and adolescent females. Nearly half of Palestinian families contain young children. Childcare and care of the elderly or persons with disability within the household is usually shouldered by family members, with females including young girls bearing most of the responsibility resulting in lost opportunities for recreation, education, and work. Although most households contain the basic essentials, tools for recreation and spaces for children and adolescents are not adequately maintained.

Generally, young people participation is little in making family decisions. When they do, males are more often consulted than are females. The generation gap between children and elderly family members is immense and increasing due to changes in access to information, globalization, and the use of advanced IT. Girls in one study repeatedly lamented that they were not accorded the same value as their male counterparts by family and community members alike.[21] Similarly, girls reported feeling less valued than boys when sharing opinions and thoughts. Even though the home is seen as women's natural domain, men are likely to believe that they should control household resources and decision-making.[22]

The rapidly escalation of urbanization and shifts from an agricultural society towards an industrial and service-oriented one has been accompanied by a change to less reliance on family and informal support and a greater tendency to seek support from formal services. Formal social systems should respond to the change in norms and be prepared to provide support for a larger number of people due to the anticipated growth and change in population structure.

Traditionally, Palestinians express great respect for the elderly. One study found that the majority of those polled (87.9%) were opposed to sending their parents to a retirement home, one example of the high value placed in social connections[23]. Most elderly are economically dependent on their (male) children and only 7% are served by social security. Nearly 70% of the elderly population suffers from at least one chronic disease or condition.[24] The intensive needs of the elderly coupled with their dependence upon family to meet those needs places a heavy burden upon their children, who themselves may not have adequate or regular income.

19 UN Women, "Cross-Sectoral National Gender Strategy: Promoting Gender Equality and Equity 2011–2013", (Ramallah, UN Women, 2011). Available at http://www.unwomen.org/wp- content/uploads/2011/05/UN-Women_oPt_Full-Palestinian-Gender-Strategy_2011_en.pdf; World Bank, "Towards a Palestinian State: Reforms for Fiscal Strengthening", Economic Monitoring Report to the Ad Hoc Liaison Committee, (2010). Available at http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WorldBankReportAHLCApril2010Final.pdf).

20 Palestinian Central Bureau of Statistics, *The Status of Palestinian Population Living in Palestine* (Ramallah, 2015)

21 Samuels, F. and N. Jones, *Rebuilding adolescent girls' lives : Mental health and psychosocial support in conflict-affected Gaza, Liberia and Sri Lanka*, (2015). Available at https://www.odi.org/sites/odi.org.uk/files/odi- assets/publications-opinion-files/9999.pdf

22 Palestinian Central Bureau of Statistics, *Palestine in Figures 2015*, (Palestine, 2016)

23 Al Bayoumi, N., *The Status of Wellbeing in Gaza Governorates: Correlates and Implications* (Khan Yunis, Al-Quds University, 2014)

24 Palestinian Central Bureau of Statistics, *Family Survey*, 2010.

2. Gender inequalities

(a) Education

The literacy rate among Palestinians (15 years old and above) is very high (above 96.4% in 2014) and slightly higher among males (98.4%) than females (94.4%). This reflects the high cultural value Palestinians have placed on education, regarding it as a durable and movable asset, "contrary to land and houses that can be and were lost"[25]. Today 37.9% of youth (aged 15-29 years) are currently enrolled in education with 36.3% in the West Bank and 37.9% in the Gaza Strip. Enrolment favours females (32.1% for males, 42.0% for females) and the proportion of females who completed university education (14.3%) is higher than that of males (11.2%), both in the West Bank and the Gaza Strip.[26] This is true despite that families with scarce resources prefer to invest in sending their sons to university, and despite early marriage and its presumed negative impact on girls' access to university education.

(b) Gender-based violence

Gender-based violence (GBV) is widespread in Palestine, both within public and private spheres. The 2011 violence survey conducted by the PCBS showed that the streets are the main site of abuse suffered by youth. Twenty percent of youth aged 18-29 years were exposed to psychological violence in the street, 28.7% of males and 10.2% of females.[27] Married women who suffered violence and abuse from their husbands were 37%, 29.9% in the West Bank and 51% in the Gaza Strip. Of these, more than one-third of women in Gaza were exposed to physical violence. Otherwise, violence takes various forms including forced marriage, denying emotional needs, forcing siblings to study and enrol in the careers preferred by parents, controlling resources even if these resources were earned by another family member and so on. Of those exposed to violence, 30.2% left for the house of a brother or sister and 65.3% preferred to remain silent. Those who sought help from a women's institution or center did not exceed 0.7% indicating strong gendered cultural norms and a lack of formal services.

Many victims of GBV are reluctant to seek supportive services at institutions, or even to seek family support, fearing that doing so might harm their chances of marrying or might expose them to risks associated with the perceived violation of so-called 'honour'.[28] Conforming to expectations of 'family honour' is a source of considerable stress for females, especially as violations (or perceived violations) of that honour can meet the most severe of consequences.[29] In 2013, 27 Palestinian females were killed under the pretext of maintaining family 'honour' (12 of them were from Gaza). Lack of protective legislation, laws and policies contribute to an apparent increase in this phenomenon. For instance, a longstanding law provides leniency in sentencing for men if the motive for murdering a female family member is to preserve family honour.

25 Hamad, B. and Shalabi, A., *Applicability of the Learning Organization Concept*, (Saarbrucken, LAP lambert Academic Publishing, 2013)

26 Palestinian Central Bureau of Statistics, *Palestine in Figures 2015*, (Palestine, 2016).

27 Palestinian Central Bureau of Statistics, *Violence Survey in the Palestinian Society, 2011*, (Palestine, 2011).

28 Miftah, Independent Commission for Human Rights, & United Nations Population Fund, *Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine,* (Palestine, 2015).

29 Miftah et al., 2015.

Domestic violence against women in Palestine is regarded as an issue that should be handled by the family. Patriarchal and masculinity values lie behind this 'culture of silence' and socio-cultural norms are built upon them. Significant achievements in addressing violence have been realized in Palestine over the last decade, with normative frameworks comprised of legislation, policies and systems addressing women, child and youth protection. Nevertheless, their endorsement and implementation are partially or entirely lacking. An inter-sectorial referral system exists, but government engagement remains insufficient and inconsistent, especially in the health sector.

As a result, females are often forced to retreat from the public sphere and spend their leisure and recreation time at home with family. When they graduate from school, girls' lives shrink further still. While most would very much like to work outside the home[30], gender norms that see the home as women's natural domain mean that Palestinian women's labour force participation rates are amongst the lowest in the world (19% in 2014).[31]

Palestinian girls are also vulnerable to child marriage and pregnancy. They are not only poorly protected by national law which in the West Bank permits the marriage of girls as young as 14.5 (16.5 in Gaza), but they face considerable pressure from their families to marry early in order to uphold 'honour' and also to relieve economic hardship. Among married women, 23% were girls younger than 18.[32] The end result of this relatively high rate of child marriage is that Palestine's adolescent pregnancy rate is very high. Nearly 30% of girls in Gaza and 25% of girls in the West Bank are pregnant before they turn 18 and about half are mothers before age 20.[33] Notably, despite their early exposure to sex, less than 10% of adolescent girls had adequate knowledge about HIV.[34] Furthermore, one-third of marriages occur between first-degree relatives, which drives the country's relatively high rate of birth defects.[35]

According to UNSCR 1325, women and girls are to be protected from sexual violence and all forms of violence during conflict. However, Palestinian women still endure violence as an effect of the ongoing Israeli occupation, which undermines women's rights and security through restrictions on freedoms and access to essential services, as well as through verbal and psychological abuse at Israeli checkpoints and from Israeli settlers. Currently, the level of violence practiced by Israeli soldiers is significantly increasing. In Gaza in 2014, 260 women were killed and 2,088 were injured.[36]

(c) Female participation

With the socio-political environment significantly narrowing women and girls' access to the public sphere, it has become more difficult for women to obtain income, access services, and secure their rights. Women's involvement in the formal economy is marked by highly segmented labour markets, with more than 80% of women employed by only two sectors: services (primarily education, health and social work) and agriculture (mostly as wage employees). Gender rigidities exacerbated by insecurity have undermined women's

30 World Bank, "Targeting Assessment of the Cash Transfer Program, West Bank and Gaza." Report No: ACS890. 25 June. (Washington DC, World Bank, 2012)

31 UN Women, *Women and the SDGs*, (2015), Available at http://www.unwomen.org/en/news/in-focus/women- and-the-sdgs/sdg-5-gender-equality; Palestinian Central Bureau of Statistics, 2015; World Bank, 2012b.

32 Palestinian Central Bureau of Statistics, United Nations Population Fund & United Nations Children's Fund Palestinian Family Survey 2010, (Palestine, 2013).

33 Miftah et al., 2015.

34 Palestinian Central Bureau of Statistics et al., 2015.

35 Miftah et al., 2015.

36 Miftah et al., 2015.

ability to engage in business and trade. Unsurprisingly, men outnumber women both as employers and in self-employment and women's representation in senior positions within the public sector is very low. Nevertheless, women have played critical roles in securing household livelihoods under ever-deteriorating circumstances. There is an emerging gap between women's sense of themselves as economic actors on the one hand, and limited control over assets and recognition from family members on the other, especially in Gaza.[37]

Women's political participation has improved in the past 10 years, thanks to a quota introduced in 2005 that increased the proportion of female members of the legislature from 5.6% to 12.9% between 1996 and 2006. Likewise, the proportion of female members of local governing councils rose from 1.8% in 2000 to 18% in December 2005. Efforts by leaders of the women's movement to bring about legislative change and electoral reform were subsequently derailed by the paralysis of the PLC. Women have been largely absent from the factional reconciliation process and have reported feeling unable to represent women's interests due to competing agendas and the difficulty of gaining positions of influence within the parties themselves.[38] Many of the vocal grassroots women's organizations that flourished under the PLO were transformed in the aftermath of the Oslo Accords into Western-funded NGOs, both less inclined to lobby domestic authorities and unable to orchestrate mass mobilization.[39]

Multiple gender and social norms also constrain widows and separated and divorced women from engaging in their communities and constrain their ability to move freely, engage in extra-domestic productive activities, and in general exercise their agency to choose the course of their lives and those of their children. In general, widows and separated and divorced women are expected to spend most of their time at home. Activities outside the domestic space are often viewed with suspicion and can be associated with 'inappropriate' behaviour.[40] Divorced women are arguably exposed to the most severe social sanctions; they are often viewed as the cause of their own misfortune, with divorce largely considered 'shameful' for women, but not for men. Separated women also suffer stigma and live in limbo until a decision to either return to their husband's house or finalise a divorce is taken. In the meantime, separated women live temporarily at their father's or a brother's house. Widowhood appears to be less stigmatised because of the cultural and religious precepts that see widows and orphans as vulnerable groups in need of assistance, and as a social responsibility.

37 Hammami, R. and Syam, A., *Who Answers to Gazan Women,* (Ramallah, UN Women, 2011).

38 Zayyan, H, *The Gazan Women's Context: Challenges and Opportunities,* (Gaza, Pal-Think, 2012).

39 Jad, I., 'The NGOization of the Arab Women's Movements', *Review of Women Studies* (2004), pp. 42-56.

40 Abu Hamad, B and Panvello, S. *Transforming Cash Transfers: Beneficiary and community perspectives on the Palestinian National Cash Transfer Programme,* (London, Overseas Development Institute, 2012).

(d) Women's reproductive role

"The Palestinian population has one of the highest fertility rates in the region. Religious and cultural beliefs dominating the society encourage fertility and having many children. Having many children provides a type of social security and protection for the family and the tribe against others."

The Palestinian population has one of the highest fertility rates in the region, a fact related to cultural, educational, political, tribal and religious factors. (A more complete discussion of fertility and sexual and reproductive health can be found in Chapter 3.) Religious and cultural beliefs dominating the society encourage fertility and having many children. Furthermore, polygamy is not an uncommon phenomenon. Having many children provides a type of social security and protection for the family and the tribe against others. High fertility rate is also an outcome of the political situation dominating the area. Many families have lost members in ongoing political violence and most Palestinians are aware of the demographic dimension of the Arab-Israeli conflict and are committed to the principle of having many children. Some perceive high fertility and having many children as prestigious (*e'zwa*) and one of the very few available opportunities to gain status and recognition, particularly for males whose ego might struggle with the prevailing lack of employment and other opportunities. For farmers, having a large family is a necessity. Furthermore, children provide social security and financial support for the family that is unlikely to be adequately replaced by the government.

(e) Legal perspectives

Gender inequality is still embedded in some Palestinians laws, stipulating that "the testimony of a woman is worth only half of that of a man in cases related to marriage, divorce and child custody"[41]. The high degree of gender discrimination incorporated within the Palestinian Personal Affairs Law or Family Law affects several important areas such as inheritance, maintenance, marriage, divorce, and child custody. It contributes to the persistence of gender inequalities and to acute vulnerability to poverty, which is also a result of women's inability to access their entitlements. For example, in the case of divorce, the guardianship of children or the decision-making power over children is granted to the father. Mothers are given physical custody based on the child's age and sex: for sons until the age of nine and daughters until the age of 11, at which point the father (or the paternal family) gains custody, unless he accepts to extend the mother's custody period. If a divorcee remarries, however, she immediately loses custody rights over her children[42]; this is not the case for men when they remarry. In most cases, divorced women have foregone their rights to maintenance, and in the process have been subjected to significant levels of stress.

The Personal Affairs Law stipulates that if the wife initiates a divorce, unless she proves severe physically abuse by her husband, she must give up all her financial rights to maintenance,

41 United Nations Children's Fund, Occupied Palestinian Territory: MENA Gender Equality Profile - Status of Girls and Women in the Middle East and North Africa, (2011). Available at http://www.unicef.org/gender/files/oPT-Gender-Eqaulity-Profile-2011.pdf

42 Ibid.

dowry and any other financial assets she may have accrued during marriage.[43] The obvious possibility of being suddenly pushed into destitution, together with the pervasive social stigma around divorce, act as major deterrents for women seeking to initiate divorce. The majority prefer to remain trapped in unhappy and/or abusive marital relationships. Those who initiate a divorce do so only in extreme circumstances where their lives are at risk. In addition, 25% of the population reported that there is social stigma surrounding women who ask for divorce.

Another important legislative issue relates to women's work. The Civil Service Act and Labour Law generally establish equal rights for working men and women with a few exceptions, among them child allowances and pension rights which are assigned to the disadvantage of women. This goes hand-in-hand with the gendered norms of perceiving women as primarily an instrument for reproduction rather than as workers or otherwise. The law provides equal annual leave to men and women (two weeks for employees less than five years in service and three weeks for employees with more than five years tenure). It provides women with maternity leave (ten weeks), one hour daily for breastfeeding for a year after birth, and the right to go on unpaid leave for one year. This leave can be taken only when women want to take care of their babies or when they want to accompany their husbands abroad.

43 Ibid.

Chapter 2

Population Dynamics in Palestine



A. Population growth and demographic transition

The most striking aspect of population growth in the State of Palestine in its present internationally recognized borders (i.e., the West Bank including East Jerusalem and the Gaza Strip – see Terminology) is that, since the middle of the last century until 2015 the population has multiplied five times, from 0.9 to 4.75 million at an average annual rate of growth of 2.5%. This is so despite a particularly troubled history and significant streams of migration outwards including forced migration and puts Palestine among the fastest-growing countries of the Arab world, with the exception of Jordan, which received numerous Palestinian refugees after the 1967 occupation, and the exceptionally rich oil-producing countries of the Gulf. This average rate of growth has varied over time, but not necessarily from a high rate of growth to a lower one and still remaining very high by world standards.

The paradigm of demographic transition stipulates that the effects of modernization cause countries to have increasingly lower death and birth rates, with the birth rate falling faster than the death rate. Palestine should have experienced this transition. Nevertheless, in spite of a particularly low and decreasing death rate, falling from 4.9 per 1,000, to 3.6 per 1,000 between 1997 and 2015, the birth rate – although falling – remained quite high from 42.7 per 1000 to 31.9 per 1000. Thus the present rate of natural increase of 2.83% remains high enough that a further doubling of the population in a matter of 25 years is a possibility and should not be ruled out. Also, one of the major characteristics of Palestinian population, the disparity between the Gaza Strip and the rest of Palestine, must be noted. The rate of growth for the Gaza Strip is one-third higher than that in the rest of the country – a huge difference.[44] This is also a Palestinian specificity in the Arab context.

Hence, among the peculiarities of the demographic transition in Palestine, which continues to develop, is a lag in comparison with many Asian or Arab countries and a heterogeneous disparity that places the Gaza Strip much ahead of the West Bank and East Jerusalem.

B. Changes in age structure

The total size of the population and its rate of growth tell only one part of Palestine's demographic story. The pace of demographic transition impacts certain segments differently, thus modifying the internal structure of the population. This has profound consequences on population needs and henceforth on the development process.

The classic disaggregation by large age groups – youngsters (0-14 years of age), adults (15-64 years), elderly (65 years and over) – shows that in the long run, the Palestinian demographic transition has led to a large albeit decreasing share of youngsters and a low but almost constant proportion of the elderly. It is true that the proportion of youngsters has fallen: it was around 50% at the beginning of the 1980s and has now gone below the 40% mark (39.3%) as shown by the last Multiple Indicator Cluster (MICS) survey in 2014. In the meantime, the share of the elderly has slightly increased from 2.3% to 3.2%. However, this modification of the age structure is not extensive enough to allow for significant so-called

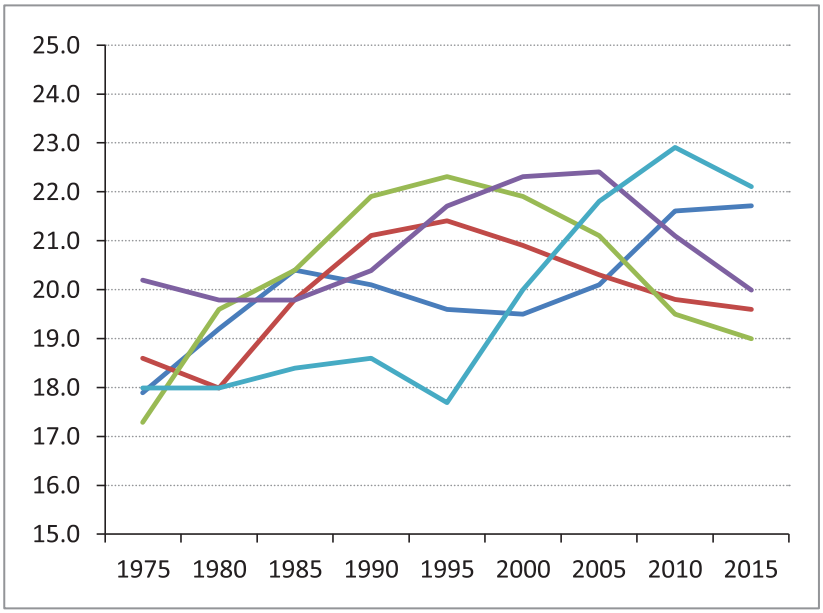
44 Palestinian Central Bureau of Statisics, *Status of Palestine Population* (2015).

'demographic dividends' that come from a decrease in dependents (i.e., youngsters and elderly) compared with the active age population (15-64 years of age).

> ***"The proportion of the age group 15-24 compared with the total population or the adult population has skyrocketed, in relative terms, increasing from 19.1% in 1980 to 22.6% in 2014, according to the last MICS survey. This is the highest increase among all of the Arab countries – of the same order of magnitude as that seen in Yemen. This is perhaps the most serious developmental issue faced by the country."***

In the meantime, another phenomenon that often goes unnoticed is that the 'youth bulge' or the proportion of the age group 15-24 years compared with the total population or the adult population has skyrocketed, in relative terms, increasing from 19.1% in 1980 to 22.6% in 2014, according to the last MICS survey. (See Chapter 4 for more information about youth and the youth bulge.) This is the highest increase among all of the Arab countries – of the same order of magnitude as that seen in Yemen. In absolute terms, the number of youth aged 15-24 years was 289,000 in 1980 and has exceeded on million people in 2015, a multiplication by 3.3 in one generation at an annual rate of growth of 3.6%. This is perhaps the most serious developmental issue faced by the country, and with many consequences in terms of the emergence of youth as a priority group, educational needs, entries into the labour market, gender equity, etc.

Figure II.1
The youth bulge trend in Palestine and some Arab countries, 1975-2015 (%)



What is the present situation in terms of age and sex equilibrium? The 2014 MICS survey provides the most recent tool for this analysis.

Table II.1
Age-sex structure (percentage), MICS Survey 2014

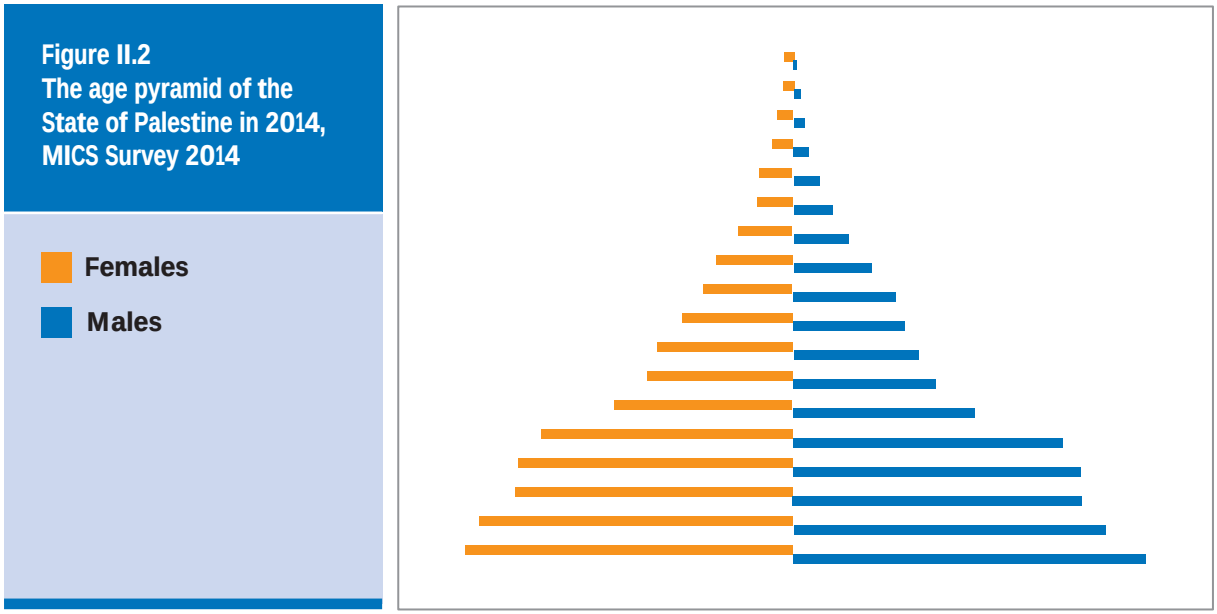
Age	Males	Females	Total	Sex ratio
0-4	7.4	6.9	14.3	107.8
5-9	6.5	6.6	13.1	99.6
10-14	6.1	5.8	11.9	104.1
15-19	6.0	5.7	11.7	104.1
20-24	5.6	5.3	10.9	107.3
25-29	3.8	3.7	7.5	103.4
30-34	3.0	3.0	6.0	98.7
35-39	2.6	2.8	5.5	94.0
40-44	2.3	2.3	4.7	100.2
45-49	2.2	1.9	4.0	114.6
50-54	1.7	1.6	3.3	101.7
55-59	1.2	1.1	2.3	104.0
60-64	0.8	0.8	1.6	109.5
65-69	0.6	0.7	1.2	81.3
70-74	0.3	0.4	0.8	79.1
75-79	0.3	0.3	0.6	79.3
80-84	0.1	0.2	0.4	67.2
85+	0.1	0.2	0.2	46.7
Total	50.6	49.4	100.0	102.6
0-14	20.0	19.3	39.3	103.9
15-64	29.2	28.3	57.5	99.6
65+	1.4	1.8	3.2	75.7
Child-Woman Ratio (CWR)[45] 115.3 per 1,000				
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, Final Report*, Ramallah, Palestine.

This age-sex structure provides important clues to the present demographic situation in the country. It also constitutes the most recent basis for the population projections that follow here.

45 The number of children under age five per 1,000 women ages 15-49 in a population in a given year.

Figure II.2
The age pyramid of the State of Palestine in 2014, MICS Survey 2014



First, the general shape of the age pyramid, with a high basis and a narrow summit is common to that of most developing countries before their demographic transition or before this demographic transition picks up speed. Hence, the 0-4 year age group is much larger than that of 5-9 years, which is still larger than that of 10-14 years, as shown in Figure 2.2. The impression provided by this Figure is also that demographic transition and fertility decrease, after gaining speed some 10-14 years ago, came to a halt, with high fertility resuming. A quick estimate of fertility indicates a child (0-4 years) to women (15-49 years) ratio of 115 per 1,000 and roughly a total fertility rate of 4.03, which is close to the survey's direct estimate of 4.06 child per woman.

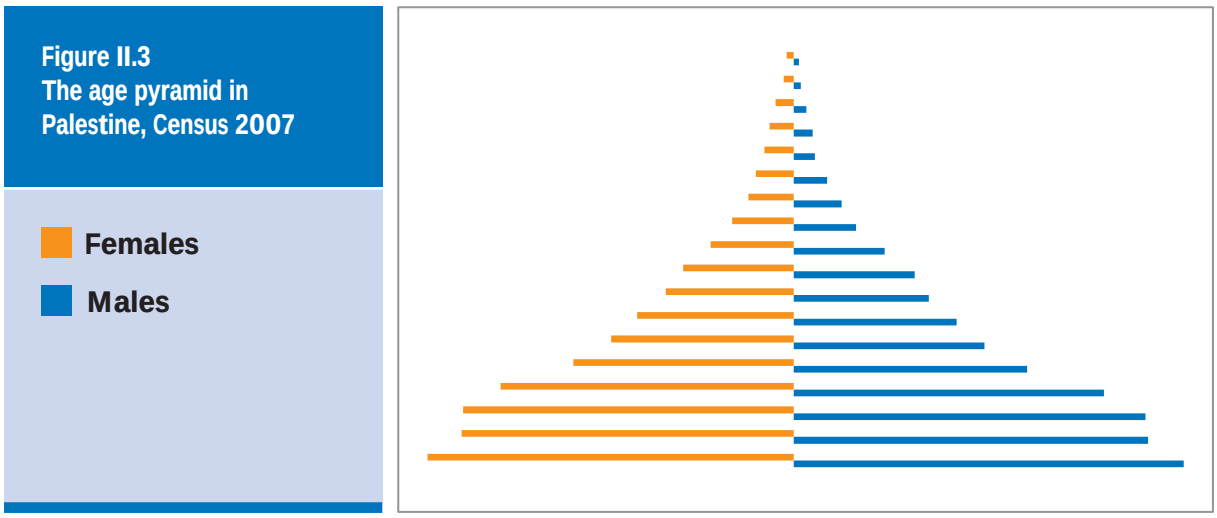
Sex ratios are relatively high for young age groups, especially at 0-4 years of age: 107.8 boys to every 100 girls. This might indicate a possible mis-declaration of age between 0-4 and 5-9 years, or an excess female mortality in childhood, which should be thoroughly assessed. For adults, there is probably some selectivity in emigration and immigration that contributes to deflate the male 30-40 years proportion and then inflate the male group aged 45-64 years of age. But a complete mortality and migration analysis requires more refined data to be presented at a later time.

Table II.2
Age-sex structure, Census 2007

	Percentage adjusted			
Age	Males	Females	Total	Sex ratio
0-4	7.8	7.4	15.2	104.8
5-9	7.1	6.7	13.8	104.9
10-14	7.0	6.7	13.7	104.7
15-19	6.2	5.9	12.1	104.1
20-24	4.6	4.5	9.1	104.2
25-29	3.8	3.7	7.5	102.8
30-34	3.2	3.2	6.4	102.4
35-39	2.7	2.6	5.3	104.1
40-44	2.4	2.2	4.6	107.7
45-49	1.8	1.7	3.5	107.8
50-54	1.2	1.2	2.5	99.8
55-59	1.0	0.9	1.9	104.2
60-64	0.7	0.8	1.4	86.6
65-69	0.4	0.6	1.0	71.4
70-74	0.4	0.5	0.9	77.7
75-79	0.3	0.4	0.6	69.5
80-84	0.1	0.2	0.3	69.9
85+	0.1	0.1	0.2	78.0
Total	50.8	49.3	100.0	103.0
0-14			42.6	
15-64			54.3	
65+			3.1	
Child-Woman Ratio (CWR) 127.7				

Source: Palestinian Central Bureau of Statistics, *Population Census, 2007*, (Ramallah, Palestine).

Figure II.3
The age pyramid in Palestine, Census 2007



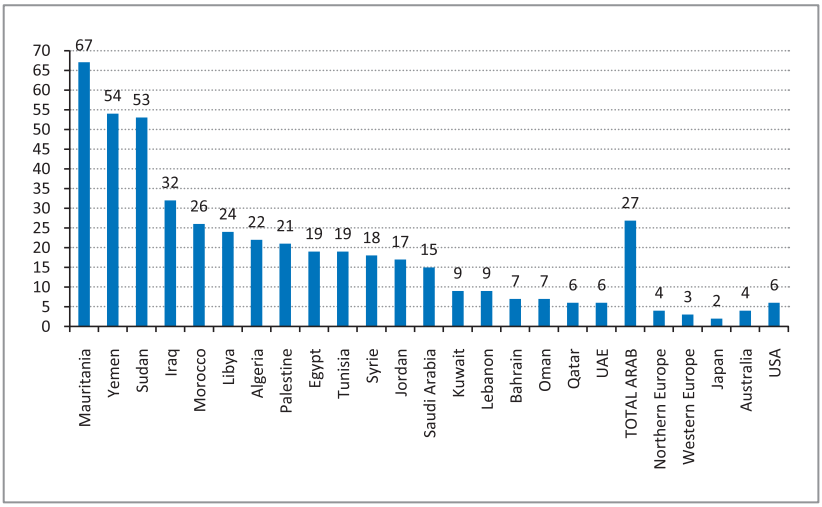
In the 2007 census, the proportion of youngsters was significantly higher than seven years later in the 2014 MICS survey. The CWR ratio: 127.7 per 1,000 diminished to 115.3 per 1,000 (-1.4% annual decrease). This could indicate, therefore, that the fertility transition has begun in earnest, a conclusion to be better ascertained later using fertility data.

C. The impact of infant, child mortality and maternal mortality

In and of themselves, the levels and trends in mortality indices are important for gauging the health situation in Palestine and to evaluate progress towards MDG and SDG goals. In addition, however, these trends are particularly important in making population projections, since fertility – the most significant component of population growth – depends heavily on infant and child mortality. When this mortality is high, one normally expects higher fertility rates and vice versa.

However, in Palestine this correlation is not as strict as it could be expected, which is also one of the specificities of the Palestinian demographic transition. The following figure shows that the Palestinian infant mortality rate is among the lowest of the Arab countries (with the exception of the small emirates and Lebanon). It is lower than in much wealthier Iraq, Morocco and Algeria. Yet, most of these countries have lower fertility rates than does Palestine.

Figure II.4
Recent infant mortality rates (per 1,000) in Palestine, compared with Arab and western countries



Source: United Nations Population Division, *World Population Prospects, the 2015 revision*, (New York, 2016)

Also, as recently shown by the MICS survey in 2014, infant and childhood mortality have fallen very rapidly in just one generation. Hence, the under-five mortality rate was halved from 41.5 per 1,000 to 21.7 in the last five years. These good results are to be found at varying degrees at different ages, but child mortality has benefited the most, being cut by one-third. On the other hand, as noted above, these decreases in mortality were not matched by similar ones in fertility. Another peculiarity is that West Bank and Gaza mortality indices are somewhat closer to one another than those for fertility: infant mortality rates are respectively 17.7 and 19.1, whereas total fertility rates are 3.74 and 4.53, a wider gap comparatively. In the case of East Jerusalem, the infant mortality rate is particularly low: 4.8 per 1,000, according to the Israel Statistical Yearbook of 2016. This is 73% lower than that in the West Bank, yet twice the rate of the Jewish population of the city. (A complete discussion of sexual and reproductive health in Palestine can be found in Chapter 3.)

It is somewhat surprising to find that infant mortality and under five mortality are lower in camps than in rural or urban areas; these latter areas have the highest rates, despite better overall living conditions.

The impact of education on mortality is strong as can be expected. Hence, infant mortality is reduced by half from 31.7 to 16.7, and child mortality by two-thirds from 9.1 to 3.5 if the mother has benefited from a higher level of education rather than a basic one. Education is correlated to the wealth index: for the poorest quintile the infant mortality rate is 17.5, almost twice than for the richest (11.6), and the child mortality rate falls from 3.6 to 2.2.

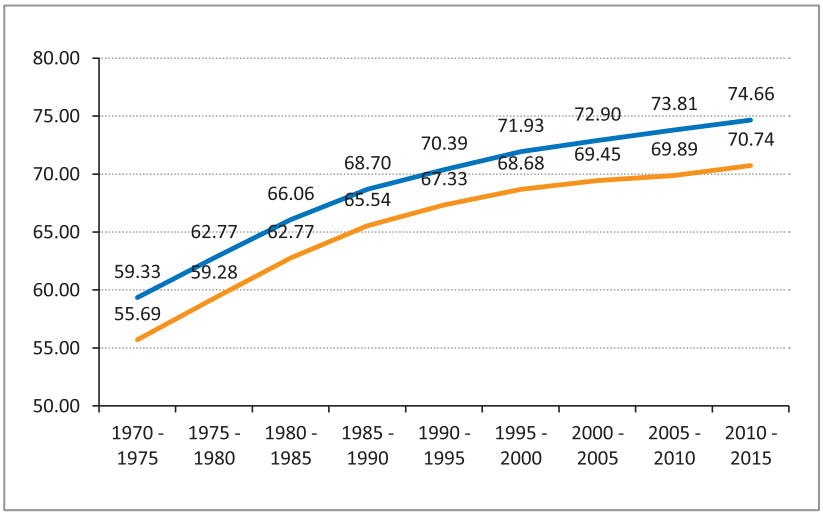
The mothers' age has a negative impact on survival, doubling the infant mortality rate for mothers over 35 years of age than for those in their twenties. It is the same for birth order and for the length of the previous birth interval. All of these close relations between demographic characteristics and mortality are as expected, but should be translated into a program of action by advocating for longer birth intervals and discouraging pregnancies at risky ages.

Palestine has accomplished great strides in reducing mortality to acceptable levels – acceptable, but not perfect. It is sufficient to refer to the preceding chart, which shows that IMR is still six to seven times higher than that in Europe or in Japan.

Estimates of maternal mortality are usually very difficult. This is due to the fact that sound estimates of these rare events require, at the best, a panel survey on a large number of households. According to World Health Association (WHO) estimates, the maternal mortality rate has fallen from 181 per 100,000 births in 1980 to 92 in 1990, 52 in 2000, 74 (Demographic Survey) in 1996 and 46 in 2008. The more recent figure, presented by the Palestinian Ministry of Health based on the established surveillance system, is 24.7 in 2014. It is higher in the Gaza Strip: 30.6 compared to the West Bank's 19.1.[46]

PCBS does not publish life tables because the recording of deaths at civil registration is often defective. Relying on UN estimates, life expectancy at birth would have increased from 55.7 to 70.7 years for males and from 59.3 to 74.7 years for females between 1970-

Figure II.5
Life expectancy at birth, State of Palestine by sex 1970-2015 (according to the United Nations)



75 and 2010-15. Although this shows improvement, life expectancy in Palestine is still some ten years below the life expectancy of the most advanced countries.

D. Fertility, trends and determinants

Although still high according to world standards or even Arab ones, one should recall that the Palestinian total fertility rate (TFR) was around eight children per woman (7.91) in 1976-1981 according to the Demographic Survey (DHS) of 1996 and that the parity, or the mean number of children ever born, in 1996 was 8.02. Palestine fertility therefore has decreased but the path of decrease is baffling. In 1996, higher levels of Gaza fertility (7.40 against 5.62, which is 32% more or a difference of almost two children per woman) was at its peak. Higher Gaza fertility persists today, although the difference between it and that in the West Bank is narrowing.

46 Ministry of Health, *Maternal Mortality Report*, 2014.

Table II.3
Age-specific fertility rate (ASFR) and total fertility rate (TFR) (per 1,000) by region, DHS in 1996 (one year before survey)

Age	Total	W. Bank	Gaza
15-19	114	98	144
20-24	297	274	340
25-29	300	274	347
30-34	256	239	289
35-39	183	160	231
40-44	90	71	123
45-49	6	7	5
TFR	6.23	5.62	7.40

Source: Palestinian Central Bureau of Statistics *The Demographic Survey in the West Bank and Gaza Strip, preliminary report*, (Ramallah, Palestine, 1996)

Table II.4
Fertility trends, age-specific fertility rate (ASFR) and total fertility rate (TFR) by five-year period before the 1996 DHS

Age	0-4	5-9	10-14	15-19
15-19	120	102	105	127
20-24	311	298	312	353
25-29	318	330	357	378
30-34	278	294	307	331
35-39	198	211	217	261
40-44	77	80	114	114
45-49	7	17	17	17
TFR	6.55	6.66	7.15	7.91

Source: Palestinian Central Bureau of Statistics, *The Demographic Survey in the West Bank and Gaza Strip, preliminary report*, (Ramallah, Palestine, 1996)

Table II.5
Average number of children born alive and still alive by age group of ever-married women, 1996 DHS

Age	Ever born	Alive	Dead (per 1,000)
15-19	0.77	0.74	39.0
20-24	1.99	1.93	30.2
25-29	3.50	3.36	40.0
30-34	5.03	4.81	43.7
35-39	6.76	6.40	53.3
40-44	7.35	6.86	66.7
45-49	7.55	6.91	84.8
50-54	8.02	7.13	111.0

Source: Palestinian Central Bureau of Statistics, *The Demographic Survey in the West Bank and Gaza Strip, preliminary report*, (Ramallah, Palestine, 1996)

This survey, the first completed after the Oslo Accords, also portrays important fertility differentials (besides the cleavage between the West Bank and Gaza) according to education, place of residence, and religion.

Table II.6
Fertility differentials for some background characteristics, 1996 DHS

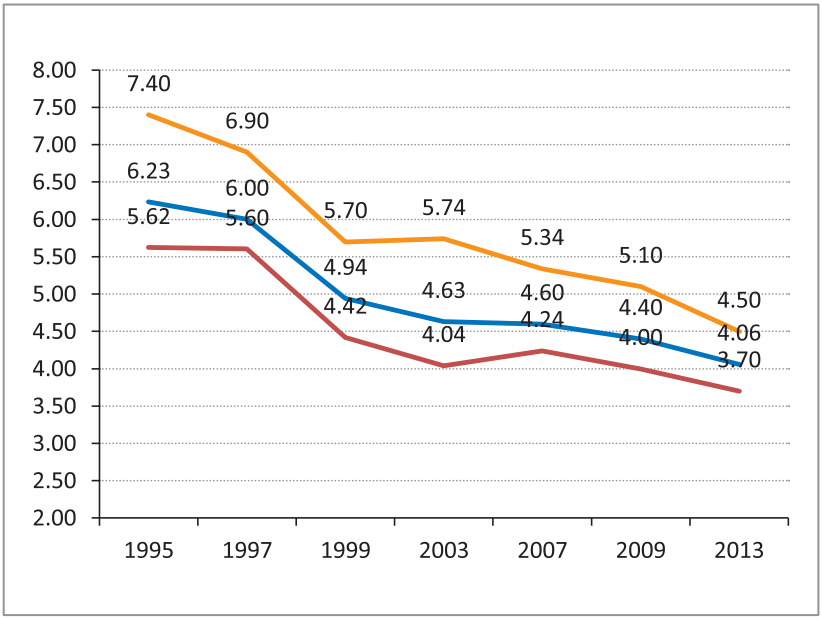
Religion	
Islam	6.34
Christian	2.71
Education	
Less secondary	6.62
Secondary	5.57
More secondary	4.72

Source: Palestinian Central Bureau of Statistics, Palestinian Central Bureau of Statistics, *The Demographic Survey in the West Bank and Gaza Strip, preliminary report*, (Ramallah, Palestine, 1996)

"Education is the leading factor in fertility differentials. In 1996, reaching secondary level schooling reduced a woman's fertility by one child, from 6.62 for the less educated to 5.57. Having been at university means a further decrease of one child. This is of the highest importance for population and fertility forecasts."

Education (but also place of residence) is the leading factor in fertility differentials. In 1996, reaching secondary level schooling reduced a woman's fertility by one child, from 6.62 for the less educated to 5.57. Having been at university means a further decrease of one child. This is of the highest importance for population and fertility forecasts, since the educational composition of the population and of the female population evolves across time, with more educated (and less fertile women) reaching reproductive ages from now on to the horizon of the population projections, in our case the year 2050.

Figure II.6
Trends in the total fertility rate (TFR) in the State of Palestine by region



Yet, in spite of these considerable achievements in terms of female educational attainment during the years of fertility, the fertility transition (while continuing at a reasonable pace) began to lag in 1999, more so in the West Bank than in the Gaza Strip. Between 1999 and 2013, total fertility rate (TFR) decreased by 0.7 children in the West Bank (-16%) compared with 1.20 in Gaza (-21%). One could say that this situation is normal, since fertility decreases are higher when the starting point is high. East Jerusalem has the lowest fertility in the State of Palestine, at 3.33 children per woman in 2014, and the trend in the city has been a continuous decrease since occupation in 1967. In 1995, fertility was still high around five children per woman (4.90). At the same time, Jewish fertility in the city is ever-increasing: at 4.37 in 2014, it exceeds that of Palestinians by one child. The difficulties of living conditions for Palestinians in East Jerusalem: housing difficulties, employment, transportation obstacles due to the separation wall have most probably induced here, more than elsewhere, a so-called "poverty-led transition," which adds to the effects of modernization (i.e., access to higher levels of education). The paradox of the occupation and annexation of East Jerusalem is that it has contributed simultaneously to decreasing fertility and to decreasing mortality, since Palestinians in East Jerusalem benefit from health insurance.

In 2014, the Palestinian total fertility rate remains high. In addition, the structure of fertility should also be a matter of concern with the concentration of births and of age-specific fertility rates (ASFR) at extreme ages being either too low or too high. This is the case for the adolescent birth rate (15-19 years of age). In 2014, the MICS Survey found an adolescent rate of 48 per 1,000. Although decreasing from its former level of 114 at the DHS survey of

1996, it is still high by world and Arab standards. Moreover, the gap between Gaza and the West Bank remains wide: it is twice higher in Gaza at 66 per 1,000 against 35 in the West Bank. Also, adolescent fertility is very class-sensitive, with acute differences according to the wealth index. Whereas adolescent females of the richest households have a rate that has fallen to a reasonable 19 per 1,000, it was still 86 among the poorest social classes.

The issue of fertility structure concerns women who give birth as adolescents or older than age 35 (both of which are considered high risk). In 1996, the share of the total fertility rate contributed by females aged 14-15 and 35 years and above was 32%. It has jumped to 47% in 2014, according to the MICS survey. This is a major public health concern for both adolescent mothers and aged mothers, the latter of which have an increased and nearly doubled infant mortality rate.

E. Marriage and divorce

Marriage is the most important inhibiting factor of fertility in the Palestinian context and is a good predictor of mentality and gender relations.

Marriage in Palestine is at the same time precocious (unusually early) – which therefore leads to a high fertility rate – and not universal, which has the adverse effect.

Hence, the singulate mean age at marriage (SMAM, built according to the method of Hajnal) or the average length of single life expressed in years among those who marry before age 50, was precocious in 1996 at 21.6 years for females, but has hardly increased across time. It was 22.9 years ten years later in 2006 (with slight differences between the West Bank and Gaza). However, whereas a quarter (24%) of young females, aged 15-19 years, were ever-married in 1996, their share has fallen to 9% in 2006, a proportion which remained almost constant until 2014 when it was 9.3% (6.8% in the West Bank and 12.8% in Gaza, which registers twice as many precocious marriages).

Yet, marriage is not universal. In most Arab countries, the proportion of spinsters diminishes rapidly and become negligible above age 30 or 35. This is not the case in Palestine. The ultimate rate of celibacy (by convention ages 45-49 or 50-54) is still high and is slightly increasing: 8.1% in 1996, 8.5% in 2010 (average of the rates at 45-49 and 50-54 years). In the West Bank it is more than twice that in Gaza: 10.7% compared with 5%.

Recent longitudinal data from the MICS 2014 survey shows how early marriage has evolved across generations. If extremely precocious marriage (i.e. before age 15) is on the verge of extinction, from 3.6% for the generation of women aged 45-49 years to 1% for those aged 20-24, this is unfortunately not the case for those married before 18, still a precocious age. This group comprised 27.3% of the generation corresponding to age group 45-49 years and remain 15.3% among those 20-24 years of age. This is an extremely important issue for policymakers in the domain of population and health. Certainly the best way to diminish early marriage is to increase the standard of living, since it was found through the MICS survey that marriage below 18 affects 32% of the poorest segment of the population versus 21.6% in the richest households. Yet, female education remains the most powerful agent of marriage transition from traditional to modern. While over half (50.7%) of females with basic education were married before age 18, females with secondary education were only 22.7% of early marriages and those who went to university were almost negligible (4.3%) in that group.

Table II.7
Female marital status (percentage) and singulate mean age (SMAM) at marriage, 1996 to 2010

1996						
	Single	Married	Divorced	Widow	Separated	Total
15-19	76.2	23.4	0.2	0.1	0.1	100.0
20-24	35.7	62.9	1.0	0.3	0.1	100.0
25-29	19.8	78.4	1.1	0.4	0.3	100.0
30-34	16.3	80.3	1.3	1.6	0.5	100.0
35-39	12.1	84.0	1.4	2.0	0.5	100.0
40-44	9.1	83.6	2.2	4.4	0.7	100.0
45-49	8.1	81.0	2.1	7.9	0.9	100.0
SMAM	21.6					
2006						
	Single	Married	Divorced	Widow	Separated	Total
15-19	90.8	8.9	0.1	0.1	0.1	100.0
20-24	51.8	47.0	0.9	0.2	0.1	100.0
25-29	21.4	76.4	1.4	0.5	0.3	100.0
30-34	13.1	84.0	1.6	1.1	0.2	100.0
35-39	10.7	85.3	2.0	1.8	0.2	100.0
40-44	8.9	86.0	1.2	3.6	0.3	100.0
45-49	8.8	81.5	1.8	6.8	1.1	100.0
SMAM	22.9					
2010						
	Single	Married	Divorced / Separated	Widow	separated	Total
15-19	93.5	6.3	0.2	0.0	na	100.0
20-24	56.1	42.7	1.0	0.2	na	100.0
25-29	23.5	74.0	1.8	0.7	na	100.0
30-34	13.5	83.7	1.9	0.9	na	100.0
35-39	10.6	85.6	2.4	1.4	na	100.0
40-44	8.6	86.3	1.9	3.2	na	100.0
45-49	8.1	85.1	2.0	4.8	na	100.0
SMAM	23.6					

Source: Palestinian Central Bureau of Statistics, *The Demographic Survey in the West Bank and Gaza Strip, preliminary report*, (Ramallah, Palestine, 1996), Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey 2006, Final Report, 2007*, Ramallah, Palestine, 2010, Palestinian Central Bureau of Statistics, *Palestinian Family Survey 2010, Final Report, 2013*, Ramallah, Palestine.

Table II.8
Early marriage and polygyny (percentage), 2014

	Age 15-49	Age 20-49	Age 20-49	Age 15-19	Age 15-49
Age	Married before 15	Married before 15	Married before 18	Currently married	Polygynous
15-19	0.6	na	na	na	0.3
20-24	1.0	1.0	15.3	9.3	0.8
25-29	1.6	1.6	18.4	na	2.1
30-34	2.4	2.4	30.1	na	4.9
35-39	5.1	5.1	31.9	na	5.4
40-44	3.7	3.7	33.6	na	7.7
45-49	3.6	3.6	27.3	na	7.8
Education					
None	6.6	7.2	23.8	na	17.2
Basic	5.3	7.3	50.7	8.2	6.5
Secondary	0.4	0.6	22.7	14.8	3.4
Higher	0.4	0.1	4.3	4.1	2.3
Wealth					
Poorest	2.9	3.2	32.0	18.4	6.8
Second	2.3	2.9	24.4	8.9	5.5
Middle	2.0	2.5	21.9	7.8	5.1
Fourth	1.6	2.0	21.8	8.5	2.4
Richest	1.7	2.2	21.6	3.1	1.7

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, Final Report*, (Ramallah, Palestine).

As shown by the age at marriage at civil registration, there are still numerous cases of females being married at age of 14 (681 cases out of 40,292). Although the proportion is fairly small –1.7% – it should be a matter of concern. Also the average age of grooms and brides, 27.0 and 21.5, producing a gap of 5.5 years is particularly high, even according to Arab standards.

Table II.9
Age at marriage at civil registration, 2010 by gender, West Bank

Age	Brides	Grooms
14	681	8
15	17,797	2,880
20	15,471	16,231
25	3,829	13,293
30	1,317	4,122
35	640	1,384
40	329	718
45	156	549
50	55	340
55	11	295
60	4	172
65	2	300
Total	40,292	40,292
Mean age	21.5	27.0

Source: Palestinian Central Bureau of Statistics, *Statistical Abstract of Palestine*, Ramallah, Palestine, 2011.

Palestine's divorce statistics are relatively unremarkable when compared to other demographic aspects such as fertility, excess mortality, in- and out-migration, forced migration, etc. Marital status in 1997 and 2006 always reflects the low proportion of divorcees, notably in comparison with Jordan (where much of the population is of Palestinian origin).

Crude Divorce Rate and Refined Divorce Rates for the period 2000-2010 reflect high marital stability. As in Syria, divorce rates remain very low, at just six per 1,000 in 2006. Marital stability might be a response to the upheavals associated with the occupation. In the Gaza Strip, a rapid increase in divorce prior to the second *Intifada* came to a halt after 2000. The table below shows, according to civil registration data, that the proportion of divorces to marriages each year does not change significantly in this decade, comprising around 16-17% only. In European countries, by comparison, this rate sometimes exceeds 50%.

Table II.10
Marriages and divorces, 2010-2012

	2010	2011	2012
Marriages	37,228	36,284	40,292
Divorces	6,150	6,155	6,574
Divorce / Marriage (%)	16.5	17.0	16.3

Source: Palestinian Central Bureau of Statistics, *Statistical Abstract of Palestine*, op. cit.

F. Family planning

Fertility still remains high in Palestine, essentially due to early marriage mainly among females and a low frequency of divorce. But it is also attributable to a relatively low rate of contraception use. Presently, according to the MICS survey of 2014, the proportion of women currently using contraception is 57%, among which 13% (almost a quarter) use less effective traditional methods. These rates of contraceptive use are low according to world standards, but not particularly low in comparison with those of the Arab countries of the Middle East, i.e. Iraq, Jordan, Syria and Egypt, where fertility rates also remain high. On the other hand, they are low in comparison with those of the Arab countries of the Maghreb, Morocco and Tunisia and with the non-Arab countries of the region (Turkey at 74% and Iran at 82%).

Table 2.11
Contraceptive prevalence rate across time (percentage)

	2000	2006	2010	2014
Palestine				
All methods	51	50	53	57
Modern	36	39	41	44
West Bank				
All methods	54	55	55	60
Modern		42	44	46
Gaza				
All methods	46	42	48	53
Modern		34	37	41

Source: Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey 2006*, op. cit. Palestinian Central Bureau of Statistics, *Palestinian Family Survey 2010, op.cit*. Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit*.

Contraceptive rates have significantly increased between 2006 and 2014 from 46% to 60% in the West Bank, from 42% to 53% in Gaza, and from 44% to 57% for the whole State of Palestine. This is an increase of 13% in a short period of eight years. However, it should be noted that there are some fluctuations in the prevalence of contraception. In 2000, the rate was higher than in 2006 at 51% (54% in the West Bank and 46% in Gaza); these suggest that the rate could be aleatory.

The differentials of contraceptive prevalence rates are expected. It is higher in the West Bank (60%) than in Gaza (53%). As should be obvious, the rate increases with age from 38% at 20-24 years to 72% at 40-44 years and with the number of live births, from 25% for the married women with one live birth to 74% for those with four children or more. Wealth also positively affects this rate, from 49% for the poorest to 66% for the richest.

But some counterintuitive correlations are also observed. Contraceptive use is higher in rural than in urban areas and astonishingly, the rate decreases with level of education from 61% among those women with less than secondary education to 57% among those with secondary education to 53% for those with higher education. Hence, more highly educated females' lower fertility is determined by their marriage patterns: prolonged celibacy and higher age at marriage.

Table II.12
Methods used in 2014 (%)

No method	42.8
MODERN	
Female sterilization	1.8
Male sterilization	0.0
Intrauterine device (IUD)	26.2
Injectable	0.9
Implants	0.0
Pill	8.0
Male condom	5.5
Female condom	0.0
Diaphragm	0.1
TRADITIONAL	
Amenorrhea	1.6
Periodic abstinence	3.7
Withdrawal	9.3
Other	0.1

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit.*

Methods used are mainly female methods (Intrauterine device, pill, female sterilization). But male methods are not inexistent (withdrawal, male condom and to a certain extent, periodic abstinence which requires an agreement between spouses).

Table II.13
Contraceptive prevalence rate among married women (percentage), by background variables, 2014 MICS,

	All methods	Modern	Percentage modern
Palestine	57.2	44.1	77.1
Region			
West Bank	59.8	46.3	77.4
Gaza	53.4	40.8	76.4
Area			
Urban	56.9	43.4	76.3
Rural	59.9	45.2	75.5
Camps	57.6	48.1	83.5
Age			
15-19	15.6	10.1	64.7
20-24	38.0	26.6	70.0
25-29	52.3	37.6	71.9
30-34	60.9	49.5	81.3
35-39	73.3	59.0	80.5
40-44	72.4	58.5	80.8
45-49	59.4	44.3	74.6
Live births			
0	0.8	0.5	62.5
1	25.5	12.9	50.6
2	49.6	34.3	69.2
3	61.9	47.1	76.1
4+	74.0	59.7	80.7
Women's education			
Basic	61.1	48.7	79.7
Secondary	56.7	43.7	77.1
Higher	53.4	39.4	73.8

Table II.13 *(continued)*

Wealth index quintile			
Poorest	49.0	37.6	76.7
Secondary	56.2	43.4	77.2
Middle	55.9	43.0	76.9
Fourth	58.5	44.3	75.7
Richest	66.3	52.2	78.7

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit*.

G. Socioeconomic determinants of fertility

The MICS survey of 2014 has confirmed some typical determinants of fertility creating the divide between the West Bank and the Gaza Strip, the latter of which is less advanced in its demographic transition than the former, with a total fertility rate of 4.5 (among the highest in the Arab region and in the world), versus 3.7 (i.e. 22% more). However, the usual determinants of fertility such as urbanization, education (especially female education), employment and underemployment do not adequately explain this much higher fertility. Some demographers have forged the concept of "remote" and "remote-remote" determinants of fertility, such as conflicts, ideals, nationalism, religiosity. etc. to explain what might not be explained through socioeconomic indicators. This reasoning makes sense in the Palestinian context, however the absence of hard data prevent moving beyond mere speculation. An interesting line of research would be to measure through qualitative surveys and face-to-face interviews the extent to which political instability affects the trends of marriage and fertility. Does it lead *ceteris paribus* to a marriage and fertility decrease as one might expect, or to an aspiration for their increase even if those wishes do not materialize under material constraints?

1. Place of residence

This is not the only difficulty in attempting to explain Palestinian level of fertility. Some classical determinants such as the place of residence do not operate as expected. The overwhelming majority of the Palestinian population, eight out of 10 persons, live in urban areas. TFR is the highest in urban (4.1) not rural areas (3.7), the camps taking an intermediate position (4.0). But this might be an artefact: urbanization is higher in the more pro-natalistic Gaza Strip than in the more Malthusian West Bank. There is also the fact that villages have been significantly urbanized, many becoming the suburbs of urban settlements, while contrariwise a movement of emigration from rural to urban areas has pushed rural and agricultural households to the cities where they maintain for some time their high reproductive norms.

2. Wealth

The wellbeing of the household, as represented by wealth index quintiles is an important determinant of fertility. Inequity of income distribution is therefore highly linked to inequities in reproductive behaviour. Richer households are also those who could have access to the highest level education, a characteristic much correlated to fertility. However the relationship occurs the other way round as well: household size relies on levels of fertility. Higher fertility means a larger number of children in the household, and thus a lower income per capita. Whatever the direction of the causation, total fertility rate and adolescent birth rate are highly correlated with the level of wealth.

Table II.14
Total fertility rate and adolescent fertility rate (per 1,000), by wealth index quintiles, 2014 MICS

Quintiles	TFR	Adolescent fertility rate
Poorest	5,0	86
Second	4,1	51
Middle	4,0	40
Fourth	3,9	44
Richest	3,3	19

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit.*

3. Level of education

The most important path to fertility transition is education, especially female education since they are the most involved in the reproduction process. The last MICS survey does not directly provide this determinant of fertility, contrary to previous surveys. But another indicator, the share of births at early ages, is highly correlated to the total fertility rate and illustrates the high impact of education on fertility.

Table II.15
Percentage of women aged 20-24 who gave birth before 18, by level of education of household head

Level of education	%
Less than secondary	42.3
Secondary	30.0
Higher	13.0

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit.*

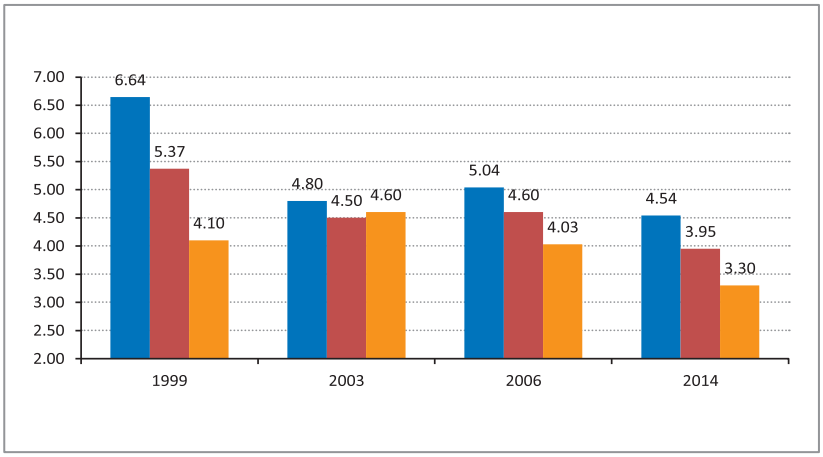
This has not always been the case. Female education played a lesser role in the past as a major determinant of fertility in Palestine than in most Arab countries, where women with higher levels of education had lower fertility than those who went only to secondary schools, with fewer numbers of children than the least educated. In 1999, this was also the case for Palestine, with the expected sequence: 6.64 children for the less educated, 5.37 for those with secondary education and 4.10 for those who went to university. However, things have changed considerably in 2003 (an *Intifada* effect?) with only negligible differences by level of education: 4.80 to 4.50 increasing to 4.60. In 2006, the expected pattern resumed with a 5.04 total fertility rate for the lesser educated, 4.60 for those with secondary education and 4.03 for those with university grades. Finally in 2014, according to provisional results that should be confirmed later on, the pattern is 4.54, 3.95 and 3.30.

Table 2.16
Total fertility rate by level of education, 1999-2014

	1999	2003	2006	2014
Less than secondary	6.64	4.80	5.04	4.54
Secondary	5.37	4.50	4.60	3.95
Higher	4.10	4.60	4.03	3.30
Decrease per year (percentage)	**1999 -2003**	**2003 -2006**		**2006 -2014**
Less than secondary	-8.1	1.6		-1.3
Secondary	-4.4	0.7		-1.9
Higher	2.9	-4.4		-2.5

Source: Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey 2006, op.cit*. Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit*.

Figure II.7
Total fertility rate by level of education, 1999, 2003, 2006 and 2014



Since level of education of women is the main determinant of fertility transition, the impact of the structural transformation of fertile women with the cohorts of the most educated replacing the less educated across time will be a major aspect of the rationale of the population forecasts for the future.

4. Women's employment

Little data exists on the fertility of women according to their employment status, neither in the MICS 2014 nor in previous surveys since the 1990s. However women's economic activity especially outside home and in the non-agricultural sector is itself a major determinant of fertility, since the opportunity cost of having an additional child is higher for working women than for housewives. Hence, it is often found that in Arab countries where data are available that working women, whatever their level of education, have lower fertility than those who are out of the labour force.

In Palestine, women's participation in economic activities has rapidly increased from 10.3% in 2001 to 19.3% in 2014, almost doubling. The gender ratio of working women to men (F/M) has therefore increased from 0.15 female per male to 0.27. But these figures might be misleading, since the unemployment rate among females is extremely high and much higher among females than males. Considering females in the most fertile age group, it is clear that if 31.7% of those aged 25-34 and 26.0% of those aged 35-44 are theoretically members of the labour force, the "true" ratios of effectively employed women excluding the unemployed should be respectively 15% and 21%. Hence, their role in fertility differences is marginal, even if this role is indisputable.

In view of the peculiar political and economic context, jobs are rare and due to the predominantly patriarchal nature of the family in Palestine or elsewhere in the Arab countries, jobs are allotted preferentially to males. Contrariwise, schools and universities are fully open to girls thus making these institutions a more powerful agent of demographic transition than the access to the labour market.

Table II.17
Labour force and unemployment by age and sex, 2014 (percentage)

Percentage in the labour force			
Age	Males	Females	Gender ratio F/M
15-24	51.9	10.4	0.20
25-34	91.1	31.7	0.35
35-44	93.5	26.0	0.28
45-54	87.1	23.5	0.27
55-64	54.9	12.1	0.22
65+	19.6	4.1	0.21
Total	**71.5**	**19.4**	**0.27**

Table II.17 *(continued)*

Percentage unemployed						
	Males			Females		
Age	Total	full	partial	Total	full	partial
15-24	47.6	39.3	8.3	68.1	62.8	5.3
25-34	32.3	23.0	9.3	57.3	53.0	4.3
35-44	20.0	13.9	6.1	20.8	18.2	2.6
45-54	20.8	16.4	4.4	10.9	9.2	1.7
55-64	18.3	14.7	3.6	3.9	3.0	0.9
65+	4.0	3.2	0.8	0.0	0.0	0.0
Total	**31.2**	**23.9**	**7.3**	**41.9**	**38.4**	**3.5**
Gender ratio F / M						
Age	Total	full	partial			
15-24	1.43	1.60	0.64			
25-34	1.77	2.30	0.46			
35-44	1.04	1.31	0.43			
45-54	0.52	0.56	0.39			
55-64	0.21	0.20	0.25			
65+	0.00	0.00	0.00			
Total	**1.34**	**1.61**	**0.48**			

Source: Palestinian Central Bureau of Statistics, *The Labour Force Survey, 2014*, Ramallah, Palestine, 2014.

The time spent on various activities for persons aged 10 years and over by sex confirms this extremely high gender inequality. Whereas a Palestinian male has spent four hours a day on working activities in 2012/2013, his female counterpart spent barely a half hour on work (33 minutes more precisely).

H. Household structures

The present Palestinian household as reflected by the last MICS 2014 survey is usually male-led: only 9% of households are headed by females, a proportion that has barely increased across time, and is lower in the Gaza Strip than in the West Bank. The level of education of household heads remains quite low, with almost half of household heads having only basic education or less (48%), 26% with secondary education, and 27% with higher education. This is in sharp contrast to the level of education of females in reproductive ages.

However, in spite of this, the mean household size is not very high: 5.5 members per household. Very roughly this suggests (according to the Kuznets method) a number of

children in the household of 2.4 and of 3.1 adult (over 15 years of age). Hence, contrary to what one might expect about the Palestinian household (that it is multigenerational, extended vertically with grandparents living with their children and grandchildren, and horizontally, with aunts and uncles residing with the household head, this household looks much more "modern" or nuclear.

Table II.18
Proportion (percentage) of members in the household, 2014

Household (HH) Size	Proportion (percentage)
1	3.3
2	9.2
3	10.6
4	13.5
5	14.5
6	15.4
7	12.7
8	9.3
9	5.6
10	5.9
Total	**100.0**

Source: Palestinian Central Bureau of Statistics, *Palestinian Multiple Indicator Cluster Survey 2014, op. cit*.

The mean household size has been diminishing across time from over six persons in 2000 (6.1 in 2000, 5.7 in 2004 and 6.3 in 2006) under the joint impact of fertility decrease, which diminishes the number of children in the household, and of de-cohabitation. More and more aged persons and relatives of the household head tend to live on their own. As expected, the mean household size is higher in the Gaza Strip than in the West Bank because of higher fertility and lower de-cohabitation, which is linked to the extremely difficult housing and living conditions in the Gaza Strip as compared to the West Bank.

Table 2.19
Household structure in 2007 (percentage)

One person	3.6
Nuclear	80.4
Extended	14.7
Composite	0.2
Not stated	1.2
Total	**100.0**

Source: Palestinian Central Bureau of Statistics, *Population census 2007*, op. cit.

However, it should be noted that, like in most Arab cities, many parents and relatives of the household head, while no longer living inside the household, tend to be very close (i.e. in the same apartment, the same street or the same quarter of the city or of the village), which in a way limits the nuclearization or autonomy of the household.

I. Population mobility: Internal migration, regional distribution, international migration

1. External migration in the Palestinian territories

(a) Continuity of external migration

Migration is a major demographic feature that plays an essential role in determining changes in population size and its sex and age structure. It has social, economic, health, political and cultural implications in both place of origin and destination. The overall political conditions and their dire economic consequences resulting from the Israeli occupation of the West Bank and Gaza Strip have served as expelling factors for Palestinians, especially the young groups searching for individual solutions for their multiple social and economic problems. Under political instability, diminished job opportunities, elevated unemployment, and political deadlock, external migration has become a possible individual solution for those seeking to enhance their economic situation and a coping mechanism for Palestinian families in the face of difficult conditions imposed by the occupation.

The 2010 PCBS survey on migration in the Palestinian territories is the main source of information on external, return and internal migration. The survey sample consisted of 15,050 households, including 9,900 in the West Bank and 5,150 in Gaza Strip.

The survey findings revealed that 6.7% of Palestinian households in the West Bank and Gaza Strip have at least one emigrant member. Most of these emigrants live in Arab countries (52%), particularly Jordan (23.5%), Gulf countries (20.4%) and other Arab states (8.12%). A large proportion of emigrants settled in the United States of America (21.6%) and other foreign countries (26%). In 0.4% of cases, the place of residence for emigrants was not identified.[47] This means that migration in a large proportion of cases is temporary – because those migrating to Gulf countries where measures prevent emigrants from staying for lengthy periods of time. In addition, these emigrants usually have high educational attainment and accumulate experience through their work in the Gulf. Hence they should be prioritized by efforts to regulate migration and maintain contacts with emigrants. This conclusion is further corroborated by the fact that the majority of Palestinian external emigrants since 2000 (57.5%) have not been granted nationality in their countries of destination.

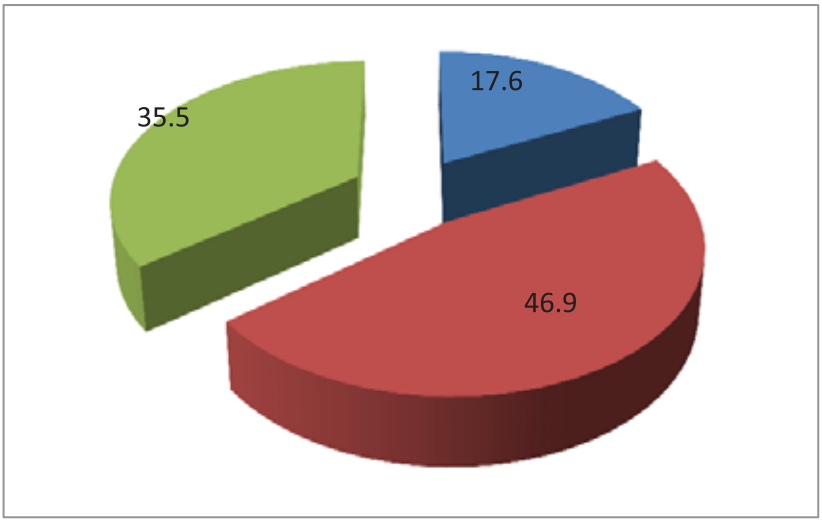
47 Palestinian Central Bureau of Statistics, 2010, p. 60.

"The overall picture one can draws from these figures is that the issue of migration is basically a temporary one and does not seem widely prevalent in Palestinian society."

Education and training was given as the main reason for migration (34.4%), followed by economic reasons (28.3%), and accompaniment (21.9%), whereas the rest of emigrants had other reasons.[48] By excluding those accompanying their relatives (who did not make the decision by themselves to emigrate), notably half the emigrants left the country to pursue their education and the other half to improve their economic situation. The survey findings indicate that 42% of emigrants (excluding accompaniment) are currently enrolled in education. The overall picture one can draws from these figures is that the issue of migration is basically a temporary one and does not seem widely prevalent in Palestinian society as previously suggested and as indicated by some studies.

Data on emigrants' educational attainment at the time of their migration correspond to those on reasons for migration. The largest segment of emigrants has secondary education (Figure II.1) and are likely seeking to pursue higher education. Another large segment (probably migrating to find employment) is that of persons with university degrees ("brain drain"). However, there is also a significant proportion of emigrants lacking academic qualifications (unskilled labour migration). These two segments require different policy interventions to address their needs, whether to regulate their migration or maintain contact with them and provide adequate facilitations to make the optimal use of the potential returns of their migration.

Figure II.8
Palestinian emigrants by educational level at the time of migration



The majority of emigrants rely on relatives and friends in the countries of destination to facilitate their accommodation and find a job. Findings indicate that 61% of emigrants have relatives or friends in their country of destination. Two-thirds of them have received assistance from those relatives or friends. The majority of such assistance revolves around

48 Palestinian Central Bureau of Statistics, 2011, p. 62.

daily living (food and accommodation) or obtaining residency status and finding jobs.

Generally speaking, these emigrants continue to rely on kinship networks to facilitate their integration in the country of destination. At the same time, there is little or no role played by relevant formal agencies (public or private), whether in the West Bank and Gaza Strip or in the country of destination.

(b) Emigrants' economic characteristics

Survey findings indicate that 42% of emigrants already had jobs waiting for them in the country of destination before they left. These comprise the majority of those migrating for reasons of employment. In view of the fact that a large proportion of emigrants have emigrated for reasons of pursuing education, it is not surprising to note that a majority (82%) were able to find a job during their first year in the country of destination.

The majority of emigrants (51%) work in occupations that require skills and academic degrees, indicating that they have opportunities to build experience that can be later employed to the benefit of their country.

(c) Money transfer

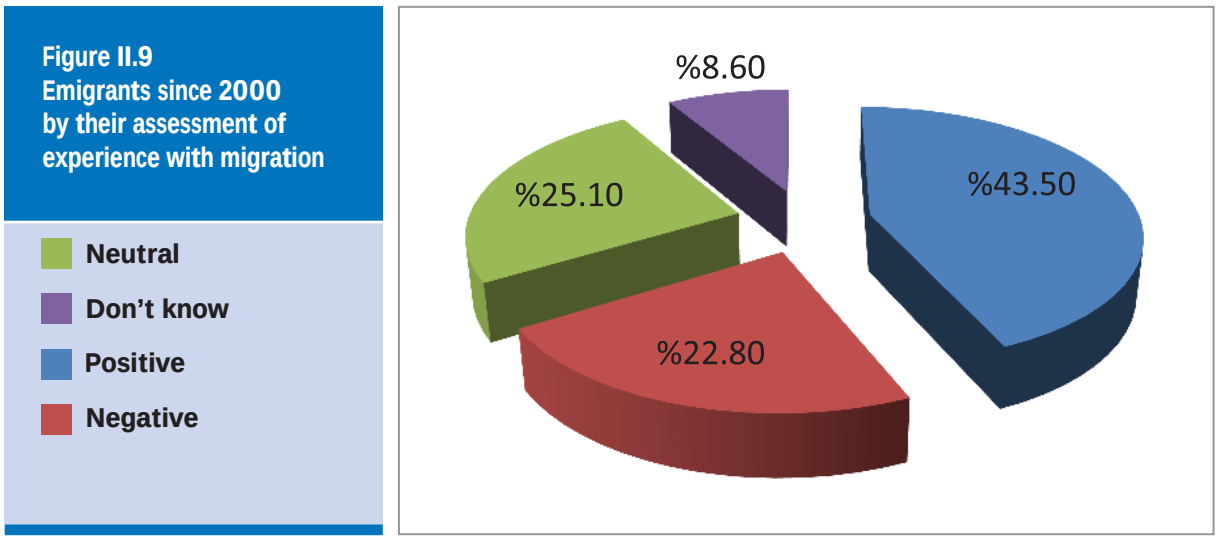
Around 15% of emigrants stated that they have sent money to their families that was used to provide for daily needs, purchase household goods, spend on education and treatment and, in a very small proportion, spend on investments (Table II.20). This corresponds to the reported reasons for migration (improving the economic situation). However, the fact that money transfers are seldom directed at local investments raises important questions as to what extent emigrants are aware of investment opportunities in the local market and to what extent they trust this market.

Table II.20
Expenditures of money sent by emigrants to their families in Palestine

Expenditures	Percentage of those sending money
Daily needs: buying food items and/or clothes for the family	83.5%
Purchase of other household goods (car, refrigerator, washing machine)	30.3%
Pay for schooling/vocational training of household members	55.3%
Treatment	46.9%
Paying debts	26.6%
Buying an apartment/constructing a house	5.8%
Buying, renting or reclaiming land	4.7%
Investment project	0.8%
Savings	9.6%
Assistance to family or relatives	19.8%
Other	2.3%

Assessing their experience with migration, the largest proportion (43%) of emigrants (according to their families) perceive it as positive, although a large proportion also perceive it as neither positive nor negative or do not know the emigrant's position (Figure II.21). This assessment probably reflects the position of emigrant's family or how his/her migration has affected them rather than the emigrant's assessment of his/her own experience. This appears to be in line with the families' attitudes regarding whether or not the emigrant should stay in the country of destination, with 51% of interviewees reporting that they encourage the migrating members to stay in their current countries of residence. Within the same context, the majority of emigrants (around 60%) prefer to stay in their current countries of residence and a quarter think of leaving their current countries of residence (not necessarily to go back home). They provide the following reasons for staying there: having a good job as the main reason (30.3%), the difficulty of finding a good job in another place (5.5%), the spouse's desire to stay there (30.8%), and other reasons (especially children's education, availability of health services, and recreation, etc.) in smaller percentages, with 23% selecting the category "other." These figures provide important indications that the main attracting factor is the availability of a good job (one matching the emigrant's skills and rewarding in terms of pay and other accompanying privileges).

Figure II.9
Emigrants since 2000 by their assessment of experience with migration



External migration has a multitude of various social and economic implications affecting all aspects of life in Palestinian society, which has experienced migration for over a century. The following are limited to the major implications only:

- External migration has been a mechanism for shaping the Palestinian middle class in the diaspora. Migration has contributed to the creation and reshaping of the Palestinian middle class abroad in the Gulf countries, Jordan and the diaspora in general.
- External migration has contributed to the reproduction of a conservative culture. This was due to the migration of more enlightened and educated social groups and due to the fact that a large proportion of emigrants have been influenced by the conservative culture prevailing in some of the recipient countries, such

as Gulf states, Saudi Arabia, Jordan and others.[49] This generalization may apply to certain areas in the West Bank and Gaza Strip, which have witnessed migration of educated residents to Gulf countries, particularly the north West Bank and the Gaza Strip, where the bulk of migration was to Gulf countries. This does not apply to many other areas of the West Bank, such as Ramallah and Al-Bireh governorate and Bethlehem, where migration to Latin America and the United States has allowed for some liberal behaviours and being open to western culture[50], especially that emigrants from these areas were from poor and uneducated rural families.

- Despite depriving Palestinian communities of social and political capital, external migration has contributed to the development of some communities by upgrading their infrastructure and services and improving their living standards through emigrants' assistance and transfers. This assistance has also contributed to creating local jobs and diversifying economic activities, particularly in rural areas that have historically witnessed extensive migration towards Latin America and the United States, such as eastern villages of Ramallah and Al-Bireh, as well as Beit Jala and Beit Sahour near Bethlehem. This has reduced the reliance of residents of these communities on jobs in the Israeli labour market.[51]
- External migration has contributed to the development of important human capital abroad through education, career development and expertise building. It has also generated important economic capital in many instances. Nevertheless, this human and economic capital requires the establishment of clear motivating policies to mobilize and invest it to the benefit of Palestine's development agenda.

2. Return migration

(a) Return migration: A source of human and economic capital

In 1997, returnees comprised 10.5% of the total population. In 2006, they comprised 7.7%. Returnees have unique characteristics within the population of the West Bank and Gaza Strip. The findings of both censuses (1997 and 2007) and other surveys conducted by PCBS have revealed that return migration sex ratio to the West Bank and Gaza Strip favoured males. Return migration also includes a lower proportion of refugees compared to that in the general population. Additionally, it has higher educational attainment levels compared to the general population of the West Bank and Gaza Strip. In terms of age structure, returnees have a higher concentration of individuals in the youth group and a lower concentration of individuals under the age of 15, which is a unique feature compared to the overall age structure of the Palestinian society in the West Bank and Gaza Strip, which is a young society. This feature could be the reason that, among returnees, a high proportion of those in the age group above 12 years are ever married and a small proportion

49 For more details on the conservative social and cultural influences of external migration, see a study by Jamil Hilal on "External Migration and Production of Conservative Behavior and Class Formation in the West Bank and Gaza Strip," in Taraki, Liza, *Life under Occupation in the West Bank and Gaza Strip: Social Mobilization and Struggle for Survival*, Palestinian Studies Association: Beirut, 2008.

50 For more details, see a study by Majdi Al-Malki and Khamis Shalabi, *Socio-economic Transitions in Three Palestinian Villages: Conditions for Reproduction of Palestinian Rural Families under the Occupation.* Maan Development Center,1994.

51 Majdi Malki and Khamis Shalabi, *Socio-economic Transitions in Three Palestinian Villages: Conditions for Reproduction of Palestinian Rural Families under the Occupation*, Maan Development Center, 1994, p.49.

only were never married in contrast to the total population, where the higher percentage of this age group is of individuals who were never married and a small proportion are married.[52]

Returnees above the age of 10 also include a higher percentage of individuals working in occupations requiring relatively high levels of education and a low percentage of those working in occupations that do not require such education levels, in contrast with the distribution of this age group in the total population. This feature applies both to males and females. It is probably linked to higher levels of education among returnees as compared to the general population.

Political factors certainly constitute the main reasons for the return of a number of Palestinians to the West Bank and Gaza Strip prior to 2000. These factors include the creation of the Palestinian Authority and the associated return of some Palestinians who were engaged in the Palestinian revolutionary movement or PLO forces and institutions. Another factor was the Gulf War and the associated expulsion of Palestinians from some Gulf countries, especially Kuwait, and their return to the West Bank and Gaza Strip. In addition, certain social factors are associated with the return of Palestinians from abroad, particularly marriage, while economic factors have limited influence. This is to be expected in view of the poor economic situation and limited job opportunities in the West Bank and Gaza Strip.[53]

A quarter of those who returned after 2000 and who lived in Palestine before migrating abroad made money transfers to Palestine. Banks were the main method used for these transfers. It is noteworthy that 3.6% of these returnees still receive pensions from the countries to which they had emigrated.

Findings indicate that a small percentage (10%) of these returnees have used the money they have transferred to the Palestinian territories in creating investment projects. The most common use was to cover the family's daily expenses (83% of total returnees), education (41%), and treatment (39%). These findings corroborate the main reasons for external migration, which are focused on education and enhanced living standards. Apparently the return is not aimed at creating investment projects, particularly under the prevailing political conditions that are not conducive to large-scale investments.

With regard to difficulties faced by returnees, the survey indicates that finding suitable job opportunities is the main difficulty (60% of returnees), followed by high living costs and difficulties in finding recreational opportunities.

In general, the findings of the survey on returnees indicate an absence or inadequacy of formal institutions that follow up on the issues of external migration, whether in terms of providing relevant information, regulating the migration process, providing emigrants with facilities, addressing their issues and maintaining contact with them, or providing an adequate platform that can help mobilize the returnees and has the ability to address the diversity of their professional and social characteristics and wide range of their expertise.

On the other hand, cross-border kinship networks were found to play an important role in this respect, whether by providing information, funding the migration, or influencing the decision to return home. Findings also indicate that emigrants' transfers are usually directed at responding to the family's daily needs rather than at investment, which undermines their developmental role.

52 Palestinian Central Bureau of Statistics, 2009, p. 23.

53 Majdi Malki and Khamis Shalabi, *Internal Migration and Palestinian Returnees in West Bank and Gaza Strip*, Palestine Economic Policy Research Institute, 2000.

3. Desire to emigrate abroad

The 2010 migration survey found that only 13.3% of Palestinians in the age group 15-59 wish to emigrate and around 30% of these wish to emigrate permanently.

The findings indicated that 60.7% of respondents said that economic factors were their reasons for this desire to emigrate (lack of job opportunities, inadequate income or seeking better living conditions), 18.7% gave education as their reason, 6.6% said the prevailing insecurity in Palestine is the motive behind their desire to emigrate and the rest gave different other reasons in small percentages. Hence the main motives behind the desire to emigrate are the wish to have better living standards and to pursue education.

The overall figures conceal a wide variation in the desire to emigrate between the different governorates and age groups. This desire is especially common in north West Bank governorates (Nablus, Jenin, Tulkarem, Tubas, Qaqlilia and Salfit) and less so in central governorates (Jerusalem, Ramallah and Jericho) while the southern governorates fall in the middle between these two regions (Figure 8). The desire to emigrate is also higher in the south of Gaza Strip than in the middle zone and northern Gaza governorates. These data could be corresponding to the prevailing economic conditions in these governorates, whereas the desire to emigrate is highest in governorates will limited job opportunities and high levels of poverty and unemployment. This is also in line with the reported reasons for this desire, as economic factors were cited as the main reasons. These findings need to be taken into account when designing development programs by the government and nongovernmental actors.

The desire to emigrate is more prevalent among youth than other age groups, a trend observed in all governorates and especially high among those 15-29 years of age compared to other age groups in all governorates with the exception of Jericho, Gaza City and North Gaza governorates. (See Chapter 5 on Youth for more information.) Males wish to emigrate more than females, which can be attributed to sociocultural traditions that require family protection for females and may cause families to exert pressures on their female members not to emigrate. Females may also find it adequate to attain a certain level of education or economic security and hence do not find it necessary to emigrate searching for better living conditions, which is considered the man's responsibility under the prevailing traditional patriarchal culture.

Percentages of those wishing to emigrate are found to be comparable between persons with different educational levels, ranging between 12% and 15%. This desire is a little higher among Phd and BA holders (15% and 13% respectively) and lower among those with minimal education (12%). Hence the overall tendency is that the different groups have similar attitudes towards external migration and education by itself does not increase the propensity to emigrate abroad. Those educated and uneducated have the same aspiration to migration, i.e., the wish to find a suitable job and improve their living standards.

4. Marginality of internal migration in the West Bank and Gaza Strip

Internal migration under occupation is specific in many ways. Experiences around the world in general, and in the Arab region in particular, indicate that internal migration is mainly concentrated in the movement from rural to urban areas as cities become political and economic centres attracting a high proportion of labour force and production establishments,

as well as hubs of cultural and recreational activities and a wide range of service delivery. Hence cities have attracted emigrants from rural areas. On the other hand, population growth in rural areas, reduced capacity of land to support the local communities, underdeveloped production means, seasonality of agricultural labour, limited job opportunities and poor public services all have played a role in motivating rural people to leave their communities and migrate to urban areas.

However, internal migration within the Palestinian context is different. Data from 1997 and 2007 censuses reveal that this phenomenon is marginal in the occupied Palestinian territory. Although 14% of respondents in 1997 and 11% in 2007 stated that they had had a previous place of residency in the Palestinian territories, internal migration has been marginal. Internal migration trends in the West Bank and Gaza Strip are mainly characterized by reciprocity since marriage and accompaniment are the main reasons for this migration, rather than work. In fact, no clear driving or expelling forces have been created between the three types of communities (cities, villages and refugee camps).

There are also no driving forces prevailing in any specific governorate, with the exception of Ramallah and Al-Bireh governorate, which is attracting the highest percentage of emigrants from other governorates, which form up to 3.7% of its total population. This is due to the concentration of government departments, local and international nongovernmental organizations, banks and major private firms, such as the Palestinian Telecommunication Company and other private investments that provide job opportunities to job seekers from the north and south of the West Bank. In the Gaza Strip, the North Gaza governorate is the largest recipient of internal emigrants, who comprise 6.5% of its total population.

Governorates with the least attracting powers (and/or strongest expelling powers) for internal migration are the Jerusalem governorate in the West Bank, which experiences restrictive policies in all life aspects from the Israeli occupation authorities, and Rafah governorate in Gaza Strip.

Data reveal another trend in internal migration, which is migration between the same types of communities, i.e., from an urban community to another urban community, involving around 7% of the total population of the West Bank, as well as from a village to a village or from a camp to a camp. Again this confirms the absence of specific centres with clear attracting powers.

The weakness of internal migration in the Palestinian territories is attributed to several factors that make it different than other developing countries and neighbouring Arab countries, which have witnessed intensive internal migration over the past century, particularly from rural to urban areas. These factors mainly include the following:

1. In the West Bank and Gaza Strip, and due to Israeli occupation policies, no major industrial centres or a political and administrative capital with strong urban growth has been created as in neighbouring countries. Medium-sized cities have developed as commercial and service delivery centres at a slow pace, serving the residents of a pool of surrounding villages and camps. Hence these cities have not presented themselves as driving forces attracting a rural labour force, but rather have attracted rural consumers who visit the city in the daytime and go back to their villages in the evening.

2. The rural labour movement has been directed towards the Israeli labour market and nearby Israeli settlements, where higher wages are offered compared to those offered in the local labour market of the West Bank and Gaza Strip. Hence labour migration to Palestinian cities has been limited.

3. Development of transportation means and the proximity of Palestinian communities to each other, in view of the small area of the West Bank and Gaza Strip, have made internal migration unnecessary, giving preference to daily commuting.

4. Together the above factors have played a role in changing the concept of city-village separation, which was prevalent in the 1950s and 1960s. Lifestyles in the city and the village have become more alike due to the ongoing interaction and daily commute between them. Furthermore, urban consumption-based patterns have become prevalent in rural areas under the Israeli economic and cultural blockade of main urban centres, thus bringing the prevailing lifestyles in different Palestinian communities closer and limiting internal migration.

Table II.21
Percentage of persons who didn't change place of residence by governorate, 2010

Governorate	Percentage
Jenin	84.7
Tubas	65.1
Tulkarm	67.2
Nablus	63.9
Qalqiliya	46.5
Salfit	39.6
Ramallah / Al-Bireh	51.9
Jericho / Agwar	26.0
Jerusalem	71.0
Bethlehem	70.1
Hebron	75.1
North Gaza	68.0
Gaza	54.2
Deir el Balah	42.8
Khan Yunis	68.6
Rafah	56.2

Source: Palestinian Central Bureau of Statistics, *Population census 2007*, op.cit.

(a) Regional distribution

Under the impact of fertility differences and to a lesser extent of mortality and migration movements, the share of the population in the different governorates was slightly modified in the last two censuses: 1997 and 2007 and later on in 2014.

The biggest loser was the governorate of Jerusalem which lost several percentage

points and increased at relatively slow rates of 1% and 1.9% during the two consecutive periods of time. Harsh living conditions in the governorate of Jerusalem and the impacts of the separation wall are certainly much correlated to lower population increases in this governorate. Gaza Strip governorates always register higher rates of growth than those in the West Bank despite of the blockade to which they are submitted and the long series of conflicts over the two decades.

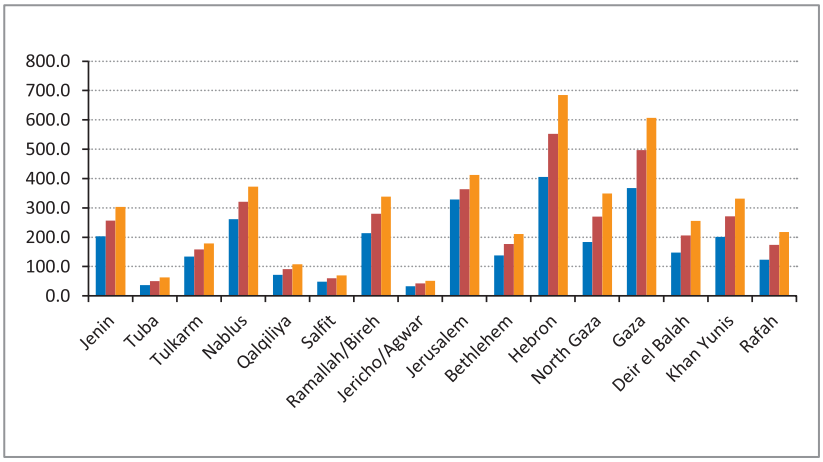
The main areas of concentration by governorates are Hebron, followed by Gaza, Jerusalem, Nablus, North Gaza. Paradoxically, Ramallah / Al-Bireh are only ranked sixth in population among the governorates, showing that it is possible to dissociate place of residence and work. Hence many civil servants live in their governorate of origin.

Table II.22
Regional distribution by governorates, 1997, 2007, 2014 (thousands and percentages)

	1997		2007		annual r (%)	2014		annual r (%)
	Population	%	Population	%	1997-2007	Population	%	2007-2014
Jenin	203.0	7.0	256.6	6.8	2.34	303.6	6.7	2.59
Tuba	36.6	1.3	50.3	1.3	3.18	62.6	1.4	3.37
Tulkarm	134.1	4.6	158.0	4.2	1.64	178.8	3.9	1.90
Nablus	261.3	9.0	320.8	8.5	2.05	372.6	8.2	2.30
Qalqiliya	72.0	2.5	91.2	2.4	2.36	108.0	2.4	2.60
Salfit	48.5	1.7	59.6	1.6	2.06	69.2	1.5	2.30
Ramallah / Bireh	213.6	7.4	279.7	7.4	2.70	338.4	7.4	2.93
Jericho / Agwar	32.7	1.1	42.3	1.1	2.57	50.8	1.1	2.82
Jerusalem	328.6	11.3	363.6	9.7	1.01	411.6	9.0	1.91
Bethlehem	137.3	4.7	176.2	4.7	2.49	210.5	4.6	2.74
Hebron	405.7	14.0	552.2	14.7	3.08	684.2	15.0	3.30
North Gaza	183.4	6.3	270.2	7.2	3.87	348.8	7.7	3.93
Gaza	367.4	12.7	496.4	13.2	3.01	606.7	13.3	3.09
Deir el Balah	147.9	5.1	205.5	5.5	3.29	255.8	5.6	3.37
Khan Yunis	200.7	6.9	271.0	7.2	3.00	331.0	7.3	3.08
Rafah	122.9	4.2	173.4	4.6	3.44	217.8	4.8	3.51
Total	2,895.7	100.0	3,767.0	100.0	2.63	4,550.4	100.0	2.91

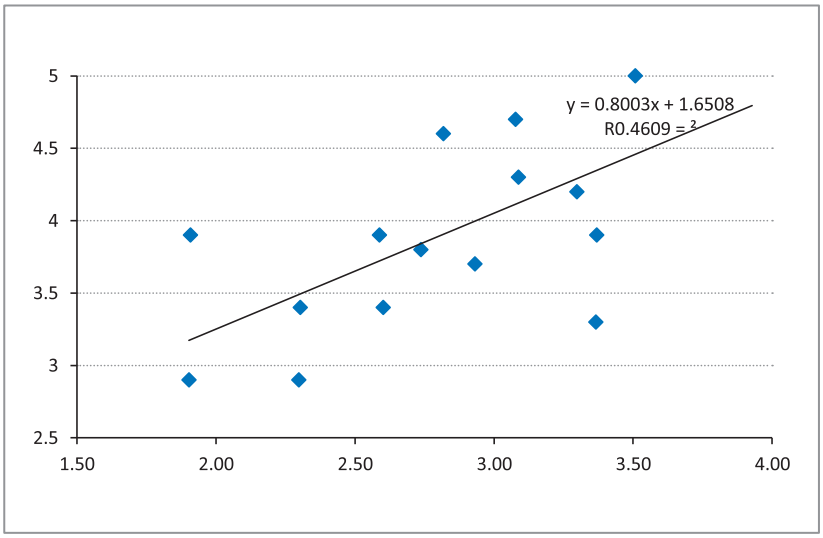
Source: Palestinian Central Bureau of Statistics, Population census 1997 and 2007 and Palestinian Central Bureau of Statistics projections to mid-2014.

Figure II.10
Population of governorates, 1997, 2007, 2014 (thousands)



The following figure shows the relationship between the rate of growth (2007-2014) and the total fertility rate in 2014. It appears very clearly that the relationship is very strong (R2=0.46) which allows us to say that it is the strongest determinant of population growth, much ahead of other factors such as mortality differentials and migration.

Figure II.11
Relationship between total fertility rate in 2014 and the annual rate of growth, 2007-2014



Chapter 3

Situation of sexual and reproductive health



1. Sexual and reproductive health and rights

(a) Maternal Mortality

Maternal Mortality Rate (MMR) is a widely used proxy MDG outcome indicator that reflects the interplay of many factors including socioeconomic, contextual, political, cultural and healthcare system related factors. The overall MMR ratio in Palestine has significantly improved from more than 55 per 100,000 live births in 1999 to around 23 in 2014, which is still within the acceptable range recommended by the WHO[54]. These estimates rank Palestine 83rd among world countries and12th among Arab countries in MMR. The rate of reduction in MMR is 3.6% per year, less than the MDG5 target of 5.5% annual reduction, but still higher than the average worldwide reduction of 2.3% for the same time period.[55] More efforts are needed to further reduce MMR according to national plans. The 51 days of hostilities on the Gaza Strip in 2014 led to an increase in the MMR due to disturbed capacity and deterioration of quality of care during the war[56]. It is reported that 20 pregnant women died during the war; four cases resulted from direct obstetric causes, and the other 16 cases were killed in the violence; thus the increase in MMR in 2014 is attributed to the Israeli military incursion.

Although there has been a great deal of improvement in the reporting and documentation of maternal deaths, monitoring and surveillance systems of maternal mortalities and morbidities can be improved. A study by the Ministry of Health (MOH) and UNFPA (2010[57]) indicated that the underlying cause of maternal death was inaccurate in 40.7% of death certificates, while pregnancy status was not clarified in 44.4% of the certificates belonging to deceased women. The leading causes of maternal deaths in Palestine include hemorrhage, hypertension, embolism, sepsis and death of associated diseases especially cardiac diseases.[58] The highest maternal mortality was observed with increased age of mothers, during the postpartum period, and when caesarean section was the mode of delivery. Hence, fertility reduction among women of 35 years and over might directly impact in reducing MMR.

Despite the great efforts in this field, safe delivery has not been achieved and gaps in maternity services are prominent and a source of discomfort to women, the public and policymakers. Socioeconomic factors such as stress, poverty, malnutrition, lack of equity, occupation measures and bad environmental conditions contribute to the slow reduction in MMR. Strategies to support safe delivery and neonatal care need to consider promoting the capacity of service providers to identify and accurately record maternal mortality and morbidity in order to plan relevant interventions. Review of maternal deaths indicates that there are deficiencies in the clinical management of key pregnancy-related complications, and lack of adequate medical record keeping and supervision, which in turn hinder the provision of standardized services according to safe protocols.

54 Miftah, Independent Commission for Human Rights, & United Nations Fund for Population Activities. *Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine*, (Palestine, 2015).

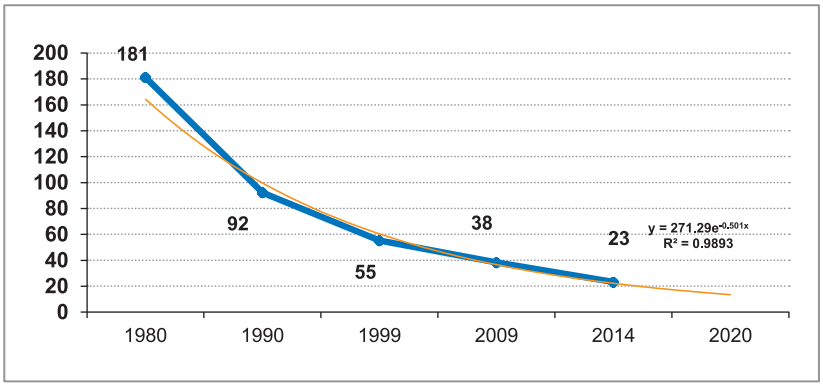
55 Ibid.

56 United Nations Fund for Population Activities, *Victims in Shadows: Gaza Post Crisis Reproductive Health Assessment*. UNFPA in partnership with WHO and The Palestinian Ministry of Health, *2014*, (2015).

57 Ministry of Health and United Nations Fund for Population Activities , *Assessment of maternal mortality in the Gaza strip 2008-2009*, (2010).

58 Ibid.

Figure III.1
Trends in the Maternal Mortality Rate, 1980-2014



Maternal mortality is known to represent the "tip of the iceberg". There is a consensus that for each case of mortality, 30 cases of morbidity develop. Women's morbidity hasn't been adequately studied in Palestine, therefore there are no precise estimates about morbidities associated with pregnancy. Published reports indicate that the most commonly reported health problems during pregnancy are infections (urinary tract infections and reproductive tract infections), anemia, and pregnancy-induced hypertension. Statistics show that around 20% of pregnancies are high-risk[59][60]. Two separate studies concluded that more efforts are needed to improve maternity health services emphasizing training of obstetricians and midwives on emergency obstetric management.

(b) Antenatal care

Despite that there is near complete antenatal coverage in the West Bank and Gaza (around 95%), the timing of visits and the quality of services is not always appropriate. The vast majority of pregnant women currently receive some antenatal care, and on average, have more antenatal care than the WHO recommends (mean 6.2 instead of four). Currently, there are no obvious trends among women receiving antenatal care[61]. A PCBS report in 2013[62] showed, on the other hand, that pregnant women in rural areas were the least likely to access antenatal care, with about 90% making four or more visits compared to 95% in urban areas and 97% in camps. Likewise, the effect of education is vivid: 96% of women with secondary education and higher made four and more antenatal visits compared to 83% of women with preparatory education and less.

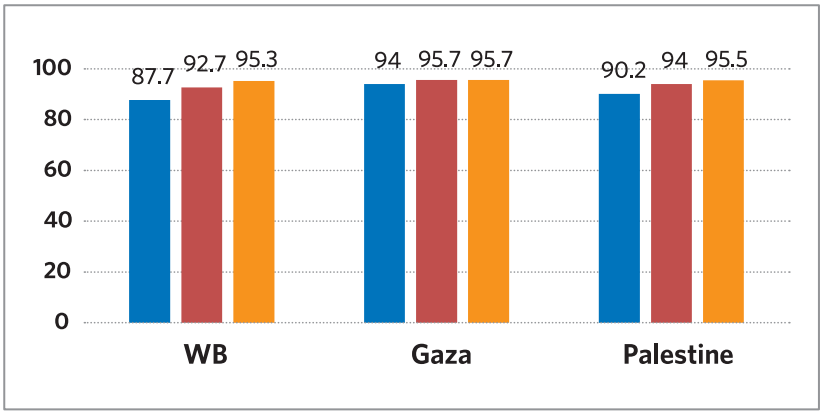
59 United Nations Relief and Works Agency, *Health Department Annual Report 2015*, (2015).

60 Detailed studies of near-miss scenarios in Gaza found the causes included severe haemorrhage (70.8%), hypertension (16%), uterine rupture (3.7%), sepsis (3.7%), and HELLP (3.7%). Similarly, the percentage of near-miss in the WB hospitals was 2.13%, mostly attributed to preeclampsia, (41.9%) antepartum haemorrhage (30.2%), and postpartum haemorrhage (18.4%). See Abu Shnaina, Y. , Risk Factors for Maternal Near miss in Gaza Strip: Case Control Study, Master's thesis Al Quds University (2014) and UNFPA, Juzoor, & Ministry of Health, *Maternal Near Miss in Four Governmental Hospitals in the West Bank*. Palestine, (2012).

61 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

62 Palestinian Central Bureau of Statistics 2013. *Final Report of the Palestinian Family Survey 2010*. Ramallah – State of Palestine

Figure III.2
Distribution of women (percentage) who made four or more antenatal visits, 2006-2014



Fortunately, antenatal care in Palestine is mainly provided by medical doctors, nurses and midwives while a minority of women receive care from a traditional birth attendant. There has been a significant improvement in the timing of seeking antenatal care after the onset of pregnancy, with 85% of mothers seeking services within the first trimester. Ten years ago, nearly half of women did not receive antenatal services within their first trimester and 7.9% had not benefited from antenatal care until the last trimester[63].

According to the PCBS (2015), the proportion of pregnant mothers from the West Bank (93%) who sought antenatal services in the first trimester is significantly higher than those from Gaza (76%). Timely utilization was more prominent among educated, wealthy and residents of rural areas. For instance, timely utilization in the first trimester reached 95.3% among the richest quintile and 76.6% among the poorest one.

As a proxy indicator to measure the content of antenatal care, the PCBS estimated that around a quarter of mothers didn't receive the following three designated tests combined during pregnancy: blood pressure, urine testing and blood testing. At that time, a smaller proportion of women in Gaza performed all the three tests in comparison to the West Bank (69.6% in Gaza and 77.6% in the West Bank)[64]. But in 2014, the proportions of pregnant women for whom these tests were conducted was higher in Gaza (98.1%) than in the West Bank (93.9%); the change was attributed to easier access in Gaza and the contribution of UNRWA which provides free services to 66% of the population. In the WB, UNRWA is less involved and Israeli measures such as checkpoints and the seperation wall impair access, especially in Area C.

During 2015, UNRWA-wide data showed that 13.4% of pregnant women were classified as high risk, while 27.7% were considered alert risk.[65] Further studies are needed to ascertain how, and by whom, high risk pregnancies are managed and to evaluate the effectiveness of management of these cases. Women themselves have insufficient knowledge/awareness of important danger signs. For example, only 16% of women identified lack of fetal movement as a danger sign for their pregnancy.[66] Women able to name at least five danger signs in pregnancy (unprompted) constituted around 15%. Increased awareness of mothers and their families about how to recognize signs of a dangerous illness and where to go for medical care is essential. To assess anemia preventive practices, mothers were asked to report measures that could be taken to prevent anemia. Eating iron-rich food was mentioned by more than

63 Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey, 2006: Final Report. (Ramallah,Palestine, 2007).*
64 Palestinian Central Bureau of Statistics 2013. Final Report of the Palestinian Family Survey 2010. Ramallah – State of Palestine.
65 United Nations Relief and Works Agency, 2015.
66 Hanan Project, *End line report Child Health and Nutrition in the West Bank and Gaza*, 2008.

half of participants, followed by drinking vitamin C-rich juice (58.3%), reducing or avoiding drinking tea (53%), delaying drinking tea with food (27.5%), and the least mentioned practice was providing iron supplementation (25%). Women able to name at least three dietary anemia prevention practices (unprompted) constituted 13.5%. Many women mentioned some of these practices and 6-10% of mothers did not know any of these practices.[67]

Access to antenatal care is usually challenged by the occupation, and restrictions on movement of people and goods, which limit pregnant women's access to services and medication. Promoting integrated reproductive health services among them maternal health services (e.g. preconception care, antenatal care, family planning services and postnatal care) is advised. The introduction of preconception care (incorporate folic acid supplementation) at UNRWA health centers is a good step towards controlling congenital anomalies, especially neural tube defects, and should be expanded to other service providers especially the MOH. As far as possible, integrated and comprehensive services should also be available to women during their visits to the same health center, thus ensuring better follow up and management. A report by UNFPA (2011[68]) indicates that referral forms are available and there is a system in place but it is not appropriately managed. Creating unified policies for referral services and formalizing the referral services through a Memorandum of Understanding is essential. Promoting feedback and exchange of information about referred cases between referring and referral organizations is also highly crucial for ensuring the continuity of care. The UNFPA COC model developed in 2011 represents a good approach for service integration, i.e. the introduction of preconception care, increasing mothers' awareness about pregnancy's danger signs, and promoting adherence to antenatal care standards are priority areas.

(c) Natal care

Delivery services are reasonably available, but usually challenged by the quality of service. Almost all deliveries are institutionalized and attended by skilled birth attendants. Physicians, nurses and midwifes perform almost all deliveries. Unlike most EOCD countries, 25% of women delivered with assistance from a midwife/nurse, while the rest were assisted by a physician.[69] Findings of the PCBS in 2007 showed that 1.4% of childbirths took place at home, on the way to hospital, or at a military roadblock (especially in the West Bank governorate of Qalqiliya). PCBS studies in 2010 and 2014 found that more than 98% of births were delivered in health facilities.

Gaza women utilize MOH hospitals (77%) more than their counterparts in the West Bank (47%), whereas women in the West Bank were more likely to use private sector facilities (32.5% in the West Bank versus 16.9% in the Gaza Strip) and non-governmental organizations (NGOs) (12.5% in West Bank versus 5.2% in the Gaza Strip). The utilization of public delivery services is inversely related to economic status, education level and urbanization.[70] With regard to the mode of delivery, in 2006, 15% of births were delivered through caesarean section, increasing to 17% in 2010 and 20% in 2014. This is higher than the WHO standard of 15%. The rate of caesarean section deliveries is higher in the West Bank (23%) than the Gaza Strip (17%). The trend towards caesarean section is unjustifiably high due to a lack of policies and protocols and over-medicalization of obstetric services, thereby unnecessarily predisposing women to increased morbidity and mortality. Also, widely available IVF services have increased the demand for caesarean deliveries.

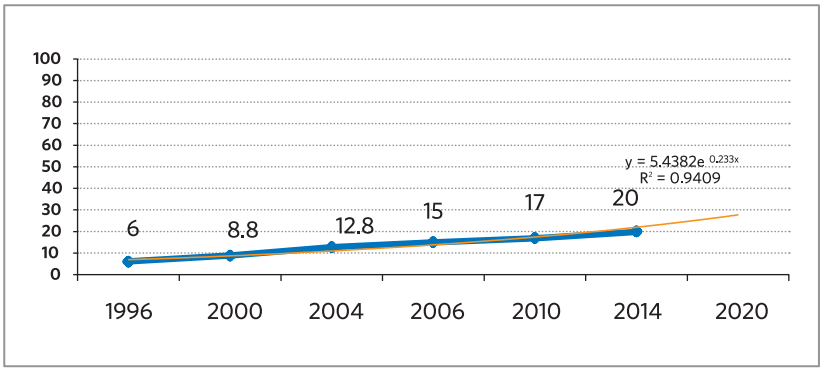
67 Ibid.

68 United Nations Population Fund, *Emergency Assistance to the Palestinian health care system in Gaza: Focus on Ensuring Access to Emergency Obstetric Care*, 2011.

69 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine*.

70 Ibid.

Figure III.3
Proportions of cesarean section deliveries, 2006-2014



Poor quality of care during delivery with routine unnecessary interventions, overcrowded delivery sites, stressed obstetricians who practice in more than one institution, and working women who are anxious to get back home are among the reported shortcomings.[71] Lack of standardized appropriate practices, low compliance with obstetric care and neonatal care protocols, shortage of skilled health providers, weak infrastructure, poor physical condition of health facilities, and shortages of needed equipment, disposables and drugs are commonly reported gaps. In Gaza, there are specific challenges attributed to the political situation unpaid staff members, inadequate power supply, and shortage of essential drugs in appropriate cleansing services. Shalaby (2012[72]) assessed the quality of natal services at Gaza Strip hospitals and found that non-evidence-based practices are commonly used to support and manage birth in Gaza. High prevalence of obstetric interventions were observed such as use of IVs for 60% of observed women, labor augmented with oxytocin in 62.5% of cases, and the artificial rupture of membranes in 77.5% of cases. During the birth experience, women were not always treated with respect and their privacy frequently violated.

Impacting perinatal health requires promotion of safe delivery and appropriate care of the woman and her newborn at the time and place of birth. Improvements are needed in the quality of antenatal and labor and delivery care. Lifesaving measures, clinical management standards, and protocols for antenatal, labor and delivery and infant medical care need to be reinforced, and arrangements should be made to provide training courses in these materials for healthcare providers, followed by appropriate follow up. Also, standards must be operationalized and refresher training courses offered periodically to assure good implementation of the protocols.

(d) Post-natal care

The level of post-natal care received by Palestinian women remains unacceptable in terms of coverage, quality of services, and the frequency of visits despite the progress made over the last 10 years. Post-natal visits are infrequent in number and mainly linked to the BCG vaccine given to the newly-born (usually only one visit occurs if at all). The MOH, UNRWA and some NGOs implement various post-natal care programs but universal coverage has not been achieved and most focus is on high-risk cases.

The average stay of women in the hospital after a normal birth is usually very limited

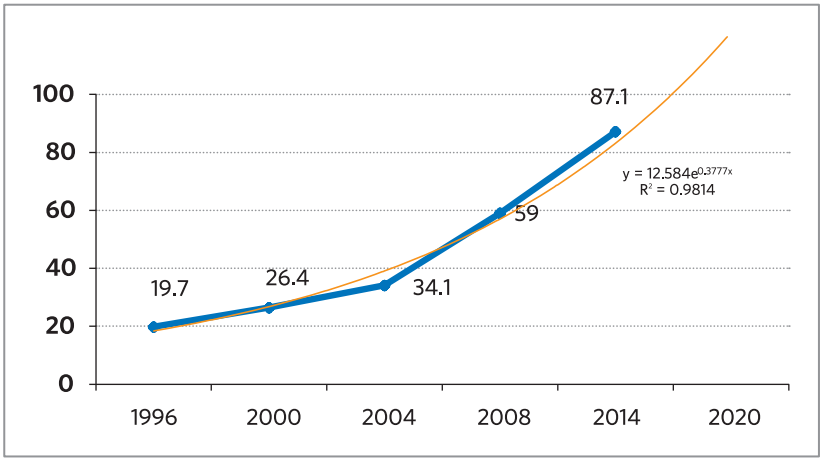
71 United Nations Population Fund, *Emergency Assistance to the Palestinian health care system in Gaza: Focus on Ensuring Access to Emergency Obstetric Care*, 2011.

72 Shalabi, S. *Evaluation Of Natal - Care Services Provided By Governmental Hospitals In Gaza Governorates*, Master thesis- Al Quds University, (2012).

(around two hours).[73] There is a missed opportunity here to provide immediate post-natal care and family planning at hospitals before the woman is discharged.

Women who stayed less than six hours represented 31.2% of the total (57.8% in the Gaza Strip and 9.2% in the West Bank).[74] Overall, 59% of women who gave birth in a health facility stay 12 hours or more in the facility after delivery (81% in the West Bank to 31% in Gaza Strip). However, 55% of women from the poorest of households stay in the hospital less than six hours after delivery. Otherwise, education, age of mother, and place of residence did not correlate with a significant difference. This indicates importance of the cultural factor.

Figure III.4
Women who received postnatal care session



Safe motherhood programs have recently increased emphasis on the importance of post-natal care, recommending that all women and newborns receive a health check within two days of delivery. The PCBS report (2015) shows that for 87.1% of live births, both the mothers and their newborns receive either a health check following birth or a timely post-natal care session. Three percent of births neither receive health checks nor a timely session. Post-natal care visits predominantly occur 3-6 days after the delivery in 20% of cases and one week after birth in 50% of cases. In less than 4% of cases these occur either on the first or second day after delivery.[75]

"Post-natal care represents a missed opportunity for early discovery of maternal and neonatal complications such as hemorrhage, infections, newborn anomalies, promoting women's health and including appropriate breastfeeding and family planning."

Strategies should aim to increase the coverage of post-natal care visits to include every woman. The current practice of checking women during the first immunization session is not adequate. Instead, timely assessment and lab investigations (Hg, sugar) should be performed for the mother and her baby. Also, the mother and her baby should be assessed

73 United Nations Population Fund, *Emergency Assistance to the Palestinian health care system in Gaza: Focus on Ensuring Access to Emergency Obstetric Care*, 2011.

74 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

75 Ibid.

for danger signs. Appropriate post-natal care could contribute to early discovery and early interventions for complications, disability, and psychosocial issues. Post-natal care represents a missed opportunity for early discovery of maternal and neonatal complications such as hemorrhage, infections, newborn anomalies, promoting women's health and including appropriate breastfeeding and family planning.

(e) Sexual health

Due to stigma, most cases of sexually-related diseases remain underreported and untreated. The government made great efforts towards addressing HIV/AIDS, however many gaps remain, among them reducing stigma, increasing accessibility to voluntary testing, and raising community and health providers' awareness. Comprehensive and age-appropriate education on sexual and reproductive health and rights is not provided in schools, although there were manuals developed for training teachers on sexual and reproductive health and rights.

In Palestine the prevalence of HIV/AIDS is low. HIV case reporting began in 1988, and since then, there have been 84 cumulative identified cases. In 2010, 20 people, mostly men, evenly divided between West Bank and Gaza, were reported as being HIV positive, 11 of whom had AIDS. Around 80% of HIV cases were in the 20-49 year age group. The most common cause of HIV infection was heterosexual contact with an infected person, followed by exposure to contaminated blood or blood products. However, diagnosis of HIV remains an issue, as patients may not seek healthcare and many local physicians are unfamiliar with the disease and the pattern of symptoms. Almost two-thirds of cases with AIDS died due to lack of treatment – since the introduction of treatment, case fatality has significantly decreased. In 2013, a female child from Gaza presented with recurrent diarrhea was diagnosed at an Israeli hospital after referral. That child was frequently admitted to Gaza hospitals and never tested for HIV.

Despite being a low-HIV prevalence country, low levels of awareness and limited access to protective measures increase vulnerability and risk in Palestine. Other vulnerability factors include low socio-economic status of women, rising levels of poverty, effects of the occupation, population mobility, internal and external labor migration, and changes in lifestyles and sexual behavior. There is a range of shortcomings from the point of view of international human rights laws.

Miftah's report on sexual and reproductive health and rights (2015) found that more than 90% percent of survey respondents, regardless of age, gender or location, knew that HIV is transmitted through sexual encounters, blood, and contaminated injections. The level of awareness about HIV has increased in the past 10 years; a 2006 study found that the rate of AIDS awareness in Palestine was 87.5 (89.7% West Bank and 84.2% Gaza Strip, 89.8% for males and 84.8% for females).[76] Uneducated persons scored lower than the educated ones.[77]

Only 7.9% of respondents met UN criteria for comprehensive knowledge and correctly identified that using condoms prevents sexual transmission of HIV, rejected the two misconceptions that HIV is transmitted by mosquitoes and by swimming in a public pool and who also knew that a healthy-looking person can have HIV (2010) which didn't change significantly in 2014. In all the UN indicators respondents from the West Bank knew

76 Palestinian Central Bureau of Statistics 2013. Final Report of the Palestinian Family Survey 2010. Ramallah – State of Palestine.

77 Ibid.

about AIDs and HIV more than the Gazans respondents, comprehensive knowledge was found in the Gaza Strip (6%), compared to the West Bank (9%). The results show that comprehensive knowledge is 7% in rural areas and camps, 8% in urban, higher among women in wealthier households (12%) than among women from poor families (5%).

The protective role of condoms in HIV prevention was not known by an overwhelming majority (64.4% for all surveyed), with youth ages 15-19 far less aware (58%) than their elders aged 20-24 (68.1%) and 25-29 (70%).[78] Only 34.8% of all women surveyed knew that they can protect themselves from contracting HIV both by using condoms and having sex solely with one faithful uninfected partner. Despite a broad knowledge of modes of transmissions of HIV/AIDS, a serious concern for prevention efforts were the negative attitudes and the high levels of stigma and discrimination toward people living with HIV, or people who engage in behaviors that put them at risk for HIV, measured in the general population survey.

As a result of the stigma associated with the HIV/AIDs, not more 4.4% in 2010 said they were accepting of those with HIV/AIDS, a number that did not change significantly by 2014 (5%) with no clear differences between the WB and Gaza.[79] Miftah's report (2015) found that 85.7% of respondents would not go to a restaurant if they knew that the owner was living with HIV, 78.3% would not be willing to share a meal with a person living with HIV, 74.2% think that individuals living with HIV should be quarantined, 71.2% think that a female/male teacher living with HIV should not be allowed to continue teaching, 70.8% would not be willing to host an individual living with HIV at home, and 69.6% mind if a member of the family becomes friends with an individual living with HIV.

In the past few years, education on sexual and reproductive health has been incorporated into the school curriculum. Also, the Ministry of Education organized several training courses for teachers on sexual and reproductive health curriculum and guidance materials. Nevertheless, it is unclear to what extent the curriculum on sexual and reproductive health is followed and applied. There is no data collected in relation to internationally-recognized indicators such as the percentage of students who have received comprehensive education on sexual and reproductive health and rights in schools. Sexual and reproductive health education in Palestine is a controversial subject circumscribed by political, economic, cultural, and religious factors. Societal taboos are major obstacles to informed discussions about sexual and reproductive health issues, particularly in relation to young people. Very little is known about health risk behaviors among youth (or others), reflecting social structures in addressing sensitive issues of sexual behavior. Furthermore, the absence of sexual and reproductive health in school curricula represents a constraint on efforts to raise children's awareness of their rights to protect their bodies and break the silence around sexual harassment and rape.

While sexuality in Arab countries is a social taboo, especially among the young, data from different Arab countries confirm engagement of this group in sexual activity of some form. Lack of credible data on youth sexuality in Palestine is symptomatic of the social pressure to remain silent on the subject of sex, along with low numbers of youth seeking sexual and reproductive healthcare due to the stigma attached. Premarital sex often occurs in the context of secrecy, lack of knowledge about sex and reproduction, and limited communication with parents.

78 Miftah, Independent Commission for Human Rights, & United Nations Fund for Population Activities. *Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine*, (Palestine, 2015).

79 Palestinian Central Bureau of Statistics 2013. Final Report of the Palestinian Family Survey 2010. Ramallah – State of Palestine.

Many adolescents report feeling unprepared for this key stage in their physical and emotional growth and development, with 28% stating that this phase caused them problems.[80] For instance, 22% of girls reported that they had no idea about menstruation; 40% were afraid when they first experienced a period, and 19% felt embarrassed; and 43% taught themselves how to clean their bodies during a period. When youth were asked who they would approach for more information about how their bodies were changing 7% said no one, 82% said their fathers, 43% said their mothers, 9% preferred an older sister, 7% the uncle/aunt/grandparent, 38% other relatives, 29% friends, 42% their teacher, and 3% said they would read a book.[81]

Gaps in sexual health require urgent bridging through community mobilization efforts to overcome the social stigma. Influential people such as religious people, teachers and the media could be recruited to contribute to the dialogue about these issues. It is important to increase awareness of service providers about STDs and the available community resources in this regard. Policymakers need to establish a set of indicators to monitor issues related to sexually transmitted diseases.

(f) Abortions

There is no available data on unsafe abortions. The only estimate for the period 1995-2000 gave 9,815 cases of both safe and unsafe abortions with 141 fatalities due to unsafe abortion.[82] Among those who aborted, 66.3% had more than one abortion, 11.3% had an induced abortion and 60.5% had a spontaneous abortion.[83] Around 50% of women received treatment for incomplete abortion, which ranked first in service utilization of post-abortion care. In addition, the most common complication was severe vaginal bleeding, which was experienced by a majority (52.2%). Furthermore, 67.6% of the conducted abortions were clandestine, carried out covertly with the prior knowledge of only the woman herself. However, measuring the level of unsafe abortion in Palestine where pertinent laws are highly restrictive remains difficult. Procedures are often carried out outside the formal health system and are not reflected in health records.[84]

While, abortion is illegal in Palestine, Article 8 in the Public Health Law provides some provision for safe abortion services. Article 8 states that: "it is forbidden to abort any pregnant woman by any means, unless there was an urgent reason to save her life and under the condition of having two specialized physicians as witnesses, one of them a gynecologist, and the following is available: a) written approval from the pregnant woman. In the case where she is unable to give it, the written approval should be obtained from her husband or her legal guardian. The process of abortion should be performed in a medical institution." The development of the National Reproductive Health Strategy and Action plan in 2014 reflects the Palestinian's government commitment toward the achievement of the ICPD and MDG goals, as well as other international development goals and targets. The plan includes under the strategy of "Making pregnancy and childbirth safe" eight different strategic objectives. one of which is improving the access to, availability and quality of post-abortion services. In order to achieve this goal, the plan includes a set of actions to

80 Palestinian Central Bureau of Statistics 2013. Final Report of the Palestinian Family Survey 2010. Ramallah – State of Palestine.

81 Ibid.

82 Global Health Council, 2002. Available at http://www.globalhealth.org./assests/publications/ (Accessed Aug 16th 2015).

83 Al Rafiai, A, *Assessment of Safe and Unsafe Abortion among Palestinian Women in Hebron Governorate in Southern West Bank- Palestine*, International Planned Parenthood Federation,, (Jerusalem, 2015).

84 Miftah, Independent Commission for Human Rights, & United Nations Fund for Population Activities. *Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine*, (Palestine, 2015).

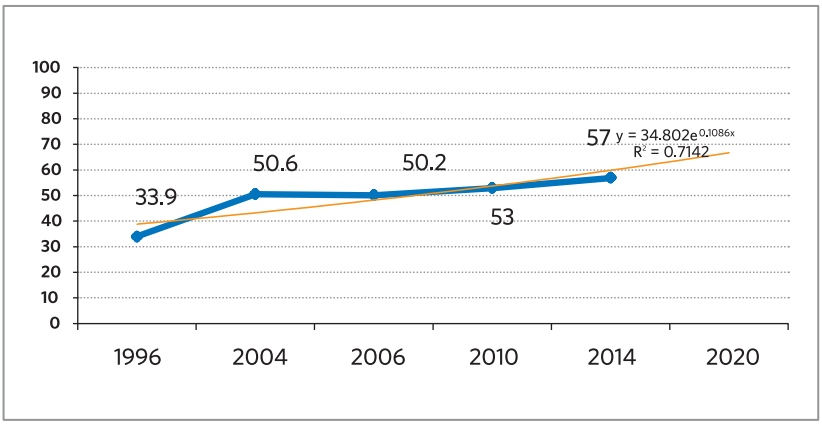
be implemented such as development and dissemination of protocols for post-abortion care and counseling in primary and secondary health care settings, as well as incorporation of a detailed description for abortion cases as part of the medical record.[85] Collaboration between different stakeholders including the religious institutions, the MOH, human rights and women's organizations, and the Ministry of Justice is essential in developing safe abortion policies.

MDM-France's 2013 assessment in the middle area of the Gaza Strip showed that many women have been faced with an unintended (unwanted or mistimed) pregnancy, and some of them resorted to unsafe abortions putting their health at risk. Some women described trying to terminate their pregnancies by inserting a traditional concoction into the uterus, applying external force (striking themselves in the lower abdomen with a gas canister) or using drugs like Misoprostol (cytotec). Due to the failure of contraceptives, deterioration of family economics, stigma of being old-age, health conditions and lack of clarity in the law for therapeutic abortion, women faced with unintended pregnancies were willing to put their lives at risk to terminate their pregnancies.

(g) Family planning and birth interval

Trends of family planning methods show a slow increase in the contraceptive prevalence rate. It was 51% in 2004, increasing to 53% in 2010, and 57% in 2014. In 2010, the prevalence was higher in the WB (55%) than the Gaza Strip (48%), with governorate variations, the highest in Bethlehem (65%) and the lowest in Rafah (43%). Currently married women in rural areas use contraceptives slightly more than women in urban and camps areas. It is worth noting that younger adolescent females are far less likely to use contraception than older women; only about 16% of married women aged 15-19 currently use contraception compared to 38% of 20-24 year-olds. Contraception among older women ranges from 52% to 73%.[86] Family planning is usually initiated late with the first contraceptive use (ever) tends to begin only after the fourth or fifth child and after having a satisfactory number of children, especially boys. More efforts are needed to promote the use of contraception focusing on both demand and supply. Also, birth spacing should be encouraged.

Figure III.5
Prevalence of contraception use planning



85 National Reproductive Health Strategy and Action Plan (2014-2016), (Palestine, 2014).

86 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

Women's education is associated with higher use of contraception: 48% use among those with no education to 57% use among those with secondary education. Congruently, the more a woman is educated, the longer her birth intervals are. Also, poorer women tended to have shorter birth intervals than rich women. Social and economic development to reduce the demand for children is essential, particularly through education and employment of mothers.

In 2010, 41% were using modern methods, 11% traditional ones. The preferred modern method was the intrauterine device (IUD) (26%), followed by oral contraceptives (7%), male condom (5%) and 6% and 3% were using withdrawal and female sterilization as a method of contraception respectively. Figures reported in 2014 were not very different: 44.1% were using any modern method, the most common of which was again the IUD (26.2%), followed by withdrawal (9.3%) and oral contraceptives (8%). The proportion of IUD use is higher in the West Bank (31%) than in Gaza (19.1%), while oral contraceptives are more used in Gaza (10%) than the West Bank (6.5%).[87]

Data from the PCBS survey in 2010 showed that 11% of those who don't use family planning fear the side effects of using contraceptives. About 7% reported inconvenience of the available family planning methods, while 5% said their husbands are opposed to family planning.

Most couples decide together (75.7%) whether or not to use birth control methods.[88] Otherwise, 14.6% of respondents said that husbands were the key deciders in this issue. Interestingly, 83.0% of the females surveyed said the decision to use birth control or not was made by the couple, compared to 69.9% of the males who reported this. The same study shows that 20.5% of the males stated that husbands alone decide in this matter while 7.1% of the females said the same. Alternatively, 8.6% of the females and 6.1% of the males stated that wives alone decide to use or avoid birth control methods. The rate of using family planning methods among women who wish to have more children was 49.3% in 2006, which is higher than previous years; in 2000 the rate was 47.4% and in 2004 the rate was 46.7% (PCBS, 2007).

Gaps in family planning include limited access to information on family planning methods and weak counseling, which negatively affected utilization. As a result of social, cultural, political, economic and legal pitfalls, women and girls often face particular challenges to their enjoyment of their full sexual and reproductive health and rights, which includes autonomous access and utilization of family planning. For instance, partner consent to use family planning by women is required to receive such services at both the MOH and UNRWA. This is a violation of privacy and health rights. Other issues that require corrective measures include filling gaps in the quality of service, promoting counseling and informed choices, changing providers' attitudes, which discourage women from seeking family planning services, providing a comprehensive range of modern contraceptive methods through appropriate commodity management, and the monitoring of an appropriate set of indicators that reflect performance in family planning. A legal framework to protect and regulate reproductive rights including family planning and community awareness is also necessary.

Availability of maternal and child health and family planning services at the same health center is associated with a higher rate of contraceptive use.[89] Maintaining the sustainability of supply is essential; 30% of women do not have regular access to contraceptives. Also,

87 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

88 Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey* 2006.

89 Hamad, K, *Socio-Economic Determinants of Family Planning Services in the Gaza Strip*, Doctoral Thesis, Brandeis University, (2011),

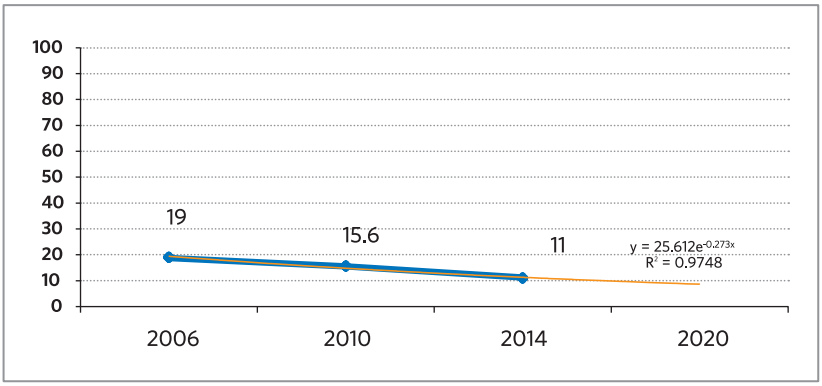
communication strategies that target the entire community including men and community leadership is essential. Social and economic development, particularly education and employment. to reduce the demand for children (political fertility) is essential.

Women with unmet need are those who want to stop or delay childbearing but are not using any method of contraception.[90] Unmet need is an indicator for Millennium Development Goal 5, improving maternal health. Women have various reasons for not wanting to become pregnant. Some want to delay their birth; they want to have a child at some point in their lives, but not yet. Some women already have one or more children and want another child, but they want to wait at least a few more years because they prefer to space their births. Other women either do not want to have any children or have had all the children they want. Certain contraceptive methods may better suit the needs of women who want to delay or space births, while others are better for women who want to stop childbearing altogether.

Unmet need is often portrayed as a problem of access, leaving the perception that women do not use contraceptives because they cannot find or afford them. But while access is an issue, women have many other reasons for not using family planning, including personal, cultural, or religious objections, fear of side effects, health concerns and lack of knowledge. For this reason, just making contraceptives available does not ensure that women will use them. In countries where many women prefer large families, unmet need as well as contraceptive use is typically low. In other countries in transition to smaller families like Palestine, unmet need will probably increase until information, supplies, legislations and services meet the increasing demand for contraception. Therefore, high levels of unmet need are not necessarily solely due to the failure of a family planning program, but may reflect growing demand for contraception.

According to PCBS reports (2007, 2013 and 2015), while the contraceptive prevalence rate increased slightly during the period 2006-2014, the unmet need for family planning remains high. It was 15.6% in 2010 and 11% in 2014 (meaning that 5% of women were not using contraceptives but wished to limit children and 6% wished to increase the space in between children).[91]

Figure III.6
Percentage distribution of women by unmet needs of family planning



Unmet need is linked to poor quality of service, weak counseling, and providers' negative attitude towards family planning, which discourages women from pursing it. Also, misconceptions among women, cultural and religious beliefs, social and economic pressure

90 United Nations, Department of Economic and Social Affairs, Population Division *World Contraceptive Use 2014*, POP/DB/CP/Rev2014, (2014).

91 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

and influence of husbands deters them. Addressing unmet need requires both political and financial commitments to understanding its causes and then responding accordingly by expanding and improving family planning information and services. Accordingly, there is a need to address the problems of unmet needs, resolve duplication of service provision within the public sector, and initiate a national supply system of contraceptives at central, district and peripheral levels.

Table III.1
Women (percentage) who became pregnant against their preferences in 2010 and 2014 (last birth)

Age	Palestine		West Bank		Gaza Strip	
	2010	2014	2010	2014	2010	2014
15-19	13.2	7.6	19.7	8.8	7.1	6.7
20-24	22.6	16.9	26.8	15.5	16.6	18.7
25-29	26.9	27.8	30.9	26.9	21.3	29.1
30-34	30.9	30.8	34.1	30.2	26.7	31.7
35-39	42.3	36.1	42.6	34.3	41.9	38.8
40-44	49.8	50.5	48.3	47.5	51.6	54.8
45-49	40.9	70.0	58.3	85.7	20.0	33.3
Total	**29.4**	**26.1**	**32.8**	**25.6**	**24.9**	**26.7**

Proportions of women who become pregnant or gave birth to a child against their preferences are proxy indicators reflecting the effectiveness of family planning programs: 29.4% in 2010, higher in the West Bank (32.8%) than in the Gaza Strip (24.9%). It could be inferred that there is a significant failure in family planning programs since at least a quarter of women gave birth against their preference. These proportions did not change significantly between 2014 and 2010 in Gaza. They decreased in the West Bank, indicating better utilization of family planning. As women's age increases, unwanted pregnancies also increase, since women reach the ideal number of children and wish to have no more.

Unwanted pregnancy in rural areas was 34.6%, higher than urban or camp areas (28.4%) in 2010. It decreased slightly in 2014 in all three areas, with camps eliciting the highest proportions. Wealth and education are not significant factors in the percentage of unwanted pregnancy. Around 60% of women wanted to have more babies later on despite preferring not to have had this one. However, nearly 40% of women did not want any more children. This should be judged meanwhile considering the number of children already women had.

Table III.2
Women (percentage) who became pregnant against their preference in 2010 and 2014 (last birth), by locale, wealth and education

Variables	2010	2014
Locality Type		
Urban	28.4	26.2
Rural	34.6	25.0
Camp	28.4	27.2
Wealth Index		
Poorest	33.5	24.6
Second	29.2	26.6
Middle	26.1	26.8
Forth	29.7	24.9
Richest	28.1	28.8
Education of Women		
None	34.6	11.1
Basic	33.0	30.8
Secondary	25.0	24.0
Higher		24.8
Wanted to delay/to limit		
Wanted to have baby later on	59.7	62.5
Did not want any more children	40.3	37.5

(h) Birth interval

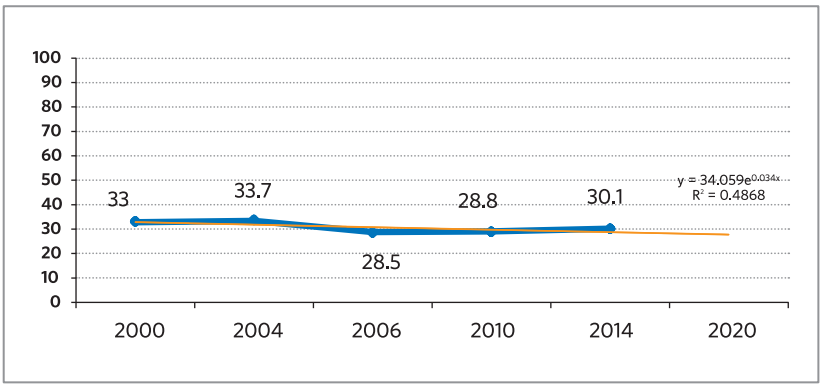
Birth interval is a major determinant of fertility and measures paternal investment in a child. Therefore, analyzing birth intervals provides useful information for guiding the formulation of effective family planning programs. Spouses manage the interval for personal, cultural, psychological and economic reasons. Also, longer birth intervals of more than 3-5 years are becoming necessary for parents who plan to send all their children to higher education. It was believed that a 24-month birth interval was necessary to ensure good health for mothers and their under-five children. However, recent research shows that spacing of at least 36 months and at most 59 months (optimal birth spacing) reduces the risks of under-five mortality.[92][93] Shorter intervals (less than 18 months) or very long intervals (more than five years) increases the risk of certain maternal and child health problems such as preeclampsia, eclampsia, low birth weight and even mortality. Also a birth interval of 18

92 World Health Organization, *Report of a WHO Technical Consultation on Birth Spacing Geneva, Switzerland 13–15 June 2006*, (2006).

93 Rutstein, S. O., "Effects of preceding birth intervals on neonatal, infant and under–five years mortality and nutritional status in developing countries: evidence from the demographic and health surveys", *International Journal of Gynecology & Obstetrics* 89 (Supplement 1), 2005. pp. S7–S24.

months or shorter is associated with elevated risk of infant, neonatal and perinatal mortality, low birth weight, small size for gestational age, and pre-term delivery. The rate of preterm birth before 37 weeks gestation was higher in women who conceived after a short IPI of less than 12 months. They were around three times as likely to give birth before 37 weeks, compared to pregnancies following an optimal IPI (20.1% vs. 7.7% respectively).[94]

Figure III.7
Birth interval by months, 2000-2014



Average birth interval in 2000 was 33 months and longer in the West Bank (34.1) than the Gaza Strip (31.2). It then dropped to 28.5 months (29.3 in the West Bank and 17.2 in Gaza) in 2006. This large drop could be the result of the big shift in intervals trends among women by age (see Table III.3 below). Comparatively, only a slight change occurred between 2010 (28.8) and 2014 (30.1) in both the West Bank and the Gaza Strip. Birth intervals increased with the increase in a woman's age, which shows that women do not have a clear understanding of the birth interval and its importance to mother's and baby's health, especially in earlier age groups. Mothers tend to have the number of children they prefer and to have them all within a limited period of time. These intervals recorded remain much lower on average than the internationally recommended period (3-5 years). Differences between the West Bank and the Gaza Strip could be attributed to cultural factors and the higher utilization of family planning in the West Bank than Gaza. Also, socioeconomic and political factors might play a role. Differences related to place of living were minimal, however, reflecting deeply-rooted beliefs about fertility.

94 Ibid.

Table III.3
Birth intervals (months) and selected variables, 2010 and 2014

Variable	2010	2014
Region		
State of Palestine	28.8	30.1
Gaza Strip	27.7	28.3
Wet Bank	29.6	31.5
Locality type		
Urban	29.1	30.0
Rural	28.1	30.7
Camp	28.0	30.4
Wealth index		
Poorest	26.7	27.7
Second	27.9	28.3
Middle	28.4	29.6
Forth	29.4	31.4
Richest	31.9	33.8
Women's age group		
15-19	20.5	19.9
20-24	21.5	21.6
25-29	25.6	25.3
30-34	28.8	29.2
35-39	30.7	32.2
40-44	30.4	32.4
45-49	29.1	30.7
Women's education level		
None		28.2
Basic		29.3
Secondary		30.7
Higher		30.1
Preschool	25.2	
Elementary	28.3	
Preparatory	29.1	
Secondary	29.1	
Higher	28.9	

Table III.3 *(continued)*

Number of children - parities		
1	33.2	0
2-3	24.5	25.4
4-6	31.9	34.4
7+	32.7	35.7
Sex of the last birth		
Female	28.9	30.2
Male	28.7	30.1

Table III.4
Birth intervals (months) by age and region, 2010 and 2014

Age group	Palestine		WB		Gaza	
	2010	2014	2010	2014	2010	2014
15-19	20.5	19.9	19.8	18.8	21.4	20.3
20-24	21.5	21.6	21.7	22.1	21.2	21.1
25-29	25.6	25.3	26.4	26.6	24.6	23.9
30-34	28.8	29.2	29.3	30.8	28.0	27.3
35-39	30.7	32.2	31.4	33.4	29.7	30.5
40-44	30.4	32.4	31.1	33.4	29.2	30.8
45-49	29.1	30.7	29.8	31.8	27.9	29.0
50-54	28.1	30.1	29.2	31.5	26.3	28.3
Total	**28.8**	**19.9**	**29.6**	**18.8**	**27.7**	**20.3**

Exploring reproduction preferences helps explain future fertility trends and the need for relevant policies and programs. Results from the youth survey (2016[95]) indicate that the ideal number of children among Palestinians is 2.2 males and 1.8 females. The figures in 2015 are lower than the figures of 2006, with a 15% reduction in the number of male children preferred and 36% reduction in the number of females. Young males see the ideal number as 2.3 males and 1.7 females whereas young females consider it 2.1 males and 1.9 females. Both males and female youth showed gender bias towards male children. Congruently, the ideal number of children was as follows: 1.1% preferred less than two children; 8.4% two children; 8.1% three children; 36.9% four children and 12.4% five or more children, 27.9% six or more, while the rest did not give a specific number. The desired mean number of children was 4.8 in 2006 and 4.6 in 2000, slightly higher in Gaza (5.2 children) than the West Bank (4.6 children). Women living in camps and less educated women preferred more children than did their counterparts living in urban areas and having more education

95 Palestinian Central Bureau of Statistics, *Youth Survey 2015: Key Findings.* (Palestine, 2016).

(i) Breastfeeding

Proper feeding of children increases their chances of survival; it also promotes optimal growth and development, in the critical window from birth to 2 years of age. Breast milk is best for the baby and the benefits of breastfeeding extend well beyond basic nutrition. In addition to containing all the vitamins and nutrients the baby needs in the first six months of life, breast milk is packed with disease-fighting substances that protect the baby from illness. UNICEF and WHO recommend that infants be breastfed within one hour of birth, breastfed exclusively for the first six months of life, and continue to be breastfed up to two years of age and beyond.[96] Starting at six months, breastfeeding should be combined with safe, age-appropriate feeding of solid, semi-solid and soft foods.

The percentage of ever-breastfed babies in Palestine is very high, around 96.6% (in 2014), and slightly higher in Gaza (97.6%) than in the West Bank (95.8%).[97] This positive achievement comes with a number of substantial caveats. Many mothers don't start to breastfeed early enough, do not breastfeed exclusively for the recommended six months or stop breastfeeding too soon. There are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and can be unsafe if hygienic conditions, including safe drinking water, are not readily available especially during conflict episodes[98] In addition to continued breastfeeding, consumption of appropriate, adequate and safe solid, semi-solid and soft foods from the age of six months onwards leads to better health and growth outcomes, with potential to reduce stunting during the first two years of life.[99] Overall, 90% of infants' age 6-8 months received solid, semi-solid, or soft foods at least once during the previous day of the interview.

Although a very important step in management of lactation and establishment of a physical and emotional relationship between the baby and the mother, only 41% of babies are breastfed for the first time within one hour of birth, while 85% of newborns in Palestine start breastfeeding within one day of birth. This proportion has actually decreased over time: in 2010, the proportion of women who initiated breastfeeding in one hour of birth had been higher (58% in the West Bank and 66% in the Gaza Strip). In 2006, it was even higher (63.6% in the West Bank and 65.3% in the Gaza Strip).

Unfortunately, nearly a quarter of newborn babies in both the West Bank and Gaza received pre-lacteal feed, especially those living in camps (PCBS, 2010). Pre-lacteal feeding refers to the provision of any liquid or food other than breast milk to a newborn within the first three days of life, such as artificial milk, crystalloid sugar and other hot drinks. In 2014, the proportion that received pre-lacteal feed has even increased with being higher in Gaza (44.6%) than the West Bank (33.3%) which negatively affects the rate of exclusive breastfeeding.[100]

Aside of its great nutritional and psychological value for babies, exclusive breastfeeding is also a natural birth control method. A breastfeeding woman may use the Lactational Amenorrhoea Method (LAM) as an introductory method, giving her time to select a complementary method needed to create a healthy 3-4 year birth interval.[101] The mutual complementarity of breastfeeding and family planning extends well beyond the postpartum period, having an impact throughout life. Breastfeeding contributes to child spacing in populations by prolonging the average interval until the next pregnancy. However, it

96 United Nations Children's Fund, 2000.

97 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

98 Ministry of Health, 2014.

99 United Nations Children's Fund, 2000.

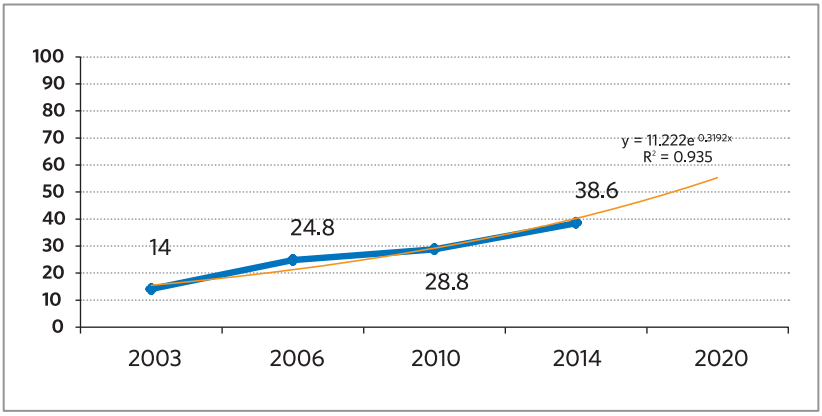
100 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

101 United Nations Children's Fund, GUIDELINES, Division of Human Resources, 2000.

also contributes directly as LAM. LAM is an introductory family planning option, part of informed choice and allows a period of time to select and obtain a complementary method. Furthermore, LAM increases optimal breastfeeding. Conversely, family planning also contributes to the duration of breastfeeding worldwide, since pregnancy is the number one or two reason reported for cessation of breastfeeding.[102] Therefore, family planning protects sustained breastfeeding and sustained weaning.

About 39% of children less than six months of age in 2015 are exclusively breastfed, a level considerably lower than recommended, with variation between West Bank and Gaza Strip (41% and 36%).[103] In 2010, 27.8% of Gaza children less than six months old were exclusively breastfed, while 29.6% in the West Bank were exclusively breastfed. This was a large increase in only four years.[104] Cultural change concerning breastfeeding is possible. Also, MOH initiatives to promote exclusive breastfeeding by controlling the marketing of milk substitutes and investing in community awareness has also contributed to improving the prevalence of breastfeeding. No consistent differences were noticed in reference to the gender of the child, wealth index, and mother's education and so on. The rate of exclusive breastfeeding is constantly increasing.

Figure III.21
Children under six months of age (percentage) exclusively breastfed, 2003-2014



In 2014, the mean duration of breastfeeding was 13.9 months, and slightly higher in Gaza (14.2 months) than the West Bank (13.3 months). This is not a significant change from 2010 (median was 14).[105] Males were breastfeed one month longer than females on average, but not necessarily exclusively. Also, mothers from rural areas breastfed for a longer duration than urban or camp mothers and the less educated breastfed for longer (15.9 months for those not educated and 14.8 months on average for mothers with secondary education and above). In 2006, the proportion of continuing breastfeeding declined among children aged 16-23 months to only 20%, which indicates that breastfeeding for two years is not guaranteed. The main reason for stopping breastfeeding among children 6-11 months is becoming pregnant. Mothers stopped breastfeeding children aged 12-23 months because they believed that the child had reached the appropriate age for weaning.[106]

102 World Health Organization, Exclusive Breastfeeding, 2016.

103 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

104 Palestinian Central Bureau of Statistics 2013. Final Report of the Palestinian Family Survey 2010. Ramallah – State of Palestine.

105 Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

106 Palestinian Central Bureau of Statistics, *Palestinian Family Health Survey* 2006,

Abu Hamad and Samour[107] found that the mean child age at which weaning occurred was 13.5 months. The majority of mothers weaned their children abruptly (88.4%) while 65.3% using traditional methods for weaning. The most popular traditional methods were putting substances with bad taste especially Aloe Vera on the nipples (39.6%), using alternatives such as pacifiers (14.7%), putting red substances (11.2%) to frighten the child, and placing coffee (8.8%) on the nipples.

Despite improvement over time, more effort is needed to support exclusive breastfeeding for six months, continuation of breastfeeding for two years, and the appropriate introduction of complementary and supplementary feeding and counseling practices. Incorrect practices in weaning expose children to risky nutritional and psychosocial consequences; counseling and health education should be stregnthened.

(j) Governance and management

The WHO regards management and governance of health services as one of the six key building blocks for improving the performance of any health care system including sexual and reproductive health and rights.[108] Broadly, the Palestinian health system faces significant governance challenges affecting both efficiency and effectiveness of its operations.

The role of the MOH as regulator, mediator and overall leader of the sector can be further strengthened. Addressing communication gaps among stakeholders and duplication in service utilization resulting in the waste of resources and fragmentation are clear priority areas for the ministry in meeting its leadership responsibilities.

While the MOH has a well-developed health information system producing valuable data about health status and services in the country, there still is a place for quality improvement, harmonization among providers outside the ministry, and more clarity and analysis of data produced at the service delivery level. Monitoring and Evaluation (M&E), unified and operationalized performance indicators, and related line of command needs should be more defined and linked to accountability frameworks. The concept of supervision and use of supervisory tools for quality improvement are areas for future consideration in terms of improving governance of the health sector at large.

Another major initiative that requires investment is standardizing clinical practices in issues related to sexual and reproductive health and rights. Few reproductive health protocols exist, but their application is still questionable; protocols related to other important issues such as GBV, sexual health, and family planning are either underdeveloped or unavailable. However, there is little enthusiasm for developing and using these protocols due to the medical orientation of the system and the cultural mainstreaming of policymakers and service providers.

Quality assurance and accountability frameworks need to be installed and made operational within the health sector. Issues of adverse events and medical errors critically need more systematic attention and action. Effective clinical audit systems, clear adverse event documentation and reporting, and fair linkage of all of the above to accreditation and licensing should be adopted.

107 Abu Hamad, B. and Sammour H. "Weaning practices of mothers attending United Nations Relief and Works Agency Health Centers in the Gaza Governorates", *Journal of Advanced Nursing*, Vol 69, No 4, (2012), pp. 745-983.

108 World Health Organization, *Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. Geneva*, (2010),

Generally, the distribution of human resources per population is fairly acceptable in most professions. It has been observed that health facilities are staffed with younger generations who are an asset. Gender balance is fairly maintained with the potential of increasing women enrolment in the working force in the future as their current representation in health-related education is higher than their male counterparts.[109] However, more attention should be paid to the inclusion of women in senior positions. There is dearth of specialized people in gender issues, sexual health and in particularly the midwifery field. Also the utilization of midwives in providing reproductive heatlh services is limited as the system is hyper-medicalized.

Clients' perspectives about the quality of health services indicate reasonably moderate to high satisfaction and reasonable waiting times, but missed opportunities for adequate counseling and informing. Obstetric services were the least satisfactory services whereas primary healthcare related services were perceived much better. In a study conducted in Gaza, around one-third of beneficiaries reported returning home without receiving the services they came to obtain. The most frequently reported reason was lack of needed medications (80%).[110] The most important factors that reflect good quality of health care services from clients' perspectives were availability of drugs (67.3%), the affording of respect (46.5%), and finally, being cured (34%).

The lack of resources among women especially lack of access to money is the most commonly reported barrier to healthcare in the West Bank and Gaza Strip (48%). There are marked regional differences in not knowing where to go (10%), travelling distance (15%), transportation (15%), not being willing to go alone, and the lack of female providers (25%). About 10% of women indicated that they faced obstacles in seeking healthcare since they need permission to leave the house.

109 Ibid.

110 Anan, H, *Client Centeredness of Governmental Health Care Services in Gaza Strip*, Master Thesis, Al-Quds University, (2011).

Chapter 4

Youth in Palestine



A. Young people as an emerging population group

Young people can be an opportunity for achieving community development and civil peace; they are the backbone of society and can change the future of the nation.

Table IV.1
Percentage distribution of youth by certain characteristic variables

Variable	Palestine	West Bank	Gaza Strip
Youth proportion of the population (15-29)	30	29.8	30.1
Youth age structure in the population			
19-15-	11.2	11.1	11.4
24-20	10.3	10.4	10.2
29-25	8.4	8.6	8.2
Educational attainment			
Less than elementary	0.8	0.4	1.4
Elementary	6.3	6.4	6.1
Preparatory	42.8	43.2	42.1
Secondary	32.3	32.5	32.0
Intermediate diploma	5.2	3.8	7.3
Bachelor and above	12.7	13.7	11.1
Youth who declared being unemployed			
Both sexes	30.2	18.2	51.5
Males	25.0	12.7	47.6
Females	60.4	52.7	71.8
Nature of work of employed youth			
Permanently/full time	58.4	61.7	48.5
Temporary/casual	36.3	33.5	44.7
Seasonal	5.3	4.8	6.8
Marital status			
Never married	67.5	69.9	63.8
Engaged	3.9	4.0	3.7
Married	28.0	25.6	31.6
Divorced/ widowed/ separated	0.6	0.5	0.9

Table IV.1 *(continued)*

Satisfaction about life			
Very happy	22.7	27.9	14.4
Somewhat happy	58.0	54.6	63.4
Neither happy nor unhappy	14.8	13.9	16.2
Somewhat unhappy	3.2	2.7	4.1
Totally unhappy	1.3	1.0	1.9
Having disability or chronic illnesses	3.6	3.7	3.6
Female youth exposed to sexual harassment in the past 12 months	18.4	13.8	25.7
Youth smokers	23.5	29.5	14
Communication and technology			
Using computer	69.7	74.8	61.7
Using internet	69.7	75.0	61.3
Desire to emigrate			
Yes	23.6	15.2	37.0
No	76.4	84.8	63.0
Civic participation			
Intention to participate in upcoming public election: yes, of course	39.9	29.4	56.8
Female youths' intention to participate in upcoming public election: yes, of course	33.9	26.4	46.0
Male youths' intention to participate in upcoming public election: yes, of course	45.8	32.3	67.2

Sources: Miftah, ICHR, & UNFPA. *Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine*. Palestine (2015); PCBS, UNFPA, & UNICEF. *Palestinian Family Survey 2010*. Palestine (2013); PCBS, UNICEF, & UNFPA. *Palestinian Multiple Indicator Cluster Survey 2014*. Palestine (2015); and PCBS. *Youth Survey 2015: Key Findings*. Palestine (2016).

PCBS reports in 2015 indicate that Palestine's youth (aged 15-29 years) comprised 30% (1.4 million) of the total population, increasing from 27% in 2006 to 29.4% in 2015.[111] The inevitable increase of youth in Palestine will put further strain on access to livelihoods and basic services, including housing, education, employment and health care. Moreover, lack of jobs and development may lead to the disillusionment of the youth and could possibly result in communal unrest.[112] The findings of an international study examining numerous countries over the period 1950-2000 found robust evidence supporting the hypothesis that youth

111 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*. Palestine (2016); Palestinian Central Bureau of Statistics, 2015. *Palestinian Multiple Indicator Cluster Survey 2014, Final Report, Ramallah, Palestine.*

112 Farooq, M., Idrees, M., Tariq, S., Ghulzar, F., & Anwar, H. N. Consequences of Youth Bulge in Pakistan. *Mediterranean Journal of Social Sciences*, 5(20), 2216–2222 (2014). Available at http://doi.org/10.5901/mjss.2014.v5n20p2216.

bulges increase the risk of domestic armed conflict, especially under conditions of economic stagnation and coinciding with a lack of youth supportive strategies.[113]

"Demographic dividends posed by the youth bulge offer great potential for economic gains: a 'demographic gift'. In order for economic growth to occur, however, the younger population must have access to quality education, adequate nutrition and health, and access to sexual and reproductive health and protective policies."

The youth bulge could offer great potential for economic gains known as demographic dividend. This anticipated boost in economic productivity occurs when there are growing numbers of people in the workforce relative to the number of dependents resulted from a reduction in fertility rate. ("A country with both increasing numbers of young people and declining fertility has the potential to reap a demographic dividend."[114]) In order for economic growth to occur, however, the younger population must have access to quality education, adequate nutrition and health, and access to sexual and reproductive health and protective policies.

Of the youth, 37% are adolescents (15-19). Adolescents are a distinct social group living through an extremely influential period in the life-cycle, which is critical in determining later life chances and outcomes. During adolescence, girls and boys start experiencing physical and neurological changes as well as social changes reflecting their transition from childhood to adulthood and new roles as spouses, parents, workers or citizens.[115] Adolescence is also a critical period because it is a time when individuals can gain positive health, social behaviors and attitudes as well as social, educational and work skills that are all pivotal for personal development and learning.[116]

113 Urdal, H. *The Devil in the Demographics: The Effect of Youth Bulges on Domestic Armed Conflict, 1950-2000. Social Development Papers: Conflict Prevention and Reconstruction* (2004).

114 UNFPA, *State of World Population 2014. The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future* (2014).

115 Jones, N., & Holmes, R. *Tackling child vulnerabilities through social protection: lessons from West and Central Africa - ODI Background Notes*. (2010: London).

116 UNICEF, *The State of the World's Children 2011*. (Unicef: 2011).

1. Education

About 36.9% of youth (ages 15-29) are currently enrolled in education (36.3% in the West Bank and 37.9% in the Gaza Strip) with clear gender disparity in favor of females (32.1% among males compared to 42% among females).[117] The Youth Survey conducted in 2015 also showed that the percentage of youth (15-29 years) who completed university education with a BA or higher had reached 12.7%, slightly higher in the West Bank (13.7%) than in the Gaza Strip (11.1%). These figures show an improvement since 2012 (when university completion was at 10.2%). This no doubt reflects the high value Palestinians have traditionally placed on education. The proportion of females who completed university education (14.3%) was higher than the proportion of males (11.2%), both in the West Bank and the Gaza Strip.[118] Females invest more time on education and hence have higher levels of enrollment and attainment. Female access to higher education also faces obstacles from early marriage (which is more prominent in rural areas), limited work opportunities after graduation especially in Gaza, gendered cultural roles, conservative culture values and greater recognition/appreciation for the reproductive role of women over other roles.[119] Data from the 2006 Family Health Survey showed that the dropout rate for unmarried youth was 29.4% for males and 12.6% for females.[120] In 2010, 31% of youth dropped out of education, 38.5% for males and 23.9% for females.[121] The dropout rate was slightly higher in the West Bank (32%) than Gaza (30%). More than one-third of youth wish to register for postgraduate studies (MA or PhD).

Youth enrolment in education, while generally perceived as beneficial, also has numerous pitfalls. These include inadequate national strategic planning that considers the sectoral supply-demand chains and the needs of the labour market, the over-enrolment in human and social sciences at the price of applied sciences, and weak vocational training and certificate-oriented systems. Rarely do universities consider market needs and respond adequately. Education instead is more theoretical, with a huge theory-practice gap.

Currently, the Palestinian labour market is flooded with tens of thousands of graduates, especially graduates of the human and social sciences. In 2012, there were around 79,000 male graduates aged 20-29 and 97,000 female graduates of the same age entering the labour market. More than half of them were unemployed. At the same time, there are severe shortages in subspecialties and trades. Many initiatives and programs have focused on promoting vocational training but enrolment rates are limited and negatively impacted by the low prestige such training accrues, stemming from traditional and cultural norms and misconceptions among community members, the weak infrastructure of vocational training institutes, and limited employability. Although declining, career decisions are largely determined by parents; in few cases does a young person determine her/his future career. Youth report having limited access to information about available specialties due to lack of career and occupational counselling at schools and universities.[122] The ILO study showed that students surveyed in Palestine mainly hoped to obtain a professional job (75%). Among male students, 68.1% preferred professional jobs and 10.1% preferred trades work,

117 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*. (Palestine: 2016).

118 Palestinian Bureau of Statistics, *The Status of the Rights of Palestinian Children*, (Ramallah, 2015)

119 Abu Hamad, B., Jones, N., Pavanello, S., & Shaheen, M., *Beneficiary and community perspectives on the Palestinian National Cash Transfer Programme*, (Palestine, 2013)

120 Palestinian Bureau of Statistics, *Palestinian Family Health Survey, 2006: Final Report*, (Ramallah, Palestine, 2007)

121 Palestinian Bureau of Statistics, *Disabled Individuals Census, Gaza Strip, 2012, Main Findings Report*, (Ramallah, 2013)

122 International Labour Organization, *Labour market transitions of young women and men in the Occupied Palestinian Territory. International Labour Office*, (Geneva., 2014) Retrieved from http://www.ilo.org/employment/areas/youth-employment/work-for-youth/publications/regional-reports/WCMS_235754/lang--en/index.htm

81% of female students preferred professional jobs and 8.5% preferred technical jobs. Half of students hoped to work someday in the government or public sector. The attraction of the public sector was due to attached status, job security, and benefits/pension.[123] School counselling programs staffed by 1,053 counsellors at UNRWA and MOE schools[124] represent missed opportunities for providing support to adolescents at the personal, psychosocial and professional aspects.[125]

2. Employment and hardship conditions

In 2010, male youth participation in the labour force stood at 88%, while only 13% of female youth were labour participants.[126] In fact, 39% of male youth reported not participating in the labour force, alongside 60.4% of females. In 2015, 30.2% of the youth (15-29 years) stated that they were unemployed (25% males and 60.4% females), with huge disparities between youth in Gaza (51.5% unemployed) and the West Bank (18.2% unemployed) due to economic hardship in Gaza.[127] The average period of unemployment for youth was 25.7 months; this was slightly longer in the Gaza Strip than in the West Bank, and among females (29 months) than among males (24 months). The vast majority of young people reported that the reason they were unemployed was the lack of job opportunities (76.4%). Of those employed, 58.4% were permanently employed or full-timers (61.7% in the West Bank and 48.7% in the Gaza Strip).[128] Unemployment is more prominent among new graduates (38.6% of new graduates overall, and 26.5% in West Bank versus 57.2% in Gaza) especially among Gaza females. Due to the constraints in finding a job, especially in public services in Gaza, 20.9% of youth have tried to establish their own businesses. These new entrepreneurs are 14.9% in the West Bank and 30.6% in Gaza Strip, and are more commonly males (29.6%) than females (11.9%).[129]

As a result of unemployment, many youth face compound vulnerabilities and economic hardships, which deeply influence young people's deteriorating psychological status. The literature links many problems youth face to the economic situation: domestic violence, low educational attainment, inadequate socialization, insufficient recreational activities, and dysfunctional relationships between youth and their families. Poverty among vulnerable households and communities is both a cause and an outcome of an array of complex interactions of political, economic, health, psychological, and social deprivations. Members of poor households suffer from physical, psychosocial and mental disabilities or chronic diseases. They also experience gender-based violence (GBV), stigma, discrimination, child labour and child abuse, and domestic violence. Young people are also more likely to drop out of school and engage in risky livelihood strategies such as working in the dangerous tunnels business (in Gaza), selling drugs illegally and selling cigarettes or earning a living collecting rubble and scrap metal from areas close to the Israeli buffer zone and settlements, which ultimately puts their lives at risk.[130] Because of hardship and unemployment, there has been a sharp increase in the number of families in Gaza that

123 Ibid.

124 Palestinian Bureau of Statistics, *The Status of the Rights of Palestinian Children* (Ramallah, 2015)

125 Pereznieto, P., Jones, N., Abu Hamad, B., Shaheen, M., & Alcala, E., *Effects of the Palestinian National Cash Transfer Programme on children and adolescents: A mixed methods analysis*. Palestine, 2014.

126 Palestinian Bureau of Statistics, *Disabled Individuals Census, Gaza Strip, 2012, Main Findings Report*, Ramallah, 2013

127 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*, Palestine, 2016

128 Ibid.

129 Ibid.

130 Abu Hamad, B., Jones, N., Pavanello, S., & Shaheen, M., *Beneficiary and community perspectives on the Palestinian National Cash Transfer Programme*., Palestine, 2013.

receive social assistance from the MOSA from 57,000 families in 2012 to 76,000 in 2015 (at this writing, 113,185 households receive cash assistance from MOSA in the West Bank and Gaza).

3. Migration

Due to the prevailing socio-economic and political challenges, a considerable proportion of young people, particularly male youth and youth in Gaza (a staggering one-third), wish to emigrate abroad. Migration affects both the young migrants themselves and the young and old persons left behind. In certain contexts, migration constitutes an important stage in the transition to adulthood and an opportunity for independent income generation. By taking advantage of new opportunities for employment, education and skill development in their destination countries, young migrants can shape their own futures. When youth migrate, they tend to improve both their own financial situation and the economic conditions of their families through the income they earn and the remittances sent home. Interestingly, 62.5% of the youth who wish to emigrate do not consider permanent emigration. Surveys[131] depict that economic conditions (40.8%), lack of work opportunities (15.1%), and seeking education abroad (12.5%) were the major reasons youth considered emigrating.

Despite the possibility for positive outcomes, youth migration also poses a serious problem due to its draining of productive resources and serious implications for social capital in the long run. These impacts are even worse when the emigrants are skilled professionals occupying important positions such as doctors, scientists, engineers and others who are needed to meet the country's demand for such professions (i.e. 'brain drain'). The Arab Gulf countries and Sweden ranked first as preferred destinations for youth emigration. This selection of countries reflects a desire among youth to live an economically and socially stable life. More than one-third surveyed believed that the prevailing context down not support the fulfilment of their aspirations.

4. Health status and sexual and reproductive health

Among youth (ages 15-29), 67.5% have not been married before, 28% are married, 3.9% engaged and 0.6% widowed, divorced or separated.[132] The proportion of married youth was higher in Gaza (31.6%) than in the West Bank (25.6%), which contributes to explaining the latter's lower fertility rate. Married males (15.6%) formed a smaller proportion of this group; married females (40.8%) are typically at a younger age when they marry. When young people were asked the ideal age of marriage, between 2010 and 2015 that age increased incrementally to 21.1 years for new brides and 25.4 for new grooms, with little difference between the West Bank and Gaza. The ideal number of children was reported at around 2.2 male children and 1.8 female children, with no significant differences between the West Bank and Gaza and also between male and female respondents.[133] Whereas this finding reflects a pervasive preference for high fertility, the expressed preference for boy children is relatively small (22%), and seems to contradict the stereotype of the patriarchal Palestinian family.

131 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*, Palestine, 2016

132 Ibid.

133 Ibid.

Despite the high youth literacy rate, early marriage and high fertility rates are still common. In 2012, 92% of marriage certificates were for females aged 15-29 years.[134] Also, 77.4% of divorce certificates belonged to females of this age group. As a result of early marriage, 29% of Gaza Strip females and 25% of West Bank females were pregnant before age 18. Hence, 53% of the youth in Gaza and 46% in the West Bank gave birth to their first child before age 20.[135] Early marriages are a big threat to the human rights and the well-being of children. It denies the young an opportunity to grow and empower themselves. It challenges the basic rights of these children to education, health, protection and development. Early marriage also results in missing an opportunity for demographic dividend transition, instead producing negative consequences in forgone education and work opportunities, exposure to risks associated with pregnancies and labour, psychosocial stress, increased possibility of abuse, and limitations on the ability to make life choices.[136] Further efforts should be invested in legally increasing the age of marriage through advocacy efforts, setting appropriate policies and legislations, and increasing awareness through community mobilization. Marriage among first-degree relatives is also still high, applying to 30% of marriages. Community mobilization efforts are needed here to reduce their negative outcomes.[137] More than one-third of households (41%) with children with disabilities have more than one member with disability, pointing to the strong role of heredity in determining disabilities and pregnancy outcomes.[138]

Youth attributed their health issues to inappropriate behaviours such as smoking (50%) and psychosocial problems (27.4%).[139] The prevalence of non-communicable diseases including disability among youth is around 3-4%. No variations exist between the West Bank and the Gaza Strip in the prevalence of non-communicable diseases, but females (2.3%) are significantly less affected than males (4.9%) due to reduced exposure to injuries and environmental risks. Nearly a quarter (23.5%) of youth smoked, 29.5% in the West Bank and 14.0% in the Gaza Strip.[140] In 2010, the prevalence of smoking was 15.4%; 20.1% in the West Bank and 7.7% in the Gaza Strip, indicating that smoking has become more prevalent among youth.[141] Gender variances were high, with 40.9% of males smoking compared to 5.4% of females – likely for socioeconomic and cultural reasons. Increasingly, youth are exposed to drug abuse, especially hallucinogens, narcotics like cocaine and heroin, sedatives, and marijuana – especially in East Jerusalem (one-third of the estimated 80,000 substances users) and especially among youth under age 22. In Gaza, the use of tramadol is widespread. Youth living in Jerusalem are more socioeconomically and politically vulnerable due to unemployment, political violence practiced by Israeli settlers and the Israeli occupation, easier access to the Israeli black market, high levels of frustration, high numbers of dropouts, inappropriate housing conditions, demolition of houses, blockade and isolation and lack of protective polices and measures.

Nutritional problems such as obesity, lack of a safe youth environment, and reproductive and sexual health related issues are the major challenges facing youth.[142] Sexually-transmitted diseases (STDs) are a particular risk for youth working in Israel and at greater risk of unprotected sex. The main obstacles hindering access to health services among female youth included inability to seek services alone (38%), lack

134 UNFPA and Higher Council for Youth and Sports,,*Status of Youth in Palestine, 2014.*
135 Ibid.
136 UNFPA, *A Value Proposition for the Demographic Dividend*, 2014
137 UNFPA and Higher Council for Youth and Sports, *Status of Youth in Palestine, 2014.*
138 UNICEF disability study, under reporting (2016).
139 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*, Palestine, 2016.
140 Ibid.
141 Palestinian Bureau of Statistics, *Disabled Individuals Census, Gaza Strip, 2012, Main Findings Report*, (Ramallah, 2013)
142 Ministry of Health, *Health Sector Strategic Plan: Gaza Governorates 2014-2018*, Palestine, 2014.

of a female service provider (33%), using transportation (29%), distance (29%), obtaining husband's approval (18%), and not knowing where to go (11%).[143]

A quarter of youth reported they exercised daily for at least half an hour, with a greater proportion of youth in Gaza (32.6%) than in the West Bank (19.6%) exercising daily, likely due to urbanization and sedentary lifestyles.[144] Gender variance was high, with 32% of males exercising compared to 17% of females. Generally, families are reluctant to allow females to participate in sports outside of the house.

Over the past 15 years, the proportion of Palestine's population with some form of disability has significantly increased. Today, using the Washington Group's narrow definition, 1.5% of Palestinian children have a disability, 1.8% for boys and 1.3% for girls, 1.6% in the West Bank and 1.4% in Gaza (1.4%).[145] The prevalence of disability is higher among the youth population. The most common form of childhood disability is mobility-related, followed by cognitive delays, communication issues, vision difficulties, hearing difficulties and then problems with remembering and concentrating. While most disabilities are either congenital, or driven in part by the high rates of consanguineous marriage[146], or the result of a birth injury or illness, a substantial proportion are caused by the ongoing political conflict.

Youth with disabilities face numerous barriers in accessing public services such as education, health and specialized services. Only 6% of persons with disabilities older than 15 years of age are enrolled in education; 38% never ever joined education and 53% are totally illiterate.[147] Youth with disabilities are particularly disadvantaged in terms of participating in university education, joining the labour force, and fulfilling their rights as human beings. Rehabilitation services (particularly sexual rehabilitation) almost do not exist. Palestinian youth with disabilities are also often stigmatized, which greater pressure upon older young people, especially girls. In some households, disability is regarded as a divine punishment which brings shame on the family and may preclude the marriage of abled-bodied siblings.[148] It is not uncommon, therefore, for parents to keep a person with a disability at home and out of sight. Community attitudes also prevent those with disabilities from integrating into their environments. The Disability Survey found that over two-thirds of adolescents with disabilities avoided activities due to public attitudes, at least some of the time.[149] Girls with disabilities are also disproportionately vulnerable to violence, exploitation and abuse from the community – and sometimes even within the family.[150] Despite the improvement in disability-related services, the inclusion policy mandated in the Palestinian Disability Law (1999) goes largely unimplemented. The regulatory frame for protecting persons with disabilities is still not guaranteed.

143 Palestinian Bureau of Statistics, *Disabled Individuals Census, Gaza Strip, 2012, Main Findings Report* (Ramallah, 2013)

144 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings* (Palestine, 2016)

145 Palestinian Bureau of Statistics, & MOSA, *Disability Survey in Palestine: Main Findings*, (Ramallah, 2011)

146 irdah, M. M., Consanguinity profile in the Gaza Strip of Palestine: Large-scale community-based study. *European Journal of Medical Genetics*, 57(2), pp. 90–94, 2014

147 Palestinian Bureau of Statistics, & MOSA, *Disability Survey in Palestine: Main Findings*, (Ramallah, 2011)

148 Pereznieto, P., Jones, N., Abu Hamad, B., Shaheen, M., & Alcala, E., *Effects of the Palestinian National Cash Transfer Programme on children and adolescents: A mixed methods analysis*, (Palestine, 2014)

149 Palestinian Bureau of Statistics, *Disabled Individuals Census, Gaza Strip, 2012, Main Findings Report*, (Ramallah, 2013)

150 Abu-Hamad, B., Jones, N., & Pereznieto, P., Tackling children's economic and psychosocial vulnerabilities synergistically: How well is the Palestinian National Cash Transfer Programme serving Gazan children? *Children and Youth Services Review, 47*(P2), pp. 121–135, (2014) Available at http://doi.org/10.1016/j.childyouth.2014.09.009

5. Psychosocial issues

The continued occupation and political instability constitute a major source of anxiety for young people.[151] In Gaza, youth reported fear of death, injury, war, and loss of work. At the personal level, economic hardship represents the major source of anxiety (higher among males (29%) than females (15%)), followed by labour and family-related issues.[152] Of the compounded psychosocial vulnerabilities facing youth and adolescents, economic hardships have the greatest influence on deteriorating their psychological status.[153] Youth linked many problems to the economic situation: domestic violence, low educational attainment, inadequate socialization, insufficient recreational activities, and dysfunctional relationships between adolescents and their parents. Lack of electricity and other basic services or infrastructure also create many stressors among youth. At school, male youth experience violence, while in the home, girls were more exposed to domestic abuse than their male peers. The closure and repeated Israeli military operations have traumatized many people who have high levels of post-traumatic stress disorder (PTSD), with chronic symptoms including high levels of anxiety and psychosomatic reactions.[154] Young people in the Gaza Strip suffer from PTSD and other forms of anxiety, depression, attention deficit disorder, conduct disorders, increased violence, loss of hope, bad memories, nightmares and bed-wetting.[155]

"Despite the many challenges faced, nearly 80% of youth feel they are very happy or somewhat happy, slightly less in Gaza than the West Bank."

Despite the many challenges faced, nearly 80% of youth feel they are very happy or somewhat happy, slightly less in Gaza than the West Bank.[156] Other studies reveal similar findings.[157] The reported scores could be attributed to high resiliency levels and effective coping. Usually individuals referred to spiritual values and ideologies that help them cope with the main stressors in their lives. Sometimes those polled said their egos (especially men's) limited their tendency to talk about their feelings and express emotions.[158] Also, satisfaction is a subjective feeling and reflects expectations and cultural tendencies. Statistics on happiness could be a reflection of low expectations more than factual satisfaction about life and happiness. Another related factor could be that the respondents don't blame themselves for difficulties they face and instead attribute hardship to the occupation and this gives them a sort of relief, as they are not the cause of these problems or stressors. Interestingly, in 2014, wellbeing in Gaza was

151 UNFPA and Higher Council for Youth and Sports, *Status of Youth in Palestine*, (2014)

152 Ibid.

153 Abu-Hamad, B., Jones, N., Bayoumi, N. Al, & Samuels, F. *Mental health and psychosocial service provision for adolescent girls in post conflict settings: The case of the Gaza Strip*, Gaza, 2015

154 Ibid.

155 Ministry of Health,, *Health Sector Strategic Plan: Gaza Governorates 2014-2018*, (Palestine, 2014)

156 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings*, (Palestine, 2016)

157 Al-Bayoumi, N., *The Status of Wellbeing in Gaza Governorates: Correlates and Implications*, Al-Quds University, 2014

158 Abu-Hamad, B., Jones, N., Bayoumi, N. Al, & Samuels, F, *Mental health and psychosocial service provision for adolescent girls in post conflict settings: The case of the Gaza Strip*, Gaza, 2015

inversely related to age; the older the respondent, the lower his or her wellbeing score.[159]

6. Activities and participation

Surveys found that 6.3% of youth (15-29 years) reported being members of sports clubs. The percentage of participation of youth in volunteer work was higher in the Gaza Strip (21.8%) than in the West Bank (18.1%), possibly due to a higher unemployment rate.[160] Also, volunteering might increase volunteers' employability. Regarding participation in elections, 39.9% of youth reported they would participate (29.4% in the West Bank, compared to 56.8% in the Gaza Strip). However, in another study, 32% of the youth in Gaza reported supporting certain political parties and 71% reported their intention to participate in the upcoming election, the context in Gaza being more and more politicized. Also, joining or supporting political parties promotes access to resources, connections, positions and other privileges. It was observed that higher positive wellbeing scores were reported among respondents who supported political parties than among those who don't.[161] The percentage of young people who use a computer or the internet has reached 69.7% (74.8% in the West Bank, 61.7% in Gaza). The rate of male users was 73.8% compared to female users (65.5%).[162] The vast majority of youth (84.8%) own a mobile phone, 91.9% of males and 77.3% of females. Increasingly, youth are using advanced IT for socializing and work; this helps to break their isolation especially in Gaza.

Youth participation in family decision-making is low, especially for younger family members. In case they do, families more frequently consult males in major decisions. The dominant patriarchal culture in Palestinian community doesn't provide a room for younger generations to participate in family decisions. The generation gap is huge and increasing among youth and their families' older members due to change in access to information, globalization and the use of advanced IT. The use of advanced IT also reduces interactions across generations. Cultural factors can either act as a source of strength for youth and adolescents, or a source of stress. Generally, communities have very limited understanding of the different stages of person's development, including adolescence and youth.[163] This means families seldom create the space needed for children to express themselves, and seldom pay attention to understanding their unique needs and concerns. Regarding gender issues, youth reported that there should be equity across the two genders in basic rights such as access to education and health services; however, males more often feel that controlling household resources and decision-making is their domain. In contrast, females believe that women should play a significant role in major household decisions. Less than one third (30.9%) of youth in Gaza reported that they always make their own decisions independently.[164] Female participation in strategic family decision and in the public sphere in general is limited and this could be attributed to gendered social norms that underpin the prevailing cultural perceptions about roles, choices and options (see Chapter 1 for more).

159 Al-Bayoumi, N. , *The Status of Wellbeing in Gaza Governorates: Correlates and Implications*, Al-Quds University, 2014

160 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings* (Palestine, 2016)

161 Al-Bayoumi, N. *The Status of Wellbeing in Gaza Governorates: Correlates and Implications*, Al-Quds University, 2014

162 Palestinian Bureau of Statistics, *Youth Survey 2015: Key Findings* (Palestine, 2016)

163 Abu-Hamad, B., Jones, N., Bayoumi, N. Al, & Samuels, F. (2015). *Mental health and psychosocial service provision for adolescent girls in post conflict settings: The case of the Gaza Strip*. Gaza.

164 Palestinian Bureau of Statistics, (2016). *Youth Survey 2015: Key Findings*. Palestine.

Chapter 5

Population Projections



In the case of the State of Palestine, where evolution is rapid including for demographic parameters, each new set of recent data should serve to update the existing population projections. The MICS 2014 survey provides most of the adequate elements for this exercise: a recent age and sex structure, fertility measures, age-specific fertility rates and total fertility rate including its determinants, infant and childhood mortality rate.

A. Population by age and sex at the start of the projection

At the start of the projection, the population by age group and sex has been derived to end 2015 from the 2014 MICS survey (see Table V.1 below). The global sex ratio, as determined, is fairly equilibrated: 103.2 males to 100 females. The proportions of the youngsters below 15 years of age is now below the 40% mark but still high (39.4%), whereas the share of the elderly above 65 is still very low at 2.9%. The youth bulge is now almost at its peak at 30%. Under the combined effects of fertility, mortality, international migration trends, and taking into account the built-in momentum, the size and structure of this population will significantly evolve over the next 35 years into the middle of this century, which is the horizon of these projections.

Table V.1
The population of the State of Palestine by age group and sex, end 2015

	(thousands)			(percentage)		
Age	Males	Females	Both sexes	Males	Females	Both sexes
0-4	364	348	711	7.7	7.3	15.0
5-9	307	295	602	6.5	6.2	12.7
10-14	283	271	554	6.0	5.7	11.7
15-19	270	259	528	5.7	5.4	11.1
20-24	249	240	489	5.3	5.0	10.3
25-29	207	198	405	4.3	4.2	8.5
30-34	160	153	313	3.4	3.2	6.6
35-39	133	129	262	2.8	2.7	5.5
40-44	112	109	221	2.4	2.3	4.7
45-49	95	91	185	2.0	1.9	3.9
50-54	79	73	153	1.7	1.5	3.2
55-59	58	55	113	1.2	1.2	2.4
60-64	38	38	76	0.8	0.8	1.6
65-69	25	29	54	0.5	0.6	1.1
70-74	16	21	37	0.3	0.4	0.8
75-79	10	14	24	0.2	0.3	0.5
80+	9	14	23	0.2	0.3	0.5
Total	2,413	2,336	4,749	50.8	49.2	100.0

Source: Palestinian Central Bureau of Statistics, *The Palestinians at the end of year 2015*, 2015, Ramallah, Palestine.

B. Projections of fertility based on future female educational attainment

As mentioned already, fertility is the most important component of population growth for the future – much more so than mortality and international migration. This results in a peculiar attention to its forecast. The analysis in Chapter 2 has pointed to the importance of developmental factors on fertility trends. Through the intermediate factors of fertility (marriage, contraception, separation of spouses, breastfeeding etc.), socio-economic factors affect levels and trends of fertility. However among these socio-economic factors,

the analysis showed that education (and particularly female education) plays the foremost role, much ahead of female employment, which is still very limited in Palestine, and residence in rural, urban, or camp areas. Hence projections are based on female education.

> ***"Education is the socioeconomic factor with highest differential effect on fertility. It is the main catalyst of modernization."***

Education is the socioeconomic factor with highest differential effect on fertility. It is the main catalyst of modernization. It is a key marker for the attributes attached to different social strata. Education – and especially female education – impacts fertility through its proximate determinants. Paradoxically, it is true that women with more education breastfeed less and for shorter durations, which ceteris paribus, might lead to shorter birth intervals and higher fertility. But this effect is offset by that of delayed age at marriage and contraceptive prevalence rates, which are more effective in fertility reduction. Educated women marry later, reducing their pregnancy risk exposure time. They are generally more prone to use contraception, although there might be exceptions.

The intermediate links that fully or partly explain the close, continuous relationship between these two phenomena are numerous. Among which:

- **Educated women are more likely to buck the trend in societies where early marriage is still the general rule**. Educated women are more demanding in their choice of husband, which impacts fertility through the cumulative effect of both spouse's education: educated husbands also often opt for a smaller family size.
- **Children of educated women benefit from much lower levels of infant and childhood mortality than those born to women with less education**. When child mortality is high, by retirement age, a six-parity parent might only engender four survivors among his children, thus an average of two sons to support him in his older age in such societies where social security systems and pension funds are almost inexistent. The situation is different when mortality is low; there could be 5.5 survivors from six children. Hence, all other things being equal, the declining child mortality that is bound up with rising female education, is in itself an effective mean of reducing desired and effective family size, if only for the lowered probability of infant mortality.
- Her family and social circle take more account of an educated woman's personality. **Education empowers women in decision-making**. In societies where extended family and in-laws interference is common, educated women are more able to stand up for their own rights, especially their reproductive choices. Educated women have more of a say than their peers in decisions about the ceremonies of marriage which many times exhaust the economic possibilities of the future household. After marriage, this affects the disposal of household income, decisions about the number and value of children, and choice of family planning methods.

- **Educators, who are also opinion-formers, tend to limit their family size**. The educated population may emulate these pioneers, and model its fertility behavior on theirs. The content and form of education helps change attitudes and behaviors that lead on to marriage and reproduction and a lower desired family size. In this connection, it has been adequately proven that desired family size influences effective fertility far more than the availability of contraception, even when it is supplied free of charge.

- Formal education improves women's abilities to enforce their desired family size; **childbearing is no longer seen as inevitable**, a fatal event. Education is likely to induce a more secular attitude to life.

- **Educated women have a greater awareness of health and family planning issues** even if they are not taught in the classroom, which is most often the case. This promotes increased longer birth timing and use of contraception. Yet, educated women do not always use the most effective modern technology such as the pill or IUD. Less educated women who have recently discovered birth control may be more open to modern family planning methods. But, the more educated might use traditional methods more efficiently.

- **Educated women have a better understanding of the outside world**. They have more confidence to leave the family home and take a paid job. Education also impacts women's fertility through the opportunities it offers for paid work outside the home. Outside work and fertility are at odds, as the opportunity costs of children lead working women to lower their desired family size. Also, economic necessity or recession has made work outside the home – once the preserve of unmarried, widowed or divorced women – a fact of life for married women in need of a second income to run the home.

- **The wider availability of modern consumer goods creates conflict between having access to them and having a large family**. In economic terms, children are also "consumer goods" and desired fertility could be expected to grow with extra earned income. In fact, however, children are a special type of consumer goods, demand for which is income-inelastic or even income-negative. But mass education acts more generally to reverse the perception of children through inter-generational wealth flows. In pre-transitional societies, these flows are from children to parents, whence the interest is the largest possible family size. In transitional societies, however, the flows are reversed chiefly due to demand for education. It then becomes in the parents' interest to limit their family size.

- **Children of educated women will inevitably receive schooling**. Even where education is free, the attendant items such as textbooks, stationary, travel, private lessons, extra courses in foreign languages, music, dance and so on are substantial extra expenditures and add incentive to limit family size. The increasing university attendance pushes many students to try to go abroad to further their studies. Rightly or wrongly, foreign universities are considered better than local ones. This is becoming an increasing trend among educated families. It entails not only smaller family but also longer birth intervals to avoid the drain of having two children being educated abroad at the same time.

- **Finally, educated women in paid employment in the formal sector will rely more on their pensions than on their children to provide for their old ages**. One motivation for high fertility – having sufficient children and especially sons to provide for their old age – has become irrelevant to whole swathes of educated societies.

Broadly the effect of education on fertility is U-shaped. Its effect is low in poor, high-illiteracy societies; high in economic and demographic transition societies; and low again in societies that have achieved their fertility transition.

However, where the effects of shorter breastfeeding by educated women is not counterbalanced by later marriage and greater contraceptive use, fertility may rise. By improving diet, education may also contribute to a rise in fertility. But this has a fairly low and generally limited effect.

The robustness of fertility forecasts built on the level of education, which has been tested often, is due to the fact that, after a certain age, cohorts of women keep their educational level almost constant. Hence, for example the cohort of women aged 20-24 years in 2015 (the generations born in 1990-1994), will be aged 25-29 years in 2020 and 45-49 years in 2040. All along these years, they will keep their present level of education: 12.8% below secondary level, 31% with secondary and 56.2% with higher education. The rates for those 15-19 years of age, who have not yet had the opportunity to access higher education, are extrapolated according to the trends presented by older age groups. The general improvement of the educational situation, here for women in the fertile age groups, is crystal clear, meaning a decrease of the average (non-weighted) of less educated women, the slight decrease of those with secondary education, and the doubling of the proportion of those with higher education as shown below.

Table V.2
Projections of women in fertile age groups by age group and level of education (percentage), Palestine, 2015-2050

Less than secondary school								
Age group	2015	2020	2025	2030	2035	2040	2045	2050
15-19	7.5	2.2	1.0	0.5	0.5	0.5	0.5	0.5
20-24	12.8	7.5	2.2	1.0	0.5	0.5	0.5	0.5
25-29	18.1	12.8	7.5	2.2	1.0	0.5	0.5	0.5
30-34	35.5	18.1	12.8	7.5	2.2	1.0	0.5	0.5
35-39	45.5	35.5	18.1	12.8	7.5	2.2	1.0	0.5
40-44	52.7	45.5	35.5	18.1	12.8	7.5	2.2	1.0
45-49	55.9	52.7	45.5	35.5	18.1	12.8	7.5	2.2
Non-weighted average	**36.8**	**28.7**	**20.3**	**12.9**	**7.0**	**4.1**	**2.0**	**0.9**

Table V.2 *(continued)*

Secondary school								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	28.7	26.7	24.8	23.1	21.5	20.0	18.6	18.6
20-24	31.0	28.7	26.7	24.8	23.1	21.5	20.0	18.6
25-29	30.6	31.0	28.7	26.7	24.8	23.1	21.5	20.0
30-34	29.3	30.6	31.0	28.7	26.7	24.8	23.1	21.5
35-39	29.3	29.3	30.6	31.0	28.7	26.7	24.8	23.1
40-44	29.1	29.3	29.3	30.6	31.0	28.7	26.7	24.8
45-49	25.9	29.1	29.3	29.3	30.6	31.0	28.7	26.7
Non-weighted average	**29.2**	**29.7**	**29.1**	**28.5**	**27.5**	**26.0**	**24.1**	**24.9**
Higher education								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	63.8	71.1	74.2	76.4	78.0	79.5	80.9	80.9
20-24	56.2	63.8	71.1	74.2	76.4	78.0	79.5	80.9
25-29	51.3	56.2	63.8	71.1	74.2	76.4	78.0	79.5
30-34	35.2	51.3	56.2	63.8	71.1	74.2	76.4	78.0
35-39	25.2	35.2	51.3	56.2	63.8	71.1	74.2	76.4
40-44	18.2	25.2	35.2	51.3	56.2	63.8	71.1	74.2
45-49	18.2	18.2	25.2	35.2	51.3	56.2	63.8	71.1
Non-weighted average	**34.1**	**41.7**	**29.1**	**58.6**	**65.5**	**70.0**	**73.8**	**73.8**
TOTAL								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
20-24	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
25-29	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
30-34	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
35-39	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
40-44	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
45-49	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Oriented extrapolation from 2015 to 2050 according to the Multiple Indicator Cluster Surveys (MICS) 2014 data.

Table V.3
Projection of Age-Specific Fertility Rate (ASFR) and the total fertility rate (TFR) by age group and level of education, Palestine, 2015-2050

Less than secondary school								
Age Group	2015	2020	2025	2030	2035	2040	2045	2050
15-19	54	50	47	44	41	39	36	34
20-24	225	211	197	185	173	162	152	142
25-29	273	256	240	224	210	197	184	173
30-34	198	186	174	163	153	143	134	125
35-39	115	108	101	95	89	83	78	73
40-44	39	37	34	32	30	28	26	25
45-49	3	3	3	3	3	2	2	2
TFR	**4.54**	**4.25**	**3.98**	**3.73**	**3.49**	**3.27**	**3.07**	**2.87**
Secondary school								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	47	44	41	38	36	34	32	30
20-24	196	183	172	161	151	141	132	124
25-29	238	223	209	195	183	171	161	150
30-34	172	161	151	142	133	124	116	109
35-39	100	94	88	82	77	72	68	63
40-44	34	32	30	28	26	25	23	22
45-49	3	3	3	2	2	2	2	2
TFR	**3.95**	**3.70**	**3.47**	**3.25**	**3.04**	**2.85**	**2.67**	**2.50**
Higher education								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	39	37	34	32	30	28	26	25
20-24	164	153	144	134	126	118	110	103
25-29	199	186	174	163	153	143	134	126
30-34	144	135	126	118	111	104	97	91
35-39	84	79	74	69	65	60	57	53
40-44	28	27	25	23	22	21	19	18
45-49	2	2	2	2	2	2	2	2
TFR	**3.30**	**3.09**	**2.90**	**2.71**	**2.54**	**2.38**	**2.23**	**2.09**

Table V.3 *(continued)*

TOTAL								
	2015	2020	2025	2030	2035	2040	2045	2050
15-19	48	39	36	34	31	29	27	26
20-24	201	166	152	142	132	123	115	107
25-29	244	206	189	173	161	150	140	131
30-34	177	152	140	128	118	109	102	95
35-39	103	94	83	76	70	64	60	55
40-44	35	33	30	26	24	22	20	19
45-49	3	3	3	2	2	2	2	2
TFR	**4.06**	**3.46**	**3.16**	**2.91**	**2.69**	**2.50**	**2.33**	**2.17**

Source: Oriented extrapolation according to previous fertility surveys and Multiple Indicator Cluster Surveys (MICS) 2014

Fertility trends by educational levels have been presented in the analysis of fertility in the preceding chapter. These trends are now oriented towards the future, according to varying scenarios. In the first scenario, it is assumed that the recent trends of fertility decrease will remain at their present observed trends in 2006-2014. This is the medium variant or the most likely scenario.

In this scenario, the total decrease of fertility at the country level results from the synergy of two combined causes:

- The first cause is the educational specific fertility decrease, i.e. each subgroup of women by level of education (less than secondary, secondary and higher) will experience a certain level of fertility decrease derived from the past observed trends: -1.3% per year for the first group, -1.9% for the second and -2.5% for the third one. Hence, the total fertility rate of the first group is assumed to decrease from 4.54 children per woman in 2015 to 2.87 in 2050, for the second from 3.95 to 2.50 and from 3.30 to 2.09 for the third one. Hence, women with a higher than secondary school level of education would reach in 2050 the replacement level.
- The second cause is the restructuring of the fertile age group by level of education. The share of women with low levels of education and high fertility will strongly diminish, whereas women with higher levels of education will be increasingly represented, and those with secondary education will decrease slightly.

As a result of these two combined effects, the total fertility rate in the State of Palestine will decrease from 4.06 to 2.17, a few decimal points above the replacement level.

In the **high scenario**, on the other hand, fertility changes are only due to the restructuring of the women's fertile age group by level of education. In this scenario, the total fertility rate of women with less than secondary school education remains constant at 4.54, for those with secondary school it remains at 3.95, and for women with higher education it is at 3.30. **In this scenario, the total fertility rate for the State of Palestine would slightly decrease from 4.06 to 3.44.**

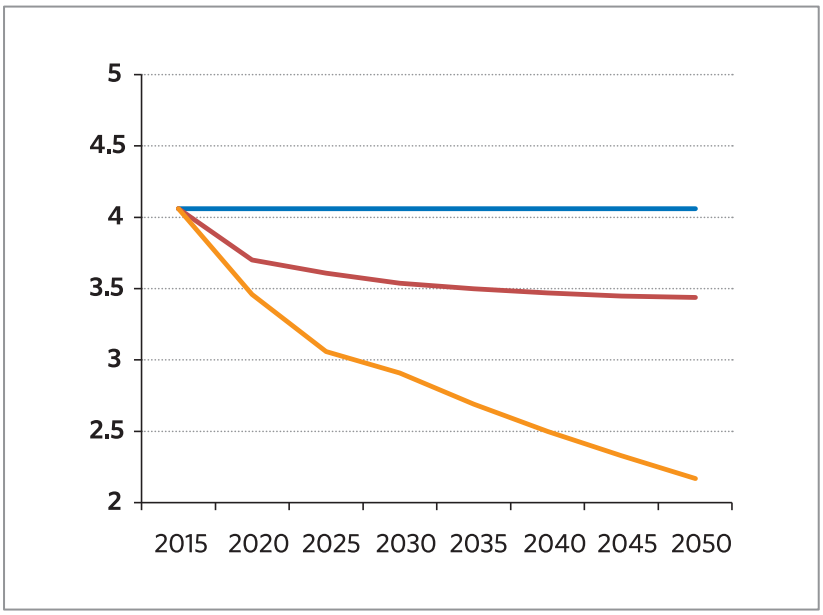
Finally, a **constant scenario is envisaged where fertility remains at its present level of 4.06** all along the projection period. This unrealistic scenario is provided just to provide a view of the demographic scene if fertility remains at its present high level.

Table V.4
Projections for the total fertility rate (TFR), Palestine 2015-2050

Scenario	2015	2020	2025	2030	2035	2040	2045	2050
Constant	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06
High	4.06	3.70	3.61	3.54	3.50	3.47	3.45	3.44
Medium	4.06	3.46	3.06	2.91	2.69	2.50	2.33	2.17

Source: Projections according to women's level of education 2015-2050

Figure V.1
Projections for the total fertility rate (TFR), Palestine 2015-2050



C. Other assumptions

Assumptions on mortality are the same for all three scenarios. Based on PCBS observations on life expectancy at birth: 71.8 years for males and 74.7 years for females (2014), it is assumed that this life-expectancy will regularly increase until 2050, to reach 74.9 for males and 80.9 for females.

As for international migration, its recent role in population growth was found to be relatively small in comparison with fertility and mortality. Therefore, and in line with PCBS presumptions of net international migration equal to zero until 2025, it was assumed that this migration will remain equal to zero until 2050[165].

165 Population Projections are based on current migration flow, projections can be updated in case of change in migration flows or return of refugees

D. Population projections for State of Palestine

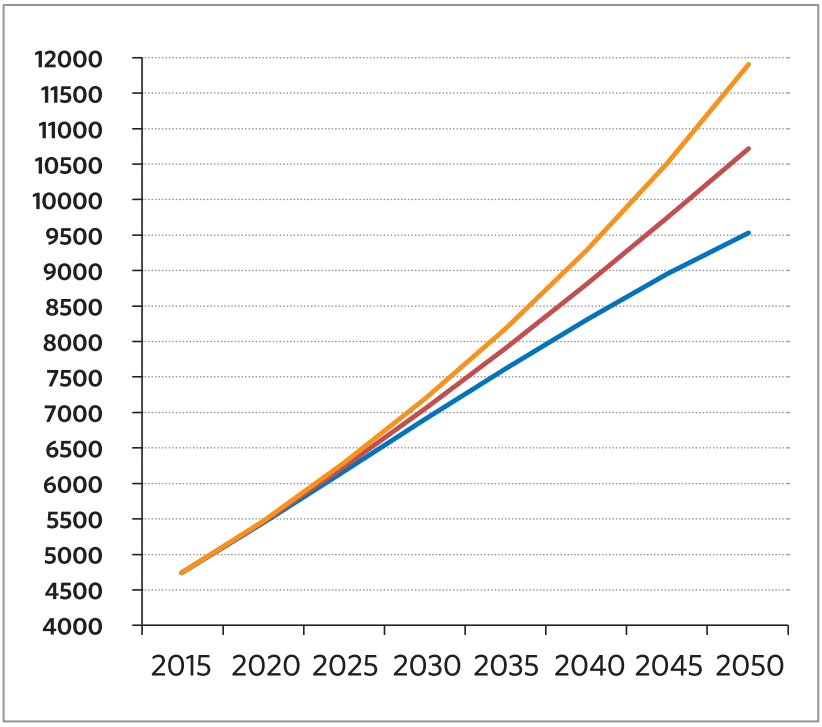
The following tables provide population projections for the entire population of Palestine through 2050[166].

Table V.5
Total population (thousands) of the State of Palestine, according to three scenarios, 2015-2050

	2015	2020	2025	2030	2035	2040	2045	2050
Medium scenario	4,752	5,448	6,175	6,900	7,610	8,298	8,944	9,519
High scenario	4,752	5,460	6,236	7,051	7,901	8,798	9,735	10,707
Constant scenario	4,752	5,472	6,294	7,196	8,184	9,279	10,509	11,893

Source: Projection by the cohort-component methods, three variants of fertility trends

Figure V.2
Population projections for the State of Palestine, according to three scenarios



166 The number of projections until 2025 may differ slightly from PCBS projections, due to different methodology used for the purpose of this study. Population projections can be updated using the upcoming 2017 Population Census.

"The most striking finding of these projections is that according to the most likely scenario, the medium one, the total size of the population in Palestine will double in one generation (from 2015 to 2050). And this doubling will happen notwithstanding the fact that fertility is slashed by half during this same period, from 4.06 to 2.17 children per women."

The most striking finding of these projections is that according to the most likely scenario, the medium one, the total size of the population in Palestine will double from 4,752,000 to 9,519,000, in one generation (from 2015 to 2050). And this doubling will happen notwithstanding the fact that fertility is slashed by half during this same period, from 4.06 to 2.17 children per women. This ineluctable doubling is the result of the population momentum that is well-engraved in the population age-sex structure, and the fact that even a decline in fertility will not prevent an ever-increasing number of births due to the arrival of large female age-cohorts at reproductive age.

Varying mortality assumptions on levels and patterns are not likely to affect these results, except by a few thousands. The same is true for international migration, which could also play a role but on the margins. Large outward movements are to be excluded since the Palestinian population has already paid a large debt in this regard (the wars of 1948, 1967) and it seems highly unlikely that such immense demographic changes would occur in the coming future with the international community keeping an attentive eye.

Another interesting impact of this built-in population momentum is the fact that the end results of population projections for the medium and high scenarios are relatively close: 9.5 and 10.7 million, a 12% difference in spite of the assumed stability of part of women's fertility by their level of education at the 2015 level. This proves a contrario the important impact of modifying the fertile age group by level of education as a key component of fertility transition in Palestine. Again, the constant scenario where fertility stops decreasing is entirely unrealistic and is portrayed only to provide a point of comparison for the population were it to remains on its current track – around 12 million people in 2050.

The following table provides detailed population projections for 2015-2050 by age group and sex.

Table V.6
Population by age group and sex (thousands), State of Palestine 2015-2050, medium scenario

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	364	348	712	396	375	771	418	396	814	424	402	826
5-9	307	295	602	362	346	708	394	373	767	416	394	810
10-14	283	271	554	306	295	601	362	345	707	394	373	767
15-19	270	259	529	282	271	553	306	294	600	361	345	706
20-24	249	240	489	269	258	527	282	270	552	305	294	599
25-29	207	198	405	248	239	487	268	258	526	281	269	550
30-34	160	153	313	206	197	403	247	238	485	267	257	524
35-39	133	129	262	159	152	311	205	196	401	246	237	483
40-44	112	109	221	132	128	260	158	151	309	203	195	398
45-49	95	91	186	110	108	218	130	127	257	156	150	306
50-54	79	73	152	93	89	182	108	106	214	127	125	252
55-59	58	55	113	76	71	147	89	87	176	104	103	207
60-64	38	38	76	54	52	106	72	68	140	85	83	168
65-69	25	29	54	34	35	69	49	49	98	65	63	128
70-74	16	21	37	21	25	46	29	31	60	43	43	86
75-79	10	14	24	12	17	29	16	21	37	23	26	49
80+	9	14	23	10	16	26	12	20	32	16	24	40
Total	**2,415**	**2,337**	**4,752**	**2,770**	**2,674**	**5,444**	**3,145**	**3,030**	**6,175**	**3,516**	**3,383**	**6899**

Table V.6 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	425	403	828	425	403	828	416	395	811	393	373	766
5-9	423	400	823	424	402	826	424	402	826	416	394	810
10-14	416	394	810	422	400	822	424	402	826	424	402	826
15-19	393	373	766	415	393	808	422	400	822	424	401	825
20-24	361	345	706	393	372	765	415	393	808	421	399	820
25-29	304	293	597	360	344	704	392	372	764	414	392	806
30-34	280	269	549	304	292	596	359	343	702	391	371	762
35-39	266	256	522	279	268	547	303	292	595	358	343	701
40-44	244	236	480	265	255	520	277	267	544	301	291	592
45-49	201	193	394	242	234	476	262	253	515	275	265	540
50-54	153	148	301	198	191	389	238	232	470	259	250	509
55-59	124	122	246	149	144	293	193	187	380	233	227	460
60-64	99	99	198	118	117	235	143	140	283	186	181	367
65-69	78	78	156	92	93	185	110	111	221	133	132	265
70-74	57	57	114	68	70	138	81	85	166	97	101	198
75-79	34	36	70	45	48	93	55	60	115	66	73	139
80+	22	30	52	32	41	73	45	56	101	58	73	131
Total	**3,880**	**3,732**	**7,612**	**4,231**	**4,067**	**8,298**	**4,559**	**4,390**	**8,949**	**4,849**	**4,668**	**9,517**

Source: Medium variant, cohort-component method

Figure V.3
The age pyramid in Palestine in 2015 and 2050, medium scenario

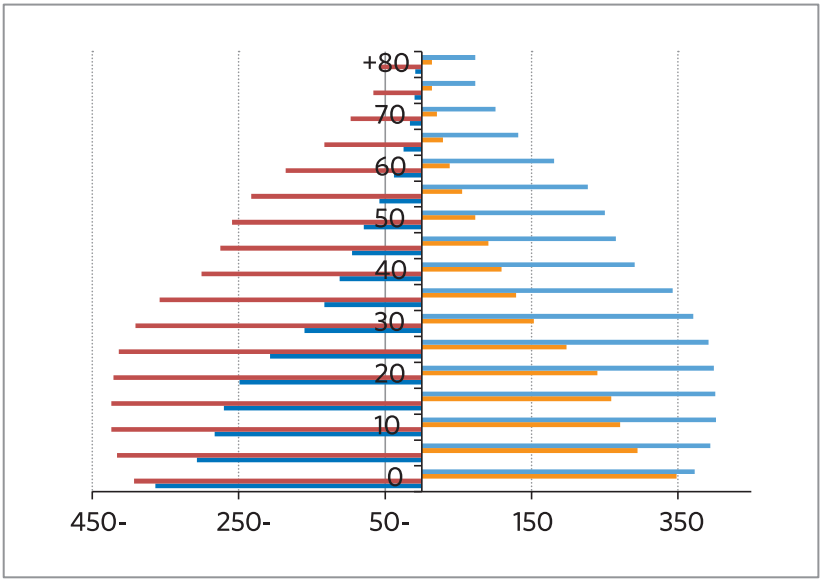
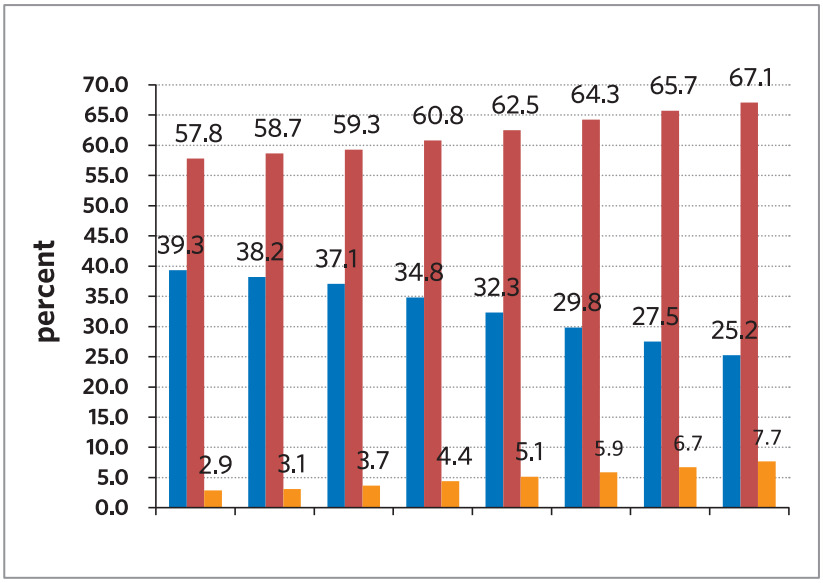


Table V.7
Age structure by large age groups 2015-2050, medium scenari

Large age groups	2015	2020	2025	2030	2035	2040	2045	2050
Thousands								
0-14	1,868	2,080	2,288	2,403	2,461	2,476	2,463	2,402
15-64	2,746	3,194	3,660	4,193	4,759	5,333	5,883	6,382
65+	138	170	227	303	392	489	603	733
Percentage								
0-14	39.3	38.2	37.1	34.8	32.3	29.8	27.5	25.2
15-64	57.8	58.7	59.3	60.8	62.5	64.3	65.7	67.1
65+	2.9	3.1	3.7	4.4	5.1	5.9	6.7	7.7

Source: Projections by the cohort-component method, medium variant

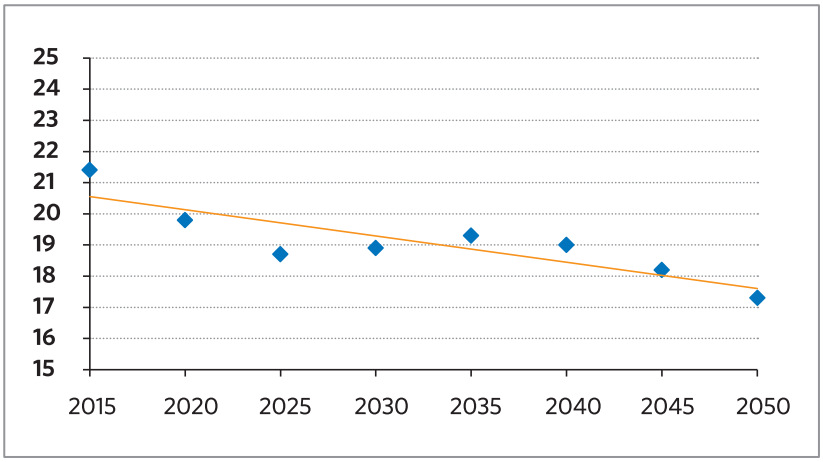
Figure V.4
Age structure by large age groups 2015-2050, medium scenario



Extensive transformation of the age structure is anticipated over the next 35 years with a fall in the proportion of youngsters below age 15; their share is expected to diminish from 39% to 25%. However, their size in absolute terms will continue to increase until 2040, before slightly decreasing afterwards. The youth bulge, which reached its apex in 2015 with the 15-24 year age group comprising 21.4% of the total population, will slightly decrease during the next 35 years at a moderate rate. This might help ease current tensions concerning higher education and the job market, despite that the number of youngsters overall will significantly increase from 2015 until 2050.

Conversely, the proportion of elderly will more than double over the same period, from 2.9% to 7.7%, whereas their size in absolute terms will be multiplied by 5.3, with all the implications that this new situation implies in time of health care and social protection.

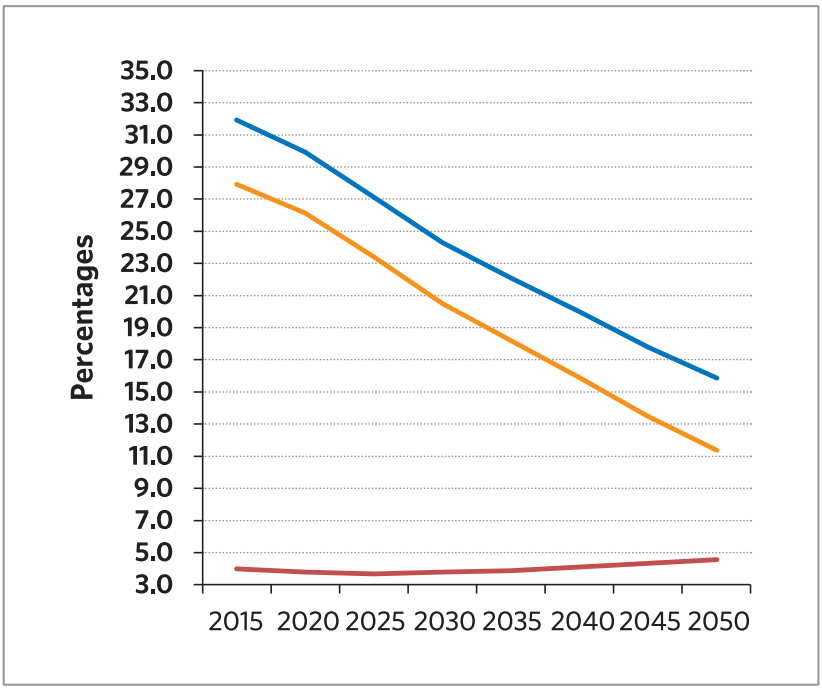
Figure V.5
The end of the youth bulge in Palestine, 2015-2050, medium scenario



In terms of the demographic dependency ratio (and demographic dividends), the new population landscape might offer interesting opportunities. As the demographic dependency ratio likely diminishes from 0.73 to 0.49 dependents (youngsters and elderly) in relationship to the active age population, there could be bonuses and less of a weight on society.

The last chart presented here provides the trends of the demographic transition (expressed in classical terms of birth, death and rate of natural increase) in Palestine. The crude birth rate will be reduced by half between 2015 and 2050, while the crude death rate will slightly increase as a result of the aging of the population. The rate of natural increase, from its present high value of 2.8% will decline to a more manageable rate of 1.1%, but which still enables a doubling of the population in a matter of 60 years.

Figure V.6
The coming demographic transition in Palestine, 2015-2050, medium scenario



E. Regional projections: the West Bank, East Jerusalem, and Gaza Strip

The political, socioeconomic and living conditions in the West Bank, East Jerusalem (as part of the West Bank) and the Gaza Strip are so divergent that they alone justify population projections for each region. Despite these striking differences, however, there is one common factor: the quest of the population at large for education, and particularly the quest of women to improve their education.

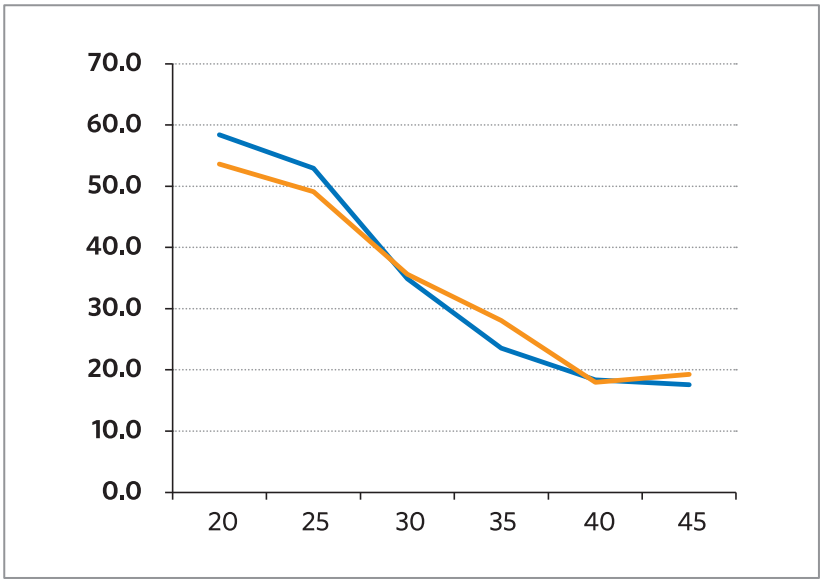
As shown in the following table and chart, educational levels in the West Bank and the Gaza Strip are fairly close. It is expected therefore that this decisive socioeconomic determinant will affect fertility decisions and behaviour and therefore population development to the same extent in the two regions.

Table V.8
Women in reproductive age groups by level of education, by region, 2014

West Bank				
	Less than secondary school	Secondary school	Higher education	Total
15-19	51.1	28.3	20.6	100.0
20-24	12.4	29.2	58.4	100.0
25-29	18.7	28.4	52.9	100.0
30-34	38.2	26.9	34.9	100.0
35-39	47.0	29.4	23.6	100.0
40-44	53.8	27.8	18.4	100.0
45-49	58.6	23.8	17.6	100.0
Gaza				
	Less than secondary school	Secondary school	Higher education	Total
15-19	53.8	29.3	16.9	100.0
20-24	13.2	33.2	53.6	100.0
25-29	17.3	33.6	49.1	100.0
30-34	31.6	32.8	35.6	100.0
35-39	42.8	29.2	28.1	100.1
40-44	50.5	31.5	18.0	100.0
45-49	50.7	30.0	19.3	100.0

Source: Palestinian Central Bureau of Statistics, Palestinian Multiple Cluster Survey, op.cit.

Figure V.7
Proportion of women in higher education by age (percentage), West Bank and Gaza, 2014



1. Assumptions for the West Bank and Gaza Strip

Since the preceding table has shown that female educational attainments resemble each other in the West Bank and Gaza Strip, their fertility (the determining factor in the future) will not vary that much as a result of differences in educational patterns, but rather due to basic differences between the West Bank and Gaza. The Gaza Strip has more precocious marriage, a higher adolescent birth rate, lower contraceptive prevalence, and so on – and therefore ultimately higher fertility. The MICS survey in 2014 has shown that with a TFR equal to 4.5, Gaza's fertility is 22% higher than in the West Bank, in spite of very similar educational attainment.

But contrariwise, the latest trends show that in the Gaza Strip fertility is now decreasing at a faster rate than in the West Bank, and that this converging trend is gaining steam. Between 1999 and 2013, fertility has fallen by -0.7 child in the West Bank against -1.2 in Gaza almost twice. These recent trends have been extrapolated. Therefore, according to the medium variant (the only one applied here at the regional level), it should be assumed that by 2050, the total fertility rate in the West Bank will diminish from 3.73 in 2015 to 2.00 (thus slightly below the replacement level), whereas in the Gaza Strip, it will diminish almost by half while remaining significantly above replacement level: 2.41 children per woman.

Table V.9
Projected total fertility rate in the West Bank and Gaza Strip, 2015-2050

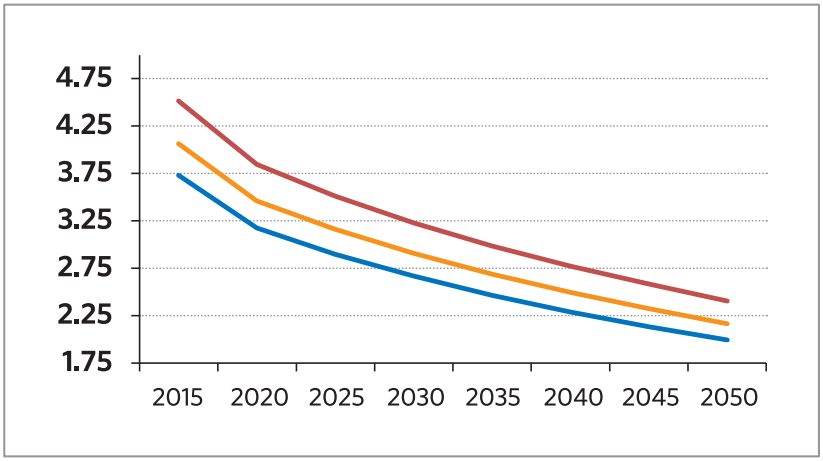
	2015	2020	2025	2030	2035	2040	2045	2050
West Bank	3.73	3.17	2.90	2.67	2.47	2.29	2.14	2.00
Gaza Strip	4.51	3.84	3.51	3.23	2.99	2.78	2.59	2.41
Total	4.06	3.46	3.16	2.91	2.69	2.50	2.33	2.17

Source: Calculation according to observed trends.

As for mortality, it is assumed that life expectancy at birth in the West Bank and Gaza will increase at the same pace, but with a higher life expectancy at birth for the first region at the start of the projections for both males and for females.

Concerning migration, the phenomenon most difficult to predict, it was assumed that the present status quo will persist, with virtually no internal migration from Gaza to the West Bank and vice versa and no outward migration from Palestine.

Figure V.8
Projected fertility trends in the West Bank and Gaza Strip, 2015-2050



2. Results of projections for the West Bank and the Gaza Strip

These projections point to another striking result: the reshaping of the Palestinian population between its two regions. The more populated West Bank in 2015 will gain 1.8 million inhabitants in 35 years, much less than the Gaza Strip, which will have to accommodate some three million more inhabitants in the meantime. Henceforth, although decreasing, persistent higher fertility for the Gaza Strip population plus its population momentum, will allow it to become more populated than the West Bank, becoming the absolute majority of the population of Palestine in 2050: 50.3%.

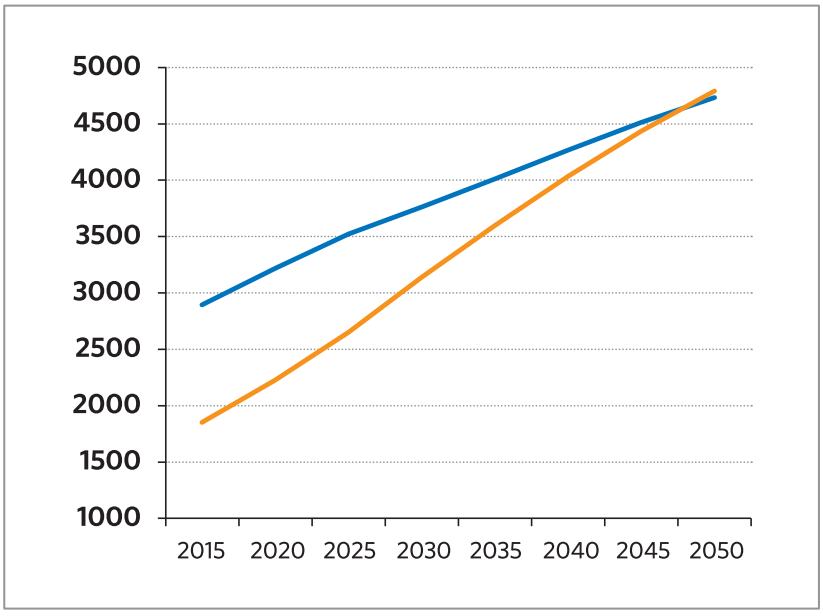
Is this growth sustainable? If one single criteria is to be mentioned, it is Gaza's population density, which will approach the unbelievable figure of 14,000 inhabitants per square kilometre. And yet, it should be stressed that a faster fertility transition in Gaza won't significantly change the balance between the two regions, especially that the occupied East Jerusalem population has been counted in these projections as an integral part of the West Bank. The same is true for population density.

Table V.10
Future population[167] (thousands) in the West Bank and Gaza Strip, distribution and annual rate of growth

Population (thousands)								
	2015	2020	2025	2030	2035	2040	2045	2050
West Bank	2,898	3,221	3,524	3,762	4,010	4,263	4,506	4,728
Gaza	1,854	2,227	2,651	3,138	3,600	4,035	4,438	4,791
Total	**4,752**	**5,448**	**6,175**	**6,900**	**7,610**	**8,298**	**8,944**	**9,519**
Percentages								
	2015	2020	2025	2030	2035	2040	2045	2050
West Bank	61.0	59.1	57.1	54.5	52.7	51.4	50.4	49.7
Gaza	39.0	40.9	42.9	45.5	47.3	48.6	49.6	50.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Rate of growth (%)								
		15-20	20-25	25-30	30-35	35-40	40-45	45-50
West Bank		2.11	1.80	1.30	1.29	1.23	1.12	0.95
Gaza		3.68	3.48	3.38	2.74	2.28	1.89	1.54
Total		2.73	2.51	2.22	1.96	1.73	1.50	1.25

Source: Calculation according to orientated trends.

Figure V.9
The convergence of total population in the West Bank and Gaza Strip populations in 2050



167 The total populations in this table might be slightly different from presentations of the detailed population by age groups and sex, because of rounding.

Table V.11
Population (thousands) by age group and sex, West Bank, 2015-2050, medium variant

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	204	195	399	189	179	368	183	174	357	154	146	300
5-9	177	171	348	203	194	397	188	178	366	183	173	356
10-14	167	160	327	177	171	348	203	194	397	188	178	366
15-19	163	156	319	167	160	327	176	171	347	203	194	397
20-24	154	147	301	163	156	319	166	160	326	176	170	346
25-29	128	123	251	153	147	300	162	155	317	166	159	325
30-34	100	95	195	127	123	250	153	146	299	162	155	317
35-39	85	82	167	99	95	194	127	122	249	152	146	298
40-44	74	72	146	84	81	165	99	94	193	126	121	247
45-49	63	61	124	73	71	144	83	81	164	98	93	191
50-54	53	49	102	62	60	122	72	70	142	82	80	162
55-59	38	37	75	51	48	99	60	58	118	69	69	138
60-64	25	25	50	36	35	71	48	46	94	57	56	113
65-69	17	19	36	23	23	46	33	33	66	45	43	88
70-74	11	14	25	15	17	32	20	21	41	28	30	58
75-79	7	10	17	9	11	20	11	14	25	15	17	32
80+	6	10	16	7	12	19	9	14	23	11	17	28
Total	**1,472**	**1,426**	**2,898**	**1,638**	**1,583**	**3,221**	**1,793**	**1,731**	**3,524**	**1,915**	**1,847**	**3,762**

Table V,11 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	166	157	323	175	165	340	178	169	347	174	165	339
5-9	154	145	299	165	156	321	174	165	339	178	169	347
10-14	183	173	356	153	145	298	165	156	321	174	165	339
15-19	188	178	366	183	173	356	153	145	298	165	156	321
20-24	202	193	395	188	178	366	182	173	355	153	145	298
25-29	176	170	346	202	193	395	187	178	365	182	173	355
30-34	165	159	324	175	170	345	202	193	395	187	177	364
35-39	161	154	315	165	158	323	175	169	344	201	192	393
40-44	151	145	296	160	154	314	164	158	322	174	169	343
45-49	125	120	245	150	144	294	159	153	312	163	157	320
50-54	96	92	188	123	119	242	148	142	290	157	151	308
55-59	80	78	158	94	90	184	120	117	237	145	140	285
60-64	66	66	132	76	75	151	90	87	177	116	114	230
65-69	52	53	105	62	62	124	71	71	142	85	83	168
70-74	39	39	78	46	48	94	55	57	112	64	66	130
75-79	23	25	48	32	33	65	38	41	79	45	50	95
80+	15	21	36	22	29	51	32	39	71	41	52	93
Total	**2,042**	**1,968**	**4,010**	**2,171**	**2,092**	**4,263**	**2,293**	**2,213**	**4,506**	**2,404**	**2,324**	**4,728**

Source: Calculation by the cohort-component method, according to orientated trends.

Table V.12
Population (thousands) by age group and sex, Gaza Strip, 2015-2050, medium variant

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	160	153	313	207	196	403	235	222	457	270	256	526
5-9	130	124	254	159	152	311	206	195	401	233	221	454
10-14	116	111	227	129	124	253	159	151	310	206	195	401
15-19	107	103	210	115	111	226	130	123	253	158	151	309
20-24	95	93	188	106	102	208	116	110	226	129	124	253
25-29	79	75	154	95	92	187	106	103	209	115	110	225
30-34	60	58	118	79	74	153	94	92	186	105	102	207
35-39	48	47	95	60	57	117	78	74	152	94	91	185
40-44	38	37	75	48	47	95	59	57	116	77	74	151
45-49	32	30	62	37	37	74	47	46	93	58	57	115
50-54	26	24	50	31	29	60	36	36	72	45	45	90
55-59	20	18	38	25	23	48	29	29	58	35	34	69
60-64	13	13	26	18	17	35	24	22	46	28	27	55
65-69	8	10	18	11	12	23	16	16	32	20	20	40
70-74	5	7	12	6	8	14	9	10	19	15	13	28
75-79	3	4	7	3	6	9	5	7	12	8	9	17
80+	3	4	7	3	4	7	3	6	9	5	7	12
Total	**943**	**911**	**1,854**	**1,132**	**1,091**	**2,223**	**1,352**	**1,299**	**2,651**	**1,601**	**1,536**	**3,137**

Table V.12 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	259	246	505	250	238	488	238	226	464	219	208	427
5-9	269	255	524	259	246	505	250	237	487	238	225	463
10-14	233	221	454	269	255	524	259	246	505	250	237	487
15-19	205	195	400	232	220	452	269	255	524	259	245	504
20-24	159	152	311	205	194	399	233	220	453	268	254	522
25-29	128	123	251	158	151	309	205	194	399	232	219	451
30-34	115	110	225	129	122	251	157	150	307	204	194	398
35-39	105	102	207	114	110	224	128	123	251	157	151	308
40-44	93	91	184	105	101	206	113	109	222	127	122	249
45-49	76	73	149	92	90	182	103	100	203	112	108	220
50-54	57	56	113	75	72	147	90	90	180	102	99	201
55-59	44	44	88	55	54	109	73	70	143	88	87	175
60-64	33	33	66	42	42	84	53	53	106	70	67	137
65-69	26	25	51	30	31	61	39	40	79	48	49	97
70-74	18	18	36	22	22	44	26	28	54	33	35	68
75-79	11	11	22	13	15	28	17	19	36	21	23	44
80+	7	9	16	10	12	22	13	17	30	17	21	38
Total	**1,838**	**1,764**	**3,602**	**2,060**	**1,975**	**4,035**	**2,266**	**2,177**	**4,443**	**2,445**	**2,344**	**4,789**

Source: Based on the total and West Bank projections.

Table V.13
Age structure by large age groups, West Bank and Gaza Strip, 2015-2050

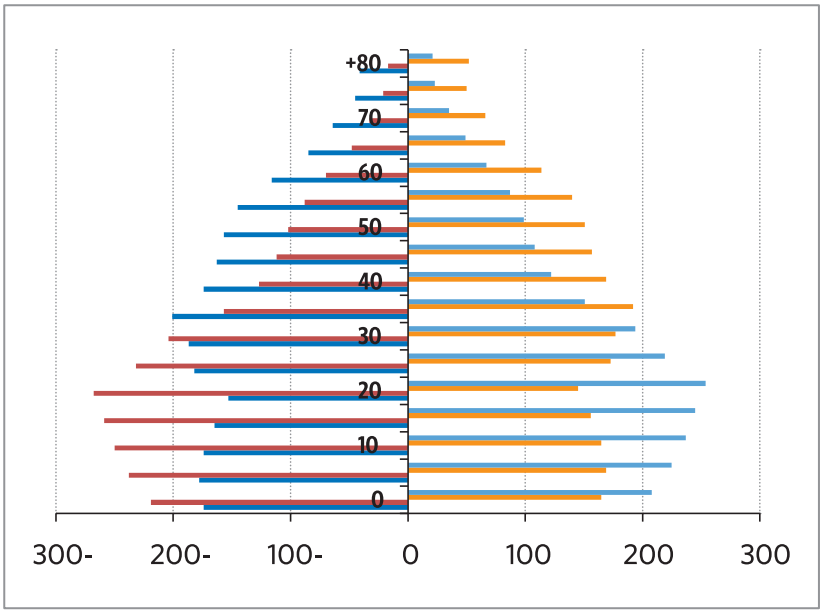
West Bank								
	2015	2020	2025	2030	2035	2040	2045	2050
thousands								
0-14	1,074	1,113	1,120	1,022	978	959	1,007	1,025
15-64	1,730	1,991	2,249	2,534	2,765	2,970	3,095	3,217
65+	94	117	155	206	267	334	404	486
Total	**2,898**	**3,221**	**3,524**	**3,762**	**4,010**	**4,263**	**4,506**	**4,728**
0-14	37.1	34.6	31.8	27.2	24.4	22.5	22.3	21.7
15-64	59.7	61.8	63.8	67.4	69.0	69.7	68.7	68.0
65+	3.2	3.6	4.4	5.5	6.7	7.8	9.0	10.3
Gaza Strip								
	2015	2020	2025	2030	2035	2040	2045	2050
thousands								
0-14	794	967	1,168	1,381	1,483	1,517	1,456	1,377
15-64	1,016	1,203	1,411	1,659	1,994	2,363	2,788	3,165
65+	44	53	72	97	125	155	199	247
Total	**1,854**	**2,223**	**2,651**	**3,137**	**3,602**	**4,035**	**4,443**	**4,789**
0-14	42.8	43.5	44.1	44.0	41.2	37.6	32.8	28.8
15-64	54.8	54.1	53.2	52.9	55.4	58.6	62.8	66.1
65+	2.4	2.4	2.7	3.1	3.5	3.8	4.5	5.2

Source: Based on the total and the West Bank projections.

As shown in this table, the proportions of youngsters will decline in both the West Bank and in the Gaza Strip from 37% to 22% and from 43% to 29%, respectively. The proportion will decline steadily in the West Bank, but in the Gaza Strip, it will slightly increase until 2025 before decreasing. In the West Bank, the proportions of the elderly will more than triple from 3.2% to 10.3%, while doubling in Gaza. These contrasting results will also affect the demographic dependency ratio and the youth bulge.

The age pyramid of the two regions at the horizon of the projections shows the higher concentration of the youngsters in the population structure of Gaza as compared to the West Bank. This has great socioeconomic and political significance.

Figure V.10
Contrasting age pyramids in the West Bank and Gaza Strip in 2050



The final table presented here compares the results of different sets of recent population projections for the State of Palestine conducted by various parties.

Table V.14
Comparison of projected population (thousands) in 2050, according to different sources

	This projection	US census Bureau*	Courbage	UN Population Division	Regional Planning / MAS
	2016	2015	2012	2015	2012
West Bank	4,731	4,400	4,385	n/a	7,136
Gaza Strip	4,788	3,394	4,127	n/a	5,124
Total	9,591	7,794	8,512	9,791	12,260

Sources: US Census Bureau, Population data sheet, Washington D.C. 2015.
Youssef Courbage, "Demographic trends and challenges in case of statehood Palestine 2012-2048," IALIIS, Birzeit, Palestine, 2012.
United Nations Population Division, *The 2015 revision*, New York, 2015.
Regional Planning / MAS, *Dirasat tahliliyya hawla al tawakkouaat el soukkaniya: Falastine 2025 wa Falastine 2050*, Ramallah, State of Palestine, 2012.

As can be seen, the results of this projection are very close to those obtained recently by the United Nations Population Division: 9.6 and 9.8 million for the country as a whole. They are higher than those of the US Census Bureau – 7.8 million (not including East Jerusalem) – and by Courbage in 2012 –8.5 million. But they are lower than those of the Ministry of Planning in 2012, which stood at 12.3 million. As for the distribution between the West Bank and Gaza, this projection provides for nearly equal populations, unlike the previous ones.

The advantages of this study's projections, made ahead of the next population census planned in December 2017, are that they are based on the most recent population data for the population size and structure and the components of its growth: fertility and mortality.

Also, they intimately connect population and development since they are based on a detailed projection of fertility, built on the expected transformations of the educational structure of the population. The fact that they do not integrate the migration variable is not a major drawback, since forecasting migration in the case of Palestine is risky and depends so much on the political and socioeconomic context.

3. Projections for East Jerusalem

Although an integral part of the West Bank, the Palestinian population of East Jerusalem, occupied and annexed for almost half a century (1967), has some demographic characteristics that justify its own projection. Besides, East Jerusalem from the statistical point of view is covered both by the Palestinian official bureau of statistics, as area J1 (albeit sometimes spottily due to access and other issues), and the Israeli official bureau of statistics, as a part of the unilateral Israeli municipal borders. Hence, inevitably, there may be some discrepancies between the two sets of data and this section will borrow from both.

In view of its strategic, geopolitical and symbolic importance, knowledge of the future development of the Jerusalem population for the coming generation is a must, especially that many of its characteristics (fertility, mortality, migration, age-sex structure, etc.) differ from those of the West Bank.

Table V.15
Population by age group and sex (thousands) of East Jerusalem, end 2015

Age groups	Males	Females	Total
0-4	18	17	34
5-9	18	17	34
10-14	17	16	32
15-19	15	14	29
20-24	12	12	25
25-29	9	10	19
30-34	9	9	17
35-39	8	8	16
40-44	7	7	14
45-49	6	6	12
50-54	5	5	10
55-59	3	4	7
60-64	2	3	5
65-69	2	2	4
70-74	1	2	3
75-74	1	1	2
80+	1	1	2
Total	**133**	**133**	**266**

Source: Adapted from Palestinian Central Bureau of Statistics, *The Jerusalem Statistical Yearbook 2015*, Ramallah, Palestine 2015, Israel CBS, *Statistical Yearbook 2015*, Jerusalem Institute for Israel Studies, Statistical Yearbook, 2015, Jerusalem, 2015.

As shown in the preceding table, the population of East Jerusalem has almost the same proportion of young persons as the West Bank (37.6%) and more aged persons (4.1%) which is a sign of an earlier demographic transition.

Table V.16
Demographic indicators for Palestinians in East Jerusalem, 1998-2014

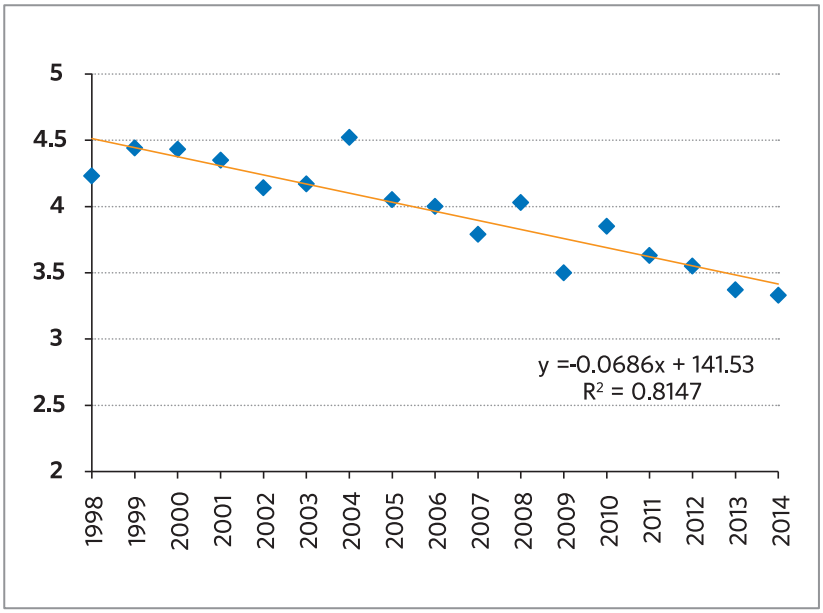
	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total fertility rate	4.23	4.44	4.43	4.35	4.14	4.17	4.52	4.05	4.00
Crude birth rate (per 1,000)	36.2	37.5	36.3	34.6	32.6	32.4	35.0	31.0	30.0
Infant mortality rate (per 1,000)	9.6	9.6	7.1	7.2	7.3	6.4	6.6	6.3	6.2
Crude death rate (per 1,000)	2.9	2.8	3.1	2.8	2.9	3.1	2.6	2.8	2.8
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	
Total fertility rate	3.79	4.03	3.50	3.85	3.63	3.55	3.37	3,33	
Crude birth rate (per 1,000)	27.7	29.8	29.9	29.6	27.9	27.3	26.0	25.9	
Infant mortality rate (per 1,000)	5.8	6.4	6.5	7.0	6.8	5.8	5.0	4.8	
Crude death rate (per 1,000)	2.8	2.6	2.7	2.5	2.7	2.6	2.5	2.7	

Source: Israel CBS, *Statistical yearbooks 1999-2014*, op. cit.

The preceding table shows how quickly demographic transition occurred in East Jerusalem. The infant mortality rate was cut by half from 9.6 per 1,000 in 1998 to 4.8 in 2014, as compared to the 17.1 per 1,000 in the West Bank in 2014. The crude death rate did not fall, remaining stable, but this is due to age-structure effects and the relative aging of the population. Life expectancy at birth has certainly increased in symbiosis with the fall in infant mortality rate.

After slight increases in 1996-2000, where the total fertility rate culminated at 4.44, fertility transition under the probable combined effects of modernization (better health, educational attainment, openness to the outside world) and poverty-led transitions (income and housing shortages) declined to a level of 3.33 in 2014, thus significantly less (11%) than in the West Bank, which was 3.74.

Figure V.11
The decline of the total fertility rate in East Jerusalem, 1998-2014



(a) Assumptions in the projection of the population of East Jerusalem

On fertility, it is assumed that the rapid decline depicted in the previous table will continue until 2035, with total fertility rate reaching 2.00 children per woman, the same as the West Bank. Thereafter, the TFR will level out.

Life expectancy was inferred from Israeli Central Bureau of Statistics (ICBS) data on the Palestinians within Israel's borders (including residents of annexed East Jerusalem). However, mortality in East Jerusalem is lower than this, as seen in data on infant mortality. Therefore, life expectancy at birth in 2015 was higher: 77.0 years for males and 81.0 for females in 2015. It will increase to respectively 83.0 and 87.0 years in 2050.

As for the other regions of Palestine, migration – whether internal (to the West Bank or Gaza) or external – was considered negligible in the coming future, for reasons which are common to the other parts of Palestine or peculiar to Jerusalem. This is confirmed by the data on migration for the Palestinian segment of Jerusalem in the Statistical Yearbook of Jerusalem.

(b) Population Projections for East Jerusalem

The total size of the Palestinian population of East Jerusalem will increase from 268,000 to 426,000 according to a medium scenario, at decreasing rates of growth from 2015 to 2050.

Table V.17
Projections by age group and sex, East Jerusalem, 2015-2050 (thousands)

Age	2015			2020			2025			2030		
	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	18	17	35	14	13	27	13	12	25	14	14	28
5-9	18	17	35	18	17	35	14	13	27	12	12	24
10-14	17	16	33	18	17	35	18	17	35	14	13	27
15-19	15	14	29	17	16	33	18	17	35	18	17	35
20-24	12	12	24	15	14	29	17	16	33	18	17	35
25-29	9	10	19	12	12	24	15	14	29	17	16	33
30-34	9	9	18	9	10	19	12	12	24	15	14	29
35-39	8	8	16	9	9	18	9	10	19	12	12	24
40-44	7	7	14	8	8	16	9	9	18	9	10	19
45-49	6	6	12	7	7	14	8	8	16	9	9	18
50-54	5	5	10	6	6	12	7	7	14	8	8	16
55-59	3	4	7	5	5	10	6	6	12	7	7	14
60-64	2	3	5	3	4	7	5	5	10	6	6	12
65-69	2	2	4	2	3	5	3	4	7	4	5	9
70-74	1	2	3	2	2	4	2	3	5	2	3	5
75-79	1	1	2	1	2	3	1	2	3	1	2	3
80+	1	1	2	1	1	2	1	2	3	2	3	5
Total	**134**	**134**	**266**	**147**	**146**	**293**	**158**	**157**	**315**	**168**	**168**	**336**

Table V.17 *(continued)*

Age	2035			2040			2045			2050		
	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	16	15	31	16	15	31	15	15	30	14	13	27
5-9	14	14	28	16	15	31	16	15	31	15	15	30
10-14	12	12	24	14	14	28	16	15	31	16	15	31
15-19	14	13	27	12	12	24	14	14	28	16	15	31
20-24	18	17	35	14	13	27	12	12	24	14	14	28
25-29	18	17	35	18	17	35	14	13	27	12	12	24
30-34	17	16	33	18	17	35	18	17	35	14	13	27
35-39	15	14	29	17	16	33	18	17	35	18	17	35
40-44	12	12	24	15	14	29	17	16	33	18	17	35
45-49	9	10	19	12	12	24	15	14	29	17	16	33
50-54	9	9	18	9	10	19	12	12	24	15	14	29
55-59	8	8	16	9	9	18	9	10	19	12	12	24
60-64	7	7	14	7	8	15	8	9	17	8	10	18
65-69	5	6	11	6	6	12	7	7	14	8	8	16
70-74	4	4	8	5	5	10	6	6	12	7	7	14
75-79	2	3	5	3	4	7	4	5	9	5	6	11
80+	2	3	5	2	5	7	4	6	10	5	8	13
Total	**182**	**180**	**362**	**193**	**192**	**385**	**205**	**203**	**408**	**214**	**212**	**426**

Source: Projection by the cohort-component method according to the medium variant

East Jerusalem's population will recede as compared to the entire West Bank and the Gaza Strip. This is mainly due to a faster demographic transition, which will certainly persist at high speed in the future. Hence, the share of East Jerusalem, which is now a mere 5.6% of the State of Palestine population, will fall to 4.4% in the middle of the century, a factor that might have important strategic implications, in view of the specific situation of its inhabitants, especially their legal status.

Otherwise, the aging of the population in East Jerusalem will happen earlier and faster than in the rest of the West Bank and Gaza, with the proportion of 65 years and above rocketing from 4% to almost 13%.

4. Projections for the governorates and Area C

(a) Projections for the governorates

Projections for the 15 governorates in the West Bank and Gaza Strip, and of Area C in the West Bank (lands that remain under complete Israeli control), are presented for the total population during the period 2015-2050. At the starting point of the projections, total population was taken from the PCBS' estimated population for the State of Palestine at end year 2015. Governorate population was projected in a first stage at constant rates of growth, which were taken from the inter-census rates of growth 1997-2007, except for the governorate of Jerusalem where this rate was too weak, and has therefore been replaced by the implicit rate of growth from 2014-2015 from the PCBS.

Table V.18
Population of the governorates in 1997, 2007, projected in 2014 and 2015 (thousands) and annual rate of growth (r %)

Governorates	1997	2007	r %	2014	2015	r %
Jerusalem	321	362	1.20	412	423	2.67
Hebron	385	544	3.46	684	718	4.97
Bethlehem	130	174	2.92	211	219	3.79
Ramallah / Al-Bireh	203	276	3.07	338	353	4.44
Jenin	193	254	2.75	304	315	3.62
Tulkarm	127	157	2.12	179	184	2.79
Salfit	46	59	2.49	69	72	4.35
Jericho	31	42	3.04	51	53	3.92
Qalqilya	68	90	2.80	108	112	3.70
Nablus	248	317	2.45	373	385	3.22
Tubas	35	50	3.57	63	66	4.76
WEST BANK	**1,787**	**2,325**	**2.63**	**2,792**	**2,900**	**3.87**
North Gaza	179	266	3.96	349	370	6.02
Gaza	358	490	3.14	608	635	4.44
Deir el Balah	144	202	3.38	256	269	5.08
Khan Younes	195	267	3.14	331	347	4.83
Rafah	120	171	3.54	218	230	5.50
GAZA	**996**	**1,396**	**3.38**	**1,762**	**1,851**	**5.05**

The annual rate of growth measures the differential potential of growth of the governorates due to the combination of fertility, mortality and migration (internal and external). As already mentioned, the potential for growth is much higher in Gaza than in the West Bank. In Gaza, it always exceeded 3%, sometimes approaching 4%, as in North Gaza. In the West Bank, the differences are due to mortality and fertility levels that vary in each governorate, and to

internal migration. The important thing here is that the rate of growth epitomizes all these differences, in addition to the potential induced by the age-sex structure (demographic momentum). Indeed, projecting the population of the governorates at constant rates in 2015-2050 (those of the 1997-2007 period) will inevitably lead to unrealistic results. Therefore, the provisional figures were prorated to the total population projected previously for the West Bank and Gaza.

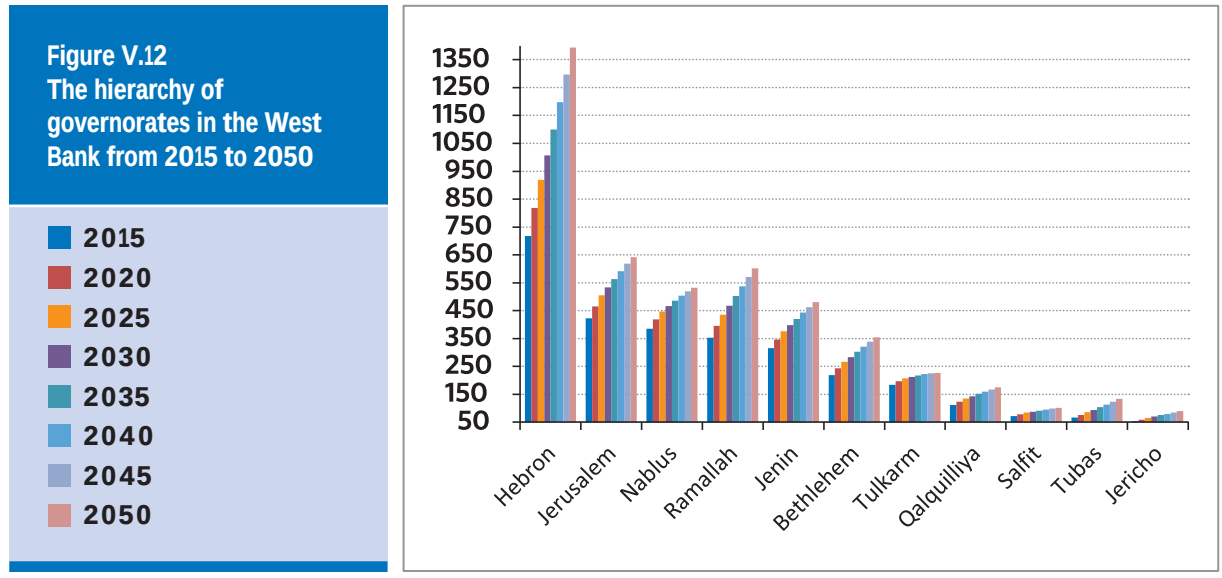
Table V.19
Projection of the total population (thousands) of the West Bank by governorates, 2015-2050 by population size of the governorate

	2015	2020	2025	2030	2035	2040	2045	2050
Hebron	718	819	919	1,006	1,100	1,198	1,298	1,394
Jerusalem	423	466	505	533	563	592	619	642
Nablus	385	418	447	466	485	504	520	532
Ramallah / Al-Bireh	353	395	435	468	502	537	570	602
Jenin	315	347	376	398	420	443	463	481
Bethlehem	219	243	266	284	302	321	338	354
Tulkarm	184	197	207	212	217	222	225	227
Qalqilya	112	124	135	143	151	160	167	174
Salfit	72	78	84	88	91	95	98	101
Tubas	66	76	85	94	103	113	123	133
Jericho	53	59	65	70	75	80	85	89
West Bank	**2,898**	**3,221**	**3,524**	**3,762**	**4,010**	**4,263**	**4,506**	**4,728**
in percentage								
	2015	2020	2025	2030	2035	2040	2045	2050
Hebron	24.8	25.4	26.1	26.7	27.4	28.1	28.8	29.5
Jerusalem	14.6	14.5	14.3	14.2	14.0	13.9	13.7	13.6
Nablus	13.3	13.0	12.7	12.4	12.1	11.8	11.5	11.2
Ramallah / Al-Bireh	12.2	12.3	12.4	12.4	12.5	12.6	12.7	12.7
Jenin	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2
Bethlehem	7.6	7.6	7.5	7.5	7.5	7.5	7.5	7.5
Tulkarm	6.3	6.1	5.9	5.6	5.4	5.2	5.0	4.8
Qalqilya	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7
Salfit	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1
Tubas	2.3	2.3	2.4	2.5	2.6	2.7	2.7	2.8
Jericho	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9
West Bank	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table V.19 *(continued)*

		2020	2025	2030	2035	2040	2045	2050
Hebron		2.64	2.31	1.81	1.78	1.72	1.59	1.44
Jerusalem		1.93	1.61	1.11	1.07	1.01	0.89	0.73
Nablus		1.66	1.34	0.84	0.80	0.74	0.62	0.46
Ramallah / Al-Bireh		2.26	1.94	1.44	1.40	1.34	1.22	1.07
Jenin		1.95	1.62	1.13	1.09	1.03	0.90	0.75
Bethlehem		2.11	1.79	1.29	1.25	1.19	1.07	0.91
Tulkarm		1.34	1.01	0.51	0.48	0.42	0.29	0.14
Qalqilya		2.00	1.68	1.18	1.14	1.08	0.96	0.80
Salfit		1.70	1.37	0.87	0.84	0.78	0.65	0.50
Tubas		2.74	2.42	1.92	1.88	1.82	1.70	1.54
Jericho		2.23	1.91	1.41	1.37	1.31	1.19	1.03
West Bank		**2.11**	**1.80**	**1.31**	**1.28**	**1.22**	**1.11**	**0.96**

Figure V.12
The hierarchy of governorates in the West Bank from 2015 to 2050



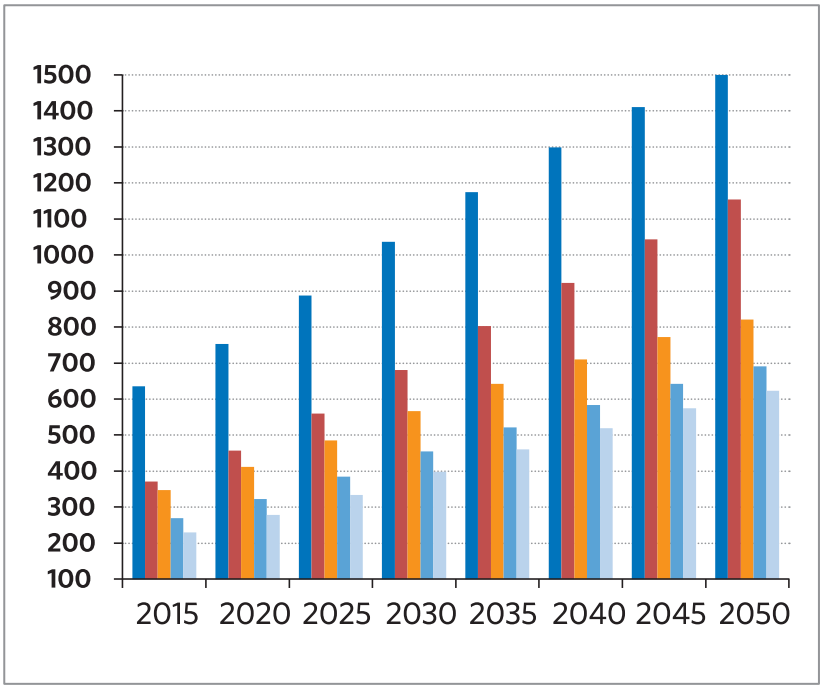
As shown above, the hierarchy of the governorates will only be slightly changed with Hebron, Jerusalem, Nablus and Ramallah taking the lead to be more populous than Nablus. There will be one governorate with more than one million inhabitants (Hebron) and four others will have half a million inhabitants or more.

In the Gaza Strip, the results of the projection suggest a very strong increase in population in the Gaza governorate, which will comprise 1.5 million people in 2050. Although in relative terms, there will be a slight decline in its share of the population, to the benefit of North Gaza. Compared with the governorates of the West Bank, it is interesting to note that Gaza governorate will become the most populated in Palestine, ahead of Hebron.

Table V.20
Projection of the total population (thousands) of the Gaza Strip, 2015-2050, by size of the governorate in 2015

	2015	2020	2025	2030	2035	2040	2045	2050
Gaza	636	753	887	1,037	1,175	1,299	1,411	1,500
North Gaza	371	457	560	680	802	923	1,043	1,154
Khan Younes	348	412	485	567	643	710	772	821
Deir el Balah	269	323	385	455	522	584	642	691
Rafah	230	278	334	398	460	519	575	623
Gaza Strip	**1,854**	**2,223**	**2,651**	**3,137**	**3,602**	**4,035**	**4,443**	**4,789**
In percentage								
	2015	2020	2025	2030	2035	2040	2045	2050
Gaza	34.3	33.9	33.5	33.0	32.6	32.2	31.8	31.3
North Gaza	20.0	20.5	21.1	21.7	22.3	22.9	23.5	24.1
Khan Younes	18.7	18.5	18.3	18.1	17.8	17.6	17.4	17.1
Deir el Balah	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.4
Rafah	12.4	12.5	12.6	12.7	12.8	12.9	12.9	13.0
Gaza Strip	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Annual rate of growth (percentage)								
		2020	2025	2030	2035	2040	2045	2050
Gaza		3.39	3.27	3.11	2.51	2.01	1.66	1.23
North Gaza		4.18	4.07	3.91	3.30	2.80	2.45	2.02
Khan Younes		3.39	3.28	3.12	2.51	2.01	1.66	1.23
Deir el Balah		3.62	3.51	3.35	2.74	2.24	1.90	1.46
Rafah		3.78	3.66	3.50	2.90	2.40	2.05	1.62
Gaza Strip		**3.63**	**3.52**	**3.37**	**2.76**	**2.27**	**1.93**	**1.50**

Figure V.13
The population of the Gaza Strip governorates from 2015 to 2050



(b) Projections for the population of Area C

Although covering more than 60% of the West Bank and dispersed all over the region, Area C has a population of around 300,000 inhabitants, thus comprising 11% of the West Bank population. All nine governorates have some of Area C within them, sometimes in small proportions such as in Nablus or in Tubas and sometimes in much larger swathes such as in Jericho, Jerusalem, Salfit or Bethlehem.

The proportion of the population living in Area C by governorate in 2013 was derived from OCHA estimates and from the projected population in this same year. These proportions have been applied to the projected population of the governorates, from 2015 to 2050.

It is therefore assumed that the components of growth are the same for the total population and for those living in Area C in each governorate. It was virtually impossible to build other assumptions, in view of the scarcity of data on this segment of the population.

Table V.21
Projection of the population (thousands) Area C by governorates, 2015-2050

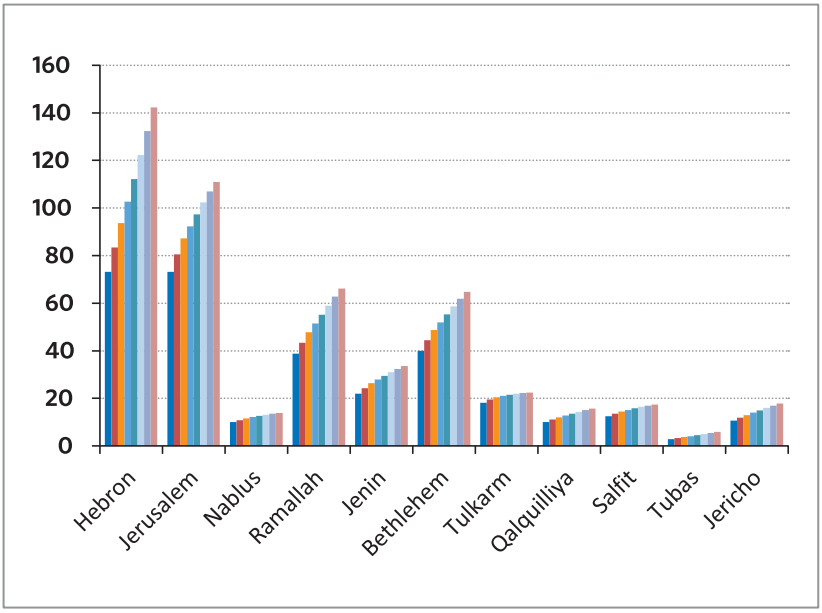
	2015	2020	2025	2030	2035	2040	2045	2050
Hebron	73	83	94	103	112	122	132	142
Jerusalem	73	81	87	92	97	102	107	111
Nablus	10	11	12	12	13	13	14	14
Ramallah	39	43	48	51	55	59	63	66
Jenin	22	24	26	28	29	31	32	34
Bethlehem	40	45	49	52	55	59	62	65
Tulkarm	18	19	20	21	22	22	22	22
Qalqilya	10	11	12	13	14	14	15	16
Salfit	12	14	15	15	16	16	17	17
Tubas	3	3	4	4	5	5	5	6
Jericho	11	12	13	14	15	16	17	18
West Bank	**311**	**346**	**379**	**405**	**432**	**460**	**487**	**511**
In percentages								
	2015	2020	2025	2030	2035	2040	2045	2050
Hebron	23.5	24.1	24.7	25.3	25.9	26.6	27.2	27.8
Jerusalem	23.5	23.2	23.0	22.8	22.5	22.3	22.0	21.7
Nablus	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7
Ramallah	12.5	12.5	12.6	12.7	12.8	12.8	12.9	13.0
Jenin	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6
Bethlehem	12.9	12.8	12.8	12.8	12.8	12.7	12.7	12.7
Tulkarm	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.4
Qalqilya	3,2	3.2	3.2	3.2	3.1	3.1	3.1	3.1
Salfit	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4
Tubas	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1
Jericho	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5
West Bank	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Population derived from projection of the government, propensity to live in Area C derived from the Office for the Coordination of Humanitarian Affairs (OCHA).

Hence, the total population living in area C would reach half a million inhabitants in 2050, provided no major geopolitical changes occur during the coming generation. However, this assumption cannot be guaranteed. And one can imagine other extreme possibilities: an annexation that might trigger population transfers outside the C zone, for example.

Contrariwise, one can imagine a scenario of internal migration from the overpopulated Gaza Strip to this low density area, especially in the Jordan Valley.

Figure V.14
The future population size of C area by governorate, 2015-2050



5. Projection of registered refugees, 2015-2050

Refugees in Palestine are those who were displaced in 1948 and their patrilineal descendants. There is a close link between population variables and the size and structure of registered refugees, which constitute a very important segment of the Palestinian population living in the State of Palestine – close to half the total population, according to UNRWA estimates for 2015 and PCBS extrapolation of the trends detected by the last two censuses, 1997 and 2007. There are also high regional variations: in the Gaza Strip, the propensity of being a refugee (70.3%) is more than twice that in the West Bank (33.0%), according to UNRWA's latest figures.

The following table shows that UNRWA's latest figures on registered refugees are more or less in line with extrapolation of census data for 1997 and 2007.[168]

168 For Palestine, extrapolation yields a proportion of refugees of 42.4% in 2015 instead of 49.5% (UNRWA), in the West Bank 27.4% instead of 33.0% and in the Gaza strip 66.8% instead of 70.3%.

Table V.22
Proportion (percentage) of registered refugees and total refugees, Palestine, West Bank and Gaza Strip, 1997 and 2007

Region	1997		2007	
	% Registered	% Total	% Registered	Total
Palestine	39.8	41.3	41.2	42.6
West Bank	24.6	26.5	26.1	28.0
Gaza	63.9	65.1	65.5	66.1

Source: Palestinian Central Bureau of Statistics, *Population censuses of 1997 and 2007*, Ramallah, varying dates.

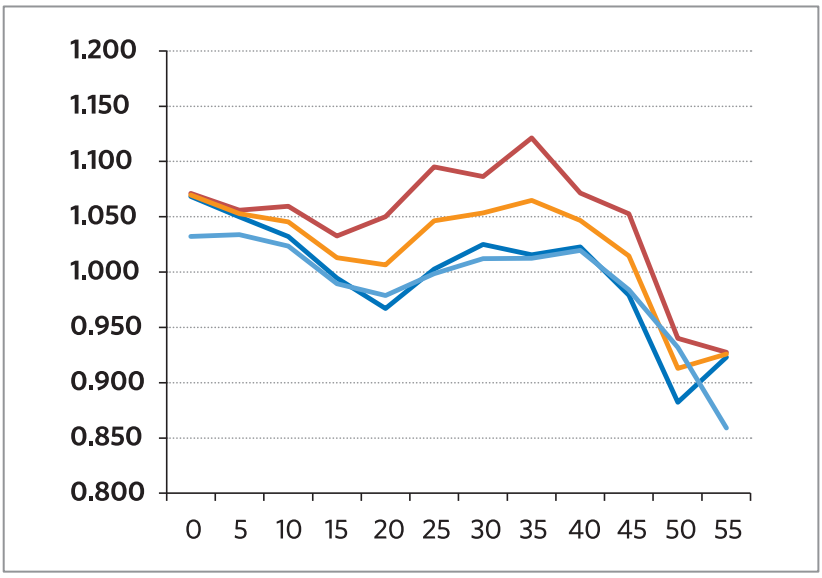
The increase in the population of registered refugees is the outcome of two factors: the growth of the Palestinian population due to the interaction of fertility, mortality and (marginally) migration and the increase of the trend to register the self and his relatives as refugees. There seems to be no significant fertility differences between refugees and non-refugees according to the latest available sources, hence it might be safely assumed that natural growth is about the same for the two population sub-groups.

Taking the two censuses of 1997 and 2007 by age group and sex, the decennial probabilities of survival 1997-2007 are obtained (i.e., the ratio of the size of the age group 10 years ahead in 2007 to its initial size in 1997). Normally these probabilities should all be lower than one, since mortality leads to an attrition of the size of the cohort (international migration playing only a marginal role).

Compared to the survival probabilities of the whole population, the first probabilities are always higher, depicting an increment that is not only reliant on demographic factors.

Besides, female probabilities are higher than those of males, reflecting a trend towards differential regularization of registration by gender.

Figure V.15
The decennial probabilities of "survival" by age group, refugees and total population, Palestine, 1997-2007



The method for projecting the registered refugee population by age group and sex consists of deriving the proportions of registered refugees by age group and sex from the trends of the 1997 and 2007 censuses for Palestine as a whole, the West Bank, and the Gaza Strip. These proportions were then applied to the projected population by age group and sex (medium scenario). Another scenario is to keep the proportions of registered refugees constant at their 2007 level.

The projection was based on registered refugees, which represent almost all of the refugees. (To obtain the total refugees, the numbers presented in the tables should be increased by 3.6% for Palestine, 7.3% for the West Bank and 1% for Gaza.)

Table V.23
Projection of registered refugees by age group and sex, Palestine, 2015-2050, varying proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	158	152	310	175	167	342	188	179	367	194	185	379
5	131	124	255	157	148	305	174	162	336	187	174	361
10	121	117	238	133	130	263	160	154	315	178	170	348
15	116	111	227	123	118	242	136	131	267	164	156	320
20	104	102	206	114	111	225	122	118	240	134	131	265
25	86	83	169	104	102	206	115	112	227	122	119	241
30	66	64	130	87	84	170	106	103	209	117	113	230
35	55	54	110	67	65	132	88	86	174	108	105	213
40	49	48	97	59	57	116	72	69	140	94	90	184
45	39	39	78	46	47	93	56	57	112	68	68	136
50	33	30	63	39	37	76	46	45	91	55	54	110
55	25	24	49	33	32	64	39	39	79	47	47	94
60	15	15	30	21	21	43	29	29	57	35	35	70
65	10	13	23	14	16	30	21	22	43	28	29	58
70	6	8	14	8	10	18	11	13	24	17	18	35
75	3	6	9	4	7	11	6	9	14	8	11	19
80+	3	6	9	3	7	11	4	9	14	6	11	17
Total	**1,020**	**996**	**2,017**	**1,190**	**1,159**	**2,349**	**1,373**	**1,336**	**2,709**	**1,560**	**1,518**	**3,079**

Table V.23 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	198	189	387	201	192	393	201	191	392	193	184	377
5	193	180	373	197	184	381	201	187	388	200	187	387
10	191	183	374	197	189	386	202	193	395	205	196	402
15	181	172	353	195	184	379	202	191	392	206	195	401
20	162	157	318	179	172	351	193	185	377	199	191	390
25	135	132	267	163	157	320	180	173	353	194	186	379
30	125	120	245	138	133	270	165	159	324	183	175	358
35	118	116	234	126	123	250	140	137	276	168	164	331
40	115	111	226	127	122	249	135	130	265	149	144	293
45	89	89	178	109	110	219	120	121	241	128	129	257
50	68	66	133	89	86	175	109	106	215	121	117	237
55	57	57	114	69	69	138	91	91	182	112	112	224
60	41	43	84	50	52	102	61	63	124	81	83	164
65	35	37	72	41	45	86	50	55	105	62	66	128
70	23	25	47	27	31	58	33	38	71	40	46	86
75	13	15	28	17	21	38	21	26	47	26	33	58
80+	8	14	23	12	20	32	17	28	45	23	37	59
Total	**1,750**	**1,705**	**3,454**	**1,938**	**1,889**	**3,827**	**2,121**	**2,074**	**4,194**	**2,290**	**2,243**	**4,533**

Source: Population projection by age group and sex, medium variant, extrapolated trends of proportions of registered refugees by age group and sex 1997-2007.

Table V.24
Projection of the registered refugees by age group and sex (thousands), West Bank, 2015-2050, varying proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	55	52	107	52	49	102	52	49	102	45	43	88
5	48	47	95	57	55	112	54	52	106	55	52	106
10	45	44	89	50	48	98	59	56	115	56	53	109
15	45	42	87	47	45	92	51	49	100	61	58	118
20	42	39	81	45	43	88	48	45	93	52	49	101
25	35	33	68	43	41	83	46	44	91	49	47	96
30	27	26	53	36	34	70	44	42	86	48	46	94
35	24	23	47	28	27	56	37	36	74	46	45	91
40	22	21	43	25	24	50	31	29	60	40	38	79
45	18	17	35	21	21	42	25	24	49	30	29	59
50	15	14	29	18	18	36	21	22	43	25	25	50
55	11	11	22	15	15	30	18	18	37	22	23	44
60	7	8	15	11	11	22	15	15	30	18	19	37
65	5	5	10	7	7	13	10	10	20	14	13	27
70	3	4	7	4	5	9	6	6	12	8	9	17
75	2	3	4	2	3	5	3	4	7	4	5	9
80+	2	3	4	2	3	5	3	4	6	3	5	8
Total	**404**	**392**	**795**	**463**	**449**	**912**	**523**	**507**	**1029**	**576**	**558**	**1134**

Table V.24 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	50	47	98	55	51	106	57	54	111	58	54	112
5	47	45	92	52	50	102	57	54	111	60	57	117
10	56	53	109	48	46	94	54	51	105	58	56	114
15	58	54	112	58	55	113	50	47	97	56	52	108
20	62	58	119	59	55	114	59	55	114	51	47	98
25	53	51	105	63	60	123	60	57	117	60	57	118
30	50	48	99	55	53	108	66	62	128	63	59	121
35	50	49	99	53	51	105	58	57	115	69	66	135
40	50	47	97	54	52	106	57	55	112	63	60	123
45	39	38	78	49	47	96	53	52	105	56	55	111
50	30	30	60	40	40	80	49	49	99	54	54	108
55	26	26	52	31	31	63	41	42	83	51	52	103
60	22	23	45	26	27	53	31	32	64	41	44	85
65	16	17	33	20	20	40	23	24	48	29	29	58
70	12	12	24	14	15	30	17	19	36	21	22	43
75	6	7	14	9	10	19	11	13	24	14	16	30
80+	5	6	11	7	9	16	11	12	22	14	16	30
Total	**633**	**614**	**1,247**	**694**	**673**	**1,367**	**755**	**735**	**1,490**	**816**	**797**	**1,613**

Source: Population projection by age group and sex, medium variant, extrapolated trends of proportions of registered refugees by age group and sex 1997-2007.

Table V.25
Projection of registered refugees by age group and sex (thousands), Gaza Strip, 2015-2050, varying proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	103	100	203	123	117	240	136	130	265	149	142	291
5	82	77	159	100	93	193	119	110	230	132	123	255
10	76	73	149	84	81	165	102	98	200	122	117	238
15	71	69	140	76	74	150	85	81	166	103	98	201
20	62	62	125	69	68	137	74	73	147	82	82	164
25	51	50	101	62	61	123	68	68	136	74	72	146
30	39	38	77	51	49	101	62	61	123	69	67	136
35	32	31	63	39	38	77	51	49	100	61	61	122
40	27	27	54	34	33	66	41	40	81	53	52	105
45	22	22	43	25	27	52	31	32	63	38	39	77
50	18	16	34	21	19	41	25	24	49	30	29	59
55	14	13	27	18	17	35	21	21	42	25	25	50
60	7	8	15	10	10	21	14	13	27	17	16	33
65	6	7	13	8	9	17	11	13	24	15	16	31
70	3	5	8	4	5	9	5	7	12	9	9	18
75	2	3	5	2	4	6	3	5	8	4	6	10
80+	1	4	5	2	4	6	2	6	7	2	7	9
Total	**617**	**604**	**1,221**	**727**	**710**	**1,437**	**850**	**830**	**1680**	**984**	**960**	**1,944**

Table V.25 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	148	141	289	147	141	288	144	137	281	135	130	265
5	146	135	281	145	135	280	144	133	277	141	130	271
10	135	129	264	149	143	292	148	142	290	147	141	288
15	123	117	241	137	130	266	152	144	295	151	142	293
20	100	99	199	120	117	237	134	130	263	148	143	291
25	81	80	162	99	97	196	120	116	236	133	128	262
30	74	72	146	82	80	162	100	97	196	121	116	237
35	68	67	135	73	72	145	81	80	162	99	97	196
40	65	64	128	72	70	143	78	75	153	86	84	170
45	50	51	100	60	63	123	67	69	136	72	74	146
50	38	35	73	49	46	95	60	57	117	67	63	129
55	31	31	62	38	37	75	50	49	99	61	61	121
60	19	20	39	24	25	49	30	31	61	40	39	79
65	18	20	38	22	25	46	27	31	57	33	37	70
70	11	12	23	13	15	28	16	19	35	19	23	43
75	6	8	14	8	11	18	10	13	23	12	16	28
80+	3	8	12	5	12	17	7	16	23	9	21	29
Total	**1,117**	**1,091**	**2,208**	**1,244**	**1,216**	**2,461**	**1,365**	**1,339**	**2,705**	**1,474**	**1,446**	**2,920**

Source: Population projection by age group and sex, medium variant, extrapolated trends of proportions of registered refugees by age group and sex 1997-2007.

The next table presents a summary of the main results of the projection of registered refugees according to region.

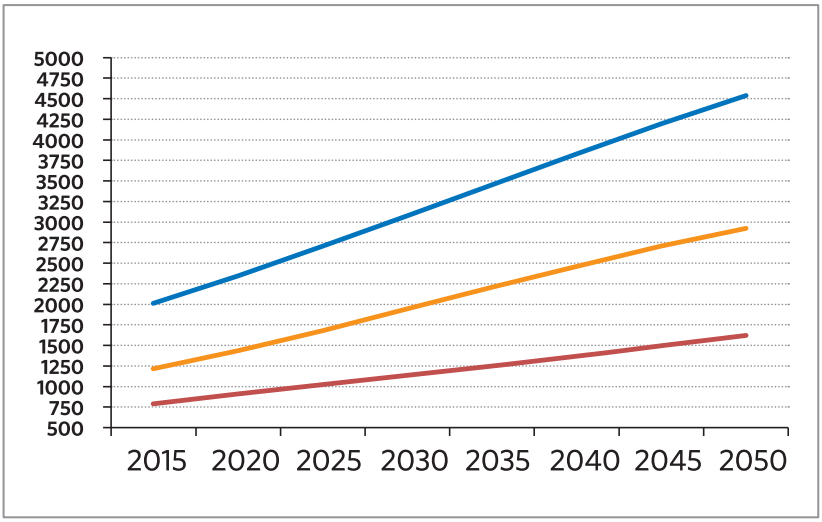
Table V.26
Summary results projection of registered refugees, Palestine, West Bank, Gaza Strip 2015-2050

Region	2015	2020	2025	2030	2035	2040	2045	2050
Population (thousands)								
Palestine	2,017	2,349	2,709	3,079	3,454	3,827	4,194	4,533
West Bank	795	912	1,029	1,134	1,247	1,367	1,490	1,613
Gaza Strip	1,222	1,437	1,680	1,945	2,207	2,460	2,704	2,920
Annual rate of increase (percentage)								
Palestine	3.05	2.85	2.56	2.30	2.05	1.83	1.55	
West Bank	2.75	2.41	1.94	1.90	1.84	1.72	1.59	
Gaza Strip	3.24	3.12	2.93	2.53	2.17	1.89	1.54	
Proportions (percentage)								
Palestine	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
West Bank	39.4	38.8	38.0	36.8	36.1	35.7	35.5	35.6
Gaza Strip	60.6	61.2	62.0	63.2	63.9	64.3	64.5	64.4

Source: Population projections, medium variant and extrapolated trends of proportions of refugees by age group and sex, from the 1997 and 2007 censuses.

The total number of registered refugees in Palestine will increase from a little bit more than two million in 2015 to 4.5 million in 2050, a multiplication by 2.25 and thus higher than the growth of the total population expected to double in 35 years. This result has significant meaning from the social, educational, economic, and political perspective and (last but not least) from the perspective of humanitarian aid. Without surprise, refugees in the Gaza Strip, where they already represent a very large share of the population, will increase in number more than in the West Bank – a multiplication by 2.4 over 2.0. Hence their proportion in the Gaza Strip region will shift from 60.6% to 64.4%.

Figure V.16
Population of registered refugees (thousands), Palestine, West Bank and Gaza Strip (2015-2050)



The following tables present projections by age group and sex of the refugee population in 2015-2035, assuming proportions of refugees by age group and sex remain constant at their 2007 level. In such case, the size of the refugee population will increase similarly to the total population.

Table V.26
Projection by age group and sex, registered refugees, Palestine, 2015-2050, constant proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	153	147	300	167	159	325	176	168	343	179	170	349
5	127	120	247	150	141	290	163	152	315	172	160	332
10	117	114	231	127	124	251	150	145	295	164	156	320
15	113	108	220	118	113	230	128	122	250	151	144	294
20	101	98	199	109	106	215	114	111	225	124	121	244
25	83	80	163	99	97	196	107	105	212	113	109	222
30	64	62	126	83	80	162	99	96	195	107	104	211
35	53	53	106	64	62	126	82	80	163	99	97	196
40	48	46	94	56	54	111	67	64	131	86	83	169
45	38	38	76	44	45	89	52	53	105	62	63	125
50	32	29	61	37	36	73	43	42	86	51	50	101
55	24	23	47	31	30	61	37	37	74	43	44	87
60	14	15	29	20	20	41	27	27	54	32	33	64
65	10	12	22	14	15	29	20	21	41	26	27	53
70	6	8	14	7	10	17	10	12	22	15	17	32
75	3	5	9	4	7	11	5	8	13	8	10	18
80+	3	6	9	3	7	10	4	9	13	5	10	16
Total	**989**	**966**	**1,955**	**1,133**	**1,104**	**2,237**	**1,285**	**1,251**	**2,536**	**1,435**	**1,397**	**2,832**

Table V.26 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	179	170	349	179	170	349	175	167	342	165	158	323
5	175	163	337	175	164	339	175	164	339	172	160	332
10	173	165	338	175	168	343	176	168	344	176	168	344
15	164	155	319	173	163	337	176	166	342	177	167	344
20	146	141	288	159	153	312	168	161	329	171	164	334
25	122	119	241	144	140	284	157	151	308	166	159	325
30	113	109	221	122	118	240	144	139	283	157	150	307
35	107	105	212	112	110	222	122	119	241	144	140	284
40	104	100	204	113	108	221	118	113	231	128	124	252
45	80	80	161	97	98	194	105	106	210	110	111	221
50	61	59	120	79	76	156	95	93	188	104	100	204
55	51	52	103	61	61	122	80	79	159	96	96	192
60	37	39	76	44	46	90	54	55	109	70	71	141
65	31	33	65	37	40	77	44	48	92	53	57	110
70	20	22	43	24	27	52	29	33	62	35	39	74
75	11	14	25	15	18	33	18	23	41	22	28	50
80+	7	13	20	11	18	28	15	24	39	19	32	51
Total	**1,581**	**1,540**	**3,122**	**1,721**	**1,678**	**3,399**	**1,851**	**1,810**	**3,661**	**1,964**	**1,924**	**3,888**

Source: Population projection by age group and sex, medium variant, constant proportions of registered refugees by age group and sex in 2007.

Table V.27
Projection by age group and sex, registered refugees, West Bank, 2015-2050, constant proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	52	50	102	48	46	94	47	44	91	39	37	77
5	46	45	91	53	51	103	49	46	95	48	45	93
10	43	42	85	46	45	90	53	51	103	49	46	95
15	43	40	83	44	41	85	46	44	90	53	50	103
20	40	37	77	42	39	82	43	40	83	45	43	88
25	33	31	64	39	38	77	42	40	81	43	41	83
30	26	24	50	33	32	65	40	38	77	42	40	82
35	23	22	44	26	25	52	34	33	66	40	39	79
40	21	20	41	23	22	46	28	26	54	35	34	69
45	17	16	33	19	19	39	22	22	44	26	25	51
50	14	14	28	16	17	33	19	19	39	22	22	44
55	10	11	21	14	14	28	16	17	33	19	20	39
60	7	7	14	10	10	20	13	14	27	16	17	32
65	4	5	10	6	6	12	9	9	18	12	12	23
70	3	4	6	4	4	8	5	6	11	7	8	15
75	2	3	4	2	3	5	3	4	6	4	4	8
80+	2	2	4	2	3	5	2	3	6	3	4	7
Total	**384**	**373**	**758**	**428**	**415**	**843**	**469**	**455**	**924**	**502**	**487**	**989**

Table V.27 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	42	40	83	45	42	87	46	43	89	45	42	87
5	40	38	78	43	41	83	45	43	88	46	44	90
10	47	45	92	40	38	77	43	40	83	45	43	88
15	49	46	96	48	45	93	40	38	78	43	41	84
20	52	50	102	49	46	94	47	45	92	39	37	77
25	45	44	89	52	50	102	48	46	94	47	44	91
30	43	41	84	45	44	89	52	50	102	48	46	94
35	43	41	83	44	42	86	46	45	91	53	51	104
40	42	40	83	45	43	88	46	44	90	49	47	96
45	33	32	65	40	38	78	42	41	83	44	42	85
50	26	24	50	33	32	64	39	38	77	42	40	82
55	22	21	43	26	25	50	33	32	65	40	38	78
60	18	18	37	21	21	42	25	24	49	32	32	64
65	14	14	28	16	16	33	19	19	37	22	22	44
70	10	10	20	12	12	24	14	14	28	16	17	33
75	5	6	11	7	8	15	9	10	18	11	12	22
80+	4	6	9	6	8	13	8	10	19	11	14	24
Total	**536**	**516**	**1,052**	**570**	**549**	**1,119**	**602**	**581**	**1,184**	**632**	**611**	**1,244**

Source: Population projection by age group and sex, medium variant, constant proportions of registered refugees by age group and sex in 2007.

Table V.28
Projection by age group and sex, registered refugees, Gaza Strip, 2015-2050, constant proportions of registered refugees

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	101	97	198	118	113	231	129	123	252	139	133	272
5	81	75	156	97	90	187	114	105	219	124	115	239
10	74	72	146	81	79	160	98	94	192	115	110	225
15	70	67	137	74	71	145	82	78	160	98	93	191
20	61	61	122	67	66	133	71	70	142	78	78	156
25	50	49	99	60	59	120	66	65	131	70	69	139
30	38	37	76	50	48	98	60	59	118	65	64	129
35	31	31	62	38	37	74	49	48	96	59	58	117
40	27	26	53	33	32	65	40	38	78	51	49	100
45	21	21	43	25	26	50	30	31	61	36	37	74
50	18	16	33	21	19	40	24	23	47	29	28	57
55	14	13	26	17	16	34	20	20	41	24	24	48
60	7	8	15	10	10	20	14	13	27	16	16	32
65	6	7	13	8	9	16	11	12	23	14	15	30
70	3	4	7	4	5	9	5	7	12	8	9	17
75	2	3	5	2	4	6	3	5	7	4	6	10
80+	1	4	5	1	4	6	2	5	7	2	6	9
Total	**605**	**592**	**1,197**	**705**	**689**	**1,394**	**816**	**796**	**1,612**	**933**	**910**	**1,843**

Table V.28 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0	136	130	267	134	128	262	130	124	253	121	116	236
5	135	125	260	132	123	255	130	121	251	126	116	242
10	125	120	246	136	130	266	133	128	261	131	126	257
15	115	109	224	125	118	244	136	129	265	134	126	260
20	94	92	186	111	107	217	121	116	238	131	126	257
25	77	75	152	92	90	183	109	105	214	119	115	234
30	70	67	137	77	74	151	92	89	181	109	104	213
35	64	64	128	68	68	136	75	75	150	91	89	180
40	62	60	121	68	65	133	72	69	141	79	77	156
45	47	48	95	57	59	116	62	65	127	66	69	135
50	36	35	70	46	45	91	56	55	111	62	60	122
55	29	30	60	36	36	72	47	47	94	56	58	114
60	19	21	39	23	25	48	29	31	60	38	40	77
65	17	19	37	20	24	44	25	29	54	31	35	65
70	10	12	23	13	15	28	15	19	34	18	23	41
75	6	8	14	7	11	18	9	14	23	11	16	28
80+	3	8	11	5	10	15	7	14	21	9	18	27
Total	**1,046**	**1,024**	**2,070**	**1,151**	**1,129**	**2,280**	**1,248**	**1,229**	**2,477**	**1,332**	**1,312**	**2,644**

Source: Population projection by age group and sex, medium variant, constant proportions of registered refugees by age group and sex in 2007.

Chapter 6

Implications of Population Dynamics on the Labour Market



A. Links between population dynamics and the labour market

In a fast-growing country like Palestine, population growth is a major component of the supply of manpower. The active-age population, those older than 15, would grow from 2.9 million in 2015 to 7.2 million in 2050, thus a multiplication by 2.5. This transformation of the age-structure and the relative decrease of dependents compared with the active population generate an opportunity for demographic dividend (an opportunity for boosting economic growth), but must be accompanied by socioeconomic measures to be effective.

In Chapter 5, a rapidly growing population was forecasted. It is likely to double in a matter of 35 years, from less than 4.8 million inhabitants in 2015 to more than 9.5 million in 2050. Indeed, although there is a strong linkage between population and employment, the likely increase in the labour force will not fit exactly the growth of the total population, although it will depend heavily upon it.

Turning now to the active age population – the size of the population beyond a minimal age, which is assumed to be 15 years despite the existence of some child labour – projections are that its total increase will actually be even higher than that of the total population: from 2.9 million in 2015 to 7.2 million in 2050, thus a multiplication by 2.5, which is significantly higher than for the total population. This is due to the maturing of the age-structure, leading to a relative decrease in the youngsters below 15 years of age and an increase in adults (and the elderly, to a lesser extent). In itself, this transformation of the age-structure does generate demographic dividends, or a demographic bonus (an opportunity for boosting economic development), but one that must be accompanied by socioeconomic measures to be effective.

Table VI.1 below provides the projection by age group and sex derived from the population projections (medium variant) for the country as a whole. When gender is considered, it appears that there will not be a significant change in the sex ratio of the active age population, from 102.6 in 2015 to 101.8 in 2050. Contrariwise, the proportion of the active age population to the total population – this key component of the demographic dividend – will increase from 58% to 75.3%, due to the concomitant decrease of the proportion of youngsters, itself due to the significant decline of the total fertility rate expected in 2015-2050, under the impact of modernization and socioeconomic transformations.

Before considering effective participation rates into the labour force, it is possible to observe how the transformation of the age-structure may, as such, impact on the size of the labour force. It is possible to schematically approximate the annual number of new entrants accessing the labour force as roughly one-tenth of those aged 15-24 and those exiting the labour force as roughly one-tenth of those aged 55-64 years.

Table VI.1
Population projections for the active age-population by age group and sex (thousands), Palestine, 2015-2050, medium scenario

Age group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	519	551	588	666	754	808	837	845
25-34	367	454	515	548	584	664	751	805
35-44	245	291	363	449	510	544	580	659
45-54	174	203	238	283	354	440	500	534
55-64	96	130	161	189	223	267	336	419
65+	60	77	106	147	191	237	291	354
Total	**1,461**	**1,706**	**1,971**	**2,282**	**2,616**	**2,960**	**3,295**	**3,616**
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	499	529	564	639	718	765	793	800
25-34	351	436	496	526	562	636	715	805
3544	238	280	347	432	492	523	559	634
45-54	164	197	233	275	341	425	485	515
55-64	93	123	155	186	221	261	327	418
65+	78	93	121	156	201	252	312	379
Total	**1,423**	**1,658**	**1,916**	**2,214**	**2,535**	**2,862**	**3,191**	**3,551**
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	1,018	1,080	1,152	1,305	1,472	1,573	1,630	1,645
25-34	718	890	1,011	1,074	1,146	1,300	1,466	1,610
35-44	483	571	710	881	1,002	1,067	1,139	1,293
45-54	338	400	471	558	695	865	985	1,049
55-64	189	253	316	375	444	528	663	837
65+	138	170	227	303	392	489	603	733
Total 15+	**2,884**	**3,364**	**3,887**	**4,496**	**5,151**	**5,822**	**6,486**	**7,167**
Total population	**4,752**	**5,448**	**6,175**	**6,900**	**7,610**	**8,298**	**8,944**	**9,519**
Percentage 15+	**60.7**	**61.7**	**62.9**	**65.2**	**67.7**	**70.2**	**72.5**	**75.3**

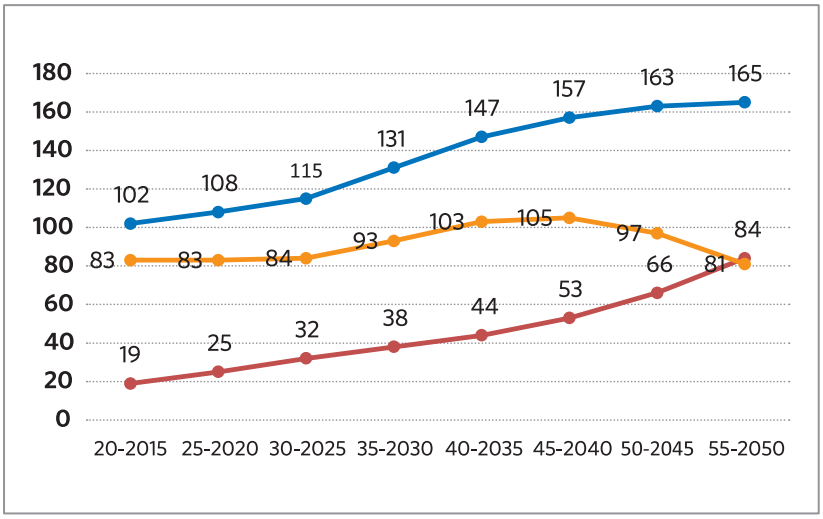
Source: Based on the population projections, medium variant.

Table VI.2
Labour force accessions and exits (thousands), Palestine, both sexes, 2015-2050

	2015-2020	2020-2025	2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	2050-2055
Accessions	102	108	115	131	147	157	163	165
Exits	19	25	32	38	44	53	66	84
Balance	83	83	84	93	103	105	97	81

Source: Based on population projections, medium variant

Figure VI.1
Labour force accessions and exits, Palestine



Based for the time being on the sole modification of the age structure, this chart shows the near-certain high pressure on the labour market during the next years. The curve of accessions (or new entrants) will increase sharply until 2035, and thereafter will still increase, but more moderately. Exits from the labour force will somewhat compensate this vigorous push, due to the increase of aged persons at retirement age. And ultimately the balance of entries and exits culminating around 2040 will decrease slightly.

Hence, using demographics alone as a first step, this analysis conveys two messages, the first being the demographic dividends that can result from the greater increase of the working-age population as compared to the total population and the dependent one. The second message is the big push of youngsters into the labour market, which is not likely to be compensated by exits of aged persons.

1. Projections of Labour Force Participation

Demographics is only one side of the coin. The other is the propensity of the population to participate in the labour force. This propensity is measured by participation or activity rates, which vary according to sex and age. Recent trends, as depicted by labour force

surveys in Palestine, show that the crude activity rate (i.e., the proportion of the active population aged 15 years and over to the total population 15 years and over) has remained almost constant for males but has increased significantly for females from a very low level to one improved, which results from modernization and more equitable gender roles but is still low by international standards.

Table VI.3
Participation rate (percentage) in the labour force by sex and age, Palestine, 2001 and 2014

Age Group	2001	2014	Index 2014/2001	Annual rate of increase (%)	Increase(%)
Males					
15-24	47.2	51.9	1.10	0.73	0.4
25-34	86.8	91.1	1.05	0.37	0.3
35-44	88.3	93.5	1.06	0.44	0.4
45-54	82.1	87.1	1.06	0.45	0.4
55-64	36.1	54.9			
65+	*	19.6			
Total	**66.8**	**71.5**	**1.07**	**0.52**	**0.4**
	2001	**2014**	**2014/2001**	**Annual rate of increase (%)**	**Increase (%)**
Females					
15-24	6.1	10.4	1.70	4.10	0.3
25-34	14.3	31.7	2.22	6.12	1.3
35-44	15.8	26.0	1.65	3.83	0.8
45-54	13.9	23.5	1.69	4.04	0.7
55-64	5.1	12.1	2.37		
65+	*	4.1			
Total	**10.4**	**19.4**	**1.87**	**4.80**	**0.7**

Participation rates in the labour force have been projected:

by keeping those rates for the youngsters aged 15-24 years at their present level in 2014, for males and for females, hence assuming that increasing proportions will continue their studies in secondary and university levels and thus will delay their entry into the labour force;

5. by keeping the rates of persons aged 55-64 years and 65 years and over at their present level;

6. by keeping the rates of participation of adult males – which are already very high, approaching the maximum – at their present level; and

7. assuming an increase in female participation from its present low rate to levels that are more in line with social and economic development and gender equity. Hence the forecast of participation rates of Palestinian women is guided by the trends observed and forecasted in developing countries that have common sociocultural characteristics with Palestine (Indonesia and Malaysia, for example) and have approached a more fair distribution of gender roles that is reflected in the labour force. These trends also in line with the doubling of Palestinian females' rate of participation and ultimately a 70% increase in 2001-2014 for those 25-54 years of age.

Table VI.4
Projection of labour force participation rate (percentage) by sex and age, Palestine, 2015-2050

Age Group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9
25-34	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1
35-44	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5
45-54	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
55-64	54.9	54.9	54.9	54.9	54.9	54.9	54.9	54.9
65+	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
15+	71.8	72.4	72.6	72.0	71.4	71.3	71.0	70.6
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
25-34	33.0	39.7	46.4	53.1	57.0	57.5	58.0	58.5
35-44	26.8	30.7	34.6	38.6	42.5	46.4	50.3	54.2
45-54	24.2	27.9	31.6	35.3	39.0	42.7	46.4	50.1
55-64	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
65+	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
15+	**20.1**	**23.4**	**26.4**	**28.8**	**30.5**	**31.8**	**33.1**	**34.4**

Source: Extrapolated from Palestinian Central Bureau of Statistics labour force surveys, 2001 and 2015, and rates from some Asian countries.

Table VI.5
Projection of the active population in the labor force by age group and sex (thousands), 2015-2050, Palestine, medium scenario

Age Group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	269	286	305	346	391	419	434	439
25-34	334	414	469	499	532	605	684	733
35-44	229	272	339	420	477	509	542	616
45-54	152	177	207	246	308	383	436	465
55-64	53	71	88	104	122	147	184	230
65+	12	15	21	29	37	46	57	69
Total	1,049	1,235	1,430	1,644	1,868	2,109	2,338	2,553
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	52	55	59	66	75	80	82	83
25-34	116	173	230	279	320	366	415	471
35-44	64	86	120	167	209	243	281	344
45-54	40	55	74	97	133	181	225	258
55-64	11	15	19	23	27	32	40	51
65+	3	4	5	6	8	10	13	16
Total	286	388	506	638	772	911	1,056	1,222
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	321	341	364	412	466	499	517	522
25-34	450	587	699	779	852	971	1,099	1,204
35-44	293	358	460	586	686	751	824	960
45-54	191	232	281	344	441	565	661	723
55-64	64	86	107	126	149	178	224	281
65+	15	19	26	35	46	57	70	85
Total	**1,335**	**1,623**	**1,937**	**2,282**	**2,640**	**3,020**	**3,394**	**3,775**
Per cent population	**28.1**	**29.8**	**31.4**	**33.1**	**34.7**	**36.4**	**37.9**	**39.7**
Per cent females	**21.4**	**23.9**	**26.2**	**28.0**	**29.2**	**30.2**	**31.1**	**32.4**

Source: Based on population projections (medium variant) and projected participation rates.

From 2015 to 2050, the expected active population of Palestine should increase from 1.3 to 3.8 million persons. This increase significantly exceeds the doubling of the total population. A growing female participation rate will be the main agent of this increase from 286,000 to 1,222,000. Yet, in spite of this high increase, their share in the labour force will remain rather modest at less than one-third (32%) of the female population – that is more than two active males for every active female. The rate of increase of the labour force will be high in the next three decades, to decrease slightly, yet remain still quite high at the horizon of the projections.

Figure VI.2
The labour force by sex (thousands), 2015-2050

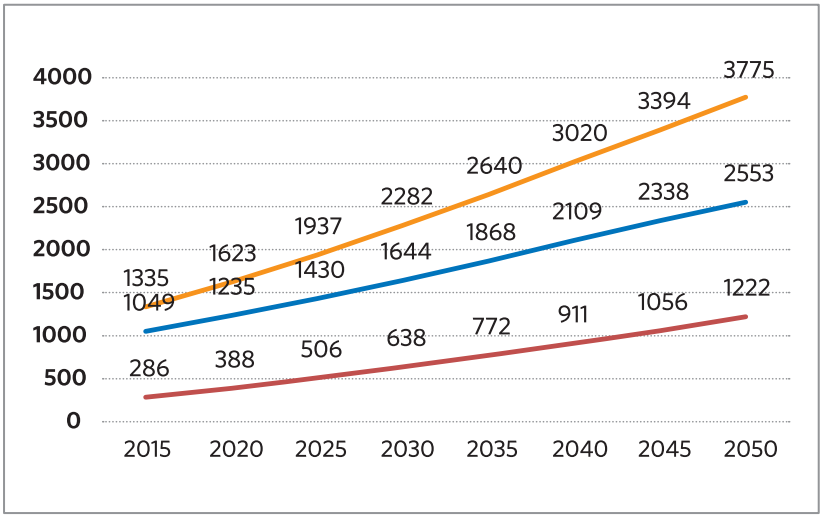
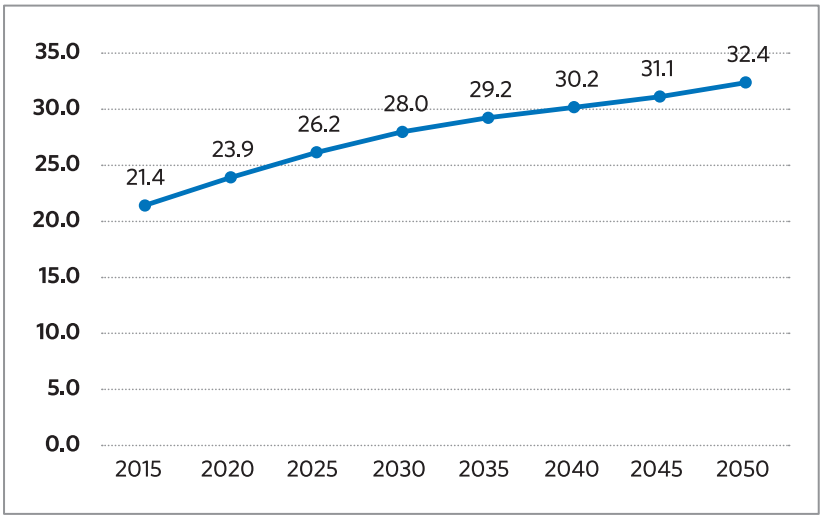


Figure VI.3
Proportion of females in the labour force (percentage), 2015-2050



What would be the impact of fertility trends if they follow the high scenario or even the constant scenario?

Table VI.6
Projection of the active population in the labor force by age group and sex (thousands), 2015-2050, Palestine, high scenario

Age group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	269	286	305	346	395	435	471	500
25-34	334	414	469	499	532	605	690	762
35-44	229	272	339	420	477	509	542	616
45-54	152	177	207	246	308	383	436	465
55-64	53	71	88	104	122	147	184	230
65+	12	15	21	29	37	46	57	69
Total	**1,049**	**1,235**	**1,430**	**1,644**	**1,872**	**2,125**	**2,380**	**2,643**
Age Group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	52	55	59	66	75	83	89	95
25-34	116	173	230	279	320	366	418	464
35-44	64	86	120	167	209	243	281	344
45-54	40	55	74	97	133	181	225	258
55-64	11	15	19	23	27	32	40	51
65+	3	4	5	6	8	10	13	16
Total	**286**	**388**	**506**	**638**	**773**	**914**	**1,066**	**1,227**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	321	341	364	412	470	518	560	595
25-34	450	587	699	779	852	971	1,108	1,226
35-44	293	358	460	586	686	751	824	960
45-54	191	232	281	344	441	565	661	723
55-64	64	86	107	126	149	178	224	281
65+	15	19	26	35	46	57	70	85
Total	**1,335**	**1,623**	**1,937**	**2,282**	**2,645**	**3,040**	**3,446**	**3,869**

Source: Based on population projections high variant and projected participation rates.

This table shows that the impact of future fertility trends according to the high scenario will be non-existent at the start of the projection, and that later on they will be very limited. This is due to the fact that active age population above 15 years are mostly already born until 2040 and that births occurring after 2015 will represent a minor share of the active

age population. Hence, in 2050, the size of the active population would be 3,869,000 according to the high scenario instead of 3,775,000, a 2.5% difference only. With the constant scenario, the active population will be greater but by a margin of 5.5%.

Table VI.7
Projection of the active population in the labor force by age group and sex (thousands), 2015-2050, Palestine, constant scenario

Age group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	269	286	305	346	398	451	507	559
25-34	334	414	469	499	532	605	695	788
35-44	229	272	339	420	477	509	542	616
45-54	152	177	207	246	308	383	436	465
55-64	53	71	88	104	122	147	184	230
65+	12	15	21	29	37	46	57	69
Total	**1,049**	**1,235**	**1,430**	**1,644**	**1,875**	**2,141**	**2,421**	**2,728**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	52	55	59	66	76	86	96	106
25-34	116	173	230	279	320	366	421	480
35-44	64	86	120	167	209	243	281	344
45-54	40	55	74	97	133	181	225	258
55-64	11	15	19	23	27	32	40	51
65+	3	4	5	6	8	10	13	16
Total	**286**	**388**	**506**	**638**	**773**	**917**	**1,076**	**1,255**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	321	341	364	412	474	537	603	666
25-34	450	587	699	779	852	971	1,116	1,268
35-44	293	358	460	586	686	751	824	960
45-54	191	232	281	344	441	565	661	723
55-64	64	86	107	126	149	178	224	281
65+	15	19	26	35	46	57	70	85
Total	**1,335**	**1,623**	**1,937**	**2,282**	**2,648**	**3,058**	**3,497**	**3,983**

Source: Based on population projections constant variant and projected participation rates.

These scenarios show that for the next 35 years, demographic variants will play a minor role in the growth and structure of the labour force (unlike other sectors such as education and health – see later Chapters 7 and 8). The economic sector and unemployment will have to adjust to an ineluctably booming active population, rather than to the other way round. However, demographic factors will definitely affect the demand for labour via the demographic dividends that will be stimulated by the transformation of the age structure of the population and the boost to economic growth through the stimulation of savings and investments.

2. Projection of Jobs Creation

Considering the demographic changes in population size and structure, and the increase of participation rates mainly among women, the number of jobs that should be created per annum will increase from 58,000 now to 76,000 in 2035-40, where they will level off at 76,000. But job creation will have also to take into account the large reserves of unemployed and under-employed also awaiting the creation of jobs.

Table VI.8
Annual number of jobs to be created (thousands), 2015-2050

	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45	2045-50
Total	**58**	**63**	**69**	**72**	**76**	**75**	**76**

Source: Based on population projections medium variant and projected participation rates.

The increase of active population as compared to the total population is meaningful in terms of demographic dividends. The economic dependency ratio (that is the ratio of economic dependents to active population) provides a better vision of the burden represented by dependency. Hence, whereas in 2015 there were more than 3.5 dependents for each active person, this economic dependency ratio will fall to 2.5 in 2050. This trend is likely to enhance savings and investments and boost economic growth, if accompanied by adequate policy measures.

However, it is important to mention that what is considered here as economically active is more a potentiality of employed persons than those effectively employed. A very high rate of unemployment, reaching 26% in 2015, is a major drawback. Many males and females who are willing to work cannot access the labour market. This is especially true for youth, for whom the unemployment rate was 36.5%. In addition, there are significant rates of unemployment for those who have worked but are now out of the labour force, either voluntarily or because they were fired from their job. Besides, there are significant numbers of persons who are considered employed, but are in fact underemployed (6.2% in 2014).

3. Regional Projections of Labour Force in West Bank and Gaza Strip

The following tables provide projections of the active population for the West Bank and Gaza Strip.

Table VI.9
Projection of the active population in the West Bank (thousands) by age group and sex, 2015-2050

Age group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	177	184	190	211	217	207	187	177
25-34	207	254	285	297	309	342	352	334
35-44	149	171	211	260	291	304	317	350
45-54	102	119	136	158	194	240	270	282
55-64	37	51	64	74	86	100	123	153
65+	10	13	18	24	32	40	48	58
Total	**681**	**792**	**905**	**1,025**	**1,130**	**1,232**	**1,297**	**1,354**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	30	31	33	36	37	35	31	30
25-34	66	99	129	154	172	192	198	189
35-44	44	57	79	109	135	154	174	207
45-54	28	38	50	64	89	116	144	162
55-64	8	11	13	16	18	21	26	32
65+	2	2	3	4	5	6	7	8
Total	**178**	**238**	**307**	**382**	**456**	**523**	**580**	**628**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	207	215	223	247	254	241	218	207
25-34	273	352	414	451	481	534	551	523
35-44	192	228	290	369	426	457	491	557
45-54	130	157	187	223	283	356	414	444
55-64	45	62	77	90	104	121	149	186
65+	12	15	21	28	36	45	55	66
Total	**858**	**1,030**	**1,211**	**1,407**	**1,585**	**1,755**	**1,878**	**1,983**

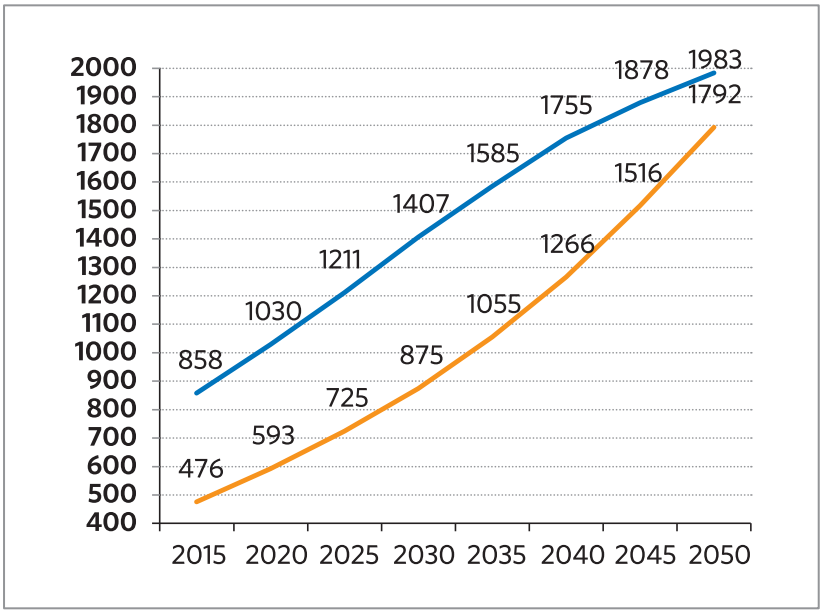
Source: Based on population projections medium variant and projected participation rates.

Table VI.10
Projection of the active population in the Gaza Strip (thousands), by age group and sex, 2015-2050

Age group	2015	2020	2025	2030	2035	2040	2045	2050
Males								
15-24	93	102	115	135	174	213	248	261
25-34	128	160	184	202	223	263	332	399
35-44	81	101	128	160	185	205	226	266
45-54	49	58	71	88	114	143	165	184
55-64	16	20	25	30	37	47	61	77
65+	2	2	3	5	6	7	9	12
Total	**368**	**443**	**525**	**619**	**739**	**878**	**1,041**	**1,198**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Females								
15-24	22	24	26	30	38	45	51	53
25-34	50	75	102	126	148	174	217	282
35-44	20	29	41	57	74	89	107	137
45-54	12	17	24	33	44	65	81	96
55-64	3	4	6	7	8	11	14	18
65+	1	2	2	3	4	5	6	7
Total	**108**	**150**	**200**	**256**	**316**	**388**	**476**	**594**
Age group	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Total								
15-24	115	126	141	165	212	258	299	315
25-34	177	235	286	328	371	437	548	681
35-44	101	130	169	218	260	294	333	403
45-54	61	75	94	121	158	208	247	279
55-64	19	25	30	36	45	57	75	95
65+	3	4	5	7	10	11	15	19
Total	**476**	**593**	**725**	**875**	**1,055**	**1,266**	**1,516**	**1792**

Source: Based on projection of the active population for Palestine and the West Bank.

Figure VI.4
Projection of the active population (thousands) in the West Bank and the Gaza Strip



The reason for the higher growth of the active population in the Gaza Strip, as compared to the West Bank, and therefore of its share in the total active population is due to a higher increase in the active age population in the Gaza Strip. It is the fact that Gaza's fertility remained high for decades – and much higher than in the West Bank – that makes the difference in impacts on future active population.

Therefore, one of the main challenges will be to cope with the disequilibrium of the Gaza labour market, present and forecasted, especially that the unemployment rate is structurally very high in Gaza, rarely below 30% since 2001 and at a new peak at 44% in 2014 (plus 7% under-unemployment).

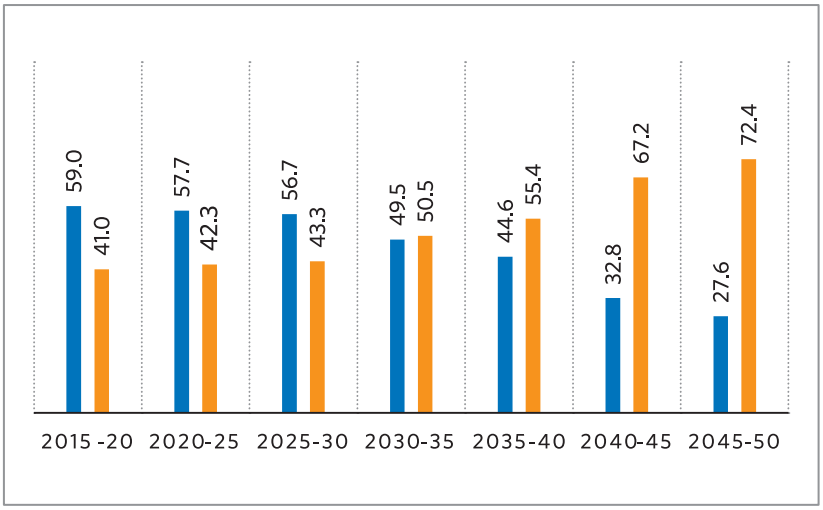
As for job creation in the West Bank and the Gaza Strip, the following table and figure illustrate the inversion of the size and shares of jobs to be created in the two geographical regions. Whereas for the time being the majority of jobs to be created (just for newcomers, not considering the numerous unemployed), is still in the West Bank, this situation will rapidly change, with over half of the jobs required to be created in the Gaza Strip. In the West Bank, job creation, although declining, will remain vary critical. Yet, these figures suggest that daily or weekly movements of the active age population or even more permanent migration from the Gaza Strip to the West Bank are an absolute necessity in order to ease the pressure on the labour market. This naturally requires greater fluidity of movement between the two regions of Palestine.

Table VI.11
Annual number of jobs to be created (thousands), in the West Bank and the Gaza Strip, 2015-2050

	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45	2045-50
West Bank	34	36	39	36	34	25	21
Gaza Strip	24	27	30	36	42	50	55
Palestine	58	63	69	72	76	75	76
Proportions (%)							
	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45	2045-50
West Bank	59.0	57.7	56.7	49.5	44.6	32.8	27.6
Gaza Strip	41.0	42.3	43.3	50.5	55.4	67.2	72.4
Palestine	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on population projections, medium variant for the West Bank and the Gaza Strip

Figure VI.5
The inversion of the share (percentage) of job creation between the West Bank and the Gaza Strip, 2015-2050



Chapter 7

Population dynamics and education



A. Projections for enrolment and numbers of schools and teachers

The State of Palestine follows the International Standard Classification of Education (ISCED). Hence for instance in 2014, the 2014 Palestinian MICS survey, realized by the Palestinian Central Bureau of Statistics (PCBS), presents data on education based on the national standards for pre-primary, primary, secondary and tertiary education according to ISCED. For these projections, these classifications were therefore used: **pre-primary, primary**, corresponding to grades 1-4, **secondary** –which aggregates *lower secondary* corresponding to grades 5-10 within the national education system and *upper secondary* which corresponds to grades 11-12 of secondary school within the national education system. For global reporting purposes, namely those of UNESCO, worldwide and for the Arab States in particular, lower secondary school and upper secondary school are combined as secondary school education. Finally, **tertiary education**, which corresponds to the degrees provided in university and colleges. Other methods of classification won't affect the global number of pupils and students, but only their internal distribution for primary and secondary levels.

Unlike active population (i.e., all persons who furnish the supply of labour), population dynamics have an almost immediate effect on education. Whereas changes in fertility behaviour start to affect the age of the active population with a time lag of 15 years at the least (and even more, considering that a high proportion of adolescents below 20 are still pupils or students), these changes influence the school-age population in a short time span. This is particularly so in Palestine where schooling starts at four years of age in the pre-primary level – and increasingly so in the future.

1. Projections of School Enrolment

Under the impact of demographic factors only, the overall school-age population, from pre-primary to the tertiary level, will significantly increase from 2.1 million in 2015 to 3.1 million in 2050, as shown in this table VII.1. This is a relative increase of 48%, thus lower than the rate for the total population, which will double in the meantime. It is expected, therefore, that this new population configuration will be a strong incentive for demographic dividends, since youngsters below the age of 22 weigh heavily as dependents, especially when they are in the education system. The lower rate of growth for the school-age population will favour the shift from 'demographic investments', i.e. those investments that exist just to cope with population growth, to 'economic investments,' which ensure an enlargement of the economic sphere and an increase in the GNP and standards of living.

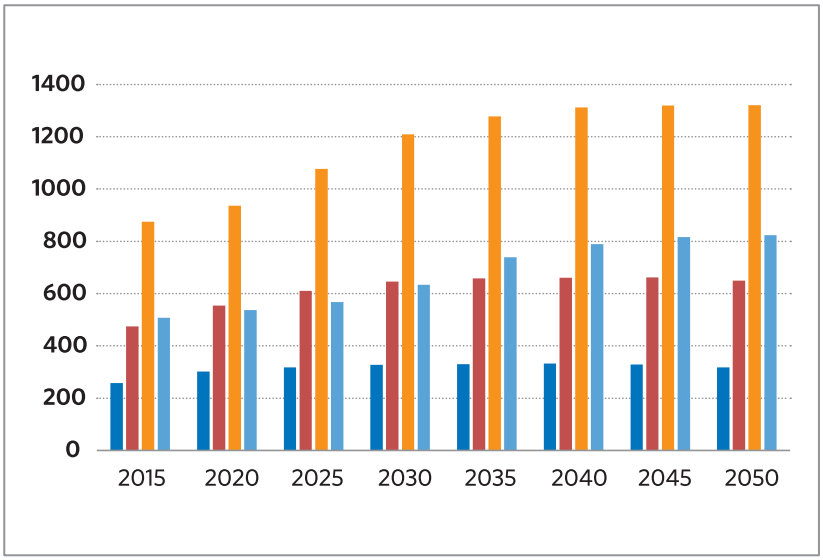
Table VII.1
Projection of the school-age population (thousands), by level of education (age of student) and sex, Palestine, 2015-2050, medium scenario

Level of Education	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5 years	132	155	163	168	170	170	169	163
Primary, 6-9	243	283	313	332	338	340	340	334
Secondary, 10-17	447	478	550	620	656	674	679	680
Tertiary, 18-22	259	274	290	322	378	405	419	423
Total	**1,081**	**1,190**	**1,316**	**1,442**	**1,542**	**1,589**	**1,607**	**1,600**
Females								
Pre-primary, 4-5 years	126	147	155	160	160	162	160	155
Primary, 6-9	232	271	297	314	320	320	322	316
Secondary, 10-17	428	458	527	589	622	638	641	641
Tertiary, 18-22	249	263	277	311	361	384	397	400
Total	**1,035**	**1,139**	**1,256**	**1,374**	**1,463**	**1,504**	**1,520**	**1,512**
Total population								
Pre-primary, 4-5 years	258	302	318	328	330	332	329	318
Primary, 6-9	475	554	610	646	658	660	662	650
Secondary, 10-17	875	936	1077	1209	1278	1312	1320	1321
Tertiary, 18-22	508	537	567	633	739	789	816	823
Total	**2,116**	**2,329**	**2,572**	**2,816**	**3,005**	**3,093**	**3,127**	**3,112**

Source: Projections by age group and sex, medium variant.

Nevertheless, this optimistic outlook might be tempered by the fact that the older school-age population (that which is most costly one for the state or the family) will grow much faster than the younger part of this group. Hence, there is a sequence of rates of increase by levels of education from pre-primary +23%, to primary +37%, to secondary +51%, and finally to tertiary +62% between 2015 and 2050.

Figure VII.1
The growth of the school-age population (thousands) by level of education (age of student), 2015-2050



The costs of education supported by the state or by civil society will therefore grow more rapidly than the size of the school-age population, since the demand for education in quantity and quality is rapidly increasing. As shown in the next table, there has been some very significant progress in the school enrolments ratio recently, although with some fluctuations. The relative decrease of male school enrolment as compared with that of females in the upper levels might be compensated for if enough job opportunities become available for the more educated.

Table VII.2
Net enrolment rates (percentage) by sex and level of education (age of student), 2005-2014

Age Group	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Males										
Pre-primary, 4-5 years	25.9	28.4	21.9	30.8	33.1	32.8	36.6	36.3	40.9	44.7
Primary, 6-9	80.1	80.2	79.4	83.6	**85.4**	**87.4**	**87.2**	**90.6**	**89.6**	**90.7**
Secondary, 10-17	83.9	84.4	84.1	83.8	**82.6**	**80.4**	**77.2**	**77.5**	**76.9**	**76.5**
Tertiary, 18-22	40.6	40.1	42.7	43.6	40.5	41.1	41.9	**40.1**	**36.4**	**34.6**
Females										
Pre-primary, 4-5 years	24.6	27.9	21.8	30.1	32.4	32.2	35.8	35.4	40.3	46.1
Primary, 6-9	79.2	80.2	79.7	83.6	84.8	85.4	**86.4**	**89.7**	**90.9**	**91.0**
Secondary, 10-17	87.4	89.0	89.0	89.0	87.7	86.1	**85.0**	**84.5**	**84.0**	**83.9**
Tertiary, 18-22	41.2	46.3	51.4	52.9	52.7	54.9	57.7	**56.6**	**54.6**	**53.8**

Source: United Nations Educational, Scientific and Cultural Organization Institute of Statistics, based on Palestinian Central Bureau of Statistics official data.

In view of its impact on future school performance (see studies by UNESCO, the World Bank and other institutions), pre-primary education, which is attracting increasing numbers of children ages 4-5 in Palestine, is likely to be generalized and become universal in the near future, as it is the case in most advanced developing countries, including the Arab countries. Primary education in Palestine is almost universal (92%) and will approach complete universality in 2050. On the other hand, the puzzling trend in school-enrolment ratio at the secondary level (ages 10-17) – like that in some other Arab countries – is worrisome. The reasons behind an increase in secondary school student drop-outs (higher for boys than for girls) is probably temporary, and will have to be reversed in the coming years, through support for an efficient schooling policy. The same is true at the tertiary level (ages 18-22), at least for males, whose gross enrolment ratio has significantly decreased from 41% to 35% (see highlighted cells in Table VII.2), while concomitantly increasing from 41% to 54% for females (although the proportion of females in tertiary education has also declined from 2012 to 2014). Obviously, this might be a temporary phenomenon, with a likely increase in enrolment of males comparable to females. The projections for school enrolment reflect a more equitable gender balance in the future.

Table VII.3
Projection of enrolment ratios (percentage) by level of education (age of student) and sex, 2015-2050

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	48.5	57.3	66.1	74.9	83.7	92.5	99.0	99.0
Primary, 6-9	91.8	97.9	99.0	99.0	99.0	99.0	99.0	99.0
Secondary, 10-17	76.1	79.4	82.7	86.0	89.3	92.6	95.9	99.2
Tertiary, 18-22	34.6	41.6	48.6	55.6	62.6	69.6	76.6	81.8
Total								
Females								
Pre-primary, 4-5	49.0	59.8	70.6	81.4	92.2	99.0	99.0	99.0
Primary, 6-9	91.1	96.2	99.0	99.0	99.0	99.0	99.0	99.0
Secondary, 10-17	83.8	85.9	88.0	90.1	92.2	94.3	96.4	98.5
Tertiary, 18-22	53.8	60.8	67.8	74.8	81.8	81.8	81.8	81.8

Source: Orientated according to past trends.

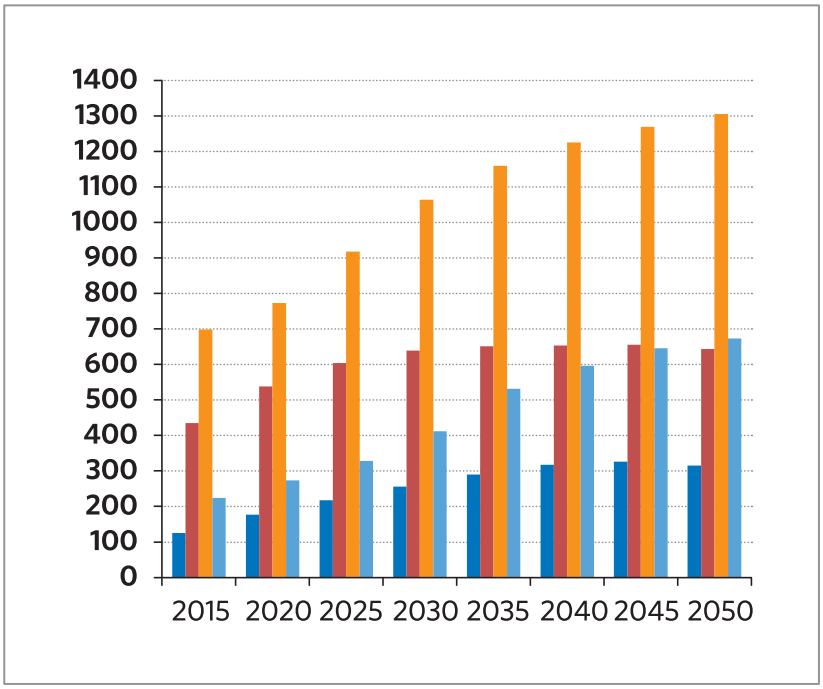
Hence, between 2015 and 2050, the number of pupils and students will grow from 1,483,000 in 2015 to 2,937,000, thus doubling at an average rate of 2% per annum, comparable to the rate of growth of the total population of Palestine. However, this growth will be unevenly distributed. Under the impact of population dynamics and the increase of demand for education for certain levels, pressure will be much higher for tertiary education for both males and females, under the cumulative effects of higher demographic growth for these segment of the population and increasing enrolment ratios across time resulting in an average rate of growth of 3.2%, and the accompanying pressure on education expenditures. In pre-primary levels, the pressure (+2.6% per annum) will also be quite strong, since enrolment ratio at this level is still relatively low by world standards. Pressure at secondary (+1.8%) and primary levels (+1.1%) will be less intense.

Table VII.4
Projection of school enrolments (thousands) by level of education (age of student) and sex, 2015-2050, Palestine, medium scenario

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	64	89	108	126	142	157	167	161
Primary, 6-9	223	277	310	329	335	337	337	331
Secondary, 10-17	340	380	455	533	586	624	651	675
Tertiary, 18-22	90	114	141	179	237	282	321	346
All levels	717	859	1,013	1,167	1,299	1,400	1,476	1,513
Females								
Pre-primary, 4-5	62	88	109	130	148	160	158	153
Primary, 6-9	211	261	294	311	317	317	319	313
Secondary, 10-17	359	393	464	531	573	602	618	631
Tertiary, 18-22	134	160	188	233	295	314	325	327
All levels	766	902	1,055	1,204	1,333	1,393	1,420	1,425
Total								
Pre-primary, 4-5	126	177	217	256	290	318	326	315
Primary, 6-9	434	538	604	640	651	653	655	644
Secondary, 10-17	699	773	919	1064	1159	1226	1269	1306
Tertiary, 18-22	224	274	329	412	532	596	646	673
All levels	1,483	1,761	2,068	2,371	2,632	2,793	2,896	2,937

Source: Projections by age group and sex, Medium variant, projection of enrolment ratios.

Figure VII.2
Projection of school enrolments (thousands) by level of education (age of student), 2015-2050



As shown in the following tables, fertility trends in the future will affect considerably the size of enrolments. Were fertility to follow the unlikely high or constant scenarios, there would be respectively 700,000 or 1.5 million more enrolments overall by the year 2050 than in the medium scenario already described.

Table VII.5
Projection of school enrolments (thousands) by level of education (age of student) and sex, 2015-2050, Palestine, high scenario

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	64	89	112	137	162	190	218	231
Primary, 6-9	223	277	313	347	370	390	417	446
Secondary, 10 -17	340	380	455	538	613	683	749	824
Tertiary, 18-22	90	114	141	179	237	291	346	393
All levels	717	859	1,021	1,201	1,382	1,554	1,730	1,893
Females								
Pre-primary, 4-5	62	88	113	141	169	193	206	219
Primary, 6-9	211	261	297	329	350	370	395	423
Secondary, 10-17	359	393	464	536	600	659	713	775
Tertiary, 18-22	134	160	188	233	296	324	351	372
All levels	766	902	1,062	1,238	1,416	1,546	1,665	1,789

Table VII.5 *(continued)*

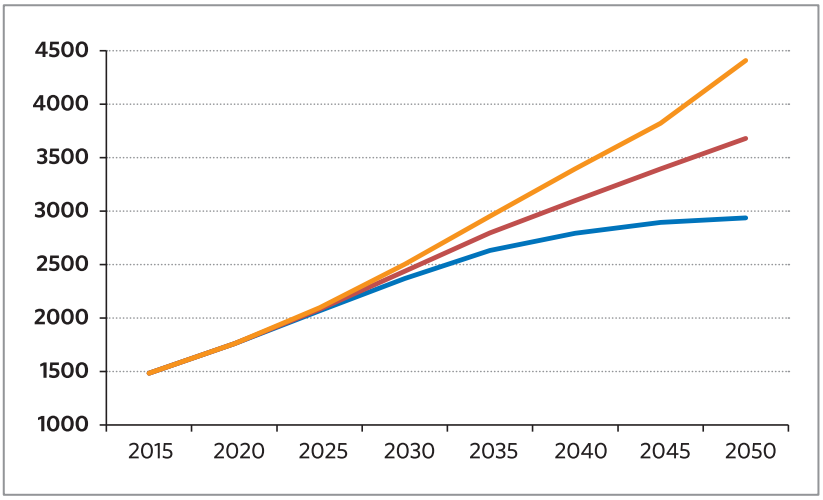
Totals								
Pre-primary, 4-5	126	177	225	278	330	383	424	449
Primary, 6-9	434	538	610	675	721	760	812	868
Secondary, 10-17	699	773	919	1,074	1,213	1,343	1,462	1,600
Tertiary, 18-22	224	274	329	412	533	615	697	765
All levels	1,483	1,761	2,083	2,439	2,797	3,100	3,395	3,682

Source: Projections by age group and sex, high variant, projection of enrolment ratios.

Table VII.6
Projection of school enrolments by level of education (age of student) and sex, 2015-2050, Palestine, constant scenario

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	64	89	116	147	181	221	266	301
Primary, 6-9	223	277	317	364	404	445	497	560
Secondary, 10-17	340	380	455	544	639	741	846	972
All levels, 18-22	90	114	141	179	238	299	372	435
Total	**717**	**859**	**1,028**	**1,234**	**1,462**	**1,706**	**1,981**	**2,269**
Females								
Pre-primary, 4-5	62	88	117	151	188	225	252	285
Primary, 6-9	211	261	300	345	381	420	470	530
Secondary, 10-17	359	393	464	542	625	713	803	914
Tertiary, 18-22	134	160	188	233	296	334	375	413
All levels	766	902	1,069	1,270	1,490	1,691	1,901	2,142
Total								
Pre-primary, 4-5	126	177	233	298	369	446	519	586
Primary, 6-9	434	538	617	709	785	864	967	1,090
Secondary, 10-17	699	773	919	1,085	1,265	1,454	1,649	1,886
Tertiary, 18-22	224	274	329	412	534	633	747	848
All levels	1,483	1,761	2,097	2,504	2,952	3,397	3,882	4,411

Figure VII.3
Projection of the number of pupils and students (thousands), all levels of education (age of student) according to the three scenarios, 2015-2050



This chart shows the decisive impact of alternative trends of fertility on the future number of pupils and students. These effects are relatively limited until 2030, but become important thereafter. Hence, future trends of fertility feature as an important component in the quantitative and qualitative aspects of education and its costs.

2. Projections of number of Schools

The increasing cost of education is quantified when considering the new infrastructure, namely the number of schools, required to serve this population. In 2015, Palestine's MOEHE[169] counted 2,753 schools; keeping the ratio of schools per pupils as exists currently requires a huge increase in number of schools, from 2,750 to 8,200 in 2050 (rounded figures), even in the medium scenario:

Year	Number of schools (rounded)
2015	2,750
2020	3,250
2025	3,850
2030	4,400
2035	4,900
2040	5,200
2045	5,400
2050	5,450

Thus, while slightly more than 100 new schools will need to be added yearly in 2015-2020, this figure will strongly diminish by 2045-2050. This is an important effect of

169 Ministry of Education and Higher Education, *Education Development Strategic Plan, EDS 2014-2019, A learning nation*, March 2014.

fertility transition, meaning that fewer demographic investments would be required when demographic transition matures, economic investments progressively becoming more important.

3. Regional enrolment and school projections

The West Bank and the Gaza Strip feature generally similar schooling patterns, namely in school enrolment ratios. However, in 2011-2012, the secondary school enrolment rate declined in the Gaza Strip to 59% for boys and 75% for girls, according to UNICEF. The reason given for this was that Gaza boys were increasingly likely to leave school for work. More recent statistics for 2011-2014 from the MOEHE show comparable enrolment ratios between the West Bank and the Gaza Strip. The last MICS survey of 2014 found that the net attendance ratios in primary schools are exactly the same in the West Bank and the Gaza Strip for boys and girls, and very close in secondary schools for both sexes. No data was available on pre-primary and tertiary levels in this survey.

As such, projected school enrolments for each region will be expected to follow the same pattern as Palestine as a whole. This is in contrast to demographic trends, which diverge significantly in the two regions, and are the sole factor in size and structure differences between the two regions.

As portrayed in the following tables and figure, school enrolments at all levels will grow, but only moderately in the West Bank (from 851,000 pupils in 2015 to 1,195,000 in 2050, an increase of 40% at an average annual rate of 1%). In the Gaza Strip, however, the 'burden' of schooling will be much more impressive, with school enrolment being multiplied by 2.8 at an annual rate of increase of 2.8%.

This is coherent with the fact that Gaza's population is more youthful at the start and that its fertility and its population momentum is higher than that of the West Bank. Therefore Gaza will accumulate relatively more births, soon to arrive at schooling ages, than will the West Bank.

Table VII.7
Projection of school enrolments (thousands) by level of education (age of student) and sex, 2015-2050, West Bank

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	36	46	54	46	54	63	70	70
Primary, 6-9	129	156	148	150	121	130	138	143
Secondary, 10-17	202	221	257	271	269	238	248	272
Tertiary, 18-22	55	69	82	103	124	137	125	130
All levels	422	491	540	571	567	568	581	615

Table VII.7 *(continued)*

Females								
Pre-primary, 4-5	35	45	54	47	55	64	66	67
Primary, 6-9	124	146	141	143	115	123	131	135
Secondary, 10-17	187	230	261	270	263	230	236	256
Tertiary, 18-22	82	95	110	132	155	153	127	122
All levels	428	517	566	592	588	570	560	580
Total								
Pre-primary, 4-5	72	91	108	94	109	127	137	138
Primary, 6-9	252	302	288	293	236	252	268	277
Secondary, 10-17	389	451	519	541	532	468	485	528
Tertiary, 18-22	137	164	192	235	279	290	252	252
All levels	851	1,008	1,107	1,163	1,155	1,138	1,141	1,195

Source: Projections by age and sex of the West Bank, projection of school–enrolment rates.

Table VII.8
Projection of school enrolments (thousands) by level of education (age of student) and sex, 2015-2050, Gaza Strip

	2015	2020	2025	2030	2035	2040	2045	2050
Males								
Pre-primary, 4-5	28	43	54	79	89	94	97	91
Primary, 6-9	95	121	162	178	214	207	199	188
Secondary, 10-17	138	159	198	262	317	386	403	403
Tertiary, 18-22	35	45	59	76	113	145	196	216
All levels	295	369	473	596	732	832	895	898
Females								
Pre-primary,4-5	26	43	55	83	92	96	92	86
Primary, 6-9	87	114	153	168	202	194	188	178
Secondary, 10-17	172	163	202	260	311	372	382	375
Tertiary, 18-22	52	64	78	100	141	161	198	205
All levels	337	385	489	612	746	823	860	845

Table VII.8 *(continued)*

Total								
Pre-primary, 4-5	54	86	109	162	181	190	189	177
Primary, 6-9	182	236	316	347	416	401	387	366
Secondary, 10-17	310	322	400	523	628	758	785	778
Tertiary, 18-22	86	110	137	176	253	306	394	421
All levels	632	754	962	1,208	1,478	1,655	1,755	1,743

Source: Projections by age sex of the Gaza Strip, projection of school enrolment rates.

Higher educational needs in 2015-2050, expressed by the increase in pupils in the Gaza Strip, appears as one of the major challenges to social and economic development. Namely, considering the requirements in terms of new schools, the Gaza Strip (where the number of pupils per school is presently more than twice in the West Bank), would require many additional schools to cope with an increasing school-age population.

Hence the number of schools in the Gaza Strip by the year 2050 would need to equal those in the West Bank, even though Gaza has a much higher number of pupils per school. Thus, demographic investments in the Strip are likely to remain very high, limiting its share devoted to economic investments, unless important changes change the status quo that exists between the two regions.

Figure VII.4
Increase in school enrolments (thousands, all levels), West Bank and Gaza Strip

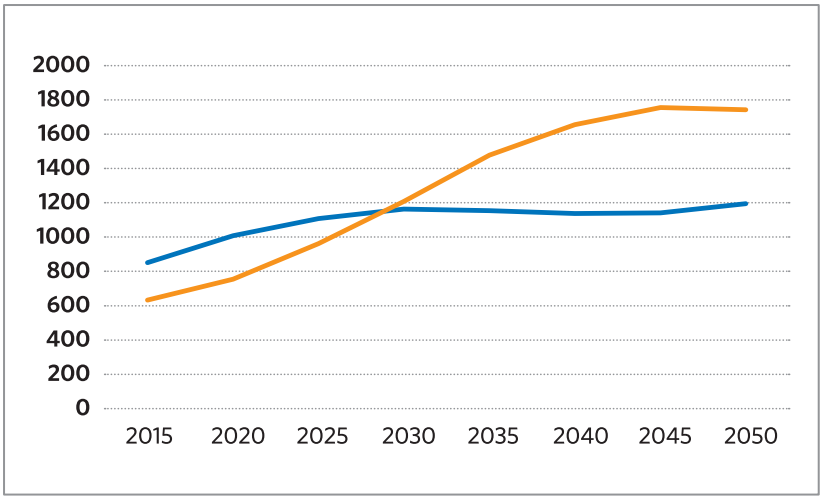


Figure VII.5
Increase in school enrolments (thousands) by level (age of student) in the West Bank, 2015-2050

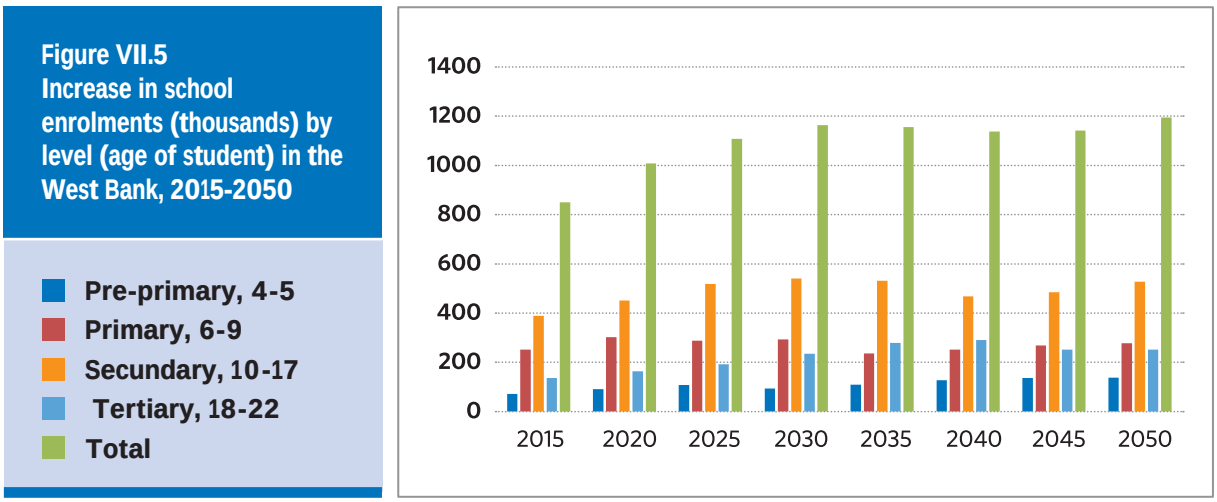


Figure VII.6
Increase in school enrolments (thousands) by level (age of student) in the Gaza Strip, 2015-2050

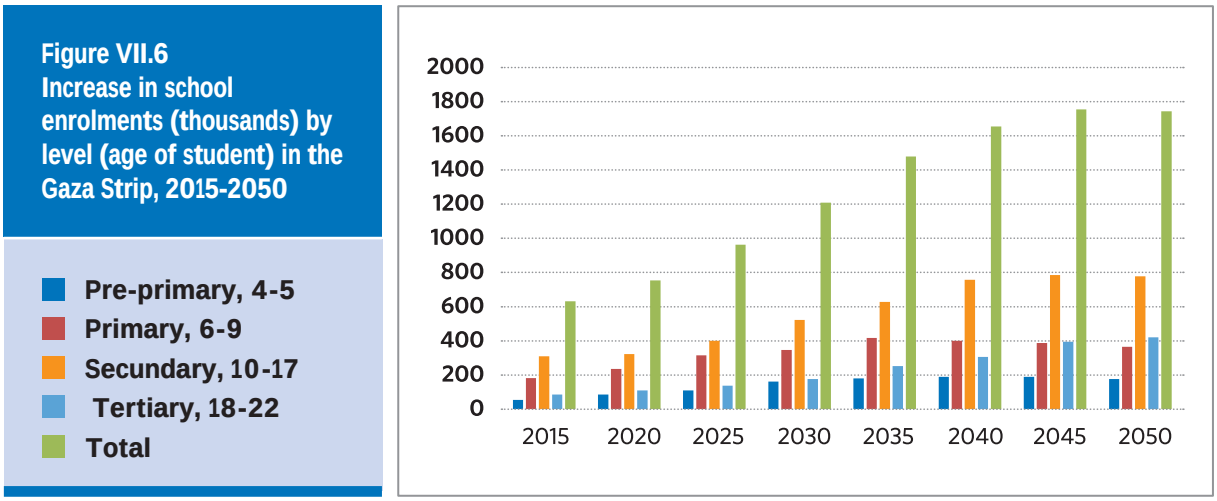


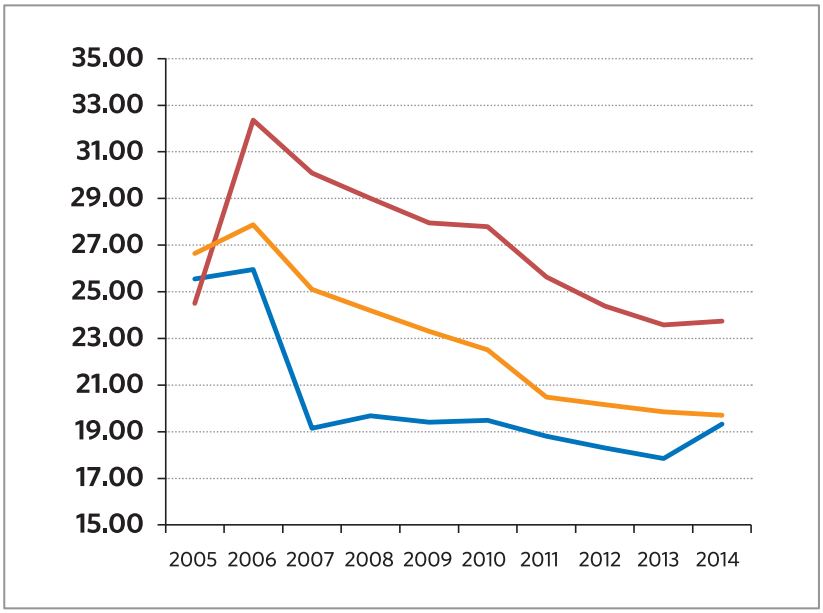
Table VII.9
Number of schools projected to meet enrolments at current student per school ratio, by region, 2015-2050

Year	West Bank	Gaza Strip
2015	2,050	700
2020	2,450	800
2025	2,700	1,150
2030	2,800	1,600
2035	2,800	2,100
2040	2,800	2,400
2045	2,800	2,600
2050	2,800	2,650

4. Projections for the number of teachers

One of the most important criteria in improving the quality of education is to have a reasonable number of pupils per teacher, thus decreasing the pupil-to-teacher ratio. In this regard, it is reassuring that, despite a high quantitative pressure on Palestine's school system over the last 10 years, the pupil-to-teacher ratio has diminished in pre-primary, primary and secondary schools.

Figure VII.7
Decline in the pupil-to-teacher ratio (percentage) in Palestine, 2005-2014



After a marked increase in the number of students to teachers in 2006, the ratio diminished until 2014, reaching moderate levels (although a bit higher than those observed in developing countries, including Arab countries where fertility and population growth are lower than in Palestine). Since, this situation of high fertility is to persist for some time in Palestine, it is reasonable to assume that the pupil-to-teacher ratio will stabilize in 2015-2050 at their present level.

Table VII.10
Projections for the number of teachers (thousands) required, Palestine, 2015-2050

	2015	2020	2025	2030	2035	2040	2045	2050
Pre-primary, 4-5	7	9	11	13	15	16	17	16
Primary, 6-9	18	23	25	27	27	28	28	27
Secondary, 10-17	35	39	47	54	59	62	64	66

Source: School enrolment projection, medium variant, pupil's teacher ratio of 2014.

Table VII.11
Projections of the number of teachers (thousands), West Bank and Gaza Strip, 2015-2050

West Bank	2015	2020	2025	2030	2035	2040	2045	2050
Pre-primary, 4-5	4	5	6	5	6	7	7	7
Primary, 6-9	11	13	12	12	10	11	11	12
Secondary, 10-17	20	23	26	27	27	24	25	27

Gaza Strip								
Pre-primary, 4-5	3	4	6	8	9	10	10	9
Primary, 6-9	8	10	13	15	18	17	16	15
Secondary, 10-17	16	16	20	27	32	38	40	39

Source: Projection of school enrolment in the West Bank and Gaza Strip and of pupil-to-teacher ratio.

To estimate the future costs of education – which are mainly constituted of teacher's salaries – and their weight in the national budget and the GNP, it should be noted that not all education expenditures are derived from the state. UNRWA and the private sector play a significant role in education.

Table VII.12
Distribution of pupils (thousands and percentages), 2014-2015

	Palestine			Percentage		
	Basic	Secondary	Total	Basic	Secondary	Total
Public	640	133	773	62.1	95.0	66.0
UNRWA	288	0	289	27.9	0	24.7
Private	103	7	110	10,.0	5.0	9.4
Total	**1,031**	**140**	**1,172**	**100.0**	**100.0**	**100.0**
	West Bank			**Percentage**		
	Basic	Secondary	Total	Basic	Secondary	Total
Public	466	76	542	77.4	92.7	79.2
UNRWA	50	0	50	8.3	0	7.3
Private	86	6	92	14.3	7.3	13.5
Total	**602**	**82**	**684**	**100.0**	**100.0**	**100.0**

Table VII.12 *(continued)*

	Gaza Strip			Percentage		
	Basic	Secondary	Total	Basic	Secondary	Total
Public	174	57	231	40.6	98.3	47.3
UNRWA	238	0	239	55.5	0	49.0
Private	17	1	18	4.0	1.7	3.7
Total	**429**	**58**	**488**	**100.0**	**100.0**	**100.0**

Source: Ministry of Education, directory of Statistics, 2015.

Hence, one-third of pupils in the country as a whole fall under the financial responsibility of UNRWA and the private sector, with a much greater proportion in the Gaza Strip than in the West Bank. UNRWA and the private sector can likely be expected to bear a significant portion of the costs of education and their share under the state's responsibility.

The shift in the paradigm from 'economic growth' to 'economic development' puts human resources at the core of the latter. "Adolescents and youth not only have a transformative impact on all aspects of societies, including the economic, social, cultural and political, they will also be the parents and teachers of the next generation. Their choices will determine the next population wave. When young people can claim their right to health, education and decent working conditions, they become a powerful force for economic development and positive change"[170]. The demand for education from kindergarten up is projected to increase from 2.1 million in 2015 to 3.1 million in 2050. The issues involved not only encompass the number of schools, classrooms, teachers and facilities but go further to issues of quality, relevance, and service provision to the increasing numbers who aspire to have a decent future.

The coming sections address issues of quality, relevance and change in the educational system towards an enhancement of the learning processes.

B. Quality of education

There is the widespread perception that the quality of education is declining in Palestine.[171] This might be ascribed to the combination of the very rapid expansion of basic and secondary education and the effects of the on-going political conflict on the school system. International and national test results can be used to assess the learning outcomes of the educational system. In addition to the *Tawjihi* (the school matriculation exam), the MOHE organizes a national test in Arabic and mathematics for the fourth grade.

In addition to the art and scientific streams that dominate education, there is some participation in technical and vocational education and training (TVET). TVET is still limited

170 UNFPA, *Population Dynamics in the Least Developed Countries: Challenges and Opportunities for Development and Poverty Reduction*, May 2011, available at https://www.unfpa.org/sites/default/files/pub-pdf/CP51265.pdf, p. 20.

171 World Bank, September 2006, p. 3

to some few thousand pupils and the graduates of this system do not exceed 1,000 each year. The negative stigma attached to this kind of education and training is unfortunately negative, and limited to those who had lost hope in continuing in the art or scientific stream of education. Despite major efforts invested in expanding TVET, the few improvements have not transformed its general marginalization.

These issues will be discussed below, with a few results that reflect on the issue of the school system's educational quality and some reflections regarding higher education's learning outcomes.

1. Learning processes and environment

To analyse the learning processes and school environment in Palestine, the Trends in International Mathematics and Science Study (or TIMSS) provides one measurement. TIMSS is developed and implemented by the International Association for the Evaluation of Children's Progress (IEA). Palestine took part in the TIMMS of 2003, 2007 and 2011, involving the eighth grade only.

To frame this discussion, a list of four indexes was developed by a researcher[172] seeking to better analyse the impact of the second *Intifada* on pupils' achievement in mathematics and science. His analysis can be adopted to reflect on the learning environment because the questions regarding the safety environment are generic. Four dimensions are considered: mathematics and science performance, safety in schools, working children, and school resources.

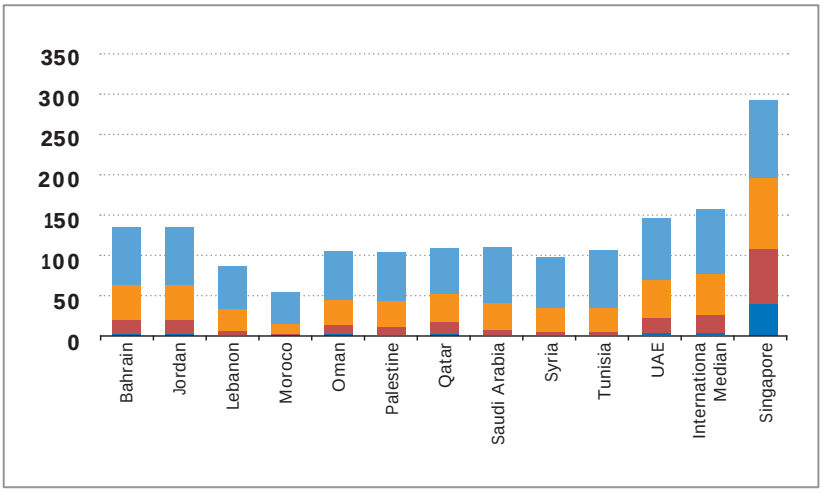
(a) Mathematics and science performance

Average scores for the TIMSS test plummeted between 2003 and 2007, before rising moderately in 2011. The average international score on the exam is 500, and those Palestinian pupils who scored an acceptable level in the TIMSS of 2007 were only 1% in science and 0% in mathematics. In the TIMSS of 2011, Palestine ranked 36 among 42 countries in mathematics achievement – lower than Jordan but in better position than Saudi Arabia and Morocco. In science achievement, Palestine ranked 34 among 42 countries and was better than Qatar, Lebanon, and Morocco. Given the particular situation of the Palestinians, they compare well to their fellow Arabs.

Average TIMSS Scores for Palestinian Eight Graders			
	2003	2007	2011
Mathematics	391	361	404
Science	436	405	420

172 Nadir Altinok, Background paper prepared for the Education for All Global Monitoring Report 2011, "An Analysis of Schooling Quality Differences in Israel and Palestinian National Authority during the Second Intifada," 2010, available at http://datatopics.worldbank.org/hnp/files/edstats/ISRgmrpap10.pdf.

Figure VII.8
Share of 8th Graders Achieving International Benchmarks in Science, 2011



Source: Martin et al, 2012.[173]

In both the math and science TIMSS tests, UNRWA schools scored higher than public schools (the difference between 2003 and 2007 from 25 points to 29 points[174]).

Overall, the generally poor achievement in these tests are indicative of the recurrent challenges in the Palestinian educational system, which is based largely on rote learning and is criticized for its lack of critical thinking and participatory processes.[175]

The poor performance of pupils in TIMSS is not the only indicator of the use of inappropriate methodologies in the learning process. Low achievement is also found in national fourth and tenth grade examinations and the high school matriculation examination, the Tawjihi. According to the PCBS Report on The Status of the Rights of Palestinian Children 2014, "(t)he results of the bi-annual national examinations showed an overall decline in the level of students in science and mathematics from 2007/2008 to 2009/2010 for fourth and tenth grade students. Results show decline in performance in comparison to previous years in math and Arabic language and improvement in sciences for fourth grade students. Performance in science declined while it improved in Arabic language and math for tenth grade students. Females performed better than males; still the academic performance is low and many do not succeed."[176]

(b) Safety in schools

Violence remains a critical issue in schools, especially at boys' schools. Almost one in every five children in Palestine has experienced violence at the hands of teachers, and one in every 50 children had experienced violence by Israeli soldiers and settlers (almost all

173 Martin, M. O., I. V. S. Mullis, P. Foy, and A. Arora, TIMSS 2011 International Results in Science. (Boston: International Association for the Evaluation of Educational Achievement, 2012).

174 See Saida Affouneh, "Critical Analysis of the Education System after the Establishment of the Palestinian Authority", Al-Najah Journal for Research (Human Sciences, vol.28, issue 2, 2014, pp. 265-292, https://journals.najah.edu/media/journals/full_texts/3_11.pdf.

175 To learn more about this issue, see Nubar Hovsepian, *Palestinian State Formation: Education and the Construction of National Identity* (Cambridge Scholars Publishing, 2008).

176 See PCBS, "The Status of the Rights of Palestinian Children 2014," http://www.pcbs.gov.ps/Downloads/book2147.pdf, April 2015, Palestine.

children are exposed to this latter type of violence). These figures were higher in Gaza and for males than females.[177] Israel's 2014 military operation in Gaza resulted in the physical destruction of numerous schools, and children and teachers in the West Bank experience violence both on their way to school and sometimes while attending classes, through raids from the military and/or settler attacks.

(c) Working children

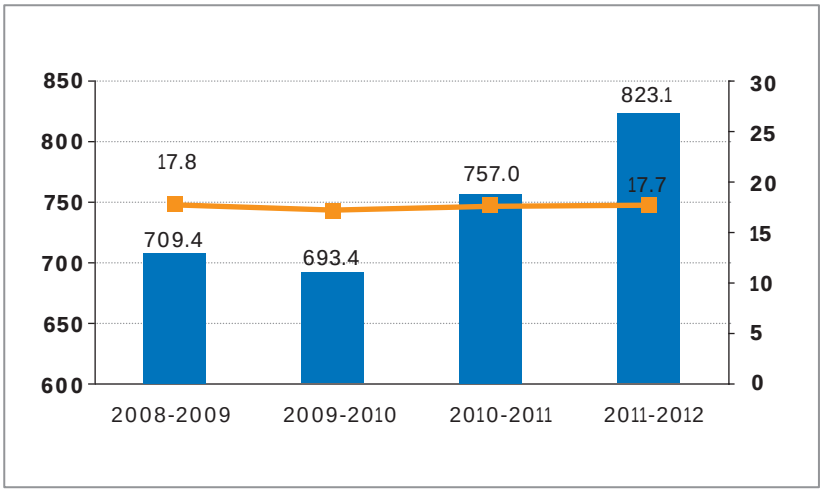
Difficult economic and social conditions have pushed children into the job market to support their families. In 2003, 38% of pupils were working; by 2007, that figure had decreased to 27%, but still reflects nearly one-third of the national student body. There are more working children in public schools (38%) than in UNRWA schools (24%). Poverty is one of the major factors in forcing children into work. Rates of poor children increased in 2011, mainly in Gaza. Nearly one-third (27.2%) of children were poor, 18.4% in the West Bank and 39.3% in the Gaza Strip. The rate of children suffering deep poverty fell slightly from 14.6% in 2010 to 13.9% in 2011.[178]

(d) School resources

Public spending on general education stagnated as a percentage of the government's budget. While the cost of education per student increased from USD 709 in 2008/2009 to USD 823 in 2011/2012, budget allocations for education were slightly lower than in 2008/2009. Only 10% of the education budget was allocated to development, with operating expenses and salaries comprising the bulk of expenditures. This has implications for class density. Overcrowding in the classroom decreases opportunities for participation and interaction, and it reduces the teacher's ability to control the class, which in turn can impede understanding, comprehension and academic performance. Density in classrooms is relatively high, particularly in UNRWA schools. Classroom density decreased between school year 2009/2010 and 2013/2014, but classrooms in government and UNRWA schools (mainly primary school classrooms) remain crowded. The average number of elementary school students per classroom in government and UNRWA schools for the 2013/2014 academic year stood at 30.8 compared with 26.2 in secondary schools. Overcrowding is greater in the Gaza Strip than in the West Bank. UNRWA schools and schools in East Jerusalem and Gaza also have a greater shortage of classrooms. Average classroom density in countries of the Organization for Economic Cooperation and Development for 2005, for example, was 21.7 students in primary schools and 23.8 students in secondary schools. Density in Palestinian schools, therefore, is relatively high.

177 Ibid.
178 Ibid.

Figure VII.9
Spending on education and cost per student in selected school years



Source: Ministry of Education, State of Palestine. Monitoring and Evaluation of the Strategic Development Plan 2008-2012.

The stagnation in public spending on education meant insufficient contribution to the upgrading of teachers' skills and left many schools without appropriate facilities. The low percentage of teachers whose qualifications meet the standards set by the MOEHE may be one of the causes of low student academic performance. Just 29.3% of teachers meet qualifications established in 2011, i.e., less than one-third of teachers have the qualifications deemed necessary for teaching. Among teachers of grades 1-4, the percentage was 45.7%, twice as many of them females as males. A large proportion of teachers and applicants for teaching jobs obtained low grades on their high school matriculation exams, and half would not want to continue working as teachers if they could find better jobs. Due to deteriorating economic and social conditions, teaching is considered a last resort for many young people, who are required to rely on private tutoring or other part-time jobs to make ends meet.[179]

Palestine has specialized classrooms, including computer laboratories in 78.1% of schools, libraries in 76.1% of schools, and science laboratories in 67% of schools. Distribution between the West Bank and Gaza Strip is respectively 73.6% and 91.4% for computer labs, 73.5% and 83.6% for libraries, and 66.2% and 69.3% for science labs. Although the percentage of schools with computers in Gaza is greater than in the West Bank, an average of 42.4 students share a computer compared with 23.2 in the West Bank (28.5 for Palestine as a while). The percentage of UNRWA schools with computer labs is higher than that of public schools. The number of students sharing a computer in UNRWA schools is still high as compared to government and private schools (43.3, 27.4 and 17.5 students per computer respectively)[180].

(e) Government response

The MOHE has written a report analysing in detail the strategic actions required to address the issues in quality of education at various school stages, encompassing curricula and human and physical resources. It also addresses the shortcomings of the current global and Palestinian framework for Education for All, among them:

179 Ibid.
180 Ibid.

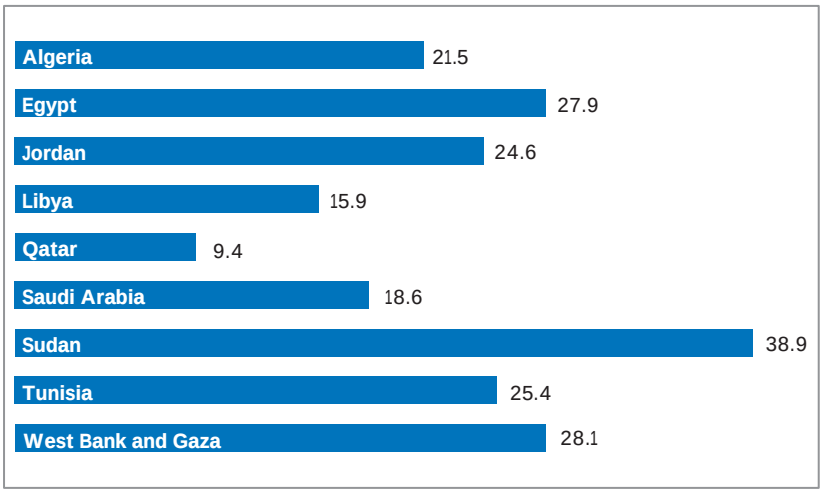
- **The limited expansion of early childhood care and education:** Education in kindergarten is still not compulsory by law. The proportion of children enrolled in 2013/2014 was 55.1% -- far from the Dakar target of 70%. Kindergartens (with the exception of two) are run mostly by the private sector.
- **The unsuitability of educational services:** Although literacy rates among youth (15-24 age groups) for 2013 totalled 99.3%, the gross enrolment rate in secondary education for 2012/2013 was 73.5%, the general secondary education ratio was 72.2%, and vocational education was 1.3%. Given that some 40%-50% of students do not pass the Tawjihi exam, that the scientific stream is in demand while the art stream is in decline, and the negligible enrolment in TVET, structural imbalances are inherent.
- **Lack of quality education:** Most indicators suggest shortcomings in achieving the plans and objectives defined by the MOEHE. Learning goals should target and evaluate basic knowledge in reading, writing and mathematics, in addition to critical thinking, problem solving, general information, and life skills. However, with indoctrination being practiced in many schools, the development of critical thinking becomes questionable.

C. Education: Adapting to the labour market

1. Relevance of education

One of the critical issues Palestine faces is how to best use education to address the needs of the labour market. This discussion reflects some of the problems facing the quality of higher education. Youth, especially female youth, have an especially high unemployment rate.

Figure VII.10
MENA youth that are not in employment, education, or training (in percentages)



Note: The data are for these years: Algeria, 2013; Egypt, 2013; Jordan, 2012; Qatar, 2009; Saudi Arabia, 2013; Sudan, 2009; Tunisia, 2012; and the West Bank and Gaza, 2012.
Source: ILO, ILOSTAT Database (Geneva, ILO, 2015).

Table VII.1 below illustrates the period of unemployment among graduates of different fields of study in 2015. The table is alarming because the rates of unemployment are quite high and extend for long periods, 11-22 months. Unemployment is highest among those in social sciences and humanities as well as teacher training and education science where the majority of the students are concentrated. Given these high rates of unemployment, many graduates seek employment in the Gulf, the US, Canada and Europe.

Table VII.13
Unemployment rate and length (months) for graduates in Palestine with an intermediate diploma or bachelor's degree, by field of education in 2015

Field of education	Period unemployed in months	Unemployment rate
Teacher training and education science	15.4	68.4
Social and behavioural science	14.2	66.4
Humanities	17.6	66.3
Mathematics and statistics	15.8	61.9
Life Sciences	12.5	54.6
Journalism and information	22.0	53.8
Business and administration	13.7	48.7
Personal services	11.1	42.7
Architectural and construction	12.1	40.4
Computing	14.7	40.0
Health	14.2	39.4
Engineering and engineering trades	11.3	39.1
Law	15.4	16.9
Other disciplines	15.0	46.8

Source: Palestinian Central Bureau of Statistics, Press Statement, 27 June 2016.

It is important to identify the problem of insufficient skills among graduates of institutions of higher education. Graduates of most secondary schools are perceived to be of insufficient skills and institutions of higher education lack the resources to invest in a 'foundation year'. Moreover, there is a general trend among university students to finish their degree requirements quickly. In spite of efforts and resources allocated, graduates still lack good communication and writing skills in Arabic and English. The cognitive skills they acquire are not satisfactory and they lack sufficient research skills. The number of published good theses is still very low, despite the large number of master's degree programs that have proliferated. That does not mean that there are not outstanding students and graduates, but generally a consensus on the above failings exists among faculty, administrators, and employers. These problems require intensive effort and a concentration of resources for some time. These problems are reflected in the mismatch between graduates' acquired skills and the skills needed in the labour market.

One 2004 study concluded that "in essence, the skills possessed by graduates remain very limited and fail to meet job market requirements, particularly in the private sector" [181]– i.e. where most jobs are created. Here are its main findings:

- **Graduates' choice of subject matter:** A graduate's choice of subject was not based on any prior plan or relationship to the local market but rather was a result of personal desire or ambition. Graduates considered the possibility of continuing graduate study, but economic variables such as the cost of education and expected income after graduation did not influence their decision. Students and employed graduates gave the same reasons for choosing their subject of study.
- **Factors affecting the post-study waiting period:** Among the factors that reduce the waiting period after graduation before a graduate finds a job are anticipated monthly income, language skills, and computer and Internet skills. But non-competitive factors, such as party affiliation, favouritism, and personal contacts, *substantially* reduce the time to find employment in the public sector, particularly in the Gaza Strip.
- **Labour market information:** Information on job vacancies and market sectors is insufficiently distributed, inadequate, and incomplete.[182]
- **Employment criteria:** Graduates lack skills necessary for the local job market. However, the decision to employ a graduate is not based on his/her individual skills or abilities but rather on a comparison with other candidates and their qualifications, particularly in the private sector.

2. Needed reforms

To achieve wage growth and high GDP growth, productivity gains are required. To attain an annual wage increase of 1.5% and achieve a target of unemployment of 7% by 2020, real GDP and total factor productivity need to grow annually by 8% and 3% respectively.[183] With productivity per worker only 7% higher in 2012 than in 2004, increasing real wages requires enhancing productivity. This is especially relevant as real wages have fallen at an average rate of 1% per year since 2004, and declined 10% in total between 2006 and 2012 as illustrated in Figure VII.11 below.

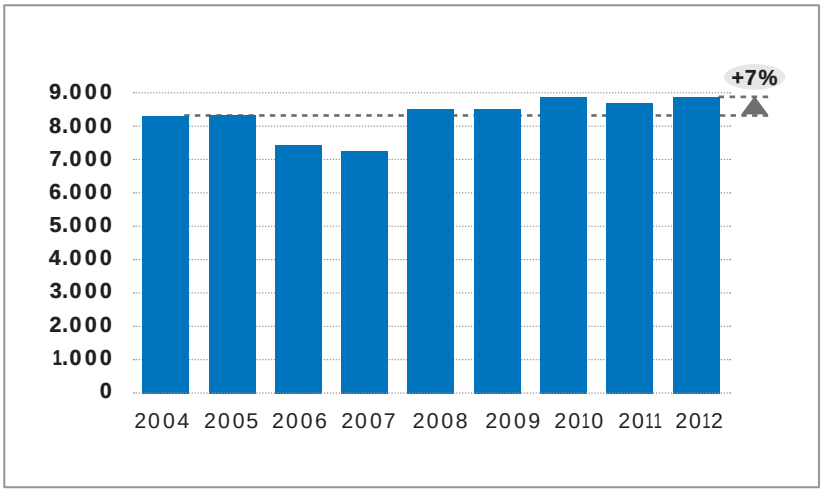
181 Mahmoud El-Jafari and Darin Lafi, MAS, "Matching Higher Education with Market Needs in the West Bank and Gaza Strip," (Ramallah) available at http://www.mas.ps/files/server/20141811142725-1.pdf. This is an econometric study about the factors that influence a student's study discipline, the length of the period before a graduate finds a job, the decisive factors in obtaining a job, and it also predicts the future (for the year 2020) of the number of graduates, the number of unemployed among them and those who might be employed. It also evaluates the criteria employers refer to when choosing a graduate for employment in either the private or public sector, and the efficiency of academic programs in in imparting knowledge, ability and skills to graduates, as assessed by employers. It also qualitatively assesses the skills and abilities acquired by students during their university education, in addition to teaching methods as viewed by faculty members and students.

182 MOHE publishes an annual pamphlet on unemployment rate per field of study before admissions start at the institutions of higher education. We do not know if such un-encouraging pamphlets are followed or even referred to.

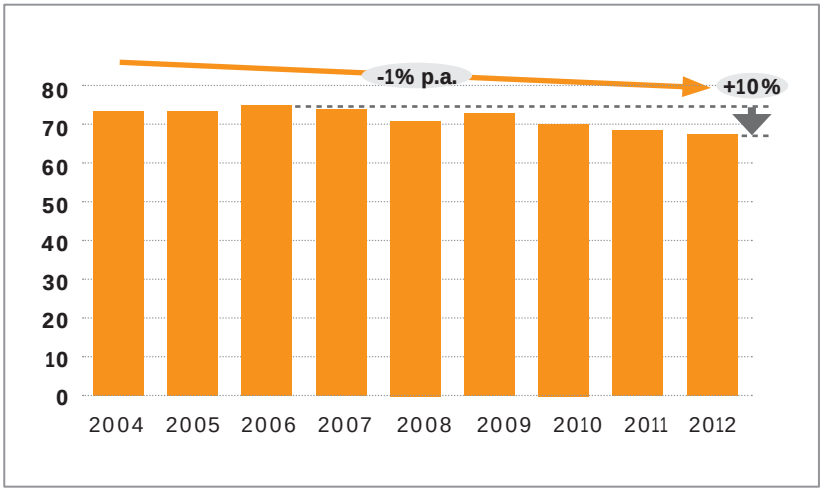
183 IMF, "West Bank and Gaza: Labour Market Trends, Growth and Unemployment," 2012.

Figure VII.11
Productivity and real wages in Palestine, 2004-2012

Productivity per employee Annual average, constant 2004 USD



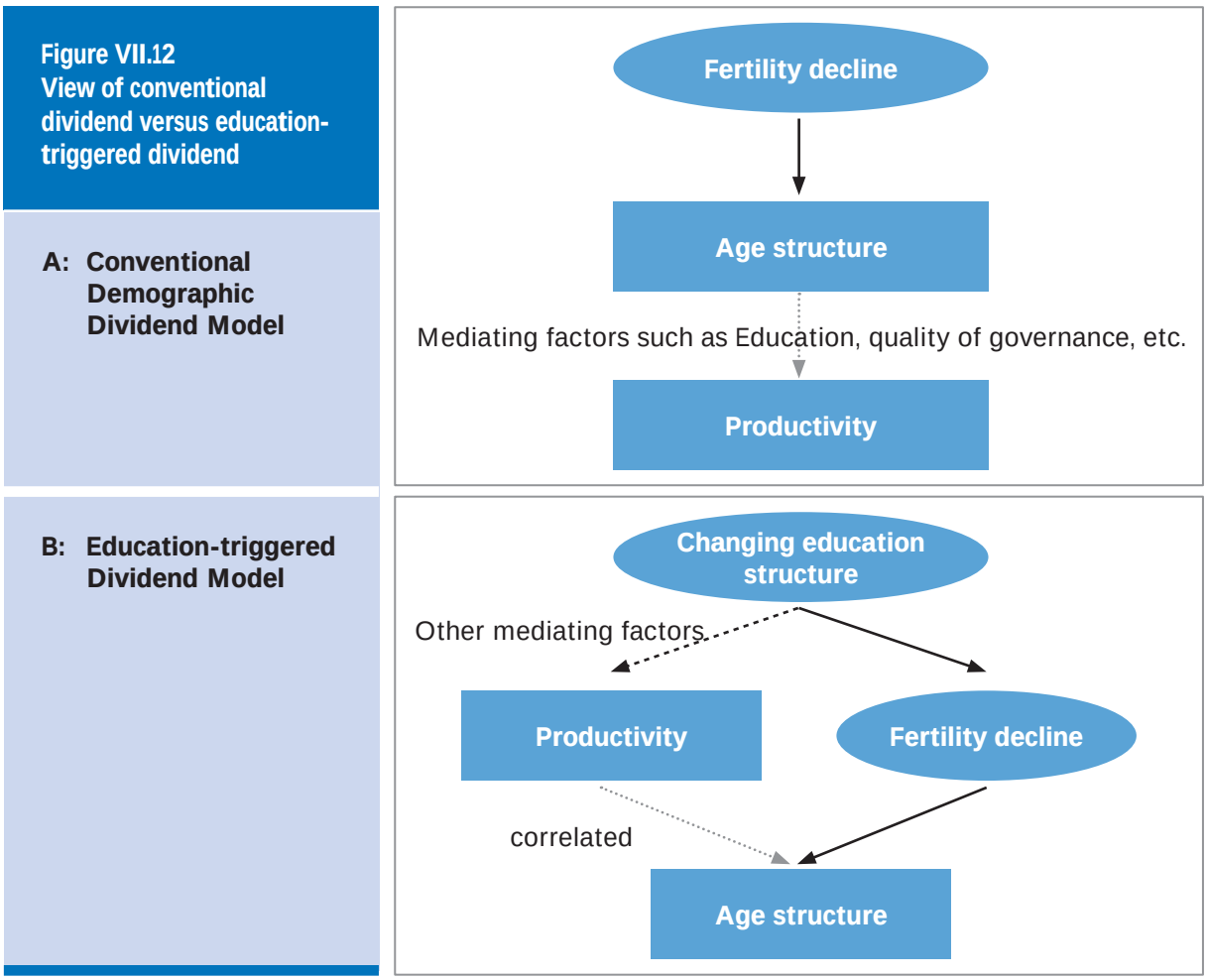
Real wages
Daily average, constant 2004 NIS



Source: PCBS (May 2013), Performance of the Palestinian Economy, 2012.

Productivity requires a better educational system. In periods of expanding educational attainment, improvements in the education of women of childbearing age contribute to declining birth rates, while at the same time a more productive workforce (due to increases in human capital) populates the labour market. Most of the economic growth effect (which under the conventional model is attributed to the change in age structure) now turns out to be a result of the dual effect of education on fertility and productivity. A more optimistic outlook for the future is possible because the strong productivity-enhancing effect of human capital does not necessarily vanish over time and even aging populations can see continued productivity growth as a function of further improving human capital, as shown in Figure VII.12 below.

Figure VII.12
View of conventional dividend versus education-triggered dividend



Source: Crespo Cuaresma, J., Lutz, W., & Sanderson, W. C. (2013).

"A labour force that has the skills required to enable productivity improvements is a key factor in ensuring income's higher growth rates. Therefore, it is education that appears at the root of the beneficial effects of the demographic dividend, affecting the change in age structure and the growth rate of income simultaneously."

The change in age structure presents a window of opportunity that can be harnessed into demographic dividend if invested well in human capital, which is a driving force for economic growth during the demographic transition. A labour force that has the skills required to enable productivity improvements is a key factor in ensuring income's higher growth rates. Therefore, it is education that appears at the root of the beneficial effects of the demographic dividend, affecting the change in age structure and the growth rate of income simultaneously. The double dividend of education expansions, by simultaneously decrease in fertility and increasing productivity, can create a positive circle of economic growth and should put human capital investment at the centre of global development

strategies aimed at poverty reduction.[184]

As such, this analysis calls for deep reforms in the labour market, an improved business environment, acceptable work standards and improved quality in education and lifelong learning systems.

184 Crespo Cuaresma, J., Lutz, W., & Sanderson, W. C., "Is the demographic dividend an education dividend?" *Demography*, 1–17. doi:10.1007/s13524-013-0245-x can be accessed at http://link.springer.com/article/10.1007/s13524-013-0245-x See Population Network Newsletter, No. 45, Winter 2014, available at http://www.agenta-project.eu/Jacomo/upload/media/popnet_winter_2014_final-5.pdf,.

Chapter 8

Implications of the population dynamics on health



A. Links between population dynamics and the health services

Health, including sexual and reproductive health and rights, is critical for human and sustainable development, with 'the enjoyment of the highest attainable standard of physical and mental health' as a recognized human right. Health services should respond to the needs of both old and young generations and males and females throughout their lives, addressing communicable and non-communicable diseases (NCDs) and other health risks. Therefore, adequate access to preventative, curative and tertiary health services is essential for people of all ages. Changes in population imply changes in the healthcare services that will be needed in the years ahead, especially among those most at risk: children, women of reproductive age, and the elderly. In this chapter, the impact of population dynamics on health and health services during the period 2015-2050 will be explored.

The relationship between population dynamics and health can be analysed as mutually influential. Progress in health science has, therefore, had a great effect on the population of most nations. To a great extent, population dynamics is underpinned by fertility and mortality rates. Operationally, demographic transition is the change from high rates (births and deaths) to low rates (births and deaths). Usually, death rates drop before birth rates, therefore, there is a period of rapid population growth. This ends when birth rates finally drop. Falling death rates are attributed to better health services and higher standards of living – these can be more easily manipulated than the factors affecting birth rates. Falling birth rates are attributed to social and economic and cultural changes that are less dynamic and more difficult to achieve. The satisfactory provision of health and social protection services enables a decline in mortality for all ages and for all functional groups (infants, children, females of reproductive ages, and the elderly), thereby improving life expectancy at birth and the quality of health. Nearly everywhere health services have contributed to a reduction in death rates. This mortality decrease and improvement of health conditions impacts directly and indirectly on fertility; more surviving children is an incentive for the potential parents to postpone their age at marriage and have fewer children. Besides, the availability of appropriate and integrated reproductive health services enables the diffusion of modern contraceptive methods.

"The worrying issue is that Palestine currently has limited resources to serve its population, therefore population growth can be an immense challenge affecting the quantity and quality of services and the health status of the population. It is worth mentioning that a considerable proportion of funding for health services emanates from unsustainable foreign aid."

On the other hand, population dynamics, its growth and structure, directly affect the health sector. Population dynamics such as changes in the size, structure and distribution of the population have implications for economic development, labour markets, income distribution, poverty and social protection. These are important determinants of health. Also population dynamics influence the epidemiological situation and the disease pattern

of the designated community. Population growth directly affects the health sector through an increase in demand for services, need for extra hospital beds, need for extra human and non-human resources. The projected population growth in Palestine calls for an increase in efforts to meet the needs for healthcare together with other related social services such as education, social protection and economic welfare. The worrying issue is that Palestine currently has limited resources to serve its population, therefore population growth can be an immense challenge affecting the quantity and quality of services and the health status of the population. It is worth mentioning that a considerable proportion of funding for health services emanates from unsustainable foreign aid. Another challenge derived from this analysis is a changing age composition that means the ageing or a shift in the proportion of females in reproductive ages, which might increase the demand for health services.

The results of this population analysis flag two critically important findings: population growth and change in the population structure. The points listed below highlight the major transformations, to be scrutinized by policy makers, politicians and programmers.

The population of Palestine will double between 2015 and 2050 and this will have serious implications on health facilities, personnel and resources.

- The population in all age groups will generally increase, however, their proportions of the entire population will vary. For instance, the proportion of children below 18 years will decrease, the proportion of females of reproductive age will remain the same, and the proportion of the elderly will increase as detailed below.
- Demographic transition modifying the structure of the population will also impact on future health requirements as follows:
    - The numbers of infants and children below five years of age will experience a slow rate of increase in Palestine as a whole, while remaining stable in the West Bank. Hence, their proportion will decrease from 15% to 8%.
    - The numbers of children 0-15 years will increase, but only slightly, and their proportion of the total population will fall from 39% to 25%.
    - Females of the reproductive age groups (15-49 years) will maintain an almost constant share of the total population at a bit less than the quarter of the total population and double in numbers by the horizon of the projection.
    - The number of Palestinians aged 65 years and over will be multiplied by 3.5 and their share will rise from 2.9% to 7.7%.

B. Implications for health services

1. Child and neonatal health

Globally, populations at risk include children under five years of age and women at reproductive age. Thus, special attention should be given to the health of these groups, particularly attention to lowering infant and maternal mortality rates. This requires more investment in supporting obstetric and neonatal services in order to further reduce mortality and disabilities (see Chapter 4 for a detailed discussion). Efforts should focus on improving the quality of reproductive health services and addressing gaps especially around the perinatal period when most neonatal and maternal mortalities and morbidities develop. There is a need to increase the number of available intensive care incubators as outlined below. Also, the current shortage in specialized neonatologists, paediatric intensive care specialists and fine subspecialties such as paediatric oncology, endocrinology, paediatric cardiologists, paediatric cardiac surgeons and genetics require bridging to meet the current and future needs.

Palestine has almost achieved universal immunization coverage – an achievement that should be maintained by deploying the needed resources to vaccinate the growing number of children. Also, child growth monitoring and well-baby services currently represent a missed opportunity to positively impact child health, especially combating malnutrition (under and over) and anaemia, a major chronic public health problem. There is a need to establish a national strategy to combat malnutrition and anaemia by raising health awareness, combating infections, ensuring food safety and security, increasing food fortification and appropriately monitoring growth. The reduction in the proportion of children below age five opens a horizon for improving the quality of child health services and bridging remaining gaps. For instance, initiatives to reduce deaths from unintentional injuries are vitally important. Also, the increasing trend of disability among children due to congenital diseases, birth injury and hereditary factors requires urgent interventions (currently, around a quarter of infant deaths occur due to congenital anomalies[185]). Screening programs to discover disability and initiate early intervention programs are vitally crucial. Moreover, psychosocial interventions and combating violence among children require greater consideration. Unless appropriate interventions are implemented, these children will grow up with aggressive behaviours that can be dangerous to the Palestinians themselves and to the external world.

The high enrolment of children and adolescents in schools provides a ready forum for health promotion activities. Child immunization, dental health, and healthy behaviours and practices are examples of issues that can be addressed at school. Schools also represent a missed opportunity for promoting psychosocial status through prevention, early discovery, and appropriate intervention. Focusing on school children can reduce increasing trends of violence in the community.

2. Women at reproductive age

As detailed in Chapter 3, the total fertility rate in the State of Palestine will decrease from 4.06 in 2014 to 2.69 in 2035, and 2.17 in 2050, a few decimal points above the replacement

185 Ministry of Health, Health Status Report, 2015

level. Females of the reproductive age groups (15-49 years) will maintain a near-constant share at a bit less than the quarter of the total population, and their numbers will double by the horizon of the projection. The high proportion of women at reproductive age implies that policymakers need to set strategies to ensure access to appropriate quality reproductive health services and information to this very important segment of the community. Women's health during and beyond the reproductive years is relevant not only to women themselves, but also has an impact on the health and development of next generations. Also, women's health greatly affects all household members.

With 70% of maternal deaths occurring in the country being attributed to avoidable causes, maternal mortality represents an important theme for the Palestinian heath care system to focus on. Further efforts are needed to reduce maternal mortality and its response system in a sustainable manner. Delivery sites should obtain an adequate number of obstetric beds and these sites must be equipped with adequate resources and technologies in order to cope with the projected increased proportion of women at the reproductive age. Significant performance gaps exist in the clinical management of maternal complications and if not solved, these will compromise efforts to improve the health and wellbeing of women for years to come. Gaps in reproductive health in Palestine include limited awareness about sexual health including sexual education for adolescents and youth, and addressing the root causes of stigma through community mobilization

The introduction of pre-conception care that is concerned with the health of women and men during their reproductive years and focuses on taking active steps to protect the health of a baby they might have sometime in the future is essential. A very important aspect that requires attention is the availability of appropriate and adequate family planning services.

Women should be encouraged to have longer intervals between births – at least three to five years. Unmet family planning needs include limited access to information, weak counselling, and a shortage of methods that negatively affect utilization. Ensuring availability of quality family planning services with an emphasis on supporting the right of women and men to choose when and what method to use is essential. Healthcare providers including the MOH and UNRWA should regard family planning as a part of their essential health services package, not just annexed services requested or supported by donors. This requires some interventions at the policymaking level to convince leaders that spending on family planning is a real cost effective investment with a lot of opportunities. At the community front, socio-cultural barriers restricting access to family planning need addressing through awareness and community mobilization. There is a need to set a legal framework to protect and regulate reproductive rights, including family planning.

Early marriage in Palestine remains a priority that needs to be addressed. Early childbearing associated with early marriage is a health and human right concern against young girls. Early childbearing increases risks for both mothers and their new-borns. This stems from public health evidence proving the many-fold increase in maternal and infant mortality and morbidity associated with early child bearing. Nutritional issues among women at childbearing age remain a challenge, with a worrying increase in the prevalence of anaemic pregnant women and obesity. As they advance in age, obese women are exposed to many risks including heart disease, hypertension and diabetes.

3. Elderly

Important demographic shifts in Palestine include the aging of the population and the projected growth of older groups; the proportion of Palestinians aged 65 years and over will increase from 2.9% to 7.7%. As a result of aging, there will be more elderly men, and particularly more women, more chronic and degenerative diseases, and more multiple health problems that are common among elderly people. The population projection indicates that the proportion of the elderly population will triple over the coming 35 years. The risks of chronic conditions and functional impairments increase with age. As more of the elderly live to the oldest ages, increasing numbers will face chronic, limiting illnesses or conditions. The prevalence of these major chronic conditions among the elderly is five times that observed in younger persons. The growing elderly population will be a major determining force in the coming decades for the demand and supply of health services and, therefore, for the type of resources needed to provide those services. The increase of life expectancy at older ages should also be accompanied by a parallel improvement in the quality of life.

Currently, alongside the demographic transition, Palestine is going through epidemiological transitions. This refers to the change in disease patterns from mostly infectious diseases to NCDs such as cancer, heart disease, stroke, injuries, diabetes and arthritis. In both the West Bank and the Gaza Strip, NCDs including heart diseases, cancer, hypertension and cardiovascular diseases and diabetes mellitus are replacing the traditional enemies of infectious diseases as the leading causes of death. NCDs are the major causes of morbidity and mortality in Gaza, resulting in a high direct cost of care, high indirect cost in loss of production, and much societal stress. The urbanization, stress, socioeconomic pressure, and continuing nutritional change from a healthy Mediterranean diet to an increasingly western-style diet is associated with reduced activity, obesity, and a loss of the protective effect of the traditional diet. Therefore, an effective comprehensive NCD control strategy should be developed to prevent/reduce, screen/identify, monitor and manage these diseases. Although the control of infectious diseases has been maintained with no reports of fatal vaccine-controllable diseases, meningitis, hepatitis, watery diarrhoea, parasitic infestation, skin diseases and others are common diseases with high morbidity rates. The spread of infectious diseases is attributed to contextual factors such as poverty, poor sanitary conditions, water and environmental pollution.

The healthcare system will be faced with greater numbers of people with NCDs. These conditions result in dependence on others for assistance in performing the activities of daily living, especially among the older elderly, portending a significant increase in the need for healthcare and social support services. The healthcare system should respond by establishing/strengthening geriatric and palliative services. More hospital beds should be allocated to the elderly population and primary healthcare facilities need to be better equipped to meet their needs both physically and technically. It is likely that a large number of elderly will seek hospitalization and long-term care for serious acute and chronic conditions. Thus hospitals will have to increase their sensitivity and ability to care for the acutely and chronically ill aging population. An increase in the number of elderly patients requiring assistance in all aspects of their care, including Activities of Daily Living (ADLs), will impact the staffing requirements for nursing services in hospitals.

Although the practice of nursing home stay is not currently widespread in Palestine, the proportion of the elderly who need nursing homes will increase. Globally, 5% of elderly

persons live in nursing homes.[186] Nursing home use increases with advancing age, especially for females above the age of 85. Changing family structures mean less family support for older people. The capacity of families, especially females, to shoulder the care burden and the associated forgone opportunities remain important issues that need addressing. Increasing enrolment in education and jobs will also reduce family support for elderly.

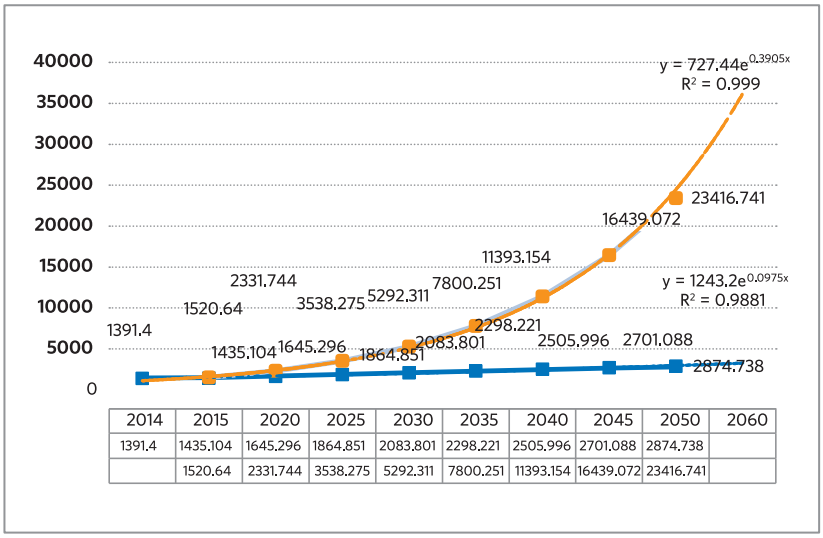
4. Health expenditures

Population growth, aging, and changes in disease patterns contribute greatly to rising healthcare costs. These shifts take on added importance and urgency in the context of a rapidly changing healthcare system, placing intense stress on the system as it tries to hold down expenditures and, at the same time, increase access and improve the quality of healthcare. The total expenditure on health in Palestine has increased from USD 397.2 million in 2000 to USD 1.4 billion in 2014, indicating an increasing trend of spending on health.[187] With the doubling of the population in 2050, health expenditures will at least double. To project health expenditures, the authors used the average annual per capita health expenditures of the past five years (USD 302) as the basis for the projection (based on the constant scenario). According to the constant scenario, Figure VIII.1 shows that in 2030, health expenditures will be more than USD 2 billion. In 2050, they will be USD 2.87 billion. However, the recurrent heath expenditure per person may remain constant, or might increase to reflect national goals for improving the healthcare system. As governments attempt to improve their health systems, they may want to increase their recurrent health expenditure per person. The average recurrent per capita health spending in OECD is USD 3,453. In 2000, it was USD 1,802 with an annual increase of 6% – the same rate of increase in Palestine during the period 1995-2014 (Figure VIII.1). If we apply the same rate of increase (6%) at a baseline of USD 302 (the average of the past five years) in Palestine, then total recurrent spending will be USD 5,292 billion in 2030 and USD 23,416 billion in 2050. These figures can be helpful in demonstrating the financial burden associated with high rates of population growth and also point to the financial resources that should be deployed to adequately provide health services.

186 David Demko (2016), http://nursinghomediaries.com/howmany/ AgeVenture News Service, www.demko.com, Boca Raton, Florida. Accessed on October 2 2016

187 PCBS and MoH, Palestine Health Accounts, Ramallah 2016

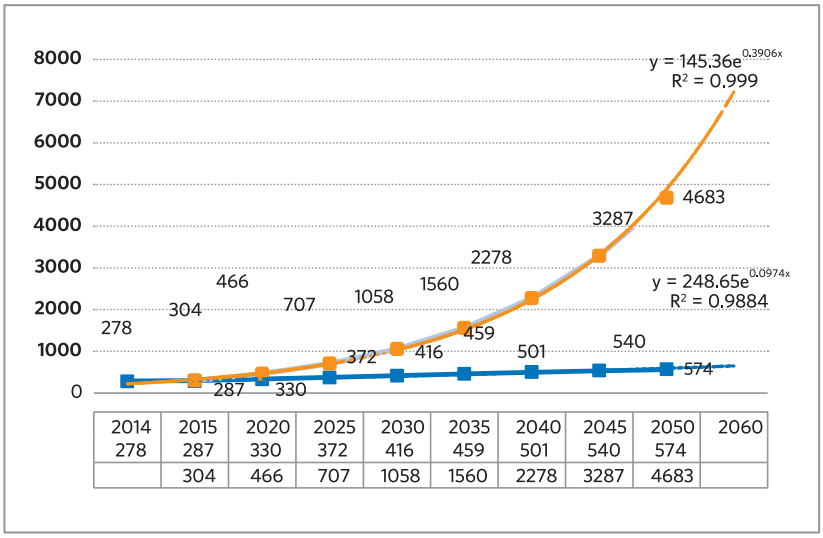
Figure VIII.1
Total forecasted recurrent health expenditure in USD million by years



2014	2015	2020	2025	2030	2035	2040	2045	2050	2060
1391.4	1435.104	1645.296	1864.851	2083.801	2298.221	2505.996	2701.088	2874.738	
	1520.64	2331.744	3538.275	5292.311	7800.251	11393.154	16439.072	23416.741	

Source: Projection according to population projection, medium variant.

Figure VIII.2
Forecasted recurrent health expenditure on pharmaceutical products in USD million by years



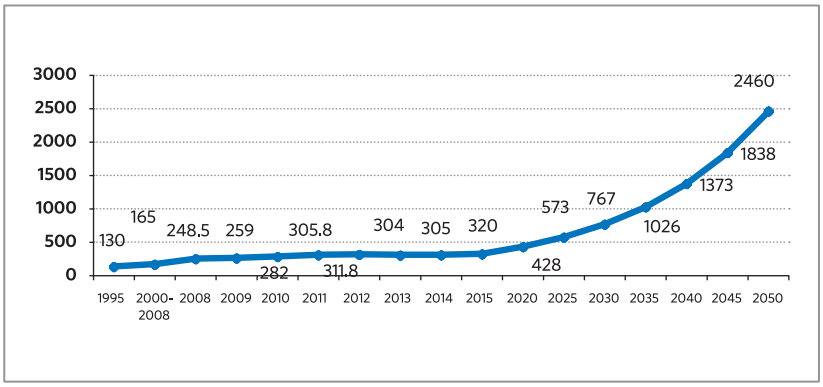
2014	2015	2020	2025	2030	2035	2040	2045	2050	2060
278	287	330	372	416	459	501	540	574	
	304	466	707	1058	1560	2278	3287	4683	

Source: Projection according to population projection, medium variant. Calculated as 20% of the total health spending,

Because expenditure on drugs and pharmaceuticals represents a large proportion of healthcare spending in Palestine (around 20% of total spending), the authors sought to highlight it. Also, despite the spending on pharmaceuticals, frequently health facilities face drug shortages at striking levels, especially in Gaza. Essential drugs that are necessarily to treat common diseases affecting the population should always be maintained, especially by the public sector. Expenditure on pharmaceuticals is 8% in Norway and Denmark, 11% in the U.S. and 12% in Germany. The prominent irrational use of drugs in Palestine through polypharmacy, double prescribing, and overuse of antibiotics leads to wasting of the already sparse resources and has health hazards. With the aging of the population, the demand for expensive NCD-related drugs will also increase. Figure VIII.2 forecasts the resources needed to meet the population's needs for medications and medical supplies using the constant recurrent spending scenario and the increased scenario (20% of total health spending).

The average health expenditure per capita in Palestine during 2000-2008 was USD 165, which increased to 305 US$ in 2014. This compares to Jordan USD 336; Syria USD 97; Egypt USD 151; Turkey USD 913; Lebanon USD 631; and Iran USD 432.[188] If health spending continues to increase at the same rhythm (at around 6% annually; baseline is 302 US$, the average of per capita expenditures 2010 through 2014), annual per capita spending in 2020 would be USD 428, USD 767 in 2030, and USD 2,460 in 2050. In addition, salaries needed for the health-related human resources consume the highest proportion of health expenditures, and therefore matching the number of allocated human resources to the health services demand and supply chain is greatly important.

Figure VIII.3
Distribution of recurrent annual (current and projected) health spending per capita by years in USD



The percentage of total health expenditures to GDP in the year 2014 is 11%, which is more than most middle-income countries, which spend 4-5% of the GDP.[189] There appears to be over-investment leading to outcomes that are normally obtainable with less investment. The degree of waste appears to be large and highly indicative of inefficiency in the system. Therefore, solutions for health services-related problems could be related to the process of delivery of healthcare, and not entirely to greater investment. The PCBS and MOH Health Account Book (2016) shows that, of the total expenditure on health in 2014, 67% was spent on curative services (25% on in-patient care and 35% on out-patient and an additional 7% that were not classified as curative services). Only 3% was spent on preventive and public health services (including immunization). This indicates gaps in resource allocation, as investment in preventative healthcare is more cost effective in the long run than secondary services. The value of preventive practices such as health promotion and primary healthcare interventions is even more important given that the population is young; 70% of the population is below 30 years of age and the return on such investments is high. Health promotion enables people to increase control over their health and its determinants, and thereby improve their health status over the long term. Investing in preventive measures for a young population reduces the burden of morbidity of NCDs in the future. Health promotion can help improve health and wellbeing, with a cost-effectiveness that is as good as, or better than, that of many accepted forms of healthcare. Issues to focus on include tobacco use, drug abuse, alcohol consumption, unhealthy diet, physical inactivity, obesity and stress.

Regarding sources of funds for the health sector, the contribution of the government in Palestine is limited, at 37% in 2016. By comparison, it is 72% in Turkey and in the EOCD.[190]

188 WHO, Global Health Observatory (GHO) data, 2016. http://www.who.int/gho/countries/en/
189 PCBS and MOH (2016), Palestinian Health Account.
190 Ibid.

In the same year, the contribution of households in Palestine was 40.8%, compared with 19.5% in OECD, constituting a high burden on families. Improving the quality of public health services will reduce direct out-of-pocket payment for health services. The ability of elderly people to pay medical fees out-of-pocket is less than younger generations, as they usually experience greater economic hardship. Despite the wide coverage of public health insurance, revenues from the insurance scheme are limited and the package of services covered by the health insurance system is unlimited/open, and may be more liberal than it should be. Also, treatment abroad consumes a great amount of resources spent on a limited number of patients, raising important equity-related questions. It is essential to reform the health insurance system and to publically advertise the package of services it covers. Health insurance can't function independently from social protection policies, therefore it should be reformed within a social protection lens and achieve universal coverage. Currently, the MOH is focusing on reforming the health insurance scheme and achieving universal coverage.

In summary, it is worth exploring gradually decentralizing financial systems such as allowing more hospital autonomy. Allowing health facility staff to engage more in managing finances at their facilities contributes to increasing efficiency, cost containment, and the recruitment of additional resources. Also, the health insurance scheme in Palestine needs reform to promote financial self-sustainability.

C. Human resources projections for health

There are many factors affecting how many human resources for health should be deployed in a country. These factors include – but are not limited to – the orientation of the medical system towards primary versus secondary care, the capacity of medical colleges to graduate new professionals, the degree of medicalization in the system, the availability and utilization of other health professions such as midwives and nurses, the degree of social orientation of the healthcare system, the lifestyle of the population, demography, epidemiology and diseases patterns, policies and management of health services, packages of services and standards of care, ideological perspectives about health (investment versus industry), available technology, and many other factors. Indeed, there is no one-size fit that can be applied everywhere regarding health personnel density. Also, strategic development policies and plans, resources available, and governance perspectives help determine what is feasible. At the same time, there are similarities and commonalities among well-performing systems. The applied forecasting in this analysis has considered the current densities of health personnel and also benchmarks the densities in the region. In addition, it considers the average densities in the OECD, which incorporates 34 countries including Turkey and Israel.

Generally, the current distribution of human resources for health per population is fairly acceptable in most health professions in Palestine in comparison with other Arab and Middle Eastern countries living with similar economic conditions. The forecasted population doubling of the population between 2015 and 2050 should certainly translate into an increase in health personnel. However, health personnel density is less than in other countries with more developed healthcare systems such as Lebanon, Qatar and Jordan. Therefore, Palestinian medical personnel densities should significantly increase in the future to reach

the present densities of other developed health systems like that of Lebanon. Interestingly, health facilities are staffed with young generations who constitute an asset in the long run. Moreover, the gender balance is fairly maintained with the potential of increasing women's enrolment in the working force, especially in senior positions in the future, as their current representation in the education sector is even higher than their male counterparts.[191]

Table VIII.1
Number of physicians per 1,000 inhabitants, Arab countries and Middle East

Country	Density	Country	Density
Mauritania	0.1	Turkey	1.7
Syria	0.2	Palestine	1.7
Sudan	0.3	UAE	1.9
Yemen	0.3	Oman	2.4
Morocco	0.6	Jordan	2.6
Iraq	0.7	Kuwait	2.7
Saudi Arabia	0.9	Egypt	2.8
Iran	0.9	Lebanon	3.2
Algeria	1.2	Qatar	3.2
Tunisia	1.2	Israel	3.3

Source: World Bank data and national sources

Physicians are playing a leadership role in developing, supervising and shaping healthcare systems. They largely control and direct medical resources and act as the gatekeeper to the health system. In 2014, there were 7,510 physicians at a rate of 1.7 physicians per 1,000 inhabitants in the country as a whole and (surprisingly) a much better situation in the Gaza Strip than in the West Bank, with almost twice more physicians in the Gaza Strip (2.2) than in the West Bank (1.3). The percentage of female physicians is very slowly increasing and currently represents 15.7% of the total. The following projection is made according to two scenarios, the constant density scenario, with the same current ratio of 1.7 per 1,000, and an improvement in the density scenario at 3.3 per 1,000.

191 WHO, 2010

Table VIII.2
Projection of the number of physicians, Palestine rounded figures 2014-2050

Area	2014	2020	2025	2030	2035	2040	2045	2050
Constant ratio								
Palestine	7,510	9,300	10,500	11,700	12,900	14,100	15,200	16,200
West Bank	3,701	4,200	4,600	4,900	5,200	5,500	5,900	6,100
Gaza Strip	3,804	5,100	5,900	6,800	7,700	8,600	9,300	10,100
Increasing ratio								
Palestine	7,510	10,400	13,100	16,200	19,500	23,000	26,700	30,500
West Bank	3,701	5,100	6,500	8,000	9,600	11,300	13,200	15,100
Gaza Strip	3,804	5,300	6,600	8,200	9,900	11,700	13,500	15,400

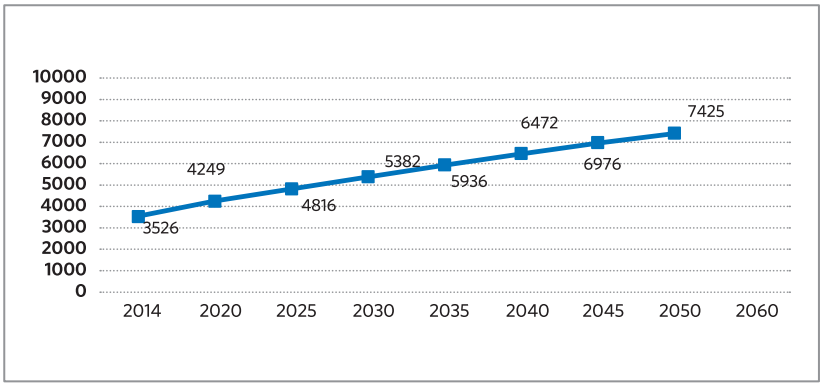
Source: Population projections, medium variant, constant ratio: 1.7 per 1,000 inhabitants, increasing ratio to 3.2 in 2050, assuming consistency between total, West Bank, and Gaza Strip. Baseline number of physicians is based on 2014 data published by the PCBS in 2015.[192]

The interaction of these two factors would lead to some quadrupling of the number of physicians between now and 2050 (16,200 physician in 2030 and 30,500 physician in 2050) according to the increasing scenario and doubling the number of physicians in the same period according to the constant scenario (11,700 physician in 2030 and 16,200 physician in 2050).

The number of other needed medical personnel will also increase. The figure below portrays the increase in the number of dentists required in response to the population growth. The 2015 population density rate is reasonable, at a rate of 7.8 dentists per 10,000 inhabitants, and 32% of them are females. This rate is close to the reported density in Jordan, yet higher than that in OECD (6.1) and UK (5.3) as reported by WHO in 2016. The density of dentists is higher in the West Bank than in Gaza (8.8 versus 6.1). Therefore, the constant density scenario has been used as a basis to make the projection. Policymakers should invest more in coordinating between the education sector and service sector and controlling the intake of medical colleges, including dentistry. What proportion of dental services should be covered by the state health insurance remains a grey area that requires clearer policy. In addition, there is a shortage in dental subspecialties such as dental implant-ology, orthodontics, orthogenetic surgery, paediatric dentistry, maxilla-facial, periodontology and oral histopathology. Also, as with other professions, more efforts are needed to regulate dental practices, as most private dental clinics are not licensed, which jeopardizes safety and exposes clients to risks.

192 Palestinian Central Bureau of Statistics, Palestine Annual Statistics Book 2014 (2015).

Figure VIII.4
Projections of the number of dentists needed in Palestine 2014-2050



Source: Projection according to population projection, medium variant.

Table VIII.3
Projection of the number of nurses, Palestine rounded figures 2014-2050

Area	2014	2020	2025	2030	2035	2040	2045	2050
Constant ratio								
Palestine	13,188	2020	20252025	2030	2035	2040	2045	2050
West Bank	6,033	7,000	7,600	8,100	8,700	9,200	9,700	10,200
Gaza Strip	7,155	9,000	10,800	12,700	14,600	16,400	18,000	19,400
Increasing ratio								
Palestine	13,188	27,200	30,900	34,500	38,000	41,500	44,700	47,600
West Bank	6,033	16,100	17,600	18,800	20,000	21,300	22,500	23,600
Gaza Strip	7,155	11,100	13,300	15,700	18,000	20,200	22,200	24,000

Source: Population projections, medium variant, constant ratio: 21.6 per 10,000 inhabitants in the West Bank and 40.6 in the Gaza Strip, increasing ratio to 50 (similar to Gulf countries, Oman, KSA, Kuwait), assuming consistency between total, West Bank and Gaza Strip. Baseline number of nurses is based on 2014 data published by the PCBS, Statistical Year Book (PCBS 2015)

Nurses play an integral role in the healthcare system; they have been recognized as the heart of healthcare. Although it has been significantly improved (almost doubled) in the past 15 years, nurse proportions according to the population are significantly low with around 29 nurses per 10,000 people. Nearly half of the nurses in Palestine are females. The current ratio per population in Gaza (40.6) is twice the ratio in the West Bank (21.6). However, proportions reported in other countries are much higher: 40 in Jordan, 100 in UK and U.S., and 91 in OECD countries. Two scenarios were applied to forecast the needed number of nurses that is required to cope with the growth of the population. Applying the constant scenario at the current rates at the two sites of 21.6 in the West Bank and 40.6 in Gaza per 10,000 population means that in 2030, 20,800 nurses will be needed (8,100 in the West Bank and 12,700 in the Gaza Strip). In 2050, the number of needed nurses will climb to 29,600. To improve the performance of the healthcare system, this analysis suggests increasing nurses' density to 50 per 10,000 (more similar to 49 in Saudi Arabia, 46 in Kuwait, 48 in Armenia, 50 in Israel, 55 in Bosnia, 57 in Singapore, 50 in South Africa,

90 in Cuba and 170 in Norway). Applying the increasing ratio scenario, 34,500 nurses will be required in 2030 and 47,600 in 2050. Besides the increase in nurses' density, their role in the healthcare system can be enriched, especially in health promotion, control of NCD and elderly care. Other subspecialties in nursing such as midwifery, ICU nursing, medical surgical nurses, neurology, nephrology, paediatric surgery, palliative care and geriatric and family medicine are also severely lacking.

While the number of general practitioners is adequate, specialty and subspecialty areas in medicine, nursing, midwifery and paramedical fields are greatly disadvantaged in Palestine. The need for specialized staff to work in oncology, haematology, paediatric oncology intensive care, anaesthesia, traumatology, orthopaedic, neonatology, histopathology, advanced lab services, and palliative care is essential. As a result of the change in the age structure, there will be more need for specialization in nephrology, neurology, ophthalmic, rehabilitation, palliative and geriatric care. The number of obstetricians and gynaecologists needed at a rate of 28 per 100,000 women (comprising females in general) would be around 1,000 in 2030 and 1,330 in 2050. The current shortage in midwives should be bridged by deploying 2,380 midwives in 2030 and 3,285 in 2050 (see Table VIII.4). Also, policies that empower midwives should be reinforced, as the contribution of midwives to improvements in the quality of health and reproductive services is significant. The better utilization of midwives is associated with less medicalization and less instrumentation of obstetric services, a friendlier environment, and also cost containment. To meet the need for neonatal services in 2030, there is a need for around 69 neonatologists; the number needed in 2050 would reach 95 at a rate of one per 100,000 inhabitants. To correspond to the population growth and needs, more human resources are required in selected specialties as shown in table VIII.4

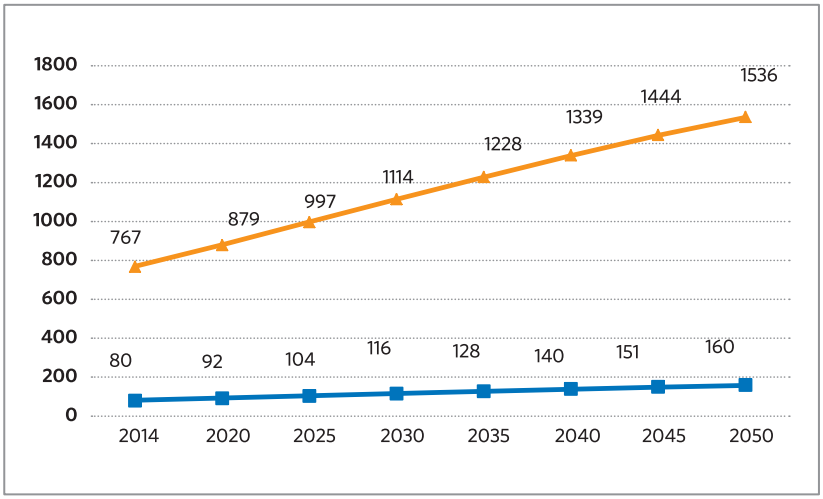
Table VIII.4
Needed human resources in selected specialties 2030 and 2050, according to projected population

Speciality	2030			2050			Used rate
	Palestine	WB	Gaza	Palestine	WB	Gaza	
Obstetrician and gynaecologists	966	519	437	1,330	658	672	28 per 100,000 females
Neonatologist	69	37	32	95	47	48	1 per 100,000 inhabitants
Midwives	2,380	1,295	1,085	3,285	1,642	1,642	69 per 100,000 female
Oncology specialist	138	75	63	190	95	95	2 per 100,000 inhabitants
Cardiologist	552	300	252	768	384	384	8 per 100,000 inhabitants
Psychiatrist	104	56	48	142	71	71	1.5 per 100,000 inhabitants

Rates were calculated based on the average OECD country

D. Health facilities, hospital beds and resources

Figure VIII.5
Projection of the number of hospitals and primary healthcare centres needed in Palestine, 2014-2050



Source: Projection according to population projection, medium variant. Baseline number for 2014: Palestinian Central Bureau of Statistics, Statistical Year Book, 2015.

Figure VIII.5 presents needed hospitals and primary healthcare facilities for the projected population from 2014 to 2050, including all sectors (MOH, UNRWA, NGO, private and military). Currently, the MOH manages 31.3% (25 hospitals) of the total and hosts 54.9% of the total hospital beds (3,259) in Palestine. NGOs manage 42.5% of hospitals (34), which contain 33% of the total beds (1,967). The MOH shoulders a greater burden in Gaza than do NGOs, which contribute more in the West Bank. Also, despite having a limited number of facilities, UNRWA covers a great deal of refugee needs, especially in Gaza. It is worth noting that the private sector is not well-regulated and most of the private clinics are not registered. In general, the contribution of the private sector is greater in the West Bank than in the Gaza Strip. Investment in the private sector is also essential, and the number of health facilities is less significant than the number of beds and types of services provided at those facilities. Also, among the important factors to consider when planning the distribution of facilities (besides population density in the area), is the accessibility of beneficiaries. Because the West Bank is larger than Gaza with many rural areas, adequate attention must be paid to the geographical distribution of health facilities. Also, the political context adds another layer of complexity due to checkpoints, settlements and the separation wall, which can restrict access even to nearby health facilities. Accessibility is hindered by checkpoints on the way to the quickest reachable health facility, and the delay at checkpoints can be three hours long or more in some cases.

In 2014, the total number of beds was 5,939, the majority of them belonging to the MOH. Overall bed population rate in 2014 was 1.3 per 1,000 inhabitants (1.3 in the West Bank and 1.4 in the Gaza Strip). This rate is less than the reported rate in Jordan (1.9) and the average OECD country rate (4.9). Projections for the appropriate number of hospitals, hospital beds, and health centres were based on the projected population from 2015 to 2050 and include all sectors. To cope with population growth and the change in the structure of the population (increased aging) associated with emerged needs for hospital services, the

projection uses the current rate with a slight gradual increase by 0.1% every five years. The maximum recommended threshold of two beds per 1,000 will be reached by 2050. In 2030, Palestine is in need of 11,000 beds, and in 2050, the number of needed beds will triple the current number of beds. It is worth mentioning that hospital services are very expensive and attention should be paid to the cost-effectiveness of providing extra beds. On average across EU member states, the number of hospital beds has fallen by close to 2% per year.

Table VIII.5
Projection of the number of hospital beds needed in Palestine 2014 -2050, rounded figures

	2014	2020	2025	2030	2035	2040	2045	2050
Palestine	5,900	7,400	9,100	11,000	13,000	15,100	17,300	19,100
West Bank	3,500	4,300	5,100	5,800	6,700	7,600	8,500	9,500
Gaza Strip	2,400	3,100	4,000	5,200	6,300	7,500	8,800	9,600

Source of baseline numbers in 2014: Palestinian Central Bureau of Statistics, Statistical Year Book, 2015.

It is important to pay attention to the bed distribution by speciality and to ensure its congruence with population needs. The current gap in obstetric beds and neonatal incubators should be bridged. Meeting the population needs for tertiary care is essential. For instance, shortages in ICU beds, oncology beds and beds for geriatric care should be addressed. The table below portrays specific needs in expensive and critical beds, equipment and services. At both MOH and NGO hospitals, in 2030 there is a need for 690 critical care beds and around 1,000 beds in 2050 (10 beds per 100,000 inhabitant is the average in most countries). The use of ICU beds is anticipated to increase with aging and/or political unrest. In 2030, at least 250 intensive care incubators are needed at a rate of 1.5 per 1,000 births in addition to intermediate and daily care incubators (five per 1,000 live births).

With regard to Magnetic Resonance Imaging (MRI) machines, which are a rapidly growing technique in diagnosis because they are safer than radiation, there is a need for 22 units in 2030 (at a rate of three per one million, 10 in Gaza and 12 in the West Bank). In OECD countries, the average annual MRI examination per 1,000 inhabitants is 30. Using this same calculation, in 2030, more than 207,000 MRI examinations are needed in Palestine. This number will rise to 285,570 in 2050. Regarding computed Tomography (CT) units, using a conservative rate of eight units per one million individuals, 80 functioning units will be needed in 2050 to perform 646,785 exams. Mammograms are important diagnostic machines for the detection of breast cancer than can be used in screening and confirming the diagnosis. Both the number of mammogram units and their use in Palestine is limited. With the high incidence of breast cancer in Palestine, it is important to invest in early detection of breast cancer, including routine mammogram screening. Using the rate of 10 mammograms per million people, there should be 70 units in 2030, and 95 units in 2050.

With increasingly higher rates of cancer and the heavy burden of referrals abroad for radiotherapy, there is a need to establish more radiation therapy units besides the units currently available. Using the rate of radiotherapy units per one million people as in Lebanon (1.24), Palestine needs nine units in 2030 and 12 units in 2050. Similarly, to diagnose and treat cardiac diseases, there will be further demand to establish cardiac and angiography laboratories. Using the standard of two per million individuals (UK standard), at least 14 units are needed for the West Bank and Gaza Strip in the year 2030. This number should

increase to 19 in 2050 to meet the needs of the growing population. Using the average OECD rate (Table VIII.6) per million people, 5,175 PCI procedures will be done in 2030, rising to 7,139 in 2050 – a huge burden on the system. Regarding psychiatric beds, using the most conservative figures among the EOCD countries at a rate of 0.1 per 1,000 inhabitant (Turkey), 690 psychiatric beds will be needed in 2030. This number will rise to about 1,000 in 2050. Because of the compound vulnerabilities facing Palestinians, including economic hardships, conflict, and a high level of stress and anxiety, the magnitude of the mental health problems experienced will increase.

Table VIII.6
Projection of the number of specialized services and resources (annually) in 2030 and 2050

Speciality	2030			2050			Rates
	Palestine	WB	Gaza	Palestine	WB	Gaza	
Critical care beds	690	376	314	952	476	476	10 per 100,000 inhabitant
Intensive care incubator	250			227			1.5 per 1,000 live births
MRI units	22	12	10	30	15	15	3 per million. (Turkey 10, Israel 3, OECD countries 14.3)
Number of MRIs needed	207,000	112,860	94,140	285,570	141,840	143,730	30 exams per 1,000 people
CT units	56	32	24	80	40	40	8 per million. (OECD 24, Turkey 7.8, Israel 8.9)
Needed CT tests	931500	507,870	423,630	1285,065	638,280	646,785	135 per 1,000. (Israel 141)
Number of doctor consultations (thousands)	41,400	22,572	18,828	57,114	28,368	28,746	6 consultations per capita. (OECD 6.7, Israel 6.2)
Mammograms	70	38	32	95	47	48	10 per million people (Turkey 10, UK 8)
Linear accelerator	9	5	4	12	6	6	1.25 per million. (Israel 3.23, Jordan and Egypt 0.55, Lebanon 1.24)
Catheterisation and angiography laboratory	14	8	6	19	9	10	2 per million people
Percutaneous coronary interventional procedures	5,175	2,820	2,355	7,139	3,546	3,593	750 for each million persons per year
Psychiatric beds	690	376	314	952	476	476	10 per 100,000 people (Turkey)

Chapter 9

Demographic dividend: How to capitalize in Palestine?



A. The theory of demographic dividend

There is increasing awareness of the influence of age structure on economy. A falling dependency ratio contributed to recent economic growth in East Asia. Evidence suggests that falling youth dependency ratios in developing countries can create an opportunity to accelerate economic growth – assuming policies taking advantage of the "demographic dividend" are in place. "In fact, the combined effect of this large working-age population and health, family, labour, financial, and human capital policies can affect virtuous cycles of wealth creation."[193] Therefore, and in order to realize this dividend, "foresighted and prudent decisions about health, education, and employment need to be taken today."[194]

The renewed interest in the macroeconomic consequences of population change can be traced to new evidence in two forms.[195] First, a series of empirical studies based on aggregate level panel data concluded that demographic factors have a strong, statistically-significant effect:

(a) on aggregate saving rates and

(b) on economic growth.

Detailed case studies of the miracle economies of Eastern and South-Eastern Asia provide compelling and consistent evidence that the demographic dividend was an important contributor to that region's economic success. Econometric analysis concludes that about one-third of Eastern and South-Eastern Asia's increase in per capita income was due to the demographic dividend.

The timing of the changes varies, but essentially every country has experienced or will experience a rise in the relative importance of the working-age population. On its face, this development has a direct, favourable effect on per capita income. ***Given fixed output per worker, labour force participation rates, and unemployment rates, a rise in the share of the working-age population will lead, as a matter of simple algebra, to an increase in output per capita.*** This 'demographic gift' is what is described as the first demographic dividend. A recent study by Cuaresma, Lutz and Sanderson (2014) attributed a substantial portion of this demographic dividend to education, as there are changes in educational attainment.[196] Their study looks backward to calculate the explanatory power of education and other factors in economic growth, whereas the first demographic dividend is projected many years into the future.

The first demographic dividend typically lasts for decades, but it is inherently transitory in nature. As population ageing begins to dominate demographic trends, the share of the population of working age declines. The first dividend will turn negative as population growth outstrips growth in the labour force during a new demographic transition; the share of the population in working ages may ultimately be no greater than before the dividend period began.

193 David E. Bloom, David Canning and Jaypee Sevilla, "Economic Growth and the Demographic Transition," 2001, available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.203.1634&rep=rep1&type=pdf

194 See "Realizing the Demographic Dividend: The Science in Service to the Sahel," http://www.gatesinstitute.org/sites/default/files/DDSahelStatement_English.pdf.

195 This section draws intensively on Andrew Mason's "Demographic Transition and Demographic Dividends in Developed and Developing Countries," (2005). Available at http://www.un.org/esa/population/meetings/Proceedings_EGM_Mex_2005/mason.pdf.

196 "Is Demographic Dividend an Education Dividend," *Demography* (2014), 51:299-315. The article is also accessible on Springerlink.com.

The same demographic forces that produce an end to the first dividend, however, may lead to a second demographic dividend.[197] A key economic challenge for ageing populations is to provide for old-age consumption for older persons who typically have substantially reduced labour income. The consumption of those who have low labour income, including the elderly, can be addressed through sources of other income than labour income (rents), a depletion or sale of assets (saving, collectors' items, real estate), greater reliance on public transfers (in cash or in kind), and/or great reliance on debt. Which method is more appropriate depends on the economic and social circumstances of a country, and a point blank recommendation cannot be made. Moreover, the second dividend is not transitory in nature. Population ageing may produce a 'permanent' increase in capital and thus in per capita income.

Although age structure variables have predictive power and can 'explain' (in the statistical sense) a significant portion of economic growth, the relationship between demographic variables and the economy is not deterministic. Rather, the economic outcome from demographic change is policy dependent. The experience of the Asian Tigers (the economies of Hong Kong, Singapore, South Korea and Taiwan) provides evidence in support of this view. A successful export-oriented growth strategy produced more than enough jobs to absorb the rapidly growing workforce. A stable macroeconomic environment – until the financial crisis of the late 1990s struck – was attractive to investment. These and other policies worked in concert with demographic change to produce high rates of saving and investment, rapid growth in employment, and spectacular economic growth. In the absence of complementary economic policies, on the other hand, the demographic dividend cannot be counted on to produce favourable economic results.

The second demographic dividend arises to the extent that consumers and policymakers are forward-looking and respond effectively to the demographic changes that are foreseen. With a rise in the share of the elderly population on the horizon, consumption in the future can be maintained ***only through the accumulation of wealth*** in some form. One possibility is that individuals and/or firms and governments acting on behalf of consumers accumulate capital. If invested in the domestic economy, the result will be ***capital deepening***, whereby the capital per worker is increasing in the economy,[198] and there is more rapid growth in output per worker. Alternatively, if invested abroad, the result will be an improvement in the current account and an increase in national income, provided that the profits generated abroad are repatriated.

B. Measurement of demographic dividends

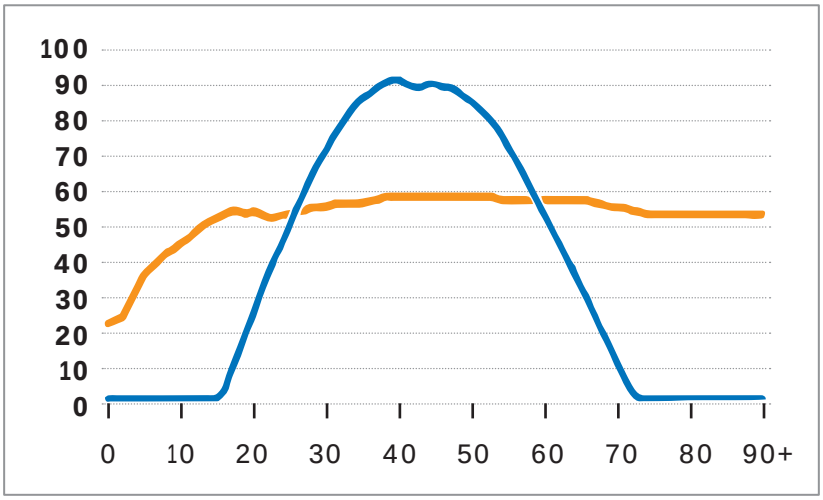
The first demographic dividend arises and dissipates as changes in age structure interact with the life cycle of production and consumption. Children and the elderly produce much *less* than they consume, whereas adults of working age, on average, produce much *more* than they consume. Countries with heavy concentrations of populations in the working ages have an inherent advantage in producing high levels of per capita income. This can be

197 Mason and Lee, 2006, https://www.imf.org/external/pubs/ft/fandd/2006/09/basics.htm, accessed on April 12, 2016.

198 This is also referred to as increase in the capital intensity. Capital deepening is often measured by the rate of change in **capital** stock per labour hour.

depicted graphically as in the following figure representing Thailand's labour income and consumption.[199]

Figure IX.1
Economic Life Cycle of a Typical Worker (per capita labour income and consumption per year), Thailand, 1998



Source: Amonthep Chawla, "National Transfer Account Estimates for Thailand," 2006, available at www.ntaccounts.org.

According to Figure IX.1, each individual has some 35 years or more (from age 25 to age 60 to 69) to build the dividend. Unfortunately, data pertaining to Palestine do not allow an estimation of the economic life cycle because data on production and consumption are not collected on the basis of age categories.

The rate of growth in output per effective consumer is the sum of the rate of growth of the support ratio and the rate of growth of output per worker. ***The first dividend is then defined as the rate of growth of the support ratio. The second dividend operates through productivity growth by inducing the accumulation of wealth and capital deepening.*** Although the unemployment rate in Palestine is high (not even considering underemployment), the first dividend can still be realized due to the rise in the support ratio, as this chapter demonstrates.

The remainder of this chapter will lay out the economic analysis, based on the quantitative analysis, to address the linkages between population dynamics and economic growth and poverty reduction in Palestine.

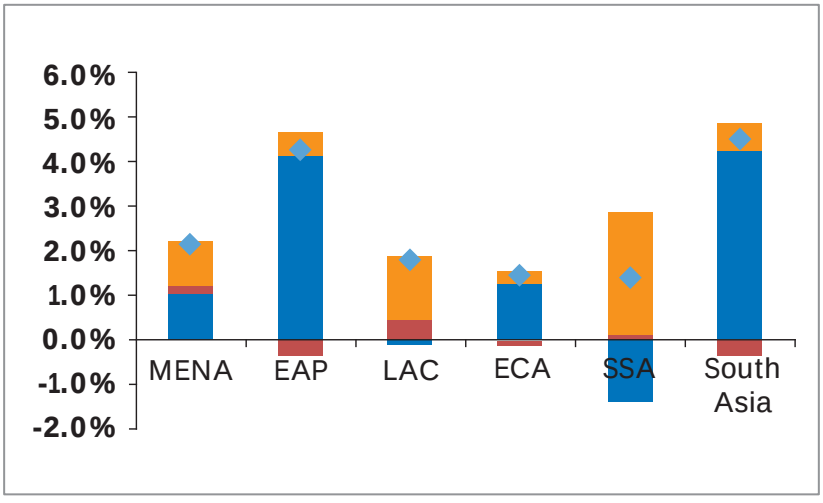
199 The figure pertains to Thailand in 1998. Labour income and consumption are measured in thousand baht.

C. Tracking Palestine's demographic dividend: Age structure and the labour market in Palestine

The first dividend started in Palestine when the growth rate in the support ratio (defined as the ratio of the number of effective producers to the number of effective consumers) started to sustain a positive value in 1990.[200] Palestine remains in an early stage of demographic dividend, which can be expected to end beyond 2045.

According to the World Bank (2015)[201], growth in the MENA region over the last two decades has been moderate and mostly driven by demographic change,[202] while productivity growth has been low compared to other developing countries. Job creation was too weak to absorb the growing working-age population. This resulted in high unemployment, inactivity, and the increase in informal jobs. Specifically, demographic change measured by the change in the working-age population accounted for 50% of economic growth. The MENA region has the second highest population growth rate in the world. By comparison, as Figure IX.2 shows, in the East Asian Pacific countries, as well as in South Asia, economic growth was driven to very large extent by labour productivity growth and less due to demographic change. In Sub-Sahara African countries, productivity growth was negative (so it reduced economic growth), while being dependent mainly on demographic change. In Latin American countries, economic growth was driven mainly by demographic change and growth in employment, while labour productivity stagnated. In European Club Association countries, economic growth was driven mainly by labour productivity growth.

Figure IX.2
Decomposing of GDP per capita growth in MENA and other developing regions, 1991-2012



Source: World Bank (2015), p. 11.

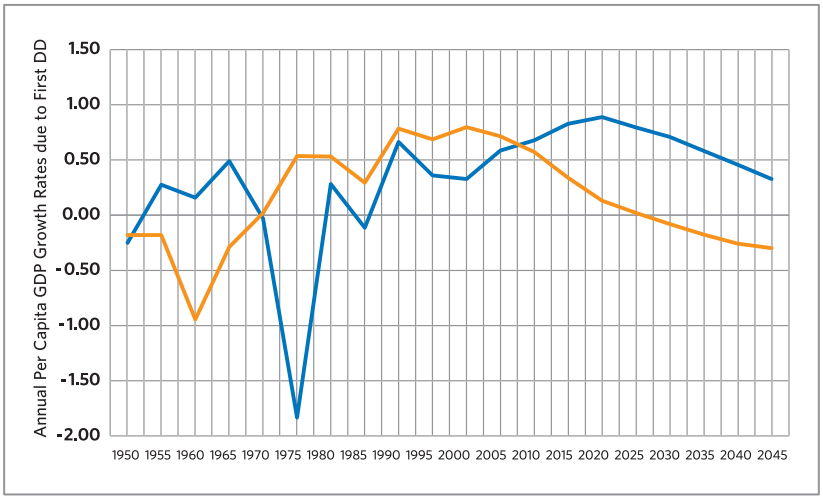
200 Andrew Mason, "Demographic Transition and Demographic Dividends in Developed and Developing Countries," available at http://www.un.org/esa/population/meetings/Proceedings_EGM_Mex_2005/mason.pdf.

201 World Bank, "Jobs or Privileges: Unleashing the Employment Potential of the Middle East and North Africa," 2015, available at https://openknowledge.worldbank.org/handle/10986/20591.

202 "Demographic change" and the "first demographic dividend "are used interchangeably.

Palestine is no exception among MENA countries. Although this study will present its own estimation of the first demographic dividend for Palestine, based on new populations projections, here are cited with some adaptations, the estimates for demographic dividend provided by Mason (2012) for the oPt and the MENA region[203] in Figure IX.3 below.

Figure IX.3
First demographic dividend in the State of Palestine and the MENA region (per capita GDP growth rates), 1950-2045



Source: Mason, Andrew and Lee, Ronald (2012), Demographic Dividends and Aging in Lower-Income Countries, National Transfer Accounts Working Paper, December 19, 2012. Retrieved from http://www.ntaccounts.org/doc/repository/Mason_Lee_2012.pdf

The first demographic dividend started in the MENA region in 1970, and then 20 years later in Palestine. In the MENA region, this dividend peaked in 2000 when it reached 0.8% and is expected to end in 2025. In Palestine, the first demographic dividend would reach its peak of 0.9% in 2020 and end beyond 2045[204].

1. Estimation of the first demographic dividend in Palestine

Based on projection of active population, the following is an estimate of the first demographic dividend for Palestine, as well as for the West Bank and Gaza Strip. There are two suggested scenarios:

1. The first scenario is pessimistic and is built upon the assumption that unemployment rates in 2015 will remain the same (and high) until 2050.
2. The second scenario is optimistic and built upon the assumption that unemployment rates will decline gradually from their 2015 levels to the natural rate of unemployment. We assumed this natural rate to be 7% for the Gaza Strip and Palestine and 5% for the West Bank.[205]

203 Israel was omitted from the MENA group but Cyprus was kept as the only non-Arab country.

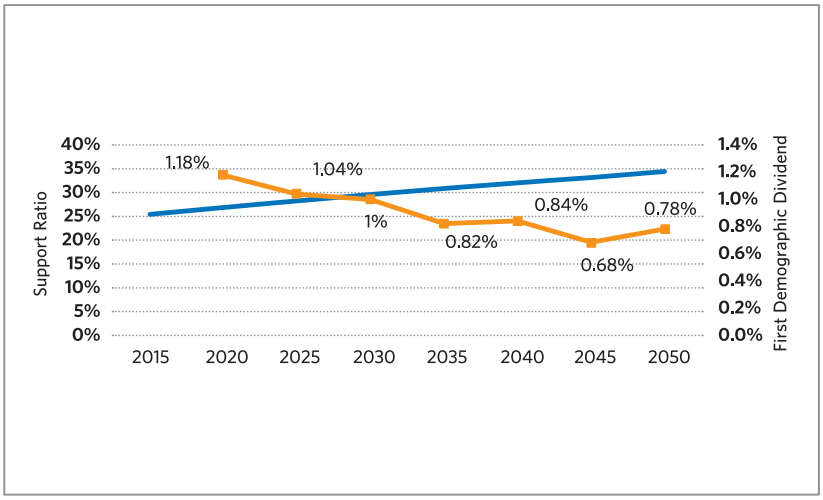
204 Mason provided to the researcher a set of data on individual countries in MENA region to allow analysis of demographic dividend for MENA countries.

205 The natural rate of unemployment is unemployment that would exist under the full-employment condition. This type of unemployment arises due to two forces: (a) people moving between jobs and those entering the labour market (or what is described as frictionally-unemployed people because searching for a job and finding it takes time); and (b) people who are structurally unemployed due to the mismatch between vacancies and job applicants. Economists typically agree to put this rate at 5-6% of the labour force.

The issue of the participation rate is taken care of by the projections. Therefore, they are incorporated in both scenarios.

The methodology used is the standard one,[206] which subtracts the unemployment rate for each age group of the active population based on its participation rate; then figures are summed up to reach the ***effective number of producers***. In order to calculate the corresponding figure of ***effective number of consumers*** for each year, the following weights were used for the corresponding age group: 0.4 for the 0-4 age group, 0.7 for the 5-10 age group, 0.9 for the 11-15 age group, and 1 for the rest.[207] Then the support ratio was estimated for each year. The percentage change of this ratio gives the first dividend and is interpreted as the percentage growth in GDP per capita. A rise in the support ratio reflects a decline in fertility and is good since it will lead to an increase in the growth rate of GDP per capita. The later decline (in some years after 2050) in the support ratio marks the decline of the first demographic dividend until it comes to a halt. This reflects its transitory nature. Below summary results are presented in the figures for each scenario.

Figure IX.4
Support ratios and the first demographic dividend in Palestine under the pessimistic scenario



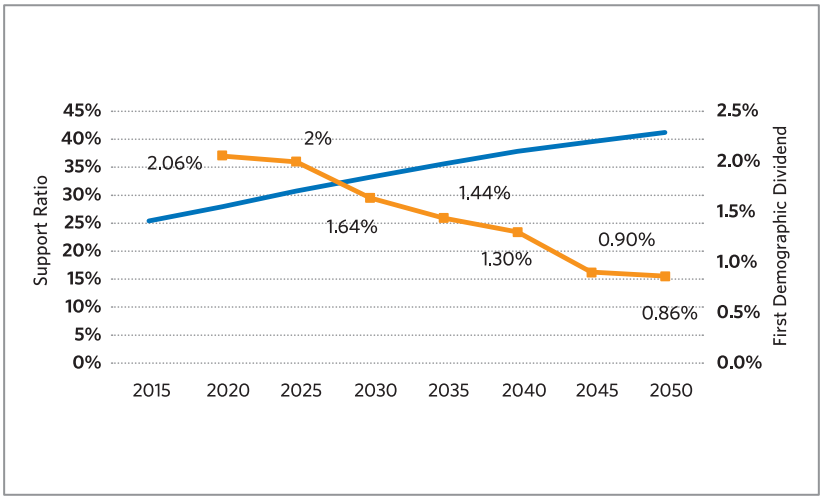
Under the pessimistic scenario, as captured by Figure IX.4, the support ratio is expected to increase from one-fourth in 2015 to one-third in 2050. The total dividend for the whole period is 31.7% increase in the GDP per capita, 1% increase per annum. The first dividend is still positive in 2050 but its potential positive impact will weaken.

Under the optimistic scenario, the support ratio is expected to increase from one-fourth in 2015 to 41% in 2050. The total dividend for the entire period would reach a 51% increase in GDP per capita at an annual average of 1.46%, i.e. 60% over the corresponding pessimistic gain. The following chart captures these results.

206 For calculations, please see Annex II.

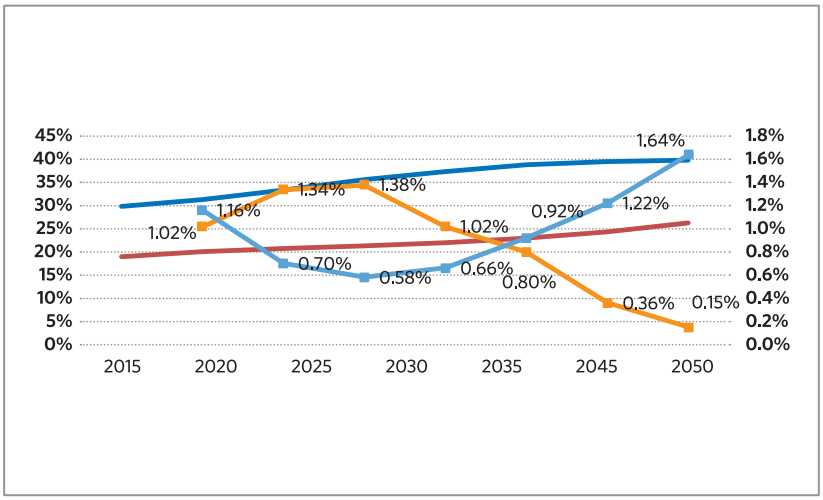
207 For the discussion of these weights, see Deaton, A., *The analysis of household surveys: a micro econometric approach to development policy* (Baltimore and London: Johns Hopkins University Press, 1997). doi:10.1596/0-8018-5254-4, cited in Alexia Prskawetz and Jože Sambt, "Economic support ratios and the demographic dividend in Europe," Demographic Research, vol. 30, 2014, pp. 963-1010.

Figure IX.5
Support ratios and the first demographic dividend in Palestine under the optimistic scenario



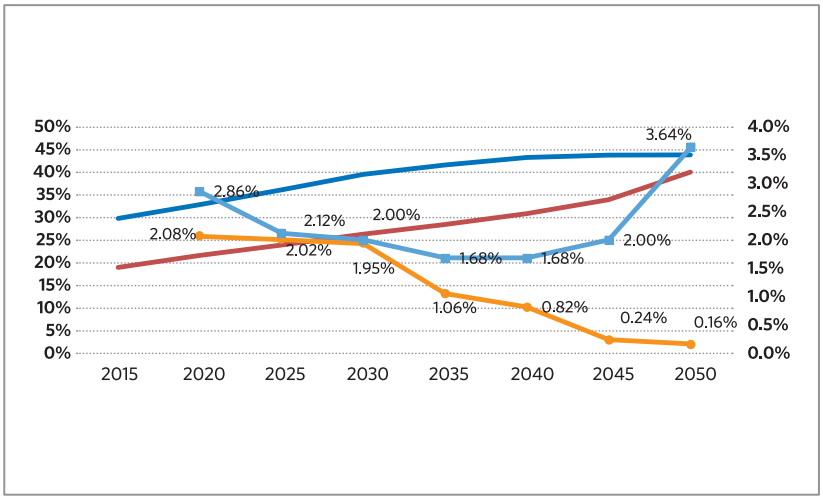
Disparities between the Gaza Strip and the West Bank were observed and the following figures reflect these disparities under both scenarios. According to the pessimistic scenario, the support ratio is estimated to increase from 30% in 2015 to 40% in 2050, while the corresponding ratios for the Gaza Strip are 19% and 26.4%. This indicates that the Gaza Strip would catch up with the level of support ratio of the West Bank beyond 2050. Under this scenario, the total demographic gain of the West Bank is estimated at a 30.4% increase in the GDP per capita over the entire period, while the corresponding figure for the Gaza Strip is 34.4%. The first demographic dividend in the latter would continue beyond 2050 reflecting the fact that it started later than in the former. Figure IX.7 below captures these findings.

Figure IX.6
Support ratios and the first demographic dividend in the West Bank and Gaza Strip under the pessimistic scenario



Under the optimistic scenario, the support ratios and the gains from the first demographic dividends would be higher. The average annual growth rates in the GDP per capita due to this are 1.17% in the West Bank and double that at 2.3% in the Gaza Strip. A few years after 2050, the support ratios in the two regions are converging more closely than in the pessimistic scenario.[208] Figure IX.7 below captures these findings.

Figure IX.7
Support ratios and the first demographic dividend in the West Bank and Gaza Strip under the optimistic scenario



The implications of the projected first demographic dividend reveal the economic gains resulting from the changing age structure, on the one hand. On the other hand, they reveal how crucial it is to reduce unemployment in order to enhance this type of demographic dividend, as reflected in a higher projected GDP per capita growth rates. Policies to increase employment rates especially among youth must be the priority.

"Rising female participation is built upon the assumption that fertility rates will decline with the feminization of higher education, an existing trend. Therefore, the labour market should be directed towards increasing opportunities for female employment."

Moreover, these projections were based upon the assumption that the female participation rate will increase, resulting in a larger number of effective producers.[209] Rising female participation is built upon the assumption that fertility rates will decline with the feminization of higher education, an existing trend. Therefore, the labour market should be directed towards increasing opportunities for female employment. Jobs that require soft skills, especially in the services sector (including education, health, banking, insurance, and ITC among others) are highly suited for this labour force.

208 The higher demographic dividend in the Gaza Strip is due to its high fertility rate and relatively younger population entering the working age population as compared to the West Bank.

209 We are fully aware of the fact that higher female participation rate in the labour force will introduce a shock to the labour market, given the high overall unemployment rate. Nevertheless, the analysis estimates the first demographic dividend based on this assumption in order to show the continuum of the possible demographic dividends, from the pessimistic end to the optimistic end.

It is also evident that higher living standards require that both parents earn an income. This is made possible by smaller household size and investing in children, with more job opportunities for both parents, many families can move out of the poverty trap to middle-income groups and income distribution becomes more equitable.[210]

This analysis assumes that each 3% decline in unemployment is equivalent to a 1% increase in consumption for lower income groups.[211] According to the optimistic scenario, Palestine unemployment rate would decline from 25% to 7% over 35 years, i.e. dropping by 18 percentage points. Dividing this 18% by three corresponds to a 6% increase in the consumption of the poorest 50% of the population. If it is assumed that this increase will be distributed evenly among the poorest 50% of the population, it is possible to produce the following consumption distribution among the 10 deciles of population based on the distribution of 2011.

Table IX.1
The share of per capita consumption of total consumption in each decile in 2011 and its estimation for 2050

	2011*	2050
The poorest decile of the population	4.4%	5.6%
The second poorest decile	5.8%	7.0%
The third poorest decile	6.5%	7.7%
The fourth poorest decile	7.7%	8.9%
The fifth poorest decile	8.3%	9.5%
The fifth richest decile	9.6%	9.6%
The fourth richest decile	10.2%	9.7%
The third richest decile	12.2%	10.7%
The second richest decile	14.0%	12.3%
The richest decile	21.3%	19.0%
Gini Coefficient	0.40	0.337

* Data for 2011 is from the Palestinian Central Bureau of Statistics, while those of 2050 are estimated by the researcher based on an equitable character of economic growth assuming expansion of jobs opportunities for the poorest population. Source: Palestinian Central Bureau of Statistics, Survey of household consumption and spending, 2011.

210 Unfortunately, data on income distribution in Palestine are not available. The only indicator that the PCBS publishes figures about is the Gini coefficient based on consumption distribution rather than income distribution. This indicator therefore masks the true picture of inequalities in income distribution. Furthermore, the PCBS does not publish data on wealth accumulated by households. As such, the analysis is moderate in ambition and tries to estimate the Gini coefficient based on the assumption that some families would move up to middle income groups based on consumption. The operative assumption for such an estimation is that of unemployment rates that decline to the natural rate. This is forecast for the oPt as a whole, but regional disparities can not be estimated because the Gini coefficient is published only for the oPt as a whole.

211 This is more or less a modified version of the rather disputed Okun's law which, according to Okun a 2% increase in output corresponds to a 1% decline in the rate of cyclical unemployment; a 0.5% increase in labor force participation; a 0.5% increase in hours worked per employee; and a 1% increase in output per hours worked. See Arthur M. Okun, "Potential GNP, its measurement and significance," Proceedings of the Business and Economic Statistics Section of the American Statistical Association, 1962, pp. 98-104.

This result must be interpreted cautiously. However, it is expected that, with a declining unemployment rate and the growth of the economy through the first demographic dividend, a reduction in poverty and more equitable distribution of consumption will be possible when other variables (including the policy of transfer payments to the poor) are held constant. Besides, the reduction in inequalities of family size due to fertility reduction, spreading to all segments of the population, will contribute to less unequal consumption on a per capita basis.

2. Propensity to save

Most (if not all) of the savings in Palestine are made by the private sector. The government and other public institutions do not have saving deposits, but they have time deposits that are kept to manage the cash flows of these institutions, especially for the management and implementation of development projects. The private sector has both time and saving deposits. Saving deposits of residents in current dollars grew from USD 241 million in 1996 to more than USD 3,048 million in 2015, i.e. 12.6 times. These deposits are not earning interest income due to the decline in the interest rate globally and locally. Time deposits, on which differential interest income can be earned depending on the currency of the deposit, grew from USD 775 million in 1996 to USD 2,370 million in 2015, i.e. more than three times. Since these two types of deposits are reported as stock in Palestinian Monetary Authority (PMA) statistics, the annual absolute change can be taken to reflect the annual saving statistics of the private sector. These can be used as the concept to derive saving-to-GDP (S/GDP) ratios, shown in Table IX.2 below.

Table IX.2
Saving and time deposits of the private sector, nominal gross domestic product (GDP) and saving-to-GDP (S/GDP) ratios

(In US$ Million)	1998	1999	2000	2001	2002	2003	2004	2005	2006
Saving Deposit (SD)	311.1	375.0	462.3	493.5	532.2	610.1	749.7	802.3	914.6
Time deposit (TD)	1,300.1	1,567.0	2,003.6	1,910.5	1,696.3	1,619.0	1,479.6	1,456.3	1,603.4
Time and Saving Deposit (T&SD)	1,611.2	1,942	2,465.9	2,404	2,228.5	2,229.1	2,229.3	2,258.6	2,518
Annual Saving (S)	-	330.8	523.9	-61.9	-175.5	0.6	0.2	29.3	259.4
Nominal GDP	4,067.8	4,271.2	4,313.6	4,003.7	3,555.8	3,968	4,329.2	4,831.8	4,910.1
S/GDP (%)	-	7.7	12.1	-1.6	-4.9	0	0	0.6	5.3

Table IX.2 *(continued)*

(In US$ Million)	2007	2008	2009	2010	2011	2012	2013	2014	2015
Saving Deposit (SD)	1,126.9	1,364.7	1,608.3	1,802.1	1,977.9	2,203.5	2,509.2	2,757.1	3,048.4
Time deposit (TD)	1,846.7	2,042.0	1,891.9	1,947.0	1,860.7	1,891.2	2059.4	2,153.7	2,370.2
Time and Saving Deposit (T&SD)	2,973.6	3,406.7	3,500.2	3,749.1	3,838.6	4,094.7	4,568.6	4,910.8	5,418.9
Annual Saving (S)	455.6	433.1	93.5	248.9	89.5	256.1	473.9	342.	507.8
Nominal GDP	5,505.8	6,673.5	7,268.2	8,913.1	1,0465.4	1,1279.4	1,2476	1,2715.6	1,2677.4
S/GDP (%)	8.3	6.5	1.3	2.8	0.9	2.3	3.8	2.7	4

Sources: Palestinian Central Bureau of Statistics and Palestine Monetary Authority websites, http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/a-naexpcurr-1994-2014.htm, and http://www.pma.ps/Default.aspx?tabid=202&language=en-US, accessed on 20 May 2016.

Private saving-to-GDP ratios fluctuated over 1999-2015. The ratio reached its peak in 2000 at 12% and declined to negative ratios consequently over 2001-2002 due to the Israeli military operations following the *Second Intifada* in 2000. It remained almost negligible over the years 2003-2005. It finally started to rise above 1% and reached a peak of 8.3% in 2007 but then declined due to the global financial crisis after 2008, reaching 1% in 2011 and picking up again to 4% in 2015. The average private saving-to-GDP ratio over the whole period was 3%.

Due to the first demographic dividend, this ratio is expected to increase in the coming 30 years for two main reasons: the decline in fertility and subsequently in the number of children in the household, and the expected increase in the female participation rate in the labour force from a low of 19% to 32%.

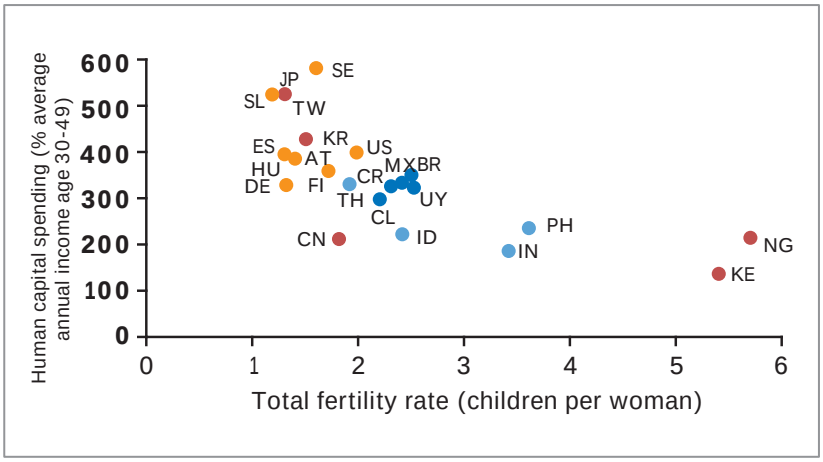
These two factors would work together to reduce the relative average propensity to consume and to increase the average propensity to save. These savings would be used for (a) better education of the children, (b) better health for all family members, and (c) to support aging parents. Of course, better education and health would also lead to a higher productivity rate per worker, therefore, higher income and higher savings. This would become a virtuous cycle but one that would come to a halt beyond 2050. It also may reduce the pressure to transfer payments from the government to the poor, provided that the unemployment rate declines. All what is being suggested is to divert consumption of families from thinly-distributed consumption and poor education and health to a more focused, future-looking spending in the form of investing in human capital by providing better learning opportunities and better health for children to enhance their freedom of choice and have better job opportunities in the future. The role of the government to provide and equip better schools and better teachers is crucial not only within the government schools but also by supporting private schools. This should also go in parallel with enhancing UNRWA schools in their role in providing better education for the children of Palestinian refugees.

Unfortunately, it is impossible to estimate how the saving-to-GDP ratio would increase because the income-consumption profile of the typical Palestinian worker is not available. It could reach its peak of 12%, as it was in 2000, and may even exceed it. With proper financial and fiscal policies, it could also reach 25%.[212] With an average inverse of the ICOR (incremental capital-output ratio) at five, which was at its peak in 1995, an annual average of 1.25% growth rate in real GDP could occur based on the actions of the private sector alone. But this cannot be achieved without proper policies to enhance the investment climate to mobilize productive investments. Otherwise, savings would be sitting idle or be redirected for better investment opportunities abroad.

3. Economic investment versus demographic investment

If the increased savings were reinvested, capital accumulation would be enhanced. With the right mix of policies, capital deepening might take place in the form of increase in capital-labour ratios, i.e. capital deepening would become possible and therefore, higher marginal and average labour productivity would result. This is the second demographic dividend and will become another virtuous cycle that has a permanent nature, in contrast to the first type of demographic dividend. This trade-off between fertility and human-capital spending is depicted in Figure IX.8 below, based on a number of countries' empirical data.

Figure IX.8
The trade-off between fertility and human-capital spending in various countries



Source: National Transfer Accounts Project Population and Health Studies, East-West Center, 2011, available at www.ntaccounts.org, accessed on 10 April 2016.

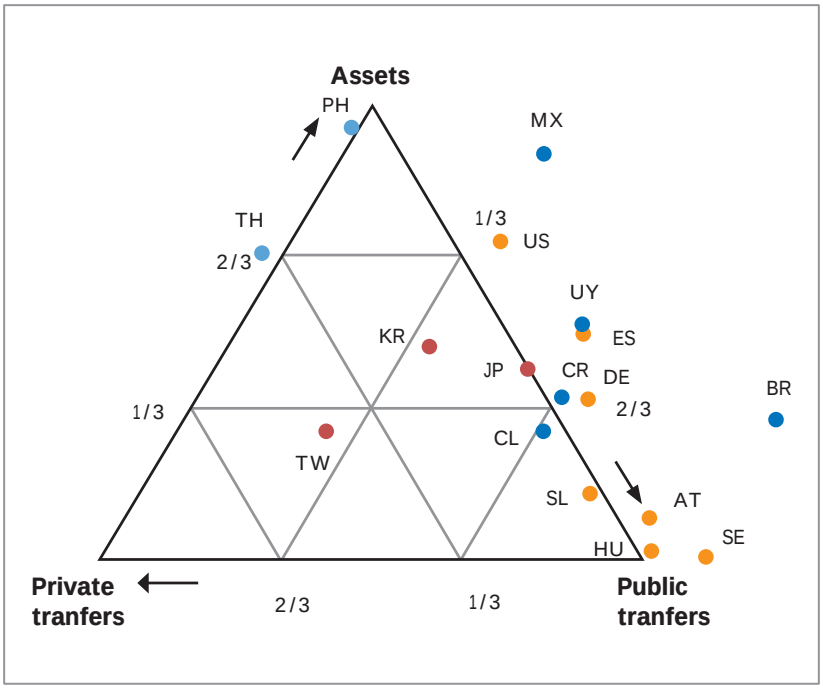
Increasing human capital spending is a promising strategy for offsetting the anticipated decline in the support ratio. Indeed, countries with low fertility tend to spend more on health and education for each child than do countries with high fertility. As a result, future generations of workers should be more productive even if there are fewer of them. For example, human capital spending on each child in low-fertility countries is about four times the average annual labour income of a prime-age adult (ages 30-49), while in high-fertility

212 For comparison purposes, and as of 2014 the saving-to-GDP ratios in Arab countries ranges from 10% in Sudan to 59% in Qatar. Arab oil exporting countries come with high ratios but countries like Lebanon, Morocco and Jordan exceeded 20% while that of Egypt was at low 12%. In the same year, the ratio for Palestine was 12%. See http://wdi.worldbank.org/table/4.8, accessed on 25 September 2016.

African countries, human capital spending on each child is only about twice the average annual labour income of this age group. But how do children and the elderly compensate for their lower potential income?

Children and the elderly can rely on economic resources from four sources to support their consumption: labour income, public transfers, private transfers, and asset-based flows. Children have relatively low labour income everywhere. Even if they are working, their wages are low. They also have little or no income from assets. In a few advanced countries, young adults may rely on credit (student loans or credit card debt, for example), but this is the exception rather than the rule. Instead, children rely extensively on private transfers from parents and grandparents. In some higher income countries, public transfers also fund a large share of consumption by children, particularly in Europe where the public sector dominates the education and health care sectors. The elderly rely on a more diverse set of economic resources to support themselves. In some low-income countries, labour income is an important economic resource. Among the industrialized countries, labour income varies in its importance – it is low in most European countries and higher in the United States and Japan. Figure IX.9 below depicts the picture of elderly reliance on diverse economic resources in different countries.

Figure: IX.9
Resources for the elderly in various countries



Source: National Transfer Accounts Project Population and Health Studies, East-West Center, 2011, www.ntaccounts.org, accessed on 10 April, 2016.

How do the elderly make up the difference between what they consume and what they earn? The triangle chart compares the relative importance of three sources of income – public transfers, private transfers, and assets. The importance of each component is represented by its distance from the points on the triangle. The elderly in Sweden and Hungary, for example, rely almost exclusively on public transfers. The elderly in Mexico and the Philippines rely heavily on assets. Private transfers are important in a few Asian economies (Thailand, Taiwan, and South Korea, for example), but not Japan. In many

countries, net private transfers are close to zero, and in quite a few (those lying to the right of the triangle) the elderly actually give more to their children and grandchildren than they receive.

"With lower fertility for the coming 35 years, more spending on human capital is expected, but policies to induce greater spending on education and health care are warranted".

To estimate the second demographic dividend, a technical problem is immediately apparent. Constructing complete life cycle wealth estimates in year *t* requires a population series that extends many decades into the future. These data are not available for individual countries. Fortunately, the nature of the economic life cycle provides assistance with this problem. For the most part, capital accumulation is concentrated among older working-age adults who are approaching their peak earnings and have completed their child-rearing responsibilities. Thus, the wealth held by those aged 50 and older can be used.[213]

Unfortunately, data on labour income, wealth, and spending patterns in Palestine are not available. Therefore, we will not be able to compare where Palestine stands in the trade-off between fertility and human-capital spending. Nevertheless, it can be said that children and the elderly rely more on net private transfers and public transfers, depending on how poor the family is. A troubling picture emerges from the weight of spending on education and healthcare in the consumer basket of a typical urban Palestinian family. Monthly cash spending on education and health care with almost stable trends totalled together an average 7.8% of total monthly cash spending, divided almost evenly between the two categories.[214] As such, Palestine, as far as the working poor are concerned, would be positioned somewhere in the lower part of the triangle between public transfers and private transfers. With lower fertility for the coming 35 years, more spending on human capital is expected, but policies to induce greater spending on education and health care are warranted, with targeted campaigns and policies to reduce spending on cigarettes and tobacco.

The second demographic dividend can be estimated to be in the range of a 2% increase in per capita GDP provided that additional savings are translated into productive investments. The MENA region was projected to achieve 0.70% annual increase in GDP per capita due to the second demographic dividend.[215] Using Mason's projection of the second demographic

213 For the discussion of these weights, see Deaton, A., *The analysis of household surveys: a micro econometric approach to development policy* (Baltimore and London: Johns Hopkins University Press, 1997). doi:10.1596/0-8018-5254-4, cited in Alexia Prskawetz and Jože Sambt, "Economic support ratios and the demographic dividend in Europe," *Demographic Research*, vol. 30, 2014, pp. 963-1010.

214 See http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/Expenditure_1996_2011_a.htm, accessed on 4 May 2016. Monthly total cash spending is defined as monthly total spending minus household self-produced food and noon food products, taxes, transfer payments and non-consumption spending). Disturbingly, monthly cash spending on transportation and telecommunication with a rising trend averaged 11.5% of total monthly cash spending, while spending on cigarettes and tobacco surpassed the category of education all the time and that of the healthcare category most of the time.

215 Andrew Mason, 2005, "Demographic Transition and Demographic Dividends in Developed and Developing Countries," United Nations Expert Group Meeting on Social and Economic Implications of Changing Population Age Structures (Mexico City).

dividend, the total demographic dividend of Palestine could range from 1.7% annual growth rate in GDP per capita under the pessimistic scenario to 2.16% under the optimistic scenario. How would the actual growth rate deviate from this projection? A negative deviation would mean a lost window of opportunity, while a positive deviation is a blessing.

D. Demographic dividend: opportunities and challenges

The demographic transition, with its accompanying declining fertility and large young population entering the working age group, presents Palestine with a window of opportunity that can be harnessed into demographic dividend. The demographic dividend can speed up the attainment of many sustainable development goals, including Goal 1, "ending poverty in all its forms." But it would be remiss to not also recall the strangulation of the Palestinian economy by the on-going Israeli occupation and the trivial power granted to the Palestinian Authority over international trade and control of natural resources (water, natural gas, etc.), including large strategic areas Area C and the Gaza Strip, which remains under closure. The mere existence of the Israeli occupation and its policies act as a deterrent to productive investments seeking to enter Palestine. Therefore, the capacity of the local economy to create jobs and activate more people as effective producers is likely to remain low, already limiting the optimistic scenario and its higher demographic dividend.

However, within the limited margin of manoeuvre available to the Palestinian government, the Palestinians can make an effort to reap some of the fruits of the demographic transition. It is well known that the productivity of young adults depends on schooling decisions, employment practices, the timing and level of childbearing, and policies that make it easier for young parents to work. Productivity at older ages depends on health and disability, tax incentives and disincentives, and, particularly, the structure of pension programs and retirement policies. Palestine can do much in the process to realize this type of dividend.

To realize the dividend, multiple intersecting investments are needed to empower, educate and employ the population, particularly young people and women. Proper policies have to be put in place to reduce infant, child and maternal mortality. Women's empowerment is critical to achieving demographic dividend; as such, policies are essential to advance gender equality and promote women's employment and social protection, including elimination of all forms of gender-based violence and discrimination. Also, investment in improving access to quality reproductive health services including family planning is essential to fulfil unmet need and expand access to choice, allowing women and couples to decide on timing, number and spacing of children. Women who are freed from unintended pregnancies not only would enjoy better health and healthier children but are more likely to promote development. Another key to harness demographic dividend is enabling young people and adolescent girls in particular to achieve their potential and enjoy their human rights. To achieve this, policies are essential to reduce child marriage and early childbearing, increase access to quality education and promote strategies for youth employment with equal access for young males and females to productive employment and active citizenship.

Similarly, the second demographic dividend is also a window of opportunity, the realization of which depends on how a society supports its elderly. In the developing world, the elderly are supported by their families and the public sector, but, in addition, they depend on assets

they have accumulated during their working years such as housing, pensions, and personal savings, among other things. As the population ages, the burden placed on families and governments will increase relative to GDP. But through the second dividend, increased numbers of middle-aged workers may substantially raise capital relative to GDP if policies encourage workers to save for their retirement. Therefore, Palestine could move forward to create the social security fund system that can create the necessary impetus to mobilize private savings.

If Palestine manages to meet the challenge of aging by expanding unfunded familial or public transfer programs, asset growth will be reduced, and the second dividend will be diminished. By contrast, if workers are encouraged to save and accumulate pension funds, population aging can boost capital per worker, productivity growth, and per capita income. Thus, policymakers will need to focus on establishing financial systems that are sound, trusted, and accessible. The time to do so is now so that, as a population ages, its growth-inducing potential will be realized.[216]

216 Ronald Lee and Andrew Mason, IMF website, "What is the Demographic Dividend," available at www.imf.org/external/pubs/ft/fandd/2006/09/basics.htm, accessed on 2 April 2016.

Annexes



Annex I. Tables related to population projections

1. Projections by age group and sex, 2015-2050, high and constant variants

Table X.1
Population by age group and sex, Palestine, 2015-2050, high scenario

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	364	348	712	402	381	783	442	419	861	470	446	916
5-9	307	295	602	362	346	708	401	379	780	441	418	859
10-14	283	271	554	306	295	601	362	345	707	400	379	779
15-19	270	259	529	282	271	553	306	294	600	361	345	706
20-24	249	240	489	269	258	527	282	270	552	305	294	599
25-29	207	198	405	248	239	487	268	258	526	281	269	550
30-34	160	153	313	206	197	403	247	238	485	267	257	524
35-39	133	129	262	159	152	311	205	196	401	246	237	483
40-44	112	109	221	132	128	260	158	151	309	203	195	398
45-49	95	91	186	110	108	218	130	127	257	156	150	306
50-54	79	73	152	93	89	182	108	106	214	127	125	252
55-59	58	55	113	76	71	147	89	87	176	104	103	207
60-64	38	38	76	54	52	106	72	68	140	85	83	168
65-69	25	29	54	34	35	69	49	49	98	65	63	128
70-74	16	21	37	21	25	46	29	31	60	43	43	86
75-79	10	14	24	12	17	29	16	21	37	23	26	49
80+	9	14	23	10	16	26	12	20	32	16	24	40
Total	**2,415**	**2,337**	**4,752**	**2,776**	**2,680**	**5,456**	**3,176**	**3,059**	**6,235**	**3,593**	**3,457**	**7,050**

Table X.1 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	498	472	970	531	504	1,035	567	538	1105	598	567	1,165
5-9	469	444	913	497	470	967	530	502	1032	566	536	1,102
10-14	440	417	857	469	444	913	496	470	966	530	502	1,032
15-19	400	379	779	440	417	857	468	444	912	496	470	966
20-24	361	345	706	399	378	777	439	416	855	468	443	911
25-29	304	293	597	360	344	704	398	378	776	439	416	855
30-34	280	269	549	304	292	596	359	343	702	397	377	774
35-39	266	256	522	279	268	547	303	292	595	358	343	701
40-44	244	236	480	265	255	520	277	267	544	301	291	592
45-49	201	193	394	242	234	476	262	253	515	275	265	540
50-54	153	148	301	198	191	389	238	232	470	259	250	509
55-59	124	122	246	149	144	293	193	187	380	233	227	460
60-64	99	99	198	118	117	235	143	140	283	186	181	367
65-69	78	78	156	92	93	185	110	111	221	133	132	265
70-74	57	57	114	68	70	138	81	85	166	97	101	198
75-79	34	36	70	45	48	93	55	60	115	66	73	139
80+	22	30	52	32	41	73	45	56	101	58	73	131
Total	**4,030**	**3,874**	**7,904**	**4,488**	**4,310**	**8,798**	**4,964**	**4,774**	**9,738**	**5,460**	**5,247**	**10,707**

Source: High variant, cohort component

Table X.2
Population by age group and sex, Palestine, 2015-2050, constant scenario

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	364	348	712	408	387	795	466	442	908	515	489	1,004
5-9	307	295	602	362	346	708	407	385	792	465	440	905
10-14	283	271	554	306	295	601	362	345	707	406	385	791
15-19	270	259	529	282	271	553	306	294	600	361	345	706
20-24	249	240	489	269	258	527	282	270	552	305	294	599
25-29	207	198	405	248	239	487	268	258	526	281	269	550
30-34	160	153	313	206	197	403	247	238	485	267	257	524
35-39	133	129	262	159	152	311	205	196	401	246	237	483
40-44	112	109	221	132	128	260	158	151	309	203	195	398
45-49	95	91	186	110	108	218	130	127	257	156	150	306
50-54	79	73	152	93	89	182	108	106	214	127	125	252
55-59	58	55	113	76	71	147	89	87	176	104	103	207
60-64	38	38	76	54	52	106	72	68	140	85	83	168
65-69	25	29	54	34	35	69	49	49	98	65	63	128
70-74	16	21	37	21	23	44	29	31	60	43	43	86
75-79	10	14	24	12	17	29	16	21	37	23	26	49
80+	9	14	23	10	16	26	12	20	32	16	24	40
Total	**2,415**	**2,337**	**4,752**	**2,782**	**2,684**	**5,466**	**3,206**	**3,088**	**6,294**	**3,668**	**3,528**	**7,196**

Table X.2 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	568	538	1,106	635	602	1,237	717	679	1,396	810	768	1,578
5-9	514	487	1,001	567	537	1,104	633	600	1,233	716	678	1,394
10-14	464	439	903	514	486	1,000	566	536	11,02	633	600	1,233
15-19	406	384	790	464	439	903	513	486	999	566	536	1,102
20-24	361	345	706	405	384	789	463	439	902	512	486	998
25-29	304	293	597	360	344	704	404	383	787	462	438	900
30-34	280	269	549	304	292	596	359	343	702	403	383	786
35-39	266	256	522	279	268	547	303	292	595	358	343	701
40-44	244	236	480	265	255	520	277	267	544	301	291	592
45-49	201	193	394	242	234	476	262	253	515	275	265	540
50-54	153	148	301	198	191	389	238	232	470	259	250	509
55-59	124	122	246	149	144	293	193	187	380	233	227	460
60-64	99	99	198	118	117	235	143	140	283	186	181	367
65-69	78	78	156	92	93	185	110	111	221	133	132	265
70-74	57	57	114	68	70	138	81	85	166	97	101	198
75-79	34	36	70	45	48	93	55	60	115	66	73	139
80+	22	30	52	32	41	73	45	56	101	58	73	131
Total	**4,175**	**4,010**	**8,185**	**4,737**	**4,545**	**9,282**	**5,362**	**5,149**	**10,511**	**6,068**	**5,825**	**11,893**

Source: Constant variant, cohort-component

Table X.3
Population by age group and sex, West Bank, 2015-2050, high scenario

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	204	195	399	189	179	368	213	202	415	231	219	450
5-9	177	171	348	203	194	397	188	178	366	212	201	413
10-14	167	160	327	177	171	348	203	194	397	188	178	366
15-19	163	156	319	167	160	327	176	171	347	203	194	397
20-24	154	147	301	163	156	319	166	160	326	176	170	346
25-29	128	123	251	153	147	300	162	155	317	166	159	325
30-34	100	95	195	127	123	250	153	146	299	162	155	317
35-39	85	82	167	99	95	194	127	122	249	152	146	298
40-44	74	72	146	84	81	165	99	94	193	126	121	247
45-49	63	61	124	73	71	144	83	81	164	98	93	191
50-54	53	49	102	62	60	122	72	70	142	82	80	162
55-59	38	37	75	51	48	99	60	58	118	69	69	138
60-64	25	25	50	36	35	71	48	46	94	57	56	113
65-69	17	19	36	23	23	46	33	33	66	45	43	88
70-74	11	14	25	15	17	32	20	21	41	28	30	58
75-79	7	10	17	9	11	20	11	14	25	15	17	32
80+	6	10	16	7	12	19	9	14	23	11	17	28
Total	**1,472**	**1,426**	**2,898**	**1,638**	**1,583**	**3,221**	**1,823**	**1,759**	**3,582**	**2,021**	**1,948**	**3,969**

Table X.3 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	248	235	483	263	250	513	277	262	539	293	278	571
5-9	231	219	450	248	235	483	263	249	512	276	262	538
10-14	212	201	413	231	218	449	248	234	482	263	249	512
15-19	188	178	366	212	201	413	231	218	449	247	234	481
20-24	202	193	395	187	178	365	212	201	413	230	218	448
25-29	176	170	346	202	193	395	187	177	364	211	200	411
30-34	165	159	324	175	170	345	202	193	395	187	177	364
35-39	161	154	315	165	158	323	175	169	344	201	192	393
40-44	151	145	296	160	154	314	164	158	322	174	169	343
45-49	125	120	245	150	144	294	159	153	312	163	157	320
50-54	96	92	188	123	119	242	148	142	290	157	151	308
55-59	80	78	158	94	90	184	120	117	237	145	140	285
60-64	66	66	132	76	75	151	90	87	177	116	114	230
65-69	52	53	105	62	62	124	71	71	142	85	83	168
70-74	39	39	78	46	48	94	55	57	112	64	66	130
75-79	23	25	48	32	33	65	38	41	79	45	50	95
80+	15	21	36	22	29	51	32	39	71	41	52	93
Total	**2230**	**2148**	**4378**	**2448**	**2357**	**4805**	**2672**	**2568**	**5240**	**2898**	**2792**	**5690**

Source: High variant, cohort-component

Table X.4
Population by age group and sex, Gaza Strip, 2015-2050, high variant

	2015			2020			2025			2030		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	160	153	313	213	202	415	229	217	446	239	227	466
5-9	130	124	254	159	152	311	213	201	414	229	217	446
10-14	116	111	227	129	124	253	159	151	310	212	201	413
15-19	107	103	210	115	111	226	130	123	253	158	151	309
20-24	95	93	188	106	102	208	116	110	226	129	124	253
25-29	79	75	154	95	92	187	106	103	209	115	110	225
30-34	60	58	118	79	74	153	94	92	186	105	102	207
35-39	48	47	95	60	57	117	78	74	152	94	91	185
40-44	38	37	75	48	47	95	59	57	116	77	74	151
45-49	32	30	62	37	37	74	47	46	93	58	57	115
50-54	26	24	50	31	29	60	36	36	72	45	45	90
55-59	20	18	38	25	23	48	29	29	58	35	34	69
60-64	13	13	26	18	17	35	24	22	46	28	27	55
65-69	8	10	18	11	12	23	16	16	32	20	20	40
70-74	5	7	12	6	8	14	9	10	19	15	13	28
75-79	3	4	7	3	6	9	5	7	12	8	9	17
80+	3	4	7	3	4	7	3	6	9	5	7	12
Total	**943**	**911**	**1,854**	**1,138**	**1,097**	**2,235**	**1,353**	**1,300**	**2,653**	**1,572**	**1,509**	**3,081**

Table X.4 *(continued)*

	2035			2040			2045			2050		
Age	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
0-4	250	237	487	268	254	522	290	276	566	305	289	594
5-9	238	225	463	249	235	484	267	253	520	290	274	564
10-14	228	216	444	238	226	464	248	236	484	267	253	520
15-19	212	201	413	228	216	444	237	226	463	249	236	485
20-24	159	152	311	212	200	412	227	215	442	238	225	463
25-29	128	123	251	158	151	309	211	201	412	228	216	444
30-34	115	110	225	129	122	251	157	150	307	210	200	410
35-39	105	102	207	114	110	224	128	123	251	157	151	308
40-44	93	91	184	105	101	206	113	109	222	127	122	249
45-49	76	73	149	92	90	182	103	100	203	112	108	220
50-54	57	56	113	75	72	147	90	90	180	102	99	201
55-59	44	44	88	55	54	109	73	70	143	88	87	175
60-64	33	33	66	42	42	84	53	53	106	70	67	137
65-69	26	25	51	30	31	61	39	40	79	48	49	97
70-74	18	18	36	22	22	44	26	28	54	33	35	68
75-79	11	11	22	13	15	28	17	19	36	21	23	44
80+	7	9	16	10	12	22	13	17	30	17	21	38
Total	**1,800**	**1,726**	**3,526**	**2,040**	**1,953**	**3,993**	**2,292**	**2,206**	**4,498**	**2,562**	**2,455**	**5,017**

Source: High variant, cohort-component

Annex II: Tables related to demographic dividend

1. Calculations of the First Demographic Dividend

(a) Calculations for Palestine

Table X.5
Palestine total effective producers (EP) (in thousands) using the medium variant population projections, assuming unemployment rate is constant at 2015 level (pessimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	321	341	364	412	466	499	517	522
Less unemployment rate (UR)	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%
Effective producers (EP)1	190	202	216	244	276	296	307	310
25-34	450	587	699	779	852	971	1,099	1,204
Less UR	30.2%	30.2%	30.2%	30.2%	30.2%	30.2%	30.2%	30.2%
EP2	314	410	488	544	595	678	767	838
35-44	293	358	460	586	686	751	824	960
Less UR	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%
EP3	251	307	394	502	588	644	706	823
45-54	191	232	281	344	441	565	661	723
Less UR	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%
EP4	167	202	245	300	385	493	576	631
55-64	64	86	107	126	149	178	224	281
Less UR	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
EP5	56	75	93	110	129	155	195	244
65+	15	19	26	35	46	57	70	85
Less UR	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
EP6	14	18	24	33	43	53	66	80
Total EP	**992**	**1,214**	**1,460**	**1,735**	**2,016**	**2,319**	**2,617**	**2,926**

Table X.6
Palestine total effective producers (in thousands) using the medium variant population projections assuming unemployment rate is lower than 2015 level (optimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	321	341	364	412	466	499	517	522
Less UR	40.7%	37.7%	33.7%	28.7%	23.7%	18.7%	13.7%	8.7%
EP1	190	213	241	294	356	406	446	477
25-34	450	587	699	779	852	971	1,099	1,204
Less UR	30.2%	27.2%	23.2%	18.2%	13.2%	8.2%	7%	7%
EP2	314	427	537	637	740	892	1022	1120
35-44	293	358	460	586	686	751	824	960
Less UR	14.3%	11.3%	7.3%	7%	7%	7%	7%	7%
EP3	251	318	427	545	638	698	766	893
45-54	191	232	281	344	441	565	661	723
Less UR	12.8%	9.8%	7%	7%	7%	7%	7%	7%
EP4	167	209	261	320	410	526	615	672
55-66+(*)	79	105	133	161	195	235	294	366
Less UR	11.9%	8.9%	7%	7%	7%	7%	7%	7%
EP5	70	96	124	150	181	219	273	340
Total EP	**992**	**1,263**	**1,590**	**1,946**	**2,325**	**2,744**	**3,122**	**3,502**

* We have combined the last age groups together because for 2015 unemployment rates for both were equalized for the period 2020-2050.

Table X.7
Palestine's effective consumers (in thousands)

Population Age groups*	2015	2020	2025	2030	2035	2040	2045	2050
0-4	285	308	326	330	331	331	325	306
5-10	809	916	1,032	1,104	1,143	1,154	1,156	1,142
11-15	476	498	540	635	689	727	740	743
16+	2,355	2,811	3,287	3,790	4,394	5,014	5,664	6,290
Total EC	**3,925**	**4,533**	**5,185**	**5,859**	**6,557**	**7,226**	**7,885**	**8,481**

Note: Original projections were multiplied by the following factors: 0.4, 0.7, 0.9 and 1 for the 0-4, 5-10, 11-15 and 16+ age groups, respectively.

Table X.8
Palestine support ratios and the first demographic dividend (FDD) under the unemployment rate of 2015 (pessimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.253	0.268	0.282	0.296	0.308	0.321	0.332	0.345	
Percentage change in the SR on the previous period (i.e. FDD)	...	5.5%	5.2%	5%	4.1%	4.2%	3.4%	3.9%	**31.3% and 0.9%**

Note: The support ratio equals total effective (TE) producers (from Table X.5) divided by total effective consumers (EC) (from Table X.7).

Table X.9

Palestine support ratios and the first demographic dividend (FDD) under declining unemployment rate of 2015 (optimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.253	0.279	0.307	0.332	0.356	0.379	0.396	0.413	
Percentage change in the SR on the previous period (i.e. FDD)	...	10.3%	10%	8.2%	7.2%	6.5%	4.5%	4.3%	**51% and 1.46%**

Note: The support ratio equals total effective (TE) producers (from Table X.6) divided by total effective consumers (EC) (from Table X.7).

(b) Calculations for the West Bank and Gaza Strip

Table X.10
West Bank effective producers (in thousands) using the medium variant population projections assuming unemployment rate is constant at 2015 level (pessimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	207	215	223	247	254	241	218	207
Less UR	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%
EP1	148	153	159	176	181	172	155	148
25-34	273	352	414	451	481	534	551	523
Less UR	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%
EP2	217	280	329	358	382	424	438	415
35-44	192	228	290	369	426	457	491	557
Less UR	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%
EP3	174	207	263	335	387	415	446	506
45-54	130	157	187	223	283	356	414	444
Less UR	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
EP4	129	145	173	206	262	329	383	410
55-64	45	62	77	90	104	121	149	186
Less UR	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
EP5	41	57	71	82	95	111	136	170
65+	12	15	21	28	36	45	55	66
Less UR	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
EP6	12	14	20	27	34	43	53	63
Total EP	**721**	**856**	**1,015**	**1,184**	**1,341**	**1,494**	**1,611**	**1,712**

Note: EP figures were rounded.

Table X.11
West Bank effective producers (in thousands) using the medium variant population projections assuming unemployment rate is lower than 2015 level (optimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	207	215	223	247	254	241	218	207
Less UR	28.7%	23.7%	18.7%	13.7%	8.7%	5%	5%	5%
EP1	148	164	181	213	232	229	207	197
25-34	273	352	414	451	481	534	551	523
Less UR	20.6%	15.6%	10.6%	5%	5%	5%	5%	5%
EP2	217	297	370	429	457	507	524	497
35-44	192	228	290	369	426	457	491	557
Less UR	9.2%	5%	5%	5%	5%	5%	5%	5%
EP3	174	217	276	351	405	434	467	529
45-54	130	157	187	223	283	356	414	444
Less UR	7.6%	5%	5%	5%	5%	5%	5%	5%
EP4	129	149	178	212	267	338	393	422
55-64	45	62	77	90	104	121	149	186
Less UR	8.5%	5%	5%	5%	5%	5%	5%	5%
EP5	41	59	73	86	99	115	142	177
65+	12	15	21	28	36	45	55	66
Less UR	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
EP6	12	14	20	27	34	43	53	63
Total EP	**721**	**900**	**1,098**	**1,318**	**1,494**	**1,666**	**1,786**	**1,885**

Table X.11
West Bank effective consumers (in thousands)

Population Age groups*	2015	2020	2025	2030	2035	2040	2045	2050
0-4	160	147	143	120	129	136	139	136
5-10	473	522	534	506	459	433	462	480
11-15	287	294	312	357	330	320	268	289
16+	1,505	1,781	2,057	2,343	2,666	2,948	3,201	3,382
Total EC	**2,425**	**2,744**	**3,046**	**3,326**	**3,584**	**3,837**	**4,070**	**4,287**

Note: Original projections were multiplied by the following factors: 0.4, 0.7, 0.9 and 1 for the 0-4, 5-10, 11-15 and 16+ age groups, respectively.

Table X.12
West Bank support ratios and the first demographic dividend (FDD) under the unemployment rate of 2015 (pessimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.297	0.312	0.333	0.356	0.374	0.389	0.396	0.399	
Percentage change in the SR on the previous period (i.e. FDD)	...	5.1%	6.7%	6.9%	5.1%	4%	1.8%	0.8%	**30.4% and 0.87%**

Note: The support ratio equals TE producers (from Table X.6) divided by total EC (from Table X.11).

Table X.13
West Bank support ratios and the first demographic dividend (FDD) under declining unemployment rate of 2015 (optimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.297	0.328	0.361	0.396	0.417	0.434	0.439	0.44	
Percentage change in the SR on the previous period (i.e. FDD)	...	10.4%	10.1%	9.7%	5.3%	4.1%	1.2%	0.2%	**41% and 1.17%**

Note: The support ratio equals TE producers (from Table X.7) divided by total EC (from Table X.8).

Table X.14
Gaza Strip effective producers (in thousands) using the medium variant population projections assuming unemployment rate is constant at its 2015 level (pessimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	115	126	141	165	212	258	299	315
Less UR	61%	61%	61%	61%	61%	61%	61%	61%
EP1	45	49	55	65	83	101	117	123
25-34	177	235	286	328	371	437	548	681
Less UR	44.5%	44.5%	44.5%	44.5%	44.5%	44.5%	44.5%	44.5%
EP2	98	131	159	182	206	243	304	378
35-44	101	130	169	218	260	294	333	403
Less UR	24%	24%	24%	24%	24%	24%	24%	24%
EP3	77	99	129	166	198	224	253	306
45-54	61	75	94	121	158	208	247	279
Less UR	23.6%	23.6%	23.6%	23.6%	23.6%	23.6%	23.6%	23.6%
EP4	47	57	72	93	121	159	189	213
55-64	19	25	30	36	45	57	75	95
Less UR	24.8%	24.8%	24.8%	24.8%	24.8%	24.8%	24.8%	24.8%
EP5	14	19	23	27	34	43	56	72
65+	3	4	5	7	10	11	15	19
Less UR	14.7%	14.7%	14.7%	14.7%	14.7%	14.7%	14.7%	14.7%
EP6	3	3	4	6	9	9	13	16
Total EP	**284**	**358**	**442**	**539**	**651**	**779**	**932**	**1,108**

Note: EP figures were rounded.

Table X.15
Gaza Strip effective producers (in thousands) using the medium variant population projections assuming unemployment rate is lower than its 2015 level (optimistic scenario)

Working Population age group	2015	2020	2025	2030	2035	2040	2045	2050
15-24	115	126	141	165	212	258	299	315
Less UR	61%	56%	51%	46%	41%	36%	31%	26%
EP1	45	56	69	89	125	165	206	233
25-34	177	235	286	328	371	437	548	681
Less UR	44.5%	39.5%	34.5%	29.5%	24.5%	19.5%	14.5%	9.5%
EP2	98	142	187	231	280	352	469	616
35-44	101	130	169	218	260	294	333	403
Less UR	24%	19%	14%	9%	7%	7%	7%	7%
EP3	77	105	145	198	242	274	310	475
45-54	61	75	94	121	158	208	247	279
Less UR	23.6%	19.6%	14.6%	9.6%	7%	7%	7%	7%
EP4	47	60	80	109	147	194	230	260
55-64	19	25	30	36	45	57	75	95
Less UR	24.8%	19.8%	14.8%	9.8%	7%	7%	7%	7%
EP5	14	20	26	33	42	53	70	88
65+	3	4	5	7	10	11	15	19
Less UR	14.7%	9.7%	7%	7%	7%	7%	7%	7%
EP6	3	4	5	7	9	10	14	18
Total EP	**284**	**387**	**512**	**667**	**845**	**1,048**	**1,299**	**1,688**

Table X.16
Gaza Strip effective consumers (in thousands)

Population Age groups*	2015	2020	2025	2030	2035	2040	2045	2050
0-4	125	161	183	211	202	195	186	171
5-10	337	395	498	599	685	720	695	665
11-15	189	204	228	278	360	407	472	454
16+	850	1,030	1,230	1,447	1,719	2,066	2,463	2,908
Total EC	**1,501**	**1,790**	**2,139**	**2,535**	**2,966**	**3,388**	**3,816**	**4,198**

Note: Original projections were multiplied by the following factors: 0.4, 0.7, 0.9 and 1 for the 0-4, 5-10, 11-15 and 16+ age groups, respectively.

Table X.17
Gaza Strip support ratios and the first demographic dividend (FDD) under the unemployment rate of 2015 (pessimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.189	0.20	0.207	0.213	0.22	0.23	0.244	0.264	
Percentage change in the SR on the previous period (i.e. FDD)	...	5.8%	3.5%	2.9%	3.3%	4.6%	6.1%	8.2%	**34.4% and 0.98%**

Note: The support ratio equals TE producers (from Table X.14) divided by total EC (from Table X.16).

Table X.18
Gaza Strip support ratios and the first demographic dividend (FDD) under declining unemployment rate of 2015 (optimistic scenario)

	2015	2020	2025	2030	2035	2040	2045	2050	Total FDD and Average annual growth rate in per capita income due to the FDD
Support Ratio (SR)	0.189	0.216	0.239	0.263	0.285	0.309	0.34	0.402	
Percentage change in the SR on the previous period (i.e. FDD)	...	14.3%	10.6%	10%	8.4%	8.4%	10%	18.2%	**79.9% and 2.3%**

Note: The support ratio equals TE producers (from Table X.15) divided by total EC (from Table X.16).



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