Socio-Economic & Food Security Survey 2018

State of Palestine

PALESTINE
FOOD SECURITY SECTOR
Strengthening Humanitarian Response

Palestinian Central Bureau of Statistics

The Food Security Sector is part of the humanitarian system coordination architecture and facilitates coordinated data collection, analysis and response, among a wide range of stakeholders, including line ministries and international and Palestinian NGOs.

Disclaimer

The survey and this publication have been produced with the assistance of the Government of Canada and the Kingdom of Netherlands. The content of this publication does not necessarily reflect their views.

Cover: A young Palestinian lady working in dates packaging in one of the dates factories in Jericho, 2019. ©FAO/Hend Younis

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This report has been prepared by the Palestine Economic Policy Research Institute (MAS)

Contents

Acronyms and Abbreviations

CPI	Consumer Price Index
FAO	Food and Agriculture Organization of the United Nations
FCPI	Food Consumer Price Index
FCS	Food Consumption Score
FIES	Food Insecurity Experience Scale
FSS	Food Security Sector
GDI	Gender Development Index
GDP	Gross Domestic Product
GFSI	Global Food Security Index
GNI	Gross National Income
GS	Gaza Strip
HDI	Human Development Index
HFIAS	Household Food Insecurity Access Scale
IMF	International Monetary Fund
MDGs	Millennium Development Goals
MOSD	Ministry of Social Development
NIS	New Israeli Shekel
PCBS	Palestinian Central Bureau of Statistics
PECS	Palestinian Expenditure and Consumption Survey
SEFSec	Palestinian Socio-Economic and Food Security Survey
UAWC	Union of Agriculture Working Committee
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
USD	United States Dollar
WB	West Bank
WFP	World Food Programme
WTO	World Trade Organization

Acknowledgements

The 2018 Socio-Economic and Food Security (SEFSec) survey was conducted by the Palestinian Central Bureau of Statistics (PCBS), in coordination with the Food Security Sector (FSS)– co-led by the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) - with the support of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), and the Union of Agriculture Working Committee (UAWC). This edition of the SEFSec benefited from the contribution of the research team of the Palestine Economic Policy Research Institute (MAS), Dr. Belal Fallah, Dr. Rafat Soboh and Mr. Ali Jabareen who led the drafting of this report, including conducting some of the analysis presented here. MAS's engagement testifies to its continued contribution to shaping the food security narrative in the country..

The 2018 SEFSec is the third round of the survey adopting a panel approach1. The patience of the 9,926 families who responded to the questionnaires, and the dedication of PCBS enumerators who administered them, form the cornerstone of this survey, and are greatly appreciated.

The SEFSec data collection was carried out through a component of the project "Land Development and Water Resources Management" implemented by a consortium of NGOs led by UAWC.

The collection of data, the related analysis, and the making of this report would not have been possible without the financial support of the Kingdom of the Netherlands. and the Government of Canada.

[1] Panel studies are a particular design of longitudinal study in which the unit of analysis is followed at specified intervals over a long period. Data are collected from the same sample at different points in time

Young Farmer Sanaa Jalamneh in her hanging strawberry greenhouses, a farming technique for strawberries that increases yield while decreasing water use.
©FAO/Sithembile Siziba

Executive Summary

The report explores the levels and dimensions of food and nutrition security and insecurity in Palestine in 2018 at the household level, and tracks their changes in the preceding five years. The analysis is based on data provided by the Socio-Economic Food Security (SEFSec) survey, which were collected in 2014 ,2013, and 2018 by the Palestinian Central Bureau of Statistics (PCBS), in partnership with the Food and Agriculture Organization for the United Nations (FAO) and the World Food Program (WFP). The report also utilizes data from multiple sources, mainly including the Palestinian Central Bureau of Statistics's (PCBS) Labor Force Survey, Population, Buildings, and Establishment Census of 2017, and PCBS's national account estimates, to illustrate and explain changes and geographical distribution of food security.

To examine extent and levels of food insecurity, the report utilizes household-level data and classifies them as: food insecure (including severely food insecure and moderately food insecure); marginally food secure; and, food secure. The findings show that 256 thousand households (comprising 1.6 million individuals) are food insecure in Palestine today, representing %26.9 of all households. By category of food security, the data show that %14.9 of all households are severely food insecure, as compared to %12 moderately food insecure, %18.6 marginally food secure, and %54.5 considered food secure.

Food Security Level in State of Palestine

Food security levels had improved in 2014 relative to 2013: the share of food secure households increased in one year from %54 by 7 percentage points, while the severely food insecure had declined from %15.8 by 3 percentage points. Nonetheless, this gain had been reversed by 2018, perhaps suggesting a chronic, rather than transitory, weakness. Indeed, the share of the two food insecure categories (severe and moderate) was only 2.5 percentage points lower in 2018 than in 2013. As for the share of food secure households, the data show that the decrease in 2018, relative to 2014, reflects more households shifting from the food secure category to the marginally food secure category.
The extent of food security exhibits a substantial regional divergence. The West Bank's share of severely and moderately food insecure households has persistently decreased since 2013, to %3 and %6.2 respectively of all household by 2018. Consistently, the share of food secure has risen standing at %68.3 in 2018, despite the shifts from food secure to marginally food secure category. On the other hand, food security conditions have worsened in Gaza Strip relative to 2013 and 2014. The share of food secure households was down to an unprecedented low of %27 in 2018, expanding the share of severely food insecure households alone to an all-time high of %38.8. In total, Gaza Strip accommodates most of the food insecure households in Palestine: as much as %87 of the severely food insecure and a mere %16 of the food secure households.

The poor food security conditions in Gaza Strip are directly related to the repercussions of the Palestinian political polarization as well as recurrent negative shocks that culminated in 2007 as Hamas took over Gaza Strip and formed its separate government. As a result, Israel installed a severe blockade, restricting trade as well as movement of people. In the following years (2012 ,2008, and 2014), Israel waged three military attacks that left the economy of Gaza Strip in shambles and pushed the local economy into a deep recession.

The level of food security, in 2018 and recently, also varies at the sub-regional level. The West Bank's highest levels of food insecurity persist in the south (where it accommodates half of the severely food insecure households) alongside a moderate decrease in the levels of food security in the center. The greatest gains in food security were realized in the north of the West Bank. The case is different in Gaza Strip such that foods security conditions worsened persistently over time for all sub-regions, more profoundly in the north and the center, where the latter is the biggest loser as the share of food secure households dropped from %46 in 2013 to %26 in 2018.

At the level of place of residence, the West Bank's share of moderately and severely food insecure households are the highest in rural areas. Still, food security conditions improved over time across the board, albeit more substantially in refugee camps. As for the Gaza Strip, the data show no significant differences across localities in 2018, whereby levels of food security for all have ubiquitously worsened. The only difference was in 2014, whence the conditions improved in refugee camps but only briefly.

The report further extends the geographical analysis to gauge differences in the level of food security between Areas "A" and "B" in one hand and "C" on the other hand. The findings show that the share of severely and moderately food insecure households in Area "C" is multiple fold than in Areas "A" and "B". This conclusion holds for all reported years. The findings also show that the share of food secure households rose in 2014 in all areas. Nonetheless, the gain was almost lost in 2018 for the households in Area "C". Even though the share of food secure household also decreased in Areas "A" and "B", it remained above the level in 2013. Markedly, %30 of the total number of severely food insecure households in the West Bank reside in Area "C".

Factors Explaining Level of Food Security

To explain the factors driving changes documented over time in food security in Palestine, the report explores the changes in its determinants (poverty incidence, food deprivation, and resilience). In the West Bank, poverty incidence and resilience remained relatively stable in 2013 and 2014 and had improved by 2018. Food deprivation, on the other hand, was exacerbated. In sum, the decline in the share of food secure households by 2018 is explained by the increase in the share of moderately food deprived households, while the decrease in the share of severely and moderately food insecure is accounted for by decrease in poverty rate and improvement in resilience. As for Gaza Strip, the findings suggest that the low levels of food security in 2018 is driven by a perfect storm of adverse factors: more households have become poorer, less resilient, and more food deprived.

Consumption and Expenditure Patterns

The report also highlights patterns of consumption as another driver of differences in the level of food security between the West Bank and Gaza Strip. The findings show that households in the West Bank, regardless the extent of food security, spend (in absolute terms) more on food and on all other items, compared to those in Gaza Strip. This has been the case since 2013, though the difference in the level of expenditures has widened over time; mostly driven by the decrease in the households' purchasing power in Gaza Strip.

The report assesses the nutritional dimensions of food security; dietary quality and dietary quantity. The former accounts for the frequency, per week of consuming certain groups of food and the associated nutritional importance, while the latter emphasizes the extent to which households consume insufficient dietary quantity. Consistent with the regional disparities in household purchasing power, the data show that the share of households with insufficient dietary quantity in Gaza Strip in 2018 amounts to %46.6 relative to %6.2 in the West Bank. The data also show that the value of this indicator slightly declined over time in Gaza Strip, while it improved in the West Bank. As for dietary quality indicator, the findings show that households, regardless the level of food security, maintained the same consumption patterns over time for most of the food groups, both in the West Bank and in Gaza Strip.

Coping Strategies to Counter Food Insecurity

This report identifies the coping strategies that households have utilized to counter insufficient food or lack of money available to buy food. In terms of the degree of utilizing copying strategies, %79.5 of the households in the West Bank, versus %8 in Gaza Strip, have not used any. For households that have used such strategies, the analysis shows that the number one strategy across the West Bank and Gaza Strip is refraining from consuming expensive food. In addition, a large section of households has utilized strategies with adverse effects, such as reduced number of meals and consuming low-quality food. If persistent, such coping strategies are expected to boost incidence of communicable diseases, such as diabetes mellitus, cardiovascular disease and hypertension. As for non-food coping strategies, they were used by %26 of the households in the West Bank versus %87 of the households in Gaza Strip. The findings show that buying food on credit or borrowing food is the most frequent strategy both in the West Bank and Gaza Strip.

Household Profiling: Demographic and Socioeconomic Characteristics

This report explores the characteristics of the food secure/insecure households, focusing on demographic and mainly labour market indicators. It shows that %22 of the severely food insecure households in the West Bank are headed by women, twice as much as the share of women headed households. This pattern does not exist in Gaza Strip, where the pervasive dire economic conditions dilute the significance of the household-head gender. The report explores other household characteristics showing that extent of food insecurity is positively correlated with household size. It also

shows that food secure households, on average, earn twice as much as the severely food insecure in the West Bank, though the income difference is lower in Gaza Strip.

Performance in the labour market appears to be linked to food security conditions. Focusing on the household head, data from the West Bank show that level of food security is highly correlated with employment status; food insecurity is directly linked to a lower employment rate and lower labor force participation. Half of the severely food insecure household-heads are out of the labour force. The connection between food security and labour market in Gaza Strip is similar, though employment opportunities are scarcer for all food security categories.

The main source of income of all food security categories in the West Bank is paid wages from the private sector. However, %18 of the severely food insecure and %14 of the moderately food insecure live mainly on government social assistance. As for Gaza Strip, years of blockade and political polarization have marginalized the significance of the private sector, paving the way for the government and international institution, like UNRWA and other international organizations, to be the main source of income.

Nature, Value, and Source of Assistance

Humanitarian and social assistance are among the most commonly used interventions to tackle food insecurity. Nationally, %31 of the Palestinian households revealed that they have received assistance in 2018. This rate has declined relative to earlier years, mainly 2014. Driven by dire economic conditions, the share of households in Gaza Strip which received assistance in 2018 is %70 compared to %11 in the West Bank. Unlike the West Bank, the share of this categories in Gaza Strip has risen relative to 2013.

In terms of type of assistance, the finding shows that cash and food are the most common in both regions, though more households in Gaza Strip are relying on these types. Nonetheless, the share of food assistance has steadily declined in both regions, but for different reasons. Most likely, the relative improvement of economic conditions in the West Bank has played a role. Nonetheless, the decline in Gaza Strip is driven by distributional changes; shifting from food to food vouchers.

The monthly median value of assistance a household received in 2018 was 120 NIS (125 NIS in the West Bank and 111.7 NIS in Gaza Strip).[2] Classified by food security categories, the results show that the value of assistance is higher for the severely food insecure in both regions. The data also show that the value of assistance has decreased over time. The decline in the value of assistance has surely contributed to deteriorating food security conditions there. Markedly, the value of food assistance, the main type of assistance, has drastically decreased since 2013, approximately cut in half to 41.4 NIS in the West Bank and 60 NIS in Gaza Strip. The value of cash assistance has decreased by half in the West Bank, where it amounted in 2018 to 125 NIS, while it decreased by %15 in Gaza Strip standing at 254 NIS. The value of food coupons has also declined by a larger magnitude in both regions, down to some 69 NIS monthly in the West Bank and 41 NIS in Gaza Strip.

The analysis is extended to explore whether the value per type of assistance varies by household characteristics. The data show no significant differences between refugees and non-refugees in the West Bank is similar, except for food assistance. Relatively, the value of food assistance that the refugees receive both in the West Bank and Gaza is higher, reflecting the special role of UNRWA in that respect. Similar conclusion holds when classifying type of assistance by gender of household head. Cash makes up most of the total value of assistance that Female Headed Households (FHHs) receive, mainly in the West Bank. However, the composition of assistance is more diversified for their male peers.

The Ministry of Social Development (MoSD) is the main source of assistance in the West Bank. It covers half of the households that received assistance in 2018, whereas the UNRWA is the main source of assistance in Gaza Strip reaching %70 of all assisted households. The share of households receiving assistance from MoSD in the West Bank slightly declined relative to 2013. This is unlike the case in the West Bank, where the share of households remained stable. Despite the significant drop in 2014, the share of West Bank's households receiving assistance from the UNRWA improved relative to 2013. The corresponding UNRWA share in Gaza Strip slightly increased relative to 2013.

[2] The monthly median assistance is calculated as the median sum of all types of assistance received by each household over the reference period (six months prior to the time of data collection).

Palestinian farmer, Akram Abu Khousa collects Cucumber from his farm at Bet Lahya north of Gaza City 20 June 2019 . ©FAO/Alaa Bardeneh

Chapter One: Introduction

The SEFSec Report aims to characterize the food security status of Palestinian households in the West Bank and Gaza Strip. This report belongs to a series of reports that have been published since 2009. The main contribution of this current issue is to explore food security trends in the country, covering the last three rounds of the survey (,2013 2014, and 2018). The rich amount of data made available allows an assessment of changes related to shocks that have occurred through the years, such as the 2014 conflict, and persistent stress factors like the Israeli blockade of the Gaza Strip. Over this period (2018-2013), PCBS, in close coordination with the Food Security Sector and its key partners, has been collecting data for the SEFSec surveys.

Following the methodology revision undertook in 2016-2013, food security status is constructed based on three pillars: asset-based poverty, qualitative and quantitative measurement of food consumption, and resilience as a coping mechanism to shocks and stressors. These three dimensions have been identified to provide a comprehensive assessment of food security in Palestine. The SEFSec survey is the Palestinian approach to food security analysis, resulting from more than ten years of experience, and participatory work among UN agencies, NGOs, line ministries and PBCS.

The concept of "food security" and the related understanding of "food insecurity" are sometimes wrongly identified with the notion of "famine' or "hunger", which represent instead extreme forms of food insecurity. Food security is characterized by the feature and the combination of four fundamental dimensions of food, namely: access; availability; utilization; and their stability over time. Food security analyses all over the world attempt to capture the most sensitive and relevant indicators that can support the profiling of a population of a specific context.

There are also methodologies applied globally to produce indexes or rankings related to food security, like the Food Insecurity Experience Scale (FIES), based on eight questions to individuals (a dedicated chapter on FIES is part of this report); or the Global Food Security Index (GFSI), based on 34 indicators at country level[3]; or the IPC, Integrated Food Security Phase Classification, which proposes a common approach to undertake in-country assessment and review of food security status[4]. It is hard to say that there are countries that do not have any level of food insecurity. For example, in the United States of America, the annual Household Food Security survey 2018 applies its own methodology and reports that 11.1 percent of households were food insecure in 2018[5]. Each methodology adopted implies focusing on different criteria and indicators, although the overall and continuously evolving notion of food security remains widely shared[6]. The SEFSec survey is the Palestinian approach to food security measurement, resulting from more than 10 years of experience, and participatory work among UN agencies, NGOs, line ministries and PBCS.

In addition to estimating changes over time in household food security status across four categories (severely food insecure, moderately food insecure, marginally food secure, food secure), the report analyzes food security status spatially and by demographic socio-economic characteristics. It also attempts to explain the main factors of change in food security status focusing on poverty incidence, resilience, and extent of food deprivation.

The findings from the SEFSec surveys provide significant information in support of policy making, especially related to in-country progress towards the Sustainable Development Goals (SDGs). Cognizant of FIES being among the adopted SDGs indicators for Palestine, and following piloting this module by PCBS, the SEFSec 2018 includes a FIES module for the first time.

The report aims to provide a reference base to policies and responses to address food insecurity conditions throughout Palestine. Notably, the report's emphasis on household socioeconomic characteristics and the regional dimension, either across or within the West Bank and Gaza Strip, helps to inform the design of food assistance and livelihood programs.

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[3] https://foodsecurityindex.eiu.com/

[4] http://www.ipcinfo.org/ipcinfo-website/ipc-overview-and-classification-system/en/

[5] USDA – Unites States Department of Agriculture, 2019 - Household Food Security in the United States in 2018 - https://www.ers.usda.gov/publications/pub-details/?pubid=94848

[6] Jones et al, 2013 – Advances in Nutrition journal - What Are We Assessing When We Measure Food Security? A Compendium and Review of Current Metrics

The analysis of the report is based on a panel sample, as it tracked the same households that appear in all the three different surveys (i.e. 2013,2014,2018). This feature enables further analysis regarding the impact of food security programs supporting disadvantaged households. The panel sample size that is common in the three rounds amounts to 6,360 households. In this respect, it is nationally representative at various levels, including gender of the head of household, refugee status, governorate, locality type, and Areas C in the West Bank.

Following the introductive Chapter one, Chapter two of the report provides an overview of the Palestinian economy, focusing on changes in macroeconomic variables, including GDP, inflation, and trade. It addresses labor market performance, emphasizing unemployment rates and wages. These aspects are considered highlighting the linkages between the Israeli occupation and structural changes of the Palestinian economy. Chapter two also compares Palestine's performance with other countries in terms of selected demographics and socioeconomic factors, including population growth, mortality and fertility rate, as well education.

Chapter three covers food security status in Palestine, also disaggregating between West Bank and Gaza Strip. It crosstabs food security estimates across several indicators: sub-regional level; type of locality; household refugee status; and poverty. In addition, it explores over time changes the determinants of food security status (poverty incidence, food consumption, and resilience).

Chapter four further highlights the driving factors of changes of the food security status in Palestine concentrating on food consumption with an emphasis on comparing food spending (relative to total expenditure) across the food security categories. In the same vein, chapter four assesses the nutritional dimensions of food security: dietary quality; and dietary quantity. This chapter concludes by examining the coping strategies that households in the West Bank and in Gaza Strip have adopted to face lack of food availability or lack of economic access to food.

Chapter five explores the demographic and income profiles of the households across the food security categories and their linkages to labor market indicators, such as employment status, type of economic sectors, and occupations.

In chapter six, the analysis tackles the changes in the extent, type, and source of assistance provided to Palestinian households over time.

Chapter seven summarizes the main findings of the report and suggests some policy recommendations to enhance food security in Palestine.

Finally, chapter eight presents the FIES methodology utilized as a global tool to assess food security at country level, as well as one of the indicators adopted within the SGDs framework.

Chapter Two: Socio-Economic Analysis

This chapter provides insights on recent economic development in Palestine, in the context of an overview of changes in socioeconomic characteristics, labour market performance, and macroeconomic indicators. Unlike other developing countries, the performance of the Palestinian economy in the occupied Palestinian territory (oPt) is largely driven by constraining measures arising from prolonged Israeli occupation and lack of sovereignty. These include barring Palestinians from freely accessing resources or investing in Area "C", which makes up some %60 of the West Bank area, controlling borders, isolating east Jerusalem from the rest of the West Bank and generally restricting movement of people and goods. The economic situation in the Gaza Strip is chronically worse with a long-lasting blockade and three devastating wars since 2008, rendering most people there increasingly aid dependent. These impediments are key drivers when assessing food security in the Gaza Strip and in Palestine at large.

The analysis in this chapter is carried out in two stages, in which the first compares the performance of Palestine to other countries. The comparison countries are classified into Arab countries[7] and countries that are ranked medium on the Human Development Index (HDI).[8] The discussion then turns to performance at the national level, distinguishing as possible between the West Bank and Gaza Strip. To achieve this, both historic and most recent available data are examined.

2.1 Demographic features

Table (2.1) exhibits several HDI indicators published in 2017, that presents several demographic characteristics in Palestine alongside comparison countries. According to the PCBS's population, housing, and establishment census of 2017, the Palestinian population in the West Bank and Gaza Strip was 4.78 million, whereby 2.88 million reside in the West Bank (including east Jerusalem) and 1.9 million in Gaza Strip. Gaza Strip is small in area (365 km), yielding the highest population density in the world (5204 persons per square kilometer), about 10 times more than in the West Bank.

Since 2014, the population has grown at an average annual rate of %2.9; above the growth rate of the Arab countries and far exceeding that of the medium HDI's. With a high population growth rate, youth (under the age of 15) dominate Palestinian society with a median age of 27. The dependency ratio for this cohort is %69, substantially above the corresponding ratio of the comparison countries.[9] Consistently, the dependency ratio in Palestine is lower for the older cohort (over 65 years of age), leveling at %5.3.

Table 2.1: Selected Demographic Indicators for Palestine, Arab States (average) and All HDI Countries (median), 2017

Demographic Indicators	Palestine (ranked 1 on HDI)	Arab States	Medium HDI States
Average annual population growth (%)			
2014-2017	2.6	2.1	1.2
- Growth from 2014 to 2017 (%)	8.9	6.2	3.7
Dependency ratio (%) in 2017			
Young age (0-14)	69	49.3	41.6
Old age (65 and older) in 2017	5.3	6.1	9.2

Source: UNDP, 2019.

In terms of health conditions, Palestine performs better than the Arab countries but poorer than the median HDI's. This can be manifested via two indicators, including life expectancy at birth as well as mortality rate indicators of

[7] The Arab countries include Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, State of Palestine, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

[8] Palestine scored 0.686 on the HDI value, positioning it 119 out of 188 countries and territories (UNDP, 2018).With this, Palestine scored just above the average HDI value (0.630), positing it with medium HDI group. See http://hdr.undp.org/en/countries/profiles/PSE

[9] The dependency ration measures the share of individuals who are not enrolled in the labor force from the total labor force: those who are younger than 15 and those older than 65 years old.

infants and children younger than 5 years old (see Table 2.2). Notably, since 2014, the mortality rate in Palestine has declined at the same rate as for the Arab countries, but at a lower rate than the median HDI's.

Table 2.2: Selected health outcome indicators for Palestine, Arab States (average) and All HDI countries (median), 2016

Health outcome indictors	Palestine	Arab States	Median HDI
Mortality rate (1000 live births)			
Infant (2016)	16.6	23.4	14.8
- Average annual growth since 2014	-2.9%	-2.9%	-3.3%
Below age of 5 (2016)	19.4	25.6	15.4
- Average annual growth since 2014	-3.0%	-3.0%	-3.9%
Life expectancy at birth (years) (2017)	73.6	71.5	77.2

Source: UNDP, 2019.

Table (2.3) compares Palestine's performance on key education indicators with other country groups. The data shows that %60.4 of the Palestinian population received at least some secondary education. This is above the Arab states rate but lower than the median HDI countries. On average the Palestinian Government spends around the same percentage of GDP on education as in the median HDI countries and slightly higher than the Arab countries. The same conclusion holds for the mean years of schooling, both for males and females.[10]

Table 2.3: Selected education achievement indicators for Palestine, Arab States (average) and All HDI countries (median)

	Palestine	Arab States	Median HDI
Population with at least some secondary education (% age 25 and older)	60.4	52.5	69.3
Average government expenditure on education (% of GDP) since 2010	5.7	5.3	5.7
Mean years of schooling, female (years)	8.9	7.6	9.0
Mean years of schooling, male (years)	9.3	8.1	9.5

Source: UNDP, 2019.

2.2 Recent Macroeconomic Developments

Real GDP across Palestine grew by0.9 percent in 2018 reaching 13,810$ million (measured in constant 2015 prices), and gross domestic product (GDP) per capita slowed to %1.7 reaching 3,021$. When measured by region, the GDP data show substantial differences: The West Bank's real GDP is four times more than that of the Gaza Strip. This surely does not reflect a scale effect as the population in Gaza Strip is about one third that of the West Bank. This is clearly reflected in the 2018 real GDP per capita measure with 4,188$ in the West Bank as opposed to 1,431$ in the Gaza Strip.

Differences in economic performance between the West Bank and the Gaza Strip can also be illustrated through the lens of labour market indicators. In 2018, data from the PCBS's labor force survey show that unemployment rate in the West Bank stood at %17.6 as opposed to %52 in the Gaza Strip. Also, the median daily wage in Gaza Strip is significantly lower, leveling at 46.2 NIS relative to 100 NIS in the West Bank. Focusing only on the private sector shows a more drastic picture, with the median wage even lower at 25 NIS relative to 115 NIS in the West Bank.

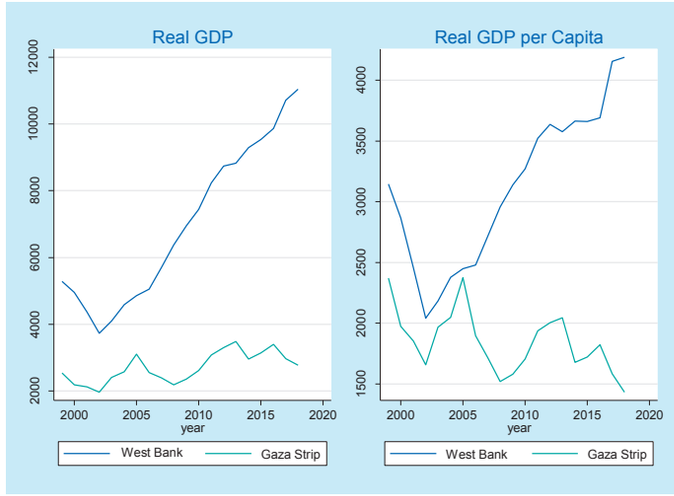
The especially dire economic conditions in Gaza Strip are attributed to the negative shocks that have struck this region over the past two decades. The first major shock took place during the Second Intifada, between the end of 2000 and 2004, when Israel banned all access from Gaza Strip to its labour market that until 2000 had accounted for about %16 of Gaza's total employment. Similar restrictions were also imposed on workers from the West Bank, though gradually lifted but never regaining pre-Second Intifada peaks (%25 of the West Bank's total employment). The second shock started in 2005, in the wake of Israel's unilaterally withdrawal and the formation in 2007 of a Hamas-led government in control of the Gaza Strip. As a result, Israel installed a severe blockade, restricting trade as well as

[10] According to the PCBS's labor force survey, females in Palestine achieved a substantial improvement in education attainment, rising from 6.8 years, relative to 8.8 years for males, in 1999.

movement of people. In the following years (2012 ,2008, and 2014), Israel waged three military attacks that left the economy of Gaza Strip in shambles and pushed the local economy into a deep recession. To this end, the Palestinian economic growth trajectory is volatile and vulnerable to external shocks and structural macro-imbalances that render a sustainable development path elusive.

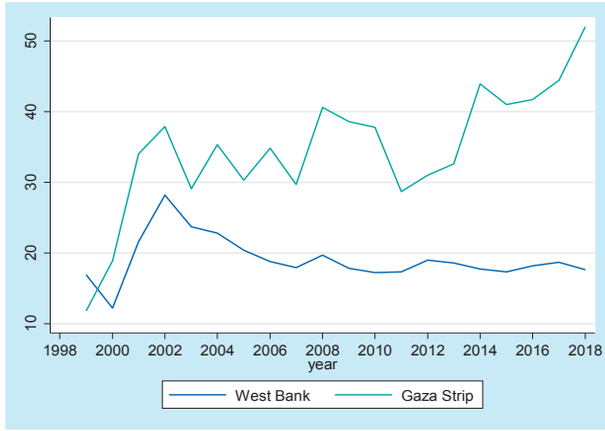
Figure (2.1) compares changes in real GDP and GDP per capita between the West Bank and Gaza Strip since 1999. The data shows the divergence in these two macro measures, indeed an unprecedented severe and steadily widening gap between the two regions of Palestine. It also shows that GDP per capita in Gaza Strip has persistently decreased. In the same vein, Figure (2.2) illustrates a steep rise in the unemployment rate in Gaza Strip. With distorted, an enfeebled and fragmented economy, over half of the population in Gaza Strip (%52) as opposed to %17.6 in the West Bank, is unemployed.

Figure (2.1): Changes in Real GDP and Real GDP Per Capita in the West Bank and Gaza Strip: 1999-2018



Source of data: PCBS national accounts.

Figure (2.2): Changes in the Unemployment Rate in the West Bank and Gaza Strip: 1999-2018



Source of Data: PCBS's labour force survey 2018-1999.

The structural distortions of the Palestinian economy are evident in the low productive sectoral structure, a high non-domestic share in total national income, and a high consumption component of aggregate demand compared to low investment. These weaknesses are illustrated by the contribution of productive activities to GDP in 2018 (measured in constant 2015 prices) of around %3) %22.8 for agriculture, %13.2 for mining, manufacturing, electricity and water, and %6.5 for Construction), while the remaining is accounted for by services, mostly traditional (including internal trade and public administration) representing %77 of GDP. In addition, GDP constitutes around %78 of Gross National Disposable Income (GNDI), indicating a high reliance on external sources of income, while domestic private and

public consumption constituted around %116 of GDP, whereas gross public and private investment formed around %24 of GDP, a low rate by regional and international comparison.[11]

2.3 International Trade

A main impediment created by prolonged Israeli occupation is found in the barriers to the flow of trade in goods and services. Restrictions on movement, expansion of settlement, exploitation of natural resources, and inaccessibility of area "C" to private investment have all hindered the production capacity of the Palestinian economy.[12] Palestine is a de-facto land locked country as Israel controls borders, rendering access to international markets dependent on Israel's security agenda rather than comparative advantage.[13] Israel has also imposed measures at ports, borders, and checkpoints that induce additional trade transaction costs. Exporting, as well as importing goods, is subject to cumbersome procedures, including "back-to-back" transportation at crossing points as well as intrusive security inspection.[14]

The World Bank "Doing Business" data show that average transportation cost that the Palestinian exporters incur is three times as high as for Israelis'.[15] Most recently, the World Bank has mapped the challenges affecting Palestinian production and export capacity, with emphasis on the impact of banning dual use goods (mainly chemicals and technologies that can be used both for civilian and military purposes).[16] The report shows that dual use restrictions mainly harm manufacturing, information and communication technology (ICT), and agriculture sectors. Trade barriers are especially aggravated in Gaza Strip with strict controls on movement of goods and restricted access to 118 items, many of which are vital inputs in the export sector.

These trade impediments have rendered Palestine import dependent. According to PCBS's preliminary national accounts estimates for 2018, goods and services exports were valued (in current prices) at 2.9$ billion and imports were 8.7$ billion, generating a significant trade deficit. Testifying to this import dependency is the high ratio of imports to GDP, which currently is estimated at %59.7, while exports, overwhelmingly goods, are only %19.9 of GDP. In 2014, these ratios stood at %17.1 and %56.7 respectively.

Trade is mostly concentrated with Israel; constituting %83 of registered exports and %55 of registered imports. Palestine consequently runs a trade deficit with Israel estimated at 2.66$ billion in 2018. Imports from Israel are mainly composed of strategic items including refined oil, cement, water, and electricity. Merchandise exports to Israel mostly include stones, footwear, and furniture.

The trade deficit is chronic and has been expanding over the past two decades (see Figure 2.3). Markedly, the Palestinian National Authority (PNA) has utilised the trade deficit, with Israel and the rest of the world, to finance its budget. Clearance revenues, generated from high levels of imports, constitute %65 of the PNA's total revenues. The Protocol on Economic Relations, signed in 1994 by the Israeli government and the Palestinian Liberation Organization (PLO), entails that Israel collects clearance revenues on behalf of the PNA. This has put the PNA at a recurrent risk of political pressure from Israel, which often unilaterally suspends revenue transfers or deducts part for political reasons.

The most recent stand-off took place since February 2019 as Israel announced that it would begin to deduct from the monthly revenue transfer an annual sum of 138$ million, to off-set the allowances paid by the PNA to families of Palestinians imprisoned by Israel. In return, the PNA at first rejected any transfers subject to such deductions. This escalation substantially raised the fiscal deficit and forced the PNA to adopt austerity measures, paying only %60 of public wages and cutting spending on current and development budget items. The stand-off lasted for about seven months before the PNA agreed to receive a portion the tax transfers with promises from the Israeli government to reactivate joint technical committees to resolve pending financial issues between the two parties.

[11] The source of the national account data is the PCBS. For investment rate comparisons see Khalidi, R., Key Features of the Palestinian Economy: Challenges to Endurance and Existing Visions to Address Them, MAS Economic Conference, 2016 (in Arabic).

[12] See more discussion below on the geopolitical division of the West Bank areas as dictated by the Oslo Accords, signed by the PLO and the government of Israel in 1993.

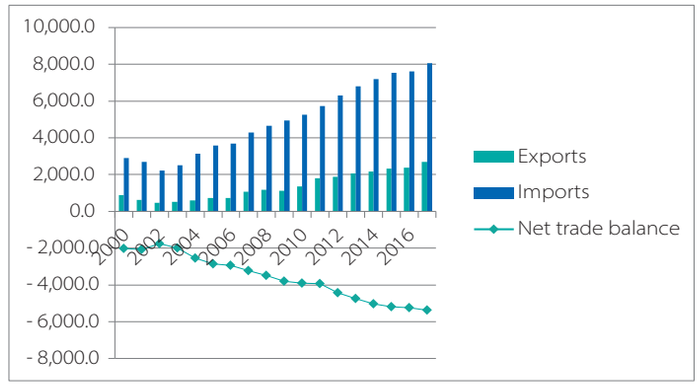
[13] See UNCTAD (2014) Trade Facilitation in the Occupied Palestinian Territory: Restrictions and Limitations. https://unctad.org/en/PublicationsLibrary/gdsapp2014d1_en.pdf.

[14] See World Bank (2017) Unlocking the trade potential of the Palestinian economy: immediate measures and a long-term vision to improve Palestinian trade and economic outcomes (English). Washington, D.C.: World Bank Group.

[15] For more discussion on trade barriers, see World Bank (2017) Economic Monitoring Report to the Ad Hoc Liaison Committee (English).Washington, D.C. : World Bank Group.

[16] See World Bank (2019) Economic Monitoring Report to the Ad Hoc Liaison Com mittee (English). Washington, D.C. : World Bank Group.

Figure 2.3: Value of registered imports, exports in goods and net trade balance in Palestine, 2000 - 2017 (Million current USD)



Source: PCBS"s national account data

2.4 Inflation

Since 2015, overall price levels in Palestine have remained relatively stable. Table (2.4) exhibits yearly changes in inflation rate during the 2018-2015 period. In 2018, inflation slightly decreased, by %0.19, relative to 2017. Decomposing by main consumption items, the data reveal different inflation dynamics in which clothing prices decreased the most after they rise in 2015 and 2016. The trend is opposite for housing prices, which experienced a relatively higher increase in 2017. As for food prices they followed a declining pattern since 2016.

Table (2.4) also depicts changes in the overall prices and by consumption items across regions; Gaza Strip, Jerusalem, and the remaining parts of the West Bank. Notably, the inflation rate grew less in the Gaza Strip, driven by economic recession and low purchasing power. The deflation is driven by price decreases in food and clothing. As for the West Bank, inflation followed similar pattern except in 2017. Figure (2.4) extends the inflation analysis to the West Bank, as a whole, and Gaza Strip covering the 2018-2000 period. The data shows that for both regions, the relatively stable inflation rate documented above is a recent phenomenon that has comes after years of steady rise.

Table (2.4): Changes in the Overall Prices‡ and by Main Consumption Items in the West Bank and Gaza Strip: 2018-2015

Major Groups of Expenditure	2015		2016		2017		2018	
	Index number	Change %	Index number	Change %	Index number	Change %	Index number	Change %
Palestine								
Food	107.82	+1.90	106.2	-1.5	105.17	-0.97	104.44	-0.7
Clothing	109.29	+4.75	112.4	+2.85	112.22	-0.16	107.45	-4.25
Housing	108.28	-5.64	105.46	-2.61	109.05	+3.41	109.95	+0.83
All items	110.99	+1.43	110.75	-0.22	110.98	+0.21	110.77	-0.19
West Bank*								
Food	109.62	+2.62	108.87	-0.68	107.00	-1.73	107.92	+0.87
Clothing	119.74	+4.24	121.74	+1.67	120.04	-1.40	114.27	-4.81
Housing	112.55	-7.04	108.93	-3.22	113.28	+3.90	113.65	+0.42
All items	113.89	+1.29	113.8	-0.08	113.79	-0.01	114.26	+0.41
East Jerusalem**								
Food	112.21	+2.41	109.84	-2.11	110.76	+0.84	111.80	+0.93
Clothing	123.41	+2.25	125.63	+1.80	127.66	+1.62	121.62	-4.75

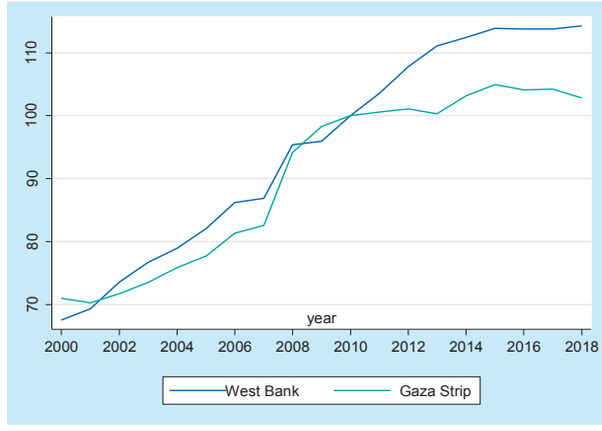
Major Groups of Expenditure	2015		2016		2017		2018	
	Index number	Change %	Index number	Change %	Index number	Change %	Index number	Change %
Housing	115.75	-4.17	112.72	+2.62	115.47	+2.44	117.45	+1.71
All items	114.02	+0.33	112.93	-0.96	115.39	+2.18	116.58	+1.04
Gaza Strip								
Food	104.42	+1.05	101.55	-2.75	101.75	+0.20	98.22	-3.47
Clothing	87.13	+3.40	90.29	+3.63	91.53	+1.37	89.29	-2.45
Housing	98.85	-3.67	97.26	-1.60	99.62	+2.42	101.22	+1.60
All items	104.97	+1.77	104.09	-0.84	104.20	+0.11	102.81	-1.34

*West Bank does not cover those parts of Jerusalem that were annexed by Israel in 1967. **Jerusalem covers those parts of Jerusalem that were annexed by Israel in 1967.

‡ Inflation rate is measured use prices in 2010 as a base year.

Source: PCBS.

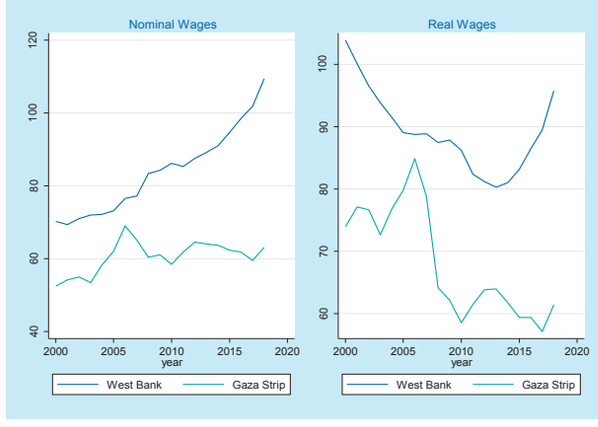
Figure (2.4): Inflation Trend in the West Bank and Gaza Strip: 2000-2018



Source: PCBS.

To explore the extent to which changes in the inflation rate affect household purchasing power, trend changes are examined in average nominal and real wages in the West Bank and Gaza Strip (see Figure 2.5). The data, covering the 2018-2000 period, show that average nominal daily wages have increased in the West Bank throughout the period, rising from 70 NIS to 109 NIS. On the other hand, average nominal daily wages in Gaza Strip temporarily rose, between 2000 and 2006, before declining in the following years to a stable level around 60 NIS.

Figure (2.5): Changes in Average Nominal and Real Daily Wages in the West Bank and Gaza Strip: 2000-2018



Source: PCBS's CPI data and labour force surveys.

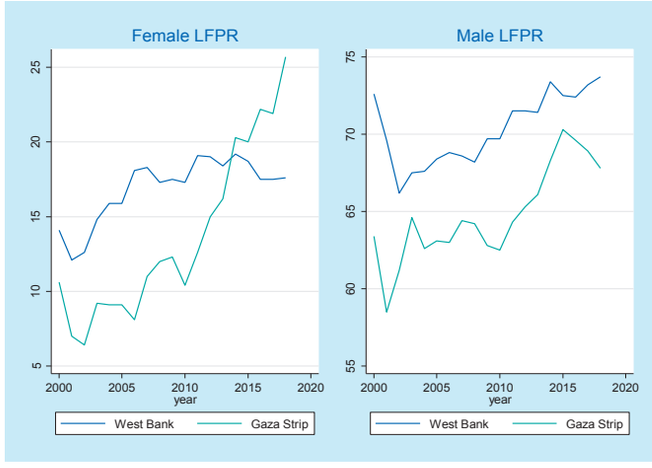
The data also show that average real daily wages in the West Bank amounted in 2018 to 96 NIS. Nonetheless, the trend of real daily wages followed U-shape pattern over the past two decades. The explanatory factor is the growth rate difference between inflation and nominal daily wages such that the latter has grown at a greater pace after 2015. Average real daily wages in Gaza Strip are much lower (61 NIS) dropping from a high of 85 NIS in 2005. The decrease in real daily wages is driven by a decline in nominal daily wages and an accelerated inflation rate. This finding surely helps better understand some important regional differences in food security conditions.

2.5 Labor Market Developments

According to the PCBS's labor force survey of 2018, labour force participation rate (LFPR) in Palestine amounted to 1.38) %46.4 million individuals). This low rate can be explained by low female LFPR, which amounts to %20.7 as opposed to %71.5 for males. At the regional level, LFPR in Gaza Strip is slightly higher than in the West Bank (%46.9 versus %46.1, respectively). Markedly, classifying LFPR by gender reveals interesting differences between the two regions. LFPR for males is higher in the West Bank (%73.7) than in Gaza Strip's (%67.8). The opposite is the case for female LFPR; %17.6 for the West Bank versus %25.7 for Gaza Strip.

Figure (2.6) shows that female LFPR in Gaza surpassed that in the West Bank starting from 2014; the year when the economy in Gaza Strip went into an even deeper recession as Israel waged its third destructive war. This is also the moment that the Egyptian authorities closed down the tunnels that had been used for several years to smuggle goods from Egypt as an alternative trade corridor to avoid the blockade effect. As for males, Figure (2.6) shows that LFPR follows similar pattern in the two regions until 2015, then it experienced a decreasing trend in Gaza Strip. So far, the data shows that female LFPR in Gaza has grown despite the harsh economic conditions and high unemployment rate as documented above. It is likely that more married females may have joined the labour force to support their families in periods with high unemployment rate.[17]

Figure (2.6): Changes in LFPR in the West Bank and Gaza by Gender: 2000-2018



Source: PCBS's labour force surveys

As noted above, the Palestinian economy heavily relies on service activities. Currently, the service sector accounts for %63 of total employment in Palestine. The service sector is a more dominant employer in the Gaza Strip, accounting for %85 of total employment as opposed to %63 in the West Bank (see Table 2.5). The manufacturing sector comes next in employment contribution in the West Bank, followed by the construction sector, and agriculture sector. The prolonged blockade and consecutive wars waged against Gaza Strip have shattered the non-services sectors. Table (2.5) also shows employment distribution by gender in both regions. The data shows females are more disproportionately employed in the service sector in Gaza Strip.

[17] See Bredtmann, J., Otten, S. and Rulff, C. (2014), Husbands Unemployment and Wifes Labor Supply – The Added Worker Effect across Europe, Economics Working Papers 2014–13.

Table (2.5): Employment Distribution By Economic Activity in 2018*

West Bank			
Sector	**Both Sexes**	**Male**	**Female**
Agriculture, Hunting and Fishing	6.5%	6.2%	7.8%
Mining, Quarrying and Manufacturing	16%	17.2%	11%
Construction	13.7%	16.8%	0.4%
Services			
Commerce, Hotels and Restaurants	24.3%	27%	13.2%
Transportation, Storage and Communication	6%	6.8%	2.4%
Services and Other Branches*	33.5%	26%	65.2%
Total	100%	100%	100%
Gaza Strip			
Sector	**Both Sexes**	**Male**	**Female**
Tab Agriculture, Hunting and Fishing	5.7%	6.1%	3.4%
Mining, Quarrying and Manufacturing	6%	6.5%	2.9%
Construction	3.5%	4.1%	0%
Services			
Commerce, Hotels and Restaurants	21.8%	24.8%	4.2%
Transportation, Storage and Communication	8.6%	9.8%	1.5%
Services and Other Branches*	54.4%	48.7%	88%
Total	100%	100%	100%
Palestine			
Sector	**Both Sexes**	**Male**	**Female**
Agriculture, Hunting and Fishing	6%	7%	6%
Mining, Quarrying and Manufacturing	14%	9%	13%
Construction	13%	0%	11%
Services:			
Commerce, Hotels and Restaurants	26%	11%	24%
Transportation, Storage and Communication	8%	2%	7%
Services and Other Branches**	33%	71%	40%
Total	100%	100%	100%

***The employment shares exclude workers in the Israeli labor market**. **Services and Other Branches mainly include public administration, education, health, and social services. Source: PCBS's labour force survey of 2018

Notably, the public sector in Gaza Strip plays a significant role, employing about a third of its work force; more than twice as much in the West Bank (see Table 2.6). In this context, the public sector acts as an employer of last resort to offset these negative shocks as well as the ban of accessing the Israeli labour market. Exporting labour to the Israeli labour market is vital to a reduced unemployment rate in the West Bank, currently accounting for about %18 of the work force.

Table (2.6): Employment Distribution By Sectors in 2018

Sector	Palestine	West Bank	Gaza Strip
Public Sector	21.1%	15.6%	36.6%
Private Sector	65.6%	66.2%	63.4%
Israel andSettlements	13.3%	18.2%	0
Total	100%	100%	100%

Source of Data: PCBS's labor force survey.

Chapter Three. Household Food Security Levels

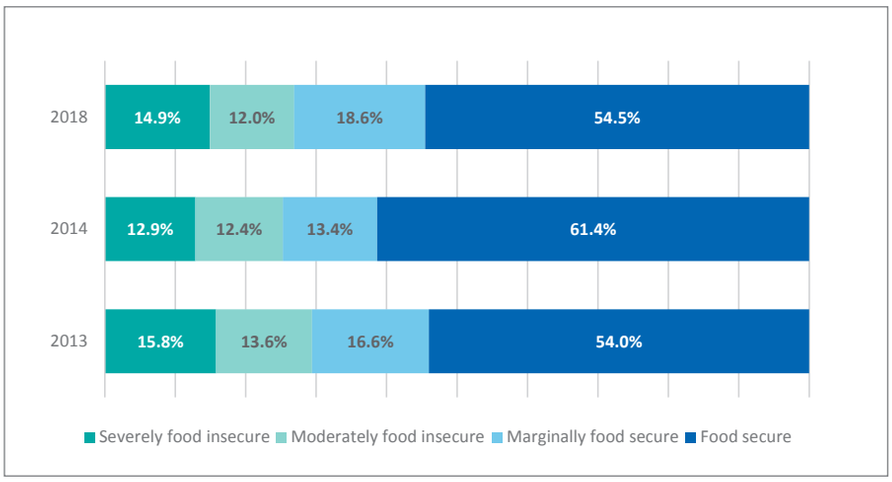
This chapter presents 2018 data on the level of food security for households in Palestine, as well as comparisons with historical estimates (2013 and 2014). In doing so, households are classified into four cohorts, including severely food insecure, moderately food insecure, marginally ***food secure***, and food secure. Food secure households are those that maintain sufficient food consumption and meet their essential nonfood needs with no resort to coping mechanisms. ***Marginally food secure*** households are at risk of not maintaining sufficient food consumption. Though they have adequate financial means, they have not adapted their diet to an nutritionally acceptable level. ***Moderately food insecure*** households face challenges to maintain adequate food consumption, in terms of quantity or quality, due to limited financial means or not being able to employ irreversible coping mechanisms. ***Severely food insecure*** households experience a severe or significant consumption gap that they cannot counter through economic means or coping mechanisms (see annex on the methodology for more details).

The analysis in this chapter examines food security in its various dimensions. It first estimates food security at the national level, then by region and sub-regions to emphasize the spatial differences in economic conditions and households' socioeconomic characteristics. The analysis then compares changes over time in food security status across the four cohorts, covering 2014 ,2013, and 2018. This exercise allows identify areas and cohorts that have witnessed improvement or deterioration in food security and provides important indicators for policy makers and stakeholders to calibrate policies and efficiently allocate the limited available resources to tackle food insecurity in Palestine.

3.1 Food security levels in Palestine

In %54.5 ,2018 of households were food secure, while %26.9 of households in Palestine were severely or moderately food insecure (see Figure 3.1), equivalent to about 269 thousand households and sums to 1.67 million individuals. Classifying by degree of food insecurity, the data show that %14.9 of all households are severely food insecure as compared to %12 for the moderately food insecure. Food security levels had momentarily improved in 2014 relative to 2013: the share of food secure households increased by 7 percentage points from %54, while the severely food insecure had declined by 3 percentage points from %15.8. Nonetheless, this gain had been reversed in 2018, perhaps suggesting a chronic, rather than transitory, weakness. Indeed, the share of the two most food insecure categories (severe and moderate) was only 2.5 percentage points lower in 2018 than in 2013. As for the share of food secure households, the data show that the decrease in 2018, relative to 2014, reflects the shift of more households from the food secure category to the marginally food secure category.

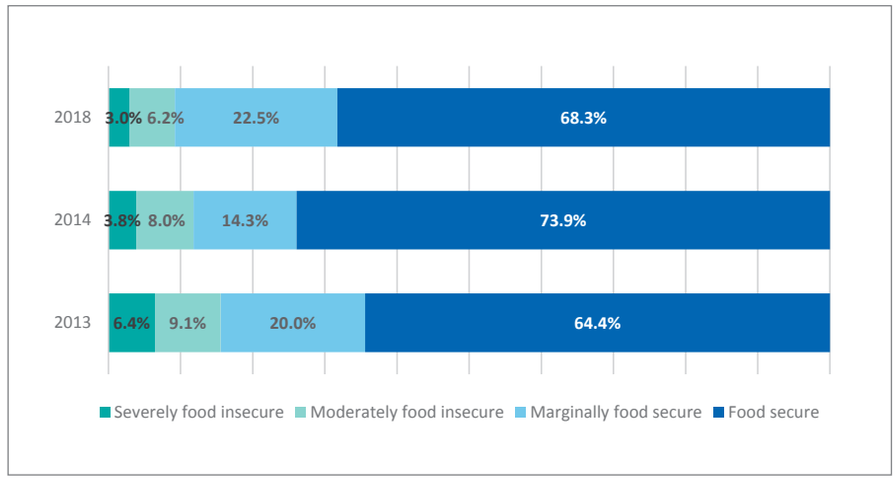
Figure 3.1: Household Food Security Levels in Palestine, 2013, 2014 and 2018



3.2 Food security levels by main region

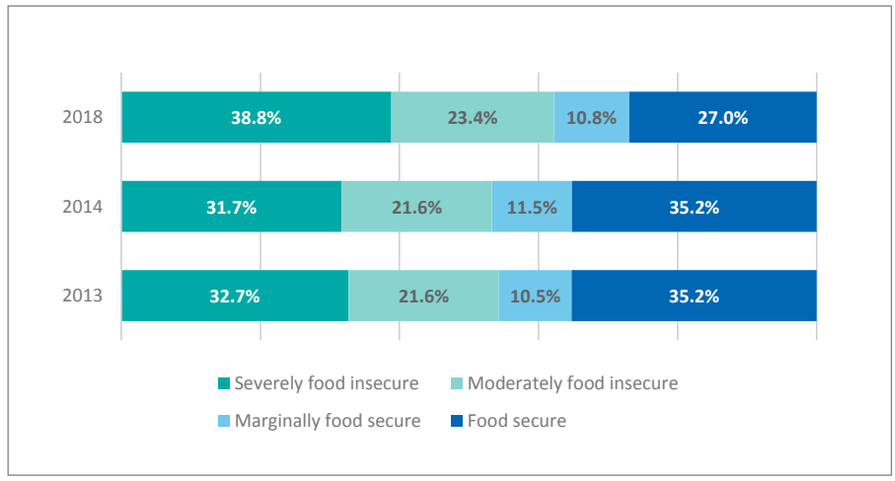
As for food security levels by region, the data exhibit a substantial divergence since 14/2013 in the context of deteriorating conditions in Gaza Strip (see Figure 3.2). Food security status in the West Bank has improved overtime despite the shifts from food secure to marginally food secure category in 2018. The share of the moderately and severely food insecure households has decreased persistently since 2013. Markedly, the share of the severely insecure cohort has declined by half, compared to 2013, standing at %3 in 2018.

Figure 3.2: Household Food Security Levels in the West Bank, 2013, 2014 and 2018



At the other end of the spectrum, food security conditions have worsened in Gaza Strip relative to 2013 and 2014, when shares were largely the same.[18] The share of food secure households was down to an unprecedented low of %27 in 2018; less than half the share in the West Bank. Of special concern is that more households have become severely food insecure, amounting to an all-time high of %38.8 in 2018. Surely, this finding testifies to the magnitude of economic hardship and the deterioration in living standards that households in the Gaza Strip have experienced especially over the past decade. In total, the Gaza Strip accommodates most of the food insecure households in Palestine (as much as %87 of the severely insecure) and a mere %16 of the food secure households in Palestine. Table (3.1) documents regional distribution of the different food security cohorts in 2018 at the household and population levels.[19]

Figure 3.3: Household Food Security Levels in Gaza Strip, 2013, 2014 and 2018



[18] The survey data used to analyse food security in 2014 does not capture the July war impact as the data was collected prior to that.
[19] The population size of each food security cohort is estimated via summing all household members across all households in a given cohort.

Table (3.1): Distribution of Food Security Levels in the West Bank and Gaza Strip; 2018

Region	Households			
	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
West Bank	13%	35%	81%	84%
Gaza Strip	87%	65%	19%	16%
Total	141,908	113,831	177,219	518,808
Population				
Region	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
West Bank	13%	37%	78%	84%
Gaza Strip	87%	63%	22%	16%
Total	970,317	618,401	840,715	2,424,579

3.3 Food security levels by sub-region

The results above document drastic differences in food security status between the West Bank and Gaza Strip that have only widened in the past five years. In this section, the analysis goes further into the sub regional level to better grasp the spatial incidence of food insecurity. In this respect, the West Bank and Gaza Strip are each divided into three sub-regions, each encompassing multiple governorates. Following PCBS's classifications, the West Bank sub-regions are: The North (Nablus, Jenin, Tulkarim, Tubas, Qalqiliya, and Salfit); the Center (Ramallah, Jericho, and Jerusalem); and the South (Bethlehem and Hebron). The sub-regions in Gaza Strip are: the North (North Gaza and Gaza), the Center (Dier Al-Balah), and the South (Khan Yunes and Rafah).

The evolution of food security within the sub-regions of the West Bank differs across the region, with the highest levels of food insecurity persisting in the south, alongside a moderate decrease in the levels of food security in the center, while the greatest gains in food security were realised in the north (see Figure 3.4). The case is somehow different in Gaza Strip such that foods security conditions worsened persistently over time for all sub-regions, especially the northern and the central sub-regions. In particular, the share of households who are severely food insecure has increased while the corresponding share of the food secure has decreased. As for the southern sub-region, food security conditions improved briefly in 2014, but had regressed by 2018. The biggest loser is the central sub-region, where the share of food secure households dropped from %46 in 2013 to about %26 in 2018 (see Figure 3.5).

Figure (3.4): Food Security Levels by Sub-Region in the West Bank 2013, 2014 and 2018

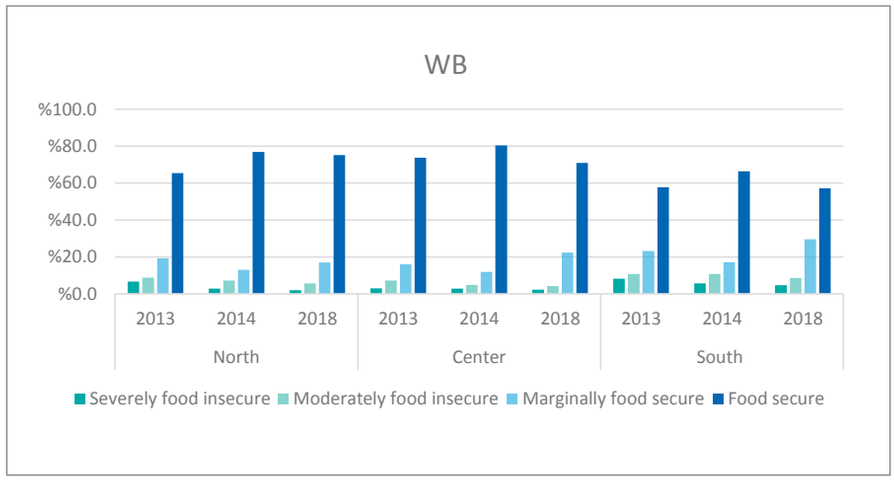
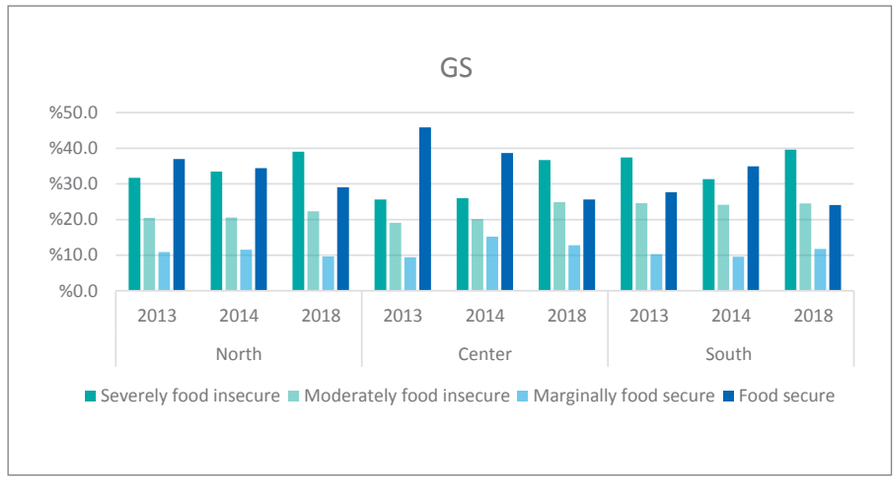


Figure (3.5): Food Security Levels by Sub-Region in Gaza Strip 2013, 2014 and 2018



So far, the analysis has explored the distribution of food security within each sub-region. Looking at the distribution across sub-regions, it is possible to estimate the share of households in each sub-region belonging to a given food security level, relative to the corresponding total number of households in that region. This allows a mapping of clusters of food insecurity and how they have evolved over time in the West Bank and Gaza Strip.

Table (3.2) presents the population distribution across sub-regions and their population weights relative to the region as a whole. Commonly, the spatial distribution of food security levels should be proportional if it corresponds to the spatial distribution of population. Table (3.3) shows that the northern sub-region in the West Bank accommodates the largest section of population (%40), while the other sub-regions equally share the remaining population. As for Gaza Strip, the share of population is the highest in the northern sub-region, followed by the southern and center sub-regions consequently.

Table (3.3): Population Distribution Across Sub-Regions in the West Bank and Gaza Strip: 2017

	Number of Households	Share of Households
West Bank		
North	237,763	40.0%
Center	175,741	29.5%
South	181,276	30.5%
Total	594,780	100%
Gaza Strip		
North	177,266	53%
Center	49,204	14.7%
South	108,262	32.3%
Total	334,732	100%

Source: PCBS Population, Housing, and Establishment census of 2017

Table (3.3) exhibits the spatial distribution of the food security levels across sub-regions in the West Bank, indicating a spatial clustering of food insecurity over the region as a whole. In 2018, half of the severely food insecure households live in the southern sub-region (only %30 of the total population) and accommodates %43.9 of the moderately food insecure Of course, the opposite holds for the food secure level.

The data also display interesting patterns as to how the spatial distribution of food security changed over time.

Food security conditions significantly improved in the northern sub-region since 2013; its share of the severely food insecure level decreased from %44 to %28, bearing in mind that the northern sub-region accommodates %40 of the West Bank's. The same conclusion holds true for the moderately food insecure and marginally food secure, while it increased in the central sub-region. The shares for the latter cohorts are relatively stable in the southern subregion. Regarding the central sub-region, the noticeable change is that its share of the severely food insecure has increased over time. As for Gaza Strip, the spatial distribution of food security levels is generally proportional to the population distribution, with no significant changes over time, a bleak testament to the all-embracing nature of the impacts of war, siege and division for all areas (and social strata) in the Strip.

Table (3.3): Spatial Distribution of Food Security Levels Across Sub-regions: 2013, 2014, and 2018

Food Security Levels	Region	WB				GS			
	Sub-region	North	Center	South	Total	North	Center	South	Total
Severely food insecure	2013	44.0%	9.8%	46.2%	100.0%	51.1%	11.6%	37.3%	100.0%
	2014	30.8%	16.9%	52.3%	100.0%	56.5%	12.4%	31.1%	100.0%
	2018	28.2%	21.8%	50.0%	100.0%	53.3%	14.6%	32.0%	100.0%
Marginally food secure	2013	40.8%	16.7%	42.4%	100.0%	49.8%	13.1%	37.1%	100.0%
	2014	37.9%	13.8%	48.3%	100.0%	50.9%	14.1%	35.1%	100.0%
	2018	36.9%	19.2%	43.9%	100.0%	50.7%	16.4%	32.9%	100.0%
Moderately food insecure	2013	41.0%	17.1%	41.9%	100.0%	54.6%	13.3%	32.1%	100.0%
	2014	38.0%	19.1%	43.0%	100.0%	53.9%	20.0%	26.1%	100.0%
	2018	30.5%	27.8%	41.7%	100.0%	47.3%	18.4%	34.3%	100.0%
Food secure	2013	43.3%	24.3%	32.4%	100.0%	55.1%	19.3%	25.6%	100.0%
	2014	43.2%	24.7%	32.1%	100.0%	52.3%	16.6%	31.1%	100.0%
	2018	44.3%	29.1%	26.6%	100.0%	57.2%	14.7%	28.0%	100.0%

3.4 Food security levels by type of locality (place of residence).

In this section the spatial analysis is extended to focus on place of residence (urban, rural, and refugee camps). According to PCBS's census 2017, most of the population in the West Bank (%70.8) reside in urban areas compared to %24.3 in rural areas and %4.9 in refugee camps. The distribution in Gaza Strip is different whereby %86.6 reside in urban areas, and %13.4 in refugee camps. Since the share of population in rural Gaza Strip is marginal, it is excluded from the analysis.

The share of moderately and severely food insecure households are the highest in rural West Bank. Still, food security conditions improved over time across localities. Food security conditions improved the most in the refugee camps: the share of severely food insecure refugee households dropped from %8 in 2013 to %2.2 in 2018 (see Figure 3.6). As for the Gaza Strip, the data, exhibited in Figure (3.7), show no significant differences between the urban areas and refugee camps in 2018 and that food security conditions in both types of localities worsened overtime. The only difference was in 2014, whence the conditions improved in refugee camps but only briefly.[20]

[20] Rural areas in Gaza Strip is excluded from the sampling frame of 2018 as almost all population live in urban areas and refugee camps.

Figure (3.6): Food Security Levels by Place of Residence in the West Bank: 2013, 2014. And 2018

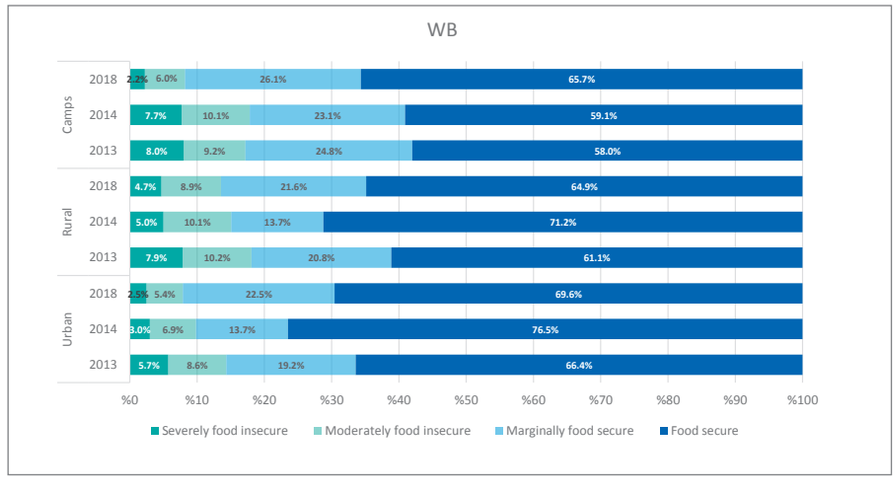
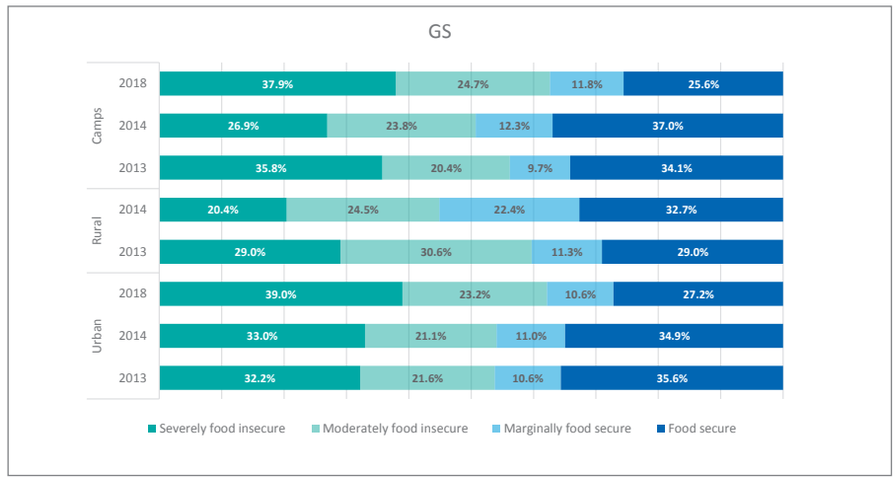


Figure (3.7): Food Security Levels by Place of Residence in Gaza Strip: 2013, 2014. And 2018



We also explore differences in food security status between refugees and non-refugees irrespective of where they live is examined. The data, presented in Figures (3.8) and (3.9), demonstrate that food security conditions are slightly better for non-refugees in the West Bank, with greater gains in 2014. Markedly, both groups in Gaza Strip are more food insecure in 2018. Yet, the situation for the non-refugees have become worse.

Figure (3.8): Food Security Level Based on Refugee Status in the West Bank, 2013, 2014, and 2018

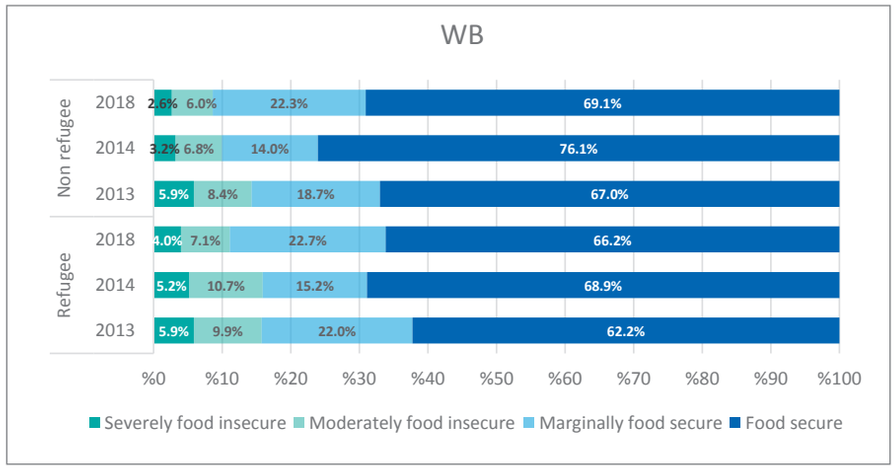
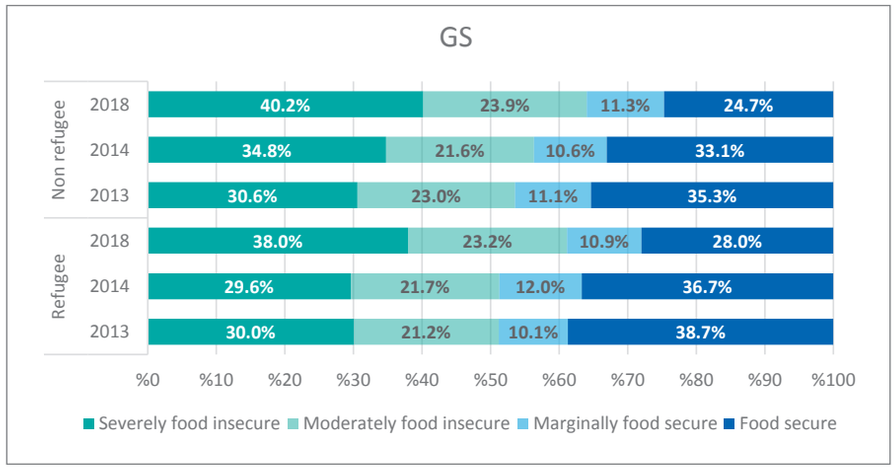


Figure (3.9): Food Security Levels Based on Refugee Status in Gaza Strip, 2013, 2014, and 2018



3.5 Food security levels in "Area C" in the West Bank

The Oslo accords and subsequent agreements, signed by the Government of Israel (GoI) and the PLO in 1995-1993, divide the West Bank into three areas ("A", "B", and "C") and assigned civil and security control to the PA in Area "A", which encompasses only %18 of the West Bank representing the main populous areas. Area "B" is mostly rural and makes up %22 of the West Bank, and the PA assumes civil jurisdiction while the Israel retains security control. Israel fully controls Area "C", constituting %60 of the West Bank. Area "C" is sparsely populated by Palestinians and accommodates about %6 of the West Bank's population in localities exclusively in Area C.[21] The domain of Israeli control in Area "C" includes all aspects of civil administration, including planning, construction, and infrastructure.[22] While this system of geographic division was meant to be a temporary arrangement prior to a permanent status agreement, it has become the status quo for twenty-five years.

Palestinians can only utilize less than %1 of Area C. Around %30 of the area is highly restricted in which official permission is required from the Israeli authorities to economically exploit existing resources or construct necessary

[21] No precise data is available on the population size of Area C as several towns and villages cross borders with Area C, Area B, and Area A. World Bank (2013) suggests that Area C is populated by 180,000 people (World Bank. 2013. West Bank and Gaza - Area C and the future of the Palestinian economy (English). Washington DC ; World Bank Group.) while OCHA (2014) suggests a larger figure (300,000). https://www.ochaopt.org/sites/default/files/ocha_opt_area_c_factsheet_August_2014_english.pdf

[22] The PA is responsible for providing education and health services for Area C resident (see B›Tselem›s 2013).

infrastructure, with an approval rate in most years close to zero.[23] Israel has also seized around %40 of Area C and declared it as "state land" and designated the remaining %30 of the area, mainly in the Jordan Valley, as military zones and natural reserves.

With a range of Israeli restrictions on home building and infrastructure development, exploitation of natural resources, access to farming and grazing land, living standards for Palestinian households in Area "C" are poor.[24] The findings on food security status reflect such poor economic conditions. The share of severely and moderately food insecure households in Area "C" is multiple fold that in Areas "A" and "B". This conclusion holds for all reported years (see Table 3.4), with hardly any change in the past five years. The data also show that the share of food secure households rose in 2014 in all areas. Nonetheless, the gain was almost lost for the households in Area "C" in 2018. While the share of food secure household also decreased in Areas "A" and "B", it remained above the level in 2013. Markedly, %30 of the total number of severely food insecure households in the West Bank reside in Area "C".

Table (3.4): Food Security Levels in Area "C" of the West Bank: 2014 ,2013, and 2018

Year	Levels	Area C	Area AandB
2013	Severely food insecure	14.0%	5.7%
	Moderately food insecure	14.6%	8.6%
	Marginally food secure	23.8%	19.6%
	Food secure	47.6%	66.1%
	Total	100.0%	100.0
2014	Severely food insecure	8.9%	3.4%
	Moderately food insecure	18.3%	6.9%
	Marginally food secure	19.3%	13.8%
	Food secure	53.4%	75.9%
	Total	100.0%	100.0%
2018	Severely food insecure	10.1%	2.3%
	Moderately food insecure	15.9%	5.3%
	Marginally food secure	25.1%	22.3%
	Food secure	48.9%	70.1%
	Total	100.0%	100.0%

3.6 Determinants of Food Security in the West Bank and Gaza Strip

So far, estimates on food security levels in Palestine have shown how they vary overtime across and within the West Bank and Gaza Strip. This section focuses on exploring some underlying factors, limiting the analysis at the regional level. These factors include those utilized to construct food security measures; namely, poverty incidence, resilience,[25] and extent of food deprivation.

Table (3.5) documents poverty incidence in both main regions and shows that it changed little, both for the poor and deeply poor, in 2013 and 2014. Nonetheless, the dynamics to some extent shifted by 2018; poverty incidence increased in Gaza Strip, but decreased in the West Bank.

[23] See Falah (2015) for a review of the economic and development restrictions in Area C.
[24] See several reports published by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) https://www.ochaopt.org/location/area-c.
[25] "The capacity to ensure that shocks and stressors do not have long-lasting adverse development consequences" (Food Security Information Network 2013)

Table (3.5):Absolute Changes in Poverty Incidence in the West Bank and Gaza Strip: 2014 ,2013, and 2018

Poverty Group	Absolute Change 2013-2014		Absolute Change 2014-2018	
	West Bank	Gaza Strip	West Bank	Gaza Strip
Deep poor	0.4%	-1%	-2.1%	3.6%
Poor (but not deep poor)	-0.6%	1.1%	-2.8%	3.4%
Non-poor	0.2%	-0.1%	4.8%	-7%

Table (3.6) presents the resilience dimension, which is classified into low, medium, and high. The data demonstrate that the share of resilient households in the West Bank has slightly increased overtime, levelling at %51.9 in 2018; the corresponding share in Gaza Strip is just a fraction of the West Bank's. It amounted to %2.1 in 2018 declining from %5.8 in 2013.

Table (3.6): Changes in Resilience in the West Bank and Gaza Strip: 2014 ,2013, and 2018

Resilience Category	2013		2014		2018	
	West Bank	Gaza Strip	West Bank	Gaza Strip	West Bank	Gaza Strip
Low	12.7%	69.9%	10.9%	72.8%	7.4%	79.3%
Medium	39.2%	24.3%	39.6%	23.4%	40.7%	18.6%
High	48.1%	5.8%	49.4%	3.8%	51.9%	2.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Finally, Table (3.7) documents changes in the extent of food deprivation. It shows that food deprivation in the West Bank declined in 2014; the share of severely and moderately food deprived households decreased, more substantially for the latter group. However, this initial improvement in food consumption had diminished by 2018, whence the share of households who were not food deprived declined to %72.1, not much above the 2013 level. This change is accounted for by the rise in the share of moderately food deprived households. As for Gaza Strip, the extent of food deprivation remained stable in 2013 and 2014 but worsened in 2018; more households became severely and moderately deprived.

Table (3.7): Changes in Food Consumption in the West Bank and Gaza Strip: 2014 ,2013, and 2018

Poverty Food Consumption Category	2013		2014		2018	
	West Bank	Gaza Strip	West Bank	Gaza Strip	West Bank	Gaza Strip
Severely food deprived	5.6%	15.6%	3.0%	14.7%	2.9%	17.4%
Moderately food deprived	24.6%	38.3%	16.3%	38.5%	25.0%	43.3%
Not food deprived	69.8%	46.2%	80.7%	46.8%	72.1%	39.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In sum, the analysis documents differential changes in the determinants of food security between the West Bank and Gaza Strip. In the West Bank, poverty incidence and resilience remained relatively stable in 2013 and 2014 and had favourably changed by 2018. Food deprivation, on the other hand, took a different route. It declined in 2014 before it substantially rose in 2018, well-fitting the pattern of over time change in food security conditions. In other words, the decline in the share of food secure households in 2018 is explained by the increase in the share of moderately food deprived households. On the other hand, it also seems that the decrease in poverty rate and improvement in resilience account for the decrease in the share of severely and moderately food insecure. As for Gaza Strip, the findings are consistent with the comprehensive nature of the economic collapse there: the decline in the level of food security in 2018 is driven by a perfect storm of adverse factors: more households have become poorer, less resilient, and more food deprived.

A Palestinian farmer collects some beans from her farm at Al- Nasariya village in the Jordan valley 4 March 2019 ©FAO/Alaa Bardeneh

Chapter 4. Consumption and Expenditure Patterns

The previous chapter highlighted factors driving food security in Palestine, focusing on food security levels in different regions. It also highlighted that while several factors are key to explaining spatial differences in food security (poverty, resilience, and food consumption), food deprivation is especially important to explaining patterns over time. This chapter sheds further light on food consumption with emphasis on food consumption relative to total expenditure.

4.1 Household Expenditure on Food

The data in Table (4.1) displays per capita total expenditure and per capita food expenditure, measured monthly (in current prices), across the food security cohorts in 2018. Both measures are calculated as median value of household expenditure divided by number of household members.[26] The data uphold the emerging picture of substantial regional differences in Palestinian food security. Households in the West Bank, regardless of food security conditions, spend (in absolute terms) more on food, as well as on all other items, compared to those in Gaza Strip. This has been the case since 2013, though the difference in expenditures has widened over time.

This widening of the gap is driven by two factors; purchasing power and price differences. The former can be largely captured via exploring wage distribution.[27] Table (4.2) ascendingly ranks daily wage data in the West Bank and Gaza Strip[28] and splits the distribution into 9 percentiles.[29] The analysis in 2018 shows that workers residing in the West Bank earn much higher wages across all percentiles than in Gaza Strip. The wage difference widens mainly for low earners (those below the median wage - P50th). So, this illustrates that households' purchasing power in Gaza strip is substantially lower.

Table (4.1) Household Expenditure by Food Security groups in the West Bank and Gaza Strip, 2014 ,2013, and 2018 (NIS monthly)

Year	Nominal Expenditure	Region	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
2013	Total expenditure per capita	WB	250.0	333.3	450.0	555.6
		GS	250.0	320.0	357.1	500.0
	Food expenditure per capita	WB	133.3	166.7	214.3	250.0
		GS	93.8	133.3	150.0	200.0
2014	Total expenditure per capita	WB	300.0	373.0	500.0	616.4
		GS	214.3	283.3	357.1	428.6
	Food expenditure per capita	WB	142.9	166.7	200.0	250.0
		GS	89.0	116.7	150.0	182.3
2018	Total expenditure per capita	WB	299.5	383.7	583.3	666.7
		GS	180.0	240.0	285.7	357.1
	Food expenditure per capita	WB	136.4	166.7	240.0	250.0
		GS	71.4	100.0	116.7	133.3

[26] The median is used to account for the outliers in the value of household expenditure.
[27] See more discussion in Chapter 6 on measuring purchasing power using total household income.
[28] The source of wage data is PCBS labor force survey of 2013, 2014, and 2014.
[29] A wage percentile measures the wage value in which a certain share of workers earns below it. For example, the 25th percentile (P25th) indicates that 25% of workers earn below that wage value.

Table (4.2) Nominal Wage Percentiles in the West Bank and Gaza Strip 2014 ,2013, and 2018

Year	Region	P1st	P5th	P10th	P25th	p50th	p75th	p90th	p95th	p99th
2018	West Bank	27	50	58	77	115	192	269	300	400
	Gaza	8	15	19	27	61	108	138	154	231
2014	West Bank	19	38	50	69	96	146	200	250	350
	Gaza	8	15	20	35	69	104	135	160	212
2013	West Bank	19	38	50	65	96	135	200	250	350
	Gaza	10	15	20	38	65	100	135	154	212

Source of data: PCBS labour force survey

To measure price differences between the West Bank and Gaza Strip, an identical food list is used to calculate the corresponding average unit price in both regions, excluding East Jerusalem. The same exercise is repeated using all items included by the PCBS in calculating the CPI. Table (4.3) exhibits the outcomes for 2014 ,2013, and 2018 and shows that prices in the West Bank are higher by between %30-%20 for all items and by %12-%10 for food items. Comparing regional differences in the magnitude of wages and prices, it may be concluded that the former contributes more to regional differences in per capita expenditure on food and food security levels.

Table (4.3) Average Unit Prices in the West Bank and Gaza Strip, 2014 ,2013, and 2018 (NIS)

Items	Year	West Bank	Gaza Strip
All Items	2013	198.1	165.1
	2014	186.0	141.7
	2018	133.9	109.6
Food Items	2013	18.8	17.0
	2014	18.6	16.8
	2018	18.1	16.1

Source: PCBS.

Changes in per capita expenditure in the same region can be explored, and over time compared, by calculating per capita real total expenditure and food expenditure both in the West Bank and Gaza Strip (Table 4.4). Reflecting hampered economic conditions in Gaza Strip, the data show that median values of both measures have persistently decreased across the years, though more profoundly in 2018. This conclusion applies to all food security categories. Overall, per capita real expenditure (consumption) on food and all items declined by %30 in 2018 compared to 2013, with little variation across food security levels. Driven by rise in wages in the West Bank, however, total expenditures have increased for all levels. An exception are the severely food insecure households who experienced a slight drop in 2018. As for food expenditure, it remained relatively stable over the years under study, though it did decrease in 2014 for the marginally food secure.

Table (4.4) Real Expenditure by Food Security Levels in the West Bank and Gaza Strip, 2014 ,2013, and 2010) 2018 constant prices)

Real (base year 2010)			Severely food insecure	Moderately food insecure	Marginally food secure	Food secure	Total
2013	Total expenditure per capita	WB	225.0	300.0	405.0	500.0	450.0
		GS	249.3	319.1	356.1	498.6	332.4
		Total	232.4	309.9	398.5	464.9	398.5
	Food expenditure per capita	WB	120.0	150.0	192.9	225.0	216.0
		GS	93.5	133.0	149.6	199.4	139.6
		Total	93.0	139.5	185.9	232.4	185.9
2014	Total expenditure per capita	WB	266.8	331.7	444.7	548.2	504.0
		GS	207.8	274.7	346.3	415.5	290.9
		Total	205.6	285.6	399.8	533.1	456.9
	Food expenditure per capita	WB	127.1	148.2	177.9	222.3	222.3
		GS	86.3	113.1	145.4	176.7	121.2
		Total	91.4	121.9	182.8	228.5	182.8
2018	Total expenditure per capita	WB	262.1	335.8	510.5	583.5	525.1
		GS	175.1	233.5	277.9	347.4	233.5
		Total	169.3	257.6	451.4	541.7	451.4
	Food expenditure per capita	WB	119.3	145.9	210.1	218.8	218.8
		GS	69.5	97.3	113.5	129.7	97.2
		Total	67.7	90.3	180.6	225.7	169.3

4.2 Food Consumption Pattern

This section assesses the nutritional dimensions of food security; dietary quality and dietary quantity. The former accounts for the frequency, per week of consuming certain groups of food and the associated nutritional importance, while the latter emphasizes the extent to which households consume insufficient dietary quantity (see the appendix more discussion on the methodology).

Figure (4.5) documents over time changes in the pattern of quantity-based consumption. Consistent with the regional disparities in household purchasing power, the data show that the 2018 share of households with insufficient dietary quantity in Gaza Strip amounts to %46.6 relative to %6.2 in the West Bank. The data also show that the value of this indicator slightly declined over time in Gaza Strip, while it improved in the West Bank, whose share decreased from a high of %16.1 in 2013. This finding alone is a graphic indicator of the challenge of achieving zero hunger in Palestine, in line with the sustainable development goals (SDGs), and attests to the dramatic regional divide in Palestinian living conditions and in the ability of all to access adequate quantities of food.

Figure (4.5): Share of Households with Insufficient Dietary Quantity in the West Bank and Gaza Strip, 2014 ,2013, and 2018

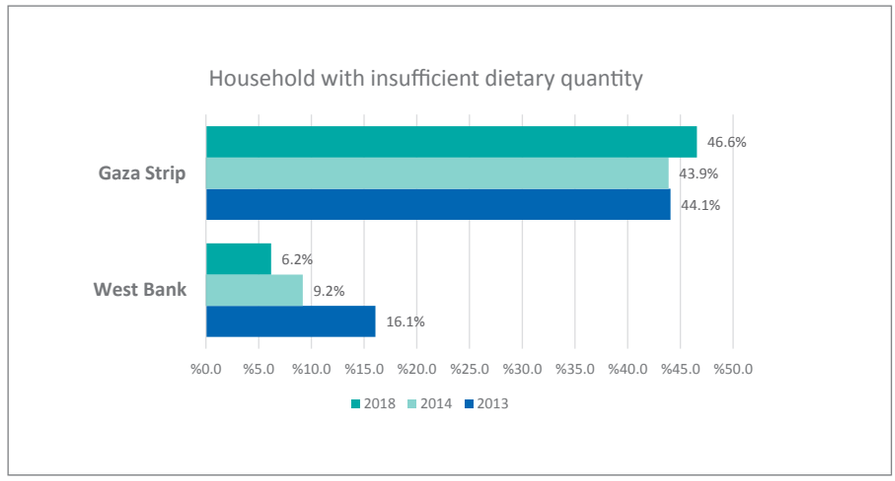


Figure (4.6) considers the qualitative dimension of consumption. It shows a similar pattern in Gaza Strip to the West Bank's. Though for Gaza Strip, the share of households with dietary quality insufficiency is lower than that of insufficient dietary quantity. On the other hand, households in the West Bank perform poorer relative to the quantity-based measure. More households suffer from quality-insufficient consumption and the corresponding share of households is increasing over time.

Figure (4.6): Share of Households with Insufficient Dietary Quality in the West Bank and Gaza Strip, 2014 ,2013, and 2018

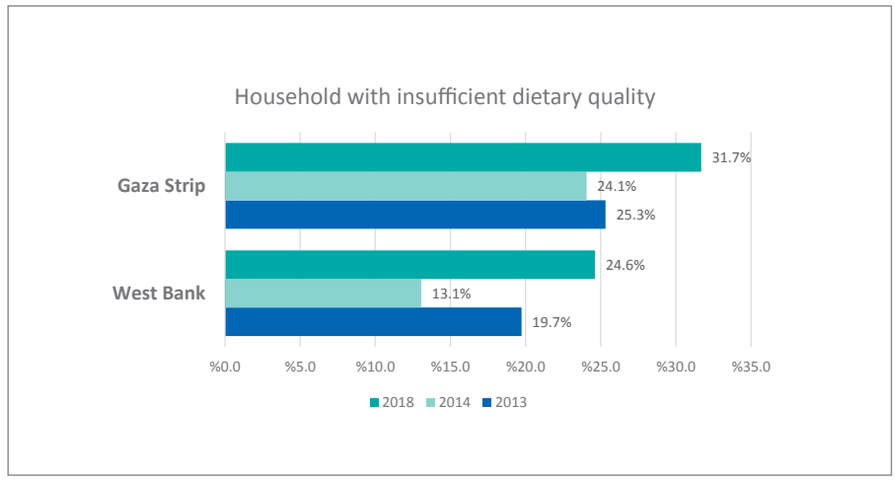
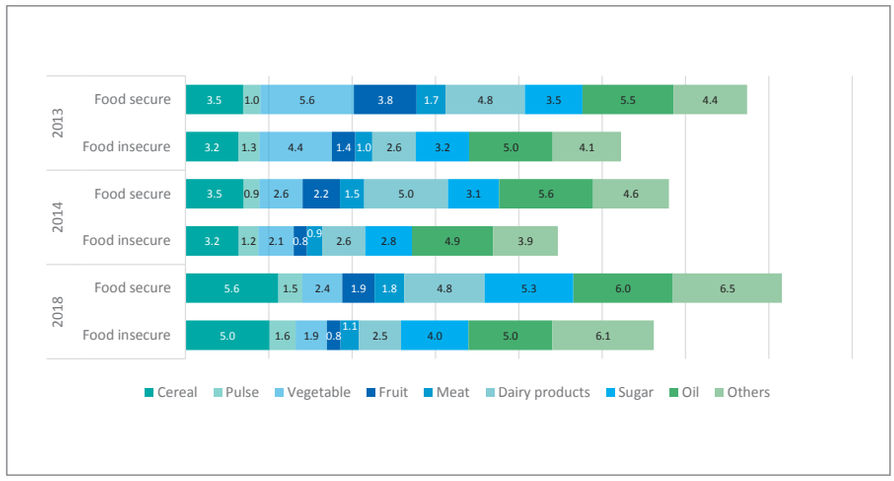


Figure (4.7) and (4.8) present household's consumption pattern per main food groups in the West Bank and Gaza Strip, respectively. The food groups are those utilized to identify households with insufficient dietary quality. Households were asked to report the daily consumption frequency of each group over a period of seven days. The purpose of this exercise is to explore changes in consumption distribution towards or away from nutrient food (see annex C for more details on food consumption indicators). For the sake of brevity, this exercise compares two food security groups: food secure and food insecure.

The data show that both food security cohorts maintained the same consumption patterns over time for all food groups, both in the West Bank and in Gaza Strip. One exception is dairy in which households in Gaza Strip consumed less over time, while the corresponding consumption in the West Bank decreased only for the food insecure. The data also show differences in the consumption pattern per food group. For both food security cohorts, consumption

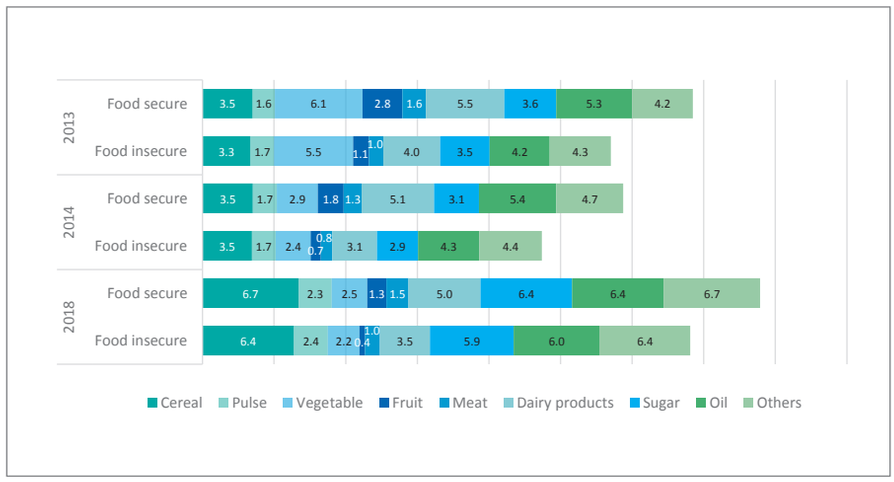
increased for cereals, sugar, oil, and pulses, while decreased for vegetables, fruits. In the same vein, the overall consumption of meat decreased in 2014 before bouncing back in 2018.

Figure 4.7: Food consumption pattern per Main Food Groups in the West Bank, 2014 ,2013, and 2018*



*The data exhibited in the graph reflect the number of days that households consume given food group per week.

Figure (4.8): Food consumption pattern per Main Food Groups in Gaza Strip, 2014 ,2013, and 2018



4.3 Coping strategies to combat decreasing food consumption

This section examines the coping strategies that households in the West Bank and Gaza Strip have deployed to face insufficient food or lack of money available to buy food. Based on the SEFSec 2018 survey, the sampled households were asked to choose from a list of strategies that they adopted in the 7days preceding the survey (see Table 4.5). Remarkably, the analysis shows that most of households in the West Bank (%79.5) have not resorted to any of the food coping strategies. Nonetheless, this section of households is a minority in Gaza Strip (%8). Of those utilized coping strategies, the majority in both regions have utilized multiple ones.

The data show that refraining from consuming expensive food is the number one strategy across the West Bank and Gaza Strip. The data also show that a large section of households use adverse strategies such as reduced number of meals and consuming lower-quality food. Naturally, consuming sufficient and nutrient food is conducive to a good

health and human capital development. If persistent, such coping strategies are expected to boost incidence of communicable diseases, such as diabetes mellitus, cardiovascular disease and hypertension.[30]

Table (4.5): Food Coping strategies in the West Bank and Gaza Strip, 2018

Coping strategies (percentage of households)	West Bank	Gaza Strip
Refrain from consuming expensive and resort to alternatives (buying cheaper kind of food)	79.7%	84.4%
Purchased low quality markets ‹leftover›	62.4%	73.5%
Reduced the number of meals for all household members per day	49.9%	57.7%
Reduced portion of food for adults in favour of children	38.7%	58.6%
Reduced the quantity of meals eaten by adults in favour of children	31.0%	50.7%
Borrow food or rely on help from family and friends	25.0%	40.8%

In terms of the non-food coping strategies, the data show that they were required by %26 of the households in the West Bank versus %87 of the households in Gaza Strip. Table (4.6) presents the percentages of households per type of non-food coping strategies. The data show that buying food on credit or borrowing food is the most frequent strategy both in the West Bank and Gaza Strip. The data show that other most frequent non-food coping strategies in the West Bank include not paying for bills/utilities, and using life savings. As for Gaza Strip, it includes reducing expenditure on health, education, and clothing, as well as not paying bills/utilities and borrowing money. These strategies surely affect household's well-being in the long run, propagating future poverty trap via increasing indebtedness, reducing investment in human capital, and enjoying a healthy life.

Table (4.6) Non-food coping strategies in the West Bank and Gaza Strip, 2018

Coping strategies	West Bank	Coping strategies	Gaza Strip
Buy food on credit, borrow food	44.3%	Buy food on credit, borrow food	66.8%
Not pay bills/ utilities	42.6%	Reduce Household expenditures on health, education, and clothing	64.3%
Used life savings	34.7%	Not pay bills/ utilities	55.3%
Looking for secondary job	26.9%	Borrow money	36.8%
Reduce Household expenditures on health, education, and clothing	26.5%	Looking for secondary job	32.1%
Borrow money	24.6%	Used life savings	23.6%
Re-organize the Household members to save money (live or eat together)	16.8%	Re-organize the Household members to save money (live or eat together)	19.0%
Sell assets jewellery, furniture, productive assets	3.4%	Sell assets jewellery, furniture, productive assets	12.6%
Resorting to agriculture (planting, animal husbandry, fishing)	2.7%	Send children to eat somewhere else, eating in groups	5.7%
Reducing production costs for example cut on fertilizers	1.8%	Resorting to agriculture (planting, animal husbandry, fishing)	2.8%
Selling remaining productive assets such as female goats	1.1%	Reducing production costs for example cut on fertilizers	1.2%
Send children to eat somewhere else, eating in groups	0.9%	Selling remaining productive assets such as female goats	1.0%
Sell off productive assets (sewing machine, vehicles)	0.7%	Sell off productive assets (sewing machine, vehicles)	0.8%
Taking children out of school	0.5%	Taking children out of school	0.7%
Selling land or housing	0.2%	Selling land or housing	0.1%

[30] For more discussion on the linkages between malnutrition and food security, please see: MAS (2014) "Strategic Review of Food and Nutrition Security in Palestine.

Chapter 5. Profile of Food Insecure and Food Secure Households

The preceding chapters analysed food security levels in Palestine, regional differences and driving factors, emphasizing how the interaction between poverty, food deprivation and resilience contribute to the evolution of adverse food security conditions. This chapter explores the characteristics of the food secure/insecure households, focusing on demographic and mainly labour market indicators. The outcome of this analysis will help to better grasp the link between food security conditions and households' labour market performance.

In terms of demographic characteristics, Table (5.1) displays two indicators, gender of household head and household size. Female headed households (FHH) are expected to be more food insecure than the male headed household (MHH) as they tend to face more challenges to join the labour market. In addition to the time spent at the workplace, FHH are usually responsible for household care (including childcare and household chores), discouraging them from engaging in full time employment, thus leading to productivity shortfalls and lower earnings. In addition, expected lower income may induce FHH to remain out of the formal labour force and live on non-wage income.[31]

Data from the SEFSec survey 2018 show that about %80 of FHH, both in the West Bank and Gaza Strip, do not participate in the labour force. Also, over half of the FHH are widows, suggesting that sources of income per household members of this cohort is limited. As a result, it is expected that poor food security conditions are linked to FHH status. The data support this finding for the West Bank (see Table 5.1), whereby %22 of the severely food insecure households are FHH, twice as much as the overall share of FHH in the sample. This pattern does not exist in Gaza Strip where the ubiquitous dire economic conditions dilute the significance of linkages with FHH status.[32]

Table (5.2) explores over time changes in the food security levels separately for the FHH and MHH. Consistent with the aforementioned findings, the share of severely and moderately food insecure in the West Bank is higher among the FHHs. This conclusion holds over time. The data also show little gender differences with respect to the marginally food secure level in 2013 and 2014. Though, more FHHs joined this level in 2018. As for Gaza Strip, the results vary by the category of food security. The share of severely food insecure is higher among the MHHs, while the share of moderately food insecure is lower among the MHHs. As for the food secure level, the data shows little gender differences.

Over time, the data exhibited in Table (5.2) also show that food security conditions slightly improved for FHHs in the West Bank, specifically with respect to the severely and moderately food insecure category. One noticeable change, however, is that the rise in the share of food secure households in 2014 was reversed in 2018. The pattern is similar to the MHH's, but the share of food secure category in 2018 is higher than in 2013. The findings for Gaza Strip show that food security conditions deteriorated in 2018, both for male and female headed households, relative to 2013 and 2014.

Economic and social science literature emphasizes the direct linkage between family size and poverty incidence. Larger households are more prone to fall into poverty trap as additional children lowers per capita economic resources, increases the dependency ratio, and lowers female labour supply and investment in human capital. All these factors are expected to negatively affect productivity. This effect might be dynamic in nature as current poverty status perpetuates over time and affects future generations via lower school performance, poorer health, and welfare dependence.[33] One strand of literature emphasizes the ties between the household size and household composition, on one hand, and poverty status on the other hand. Poorer households tend to have more children, which ultimately serves as a coping mechanism to increase future household income. However, this comes at the expense of children's level of education, health and social wellbeing; hence further reinforcing the poverty trap. Thus, it is anticipated that larger households are more likely to be food insecure. Table (5.1) confirms this argument both in the West Bank and Gaza Strip. Average household size by food security level shows that the average household size of the severely food insecure is greater than that of the food secure households.

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[31] See Akadiri et al (2017) for more discussion on food security conditions of female headed households.https://www.google.com/search?safe=activeandsource=hpandei=7gMbXb2-EoaVkwWN85KgCgandq=are+female+headed+household+less+food+secureandoq=are+female+headed+household+less+food+secureandgs_l=psy-ab.3..33i22i29i30.406.12495..12615...4.0..1.172.6530.1j49.....0....1..gws-wiz.....0..0j0i131j0i22i30j33i160j33i21.GVBBUXuVhRQ

[32] The share of female headed households in Gaza is 11.4%.

[33] For more discussion on poverty and household size see Fusco and Islam (2017). http://www.ecineq.org/ecineq_nyc17/FILESx2017/CR2/p243.pdf

Table (5.1): Household Demographic Characteristics Across Food Security Levels in the West Bank and Gaza Strip, 2018

Region		Food security group	Marginally food secure	Food secure	
		Severely food insecure	Moderately food insecure		
WB	Gender of the Household Male	78.2%	82.9%	88.3%	91.6%
	Female	21.8%	17.1%	11.7%	8.4%
	Total	100.0%	100.0%	100.0%	100.0%
	Average Household size	8.14	6.94	5.53	5.69
GS	Gender of the Household Male	90.9%	85.6%	90.1%	87.6%
	Female	9.1%	14.4%	9.9%	12.4%
	Total	100.0%	100.0%	100.0%	100.0%
	Average Household size	8.27	6.36	6.54	5.39

Table (5.2): Food Security Levels by the Gender of the Household: 2014 ,2013, and 2018

West Bank			
Food Security Levels	Year/Gender	Male Headed	Female Headed
Severely food insecure	2013	6.20%	8.40%
	2014	3.60%	6.20%
	2018	2.50%	6.50%
Moderately food insecure	2013	8.40%	16.10%
	2014	7.60%	10.20%
	2018	5.40%	12.80%
Marginally food secure	2013	20.00%	19.90%
	2014	14.30%	14.30%
	2018	21.90%	27.40%
Food secure	2013	65.40%	55.60%
	2014	74.50%	69.30%
	2018	70.10%	53.40%
Gaza Strip			
		Male Headed	Female Headed
Severely food insecure	2013	33.10%	28.00%
	2014	32.10%	26.50%
	2018	39.70%	29.10%
Moderately food insecure	2013	21.20%	27.40%
	2014	20.90%	29.60%
	2018	22.60%	32.90%
Marginally food secure	2013	10.60%	8.60%
	2014	11.80%	6.80%
	2018	11.80%	6.80%
Food secure	2013	35.10%	36.00%
	2014	35.20%	37.00%
	2018	26.80%	28.20%

Table (5.3) sheds further light on household characteristics across food security levels with a focus on extent of food consumption, income per household, and income per adult equivalent. As for the latter two measurements, the data show that they are positively correlated with better food security conditions. Markedly, the food secure households, both per household and per adult, earn more than twice as much as the severely food insecure. The earning disparity is narrower in Gaza Strip mainly with respect to income per household. This analysis also reflects differences in the level of consumption per food security level in both regions. In particular, the data show substantial difference in the average household income between the two regions. The average household income of each food security level in the West Bank exceeds that of Gaza Strip by more than two-fold. This further highlights the extent of regional differences in food security status and the perilous position of food security in the Gaza Strip. In this regard, the share of households with insufficient dietary quantity is much larger across all food security categories in Gaza Strip.

Table (5.3): Purchasing Power and Food Consumption Across Food Security Levels in the West Bank and Gaza Strip, 2018

West Bank	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Insufficient dietary quantity	68.2%	30.6%	10.0%	0%
Households with poor and borderline FCS	86.5%	68.3%	78.9%	0%
Income per household equivalent per month (NIS)	2,824.8	3,603.5	4,949.1	6,130.9
Income per adult equivalent per month (NIS)	973.4	1,193.3	1,924.2	2,233.4
Gaza Strip	**Severely food insecure**	**Moderately food insecure**	**Marginally food secure**	**Food secure**
Insufficient dietary quantity	86.7%	46.2%	19.1%	0%
Households with poor and borderline FCS	56.6%	32.1%	20.1%	0%
Income per household equivalent per month (NIS)	1,393.4	1,269.7	2,407.4	2,227.8
Income per adult equivalent per month (NIS)	441.2	479.7	861.0	898.4

Performance in the labour market appears to be correlated with food security conditions. Table (5.4) compares labour market performance in 2018 across the food security levels in the West Bank. The reported indicators in the table are limited to the household heads. The data show that food security is highly correlated with employment status. A poorer food security condition is directly linked to a lower employment rate. Table (5.4) also classifies the employed household heads by number of hours worked and shows no clear variation across the food security levels, except for the severely food insecure, who tend to work relatively fewer hours (14-1 hours). As for the unemployed, most households in all food security cohorts were previously employed.

Furthermore, linkages to labour market (being in/out of the labour force) are also correlated with food security conditions. Half of the severely food insecure household-heads are out of the labour force. This rate decreases with better food security status. Most of household heads indicate that the main reason for remaining out of the labour force is "disability, age, or illness",[34] followed by a wide margin by "performing full-time housework", mostly limited to FHH. One exception is the food secure household heads, whose second main reason for being out of the labour force is retirement. Retired individuals often worked in the public sector, which provide stable and relatively generous pension and non-wage benefits including health insurance. This represents an social protection umbrella that ensures a decent life and precludes slipping into a poverty trap and accordingly becoming food insecure.[35]

[34] The data does not distinguish between the disabled, age, or ill household heads.

[35] Workers employed in the private sector who exit the labor market at the retirement age often do not enjoy same benefit. Data from the PCBS's labor force survey show only 20% of all workers in the private sector receive severance payment.

Table 5.4: Labor Market Characteristics Across the Food Security Levels in the West Bank, 2018

West Bank	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Employed	61%	80%	90%	91%
Working 1-14 hours	8%	3%	4%	2%
Working 15-34 hours	20%	30%	14%	11%
Working 35-45 hours	47%	36%	47%	45%
Working 46 hours or more	25%	31%	35%	42%
Unemployed	39%	20%	10%	9%
Looked for a job (already worked)	94%	95%	79%	95%
Looked for a job (never worked)	6%	5%	21%	5%
Out of Labour Force	50%	40%	30%	24%
Student/ trainee	1%	4%	0%	1%
Full time housework	27%	23%	18%	15%
Disability/ age/ illness	67%	69%	70%	60%
Availability of income	0%	1%	2%	3%
Retirement	4%	2%	9%	20%
Others	0%	2%	1%	2%

The connection between food security and the labour market in Gaza Strip is similar, though employment opportunities are scarcer (see Table 5.5). Unemployment is higher across the food security levels, except for the severely food insecure which posts the same rate as in the West Bank. Noticeably the data reveal several issues that distinguish the economic conditions in Gaza Strip. Firstly, it shows a larger share of the unemployed groups who never got the chance to work, especially for the severely and moderately food insecure. Secondly, the share of household heads who are out of the labour force is lower in Gaza Strip. Harsh economic conditions possibly induce more household heads to join the labour market and search for employment. Still, with a crippled labour market, many of them end up unemployed. Thirdly, while the main reason of being out of labour force is also disability, age or illness, retirement comes next. Most probably, the reason hinges on the labour market structure whereby public sector in the Gaza Strip employs a greater share (%36.6) in Gaza Strip than in the West Bank (%15.6).[36] The share of retirees in the marginally food secure and food secure (over %40) is twice as much relative to other cohorts; speaking again to the effect of retirement benefits on food security status.

Table 5.5: Labour Market Characteristics Across the Food Security Levels in Gaza Strip, 2018

Gaza Strip	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Employed	61%	72%	83%	88%
Working 1-14 hours	10%	6%	2%	3%
Working 15-34 hours	18%	18%	20%	21%
Working 35-45 hours	43%	44%	44%	46%
Working 46 hours or more	30%	32%	34%	30%
Unemployed	39%	28%	17%	12%
Looked for a job (already worked)	69%	70%	81%	81%
Looked for a job (never worked)	31%	30%	19%	19%
Out of Labour Force	33%	38%	33%	32%
Student/ trainee	0%	1%	0%	0%
Full time housework	12%	18%	15%	13%

[36] The source of data is PCBS's labor force survey of 2018.

Gaza Strip	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Disability/ age/ illness	62%	52%	37%	37%
Availability of income	5%	7%	5%	6%
Retirement	20%	21%	41%	44%
Others	0%	1%	1%	0%

The above analysis draws a relationship between food security and the labour market considering only the employment status of the household heads. Table (5.6) displays difference in the unemployment rate across the food security cohort using individual level data. The data confirm the same conclusions.

Table (5.6): Individual Level Unemployment Rate* in the West Bank and Gaza Strip, 2018

		Food insecurity group	Marginally food secure	Food secure	
		Severely food insecure	Moderately food insecure		
West Bank	Unemployed	32.1%	25.1%	13.3%	12.1%
Gaza Strip	Unemployed	60.1%	50.7%	38.5%	29.5%

*Unemployment rate is calculated relative to labor force participation.

Table (5.7) explores an extra dimension of employment status (employer, self-employed, wage labourer). In this respect, we consider the distribution of food security levels within each employment category. Distinctly, the data show a main regional difference: most of the self-employed in Gaza Strip are food insecure in which over %40 are severely food insecure. This is unlike the case in the West Bank, where most of the self-employed are food secure. Nonetheless, caution should be exercised in interpreting the findings for employers, mainly in Gaza Strip since the sample size might be too small to infer precise and consistent estimates.[37]

Table (5.7): Employment Status by Food Security Levels in the West Bank and Gaza Strip, 2018

Region	Employment status	Food insecurity group				
		Severely food insecure	Moderately food insecure	Marginally food secure	Food Secure	Total
West Bank	Employer	0.60%	1.00%	15.20%	83.20%	100.00%
	Self-employed	2.20%	7.00%	20.40%	70.40%	100.00%
	Wage labourer	2.20%	5.50%	22.60%	69.70%	100.00%
Gaza Strip	Employer	24.30%	14.30%	10.00%	51.40%	100.00%
	Self-employed	41.70%	25.80%	12.30%	20.20%	100.00%
	Wage labourer	37.70%	21.90%	11.70%	28.70%	100.00%

Table (5.8) also displays occupational distribution of household heads per food security cohort, showing that close to half of the severely food insecure household heads in the West Bank are employed in elementary occupations, followed with a large gap by Craft and Related Trade workers as well as Plant and Machine Operators and Assemblers. As for the other food insecure cohorts, the occupation of Craft and Related Trade workers is more dominating. The occupational distribution in Gaza Strip is somehow different. Household heads employed as Service, Shop and Market workers tend to be more food insecure. Next in the severely and moderately food insecure are those working in elementary occupations.

[37] The share of employers, based on the SEFSec survey, in the West Bank is 10% versus 5.4% in Gaza Strip. This represents 367 and 84 sample observations, respectively.

Table (5.8): Distribution of Occupation Across Food Security Levels in the West Bank and Gaza Strip, 2018

Occupation Categories	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
West Bank				
Managers	1.4%	.5%	2.4%	6.0%
Specialists	5.4%	2.1%	6.5%	7.9%
Technicians, associates	0%	2.6%	2.6%	3.7%
Clerks	0%	0%	.6%	1.0%
Service, shop and market workers	6.8%	13.2%	13.8%	17.5%
Skilled agriculture and fishery workers	5.4%	10.0%	2.6%	1.4%
Craft and related trade workers	18.9%	36.3%	32.6%	29.1%
Plant and machine operators and assemblers	13.5%	13.7%	14.3%	13.4%
Elementary occupations	48.6%	21.1%	24.3%	18.3%
Security Forces	0%	0.5%	0.4%	1.6%
Total	100.0%	100.0%	100.0%	100.0%
Gaza Strip				
Managers	1.3%	3.4%	6.7%	7.8%
Specialists	5.0%	10.8%	21.3%	24.2%
Technicians, associates	2.5%	3.7%	6.7%	6.6%
Clerks	2.0%	2.5%	1.2%	3.1%
Service, shop and market workers	28.6%	26.9%	22.6%	21.4%
Skilled agriculture and fishery workers	3.6%	2.5%	1.2%	2.1%
Craft and related trade workers	14.3%	13.0%	11.6%	7.3%
Plant and machine operators and assemblers	7.7%	8.6%	6.7%	7.1%
Elementary occupations	24.8%	18.8%	14.6%	11.3%
Security Forces	10.4%	9.9%	7.3%	9.2%
Total	100.0%	100.0%	100.0%	100.0%

The main source of income of all food security levels in the West Bank is paid wages from the private sector (see Table 5.9). However, %18 of the severely food insecure and %14 of the moderately food insecure live mainly on government social assistance. As for Gaza Strip, years of blockade and political polarization have marginalized the significance of the private sector. Government is the main source of income in Gaza Strip, either via social assistance for the severely and moderately food insecure or via paid wages for the other levels. Notably, relative to the case in the West Bank, social assistance from international institutions, especially UNRWA, is an important source of income for the former levels.

Table (5.9) Households Main Source of Income by Food Security Levels in the West Bank and Gaza Strip, 2018

Income Sources	West Bank			
	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
West Bank				
Agriculture, fisheries and animal husbandry	3%	7%	2%	2%
Non agriculture family business	2%	4%	9%	13%
Wages and salaries from the public sector	10%	7%	11%	14%
Wages and salaries from the private sector	32%	38%	38%	35%

Income Sources	West Bank			
	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Wages and salaries from the Israel labour market	18%	18%	22%	20%
Social assistance	18%	14%	4%	2%
International agencies (aid)	1%	1%	0%	0%
Other	15%	11%	14%	14%
Total	100%	100%	100%	100%
Gaza Strip				
	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure
Agriculture, fisheries and animal husbandry	2%	2%		1%
Non agriculture family business	4%	6%	6%	8%
Wages and salaries from the public sector	26%	26%	39%	32%
Wages and salaries from the private sector	17%	18%	16%	19%
Wages and salaries from the Israel labour market	N/A	N/A	N/A	N/A
Social assistance	29%	25%	9%	6%
International agencies (aid)	11%	8%	5%	3%
Other	11%	16%	26%	31%
Total	100%	100%	100%	100%

Einaia Kayed shows some soap produced by her womens' cooperative in Sabastia, December 2010 ,15. ©FAO/Marco longari

Palestinian farmer checks a water system at his farm in Atel village near the west bank city of Tulkarem 11 March 2019. ©FAO/Alaa Bardeneh

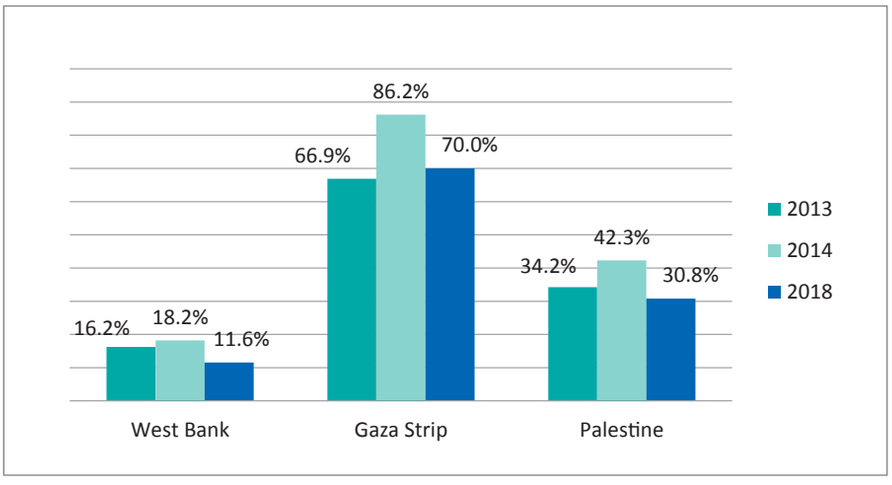
Chapter 6: Analysis of Assistance

Humanitarian and social assistance are among the most commonly used interventions to tackle food insecurity. The objective of this chapter is to explore the extent and nature of assistance provided to Palestinian households. The chapter also shed lights on the sources of assistance, differentiating between governmental, international, and societal sources. Like much of the preceding analysis, this chapter emphasizes the corresponding changes over time and between the West Bank and Gaza Strip.

6.1 Coverage and Type of Assistance.

Nationally, %31 of the Palestinian households revealed that they have received assistance in 2018. This rate has declined relative to earlier years, mainly 2014. Nonetheless, considering the analysis only at the national level hides deep regional differences. Driven by dire economic conditions, the share of households in Gaza Strip who received assistance in 2018 is %70 compared to %11 in the West Bank. Unlike in the West Bank, the share in Gaza Strip has risen relative to 2013. However, 2014 witnessed highly deteriorating conditions with the share of assisted household hitting a high of %86 (see Figure 6.1). In what follows, the analysis considers only households that actually received assistance.

Figure (6.1) Percentage of households receiving at least one type of assistance, 2014 ,2013, and 2018



The composition of assistance, reported in Table 6.1, shows that cash and food are the most common type in both regions, though more households in Gaza Strip are relying on these types. Nonetheless, the data show that the share of food assistance has steadily declined in both regions, for different reasons. Most likely, the relative improvement of economic conditions, however incremental, in the West Bank has played a role, decreasing the share of households receiving all types of assistance and mainly food related (see Figure 6.1 and related component in Table 6.1). The decline in Gaza Strip is driven by distributional changes; shifting from food to food vouchers. The share of households who received the latter in Gaza Strip rose from %7.7 to %28.9. The shares of the other types in the West Bank are not relatively significant, and none exceeded %10. An exception is health insurance in Gaza Strip in which the corresponding share amounted to %49.8 in 2013, but substantially declined since.

Table (6.1): Share of households receiving assistance by type of assistance and region, 2014 ,2013, and 2018

Type of Assuistance	2013	2014	2018			
	WB	GS	WB	GS	WB	GS
Food (in-kind)	50.10%	87.60%	46.00%	80.60%	40.50%	67.30%
Free medicine/ health treatment	3.40%	0.30%	16.50%	1.90%	7.20%	4.20%
Clothes	2.40%	2.00%	1.90%	7.10%	2.10%	1.60%
Job opportunities	1.80%	4.60%	1.40%	0.70%	0.70%	0.40%
Compensation martyrs	0.50%	0.50%	2.10%	0.60%	1.50%	1.10%
Cash	69.60%	44.30%	50.50%	37.10%	61.60%	38.90%
Health insurance	4.80%	49.80%	7.80%	24.40%	6.10%	12.80%
Food coupons and Vouchers	13.80%	7.70%	10.00%	24.20%	14.00%	39.90%
School feeding	0.40%	0.10%	0.00%	0.30%	0.20%	0.10%
Product inputs	0.70%	0.00%	0.30%	0.10%	0.00%	0.00%
Drinking water	0.10%	1.50%	0.30%	6.30%	0.00%	0.60%
Electric recharge fees	1.70%	0.00%	1.70%	0.20%	0.00%	0.20%
Residential	0%	0%	0.10%	4.30%	0.10%	0.10%
Other	1.10%	2.20%	6.00%	30.70%	1.30%	1.50%

6.2 Value of Assistance

The monthly median value of assistance a household received in 2018 was 120 NIS (125 NIS in the West Bank and 111.7 NIS in Gaza Strip).[38] Classified by food security categories Table (6.2) shows that the value of assistance is higher for the severely food insecure in both regions. The data also show that the value of assistance has decreased over time. With dreadful living standards in Gaza Strip, the decline in the value of assistance has surely contributed to deteriorating food security conditions there.

Table (6.2) Median monthly value of assistance, valued in NIS, to households by food security levels, 2014 ,2013, and 2018

Food Security Levels	2013	2014	2018	
WB	Severely food insecure	297.0	154.4	166.7
	Moderately food insecure	269.8	157.6	125.0
	Marginally food secure	250.0	125.0	125.0
	Food secure	250.0	137.2	125.0
	Total	250.0	144.0	125.0
GS	Severely food insecure	318.0	272.5	133.3
	Moderately food insecure	250.0	158.3	125.0
	Marginal food secure	201.1	101.3	100.0
	Food secure	160.0	75.0	66.7
	Total	250.0	150.0	111.7

Table (6.3) provides median estimates of the monthly value of social assistance according to its types. The data show that assistance in the form of a job opportunity and martyrs' allowances scored the highest values. Nonetheless, the share of households receiving such types is minimal. Worth noting, the value of food assistance, the main type of assistance, has drastically decreased since 2013, approximately cut in half to 41.4 NIS in the West Bank and 60 NIS in Gaza Strip. The value of cash assistance has decreased by half in the West Bank, where it amounted in 2018 to 125 NIS,

[38] The monthly median assistance is calculated as the median sum of all types of assistance received by each household over the reference period (six months prior to the time of data collection).

while it decreased by %15 in Gaza Strip standing at 254 NIS. The value of food coupons has also declined by a larger magnitude in both regions, down to some 69 NIS monthly in the West Bank and 41 NIS in Gaza Strip.

Table (6.3): Median value of social transfer by type of assistance and region: 2014 ,2013, and 2018

	2013		2014		2018	
	West Bank	Gaza Strip	West Bank	Gaza Strip	West Bank	Gaza Strip
Food	83.3	112.7	66.7	66.7	41.4	60.0
Free medicine/ health treatment	166.7	55.4	33.3	16.7	108.3	16.7
Clothes	59.4	50.0	50.0	29.4	50.0	16.7
Job opportunities	255.8	500.0	666.7	449.0	244.5	921.8
Compensation martyrs	333.3	520.4	413.4	432.6	466.7	1000.0
Cash	250.0	300.0	166.7	250.0	125.0	254.0
Health insurance	55.0	50.0	50.0	25.0	88.8	16.7
Food coupons andvouchers	140.0	164.1	50.0	66.7	63.4	50.0
School feeding	20.5	10.5	0.0	67.3	33.3	222.2
Product inputs	39.7	N/A	395.9	22.7	0.0	0.0
Drinking water	166.7	30.0	63.4	25.0	0.0	30.0
Electric recharge fees	183.3	N/A	100.0	9.7	0.0	16.7
Residential	N/A	N/A	833.3	743.5	1500.0	333.3
Other	444.2	50.0	104.3	83.3	1051.4	166.7

The median value of assistance varies across household characteristics (Table 6.4). This shows that over the years, the value of assistance that refugee households receive is less than that of non-refugees. Yet, the value of assistance for both groups has decreased. In terms of the gender of household head (Table 6.5), the data show regional differences. In Gaza Strip, FHHs have received greater value of assistance; most prominently in 2018, when they received twice as much as that of the MHHs. The case is similar in the West Bank, but the difference is much smaller. Nonetheless, the value of assistance has decreased over time for both genders.

Table (6.4): Median monthly value of assistance to Palestinian households by refugee status, 2014 ,2013, and 2018.

Year	Region	Refugee	Non-refugee
2013	WB	249.8	300.0
	GS	236.3	288.7
2014	WB	125.0	166.7
	GS	133.7	166.7
2018	WB	116.7	150.0
	GS	91.7	161.9

Table (6.5): Median monthly value of assistance to Palestinian households by gender of household head, 2014 ,2013, and 2018

Year	Region	Male	Female
2013	WB	250.0	268.8
	GS	236.3	366.7
2014	WB	134.9	171.7
	GS	139.8	211.5
2018	WB	125.0	133.3
	GS	100.0	202.4

The analysis is extended to explore whether the value per type of assistance varies by household characteristics. The data in Table (6.6) show the value share of each type of assistance relative to the total value per gender and whether the household head is a refugee. The data document differences based on these characteristics, mainly with respect to value share of food assistance. Relatively, the value of food assistance that the refugees receive both in the West Bank and Gaza Strip is higher, reflecting the special role of UNRWA in that respect. Though, no notable differences are documented with respect to cash assistance, the highest value share among all types. Similar conclusions hold when classifying type of assistance by the gender of household head. Cash makes up most of the total value of assistance that FHHs receive, mainly in the West Bank. However, the composition of assistance is more diversified for their male peers.

Table (6.6): Composition of assistance by region and household group, share of total value received, 2018

Type of assistance	WB		GS		WB		GS	
	Refugee	Non-Refugee	Refugee	Non-refugee	Male	Female	Male	Female
Food	17.8%	9.0%	28.3%	11.8%	12.0%	11.0%	22.5%	14.8%
Free medicine/ health treatment	11.4%	9.2%	0.6%	0.8%	10.7%	6.0%	0.8%	0.4%
Clothes	0.1%	1.1%	0.1%	0.1%	1.0%	0.3%	0.1%	0.0%
Job opportunities	4.0%	0.0%	0.9%	2.5%	1.6%	0.0%	1.9%	0.0%
Compensation martyrs	2.5%	6.2%	3.9%	5.1%	6.2%	0.0%	3.2%	9.0%
Cash	56.3%	52.5%	51.4%	55.3%	48.9%	75.3%	51.8%	60.5%
Health insurance	1.1%	5.3%	1.3%	2.8%	4.1%	3.0%	2.3%	2.4%
Food coupons and vouchers	5.5%	9.5%	9.8%	19.6%	9.1%	4.2%	14.9%	8.4%
School feeding	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%
Product inputs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Drinking water	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
Electric recharge fees	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Residential	1.4%	0.0%	0.2%	0.0%	0.6%	0.0%	0.1%	0.0%
Other	0.0%	7.1%	3.4%	1.7%	5.9%	0.1%	2.3%	4.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The Ministry of Social Development (MoSD) is the main source of assistance in the West Bank. It covers half of the assisted households in 2018, whereas the UNRWA is the main source of assistance in Gaza Strip reaching %70 of the assisted households (see Table 6.7). The share of households receiving assistance from MoSD in the West Bank slightly declined by 2018 relative to 2013. Despite the significant drop in 2014, the share of West Bank's households receiving assistance from the UNRWA improved relative to 2013. The corresponding UNRWA share in Gaza Strip slightly increased relative to 2013.

Markedly, the data in Table (6.7) also show that other sources have become more visible, mainly charities in the Gaza Strip. Still, the share of households receiving their assistance from those sources rose from %5.6 in 2013 to %23.7 in 2014, but then declined by 8 percentage points in 2018. International development agencies, mainly the WFP, increased their assistance coverage in Gaza Strip raising their share to %26 during the 2014 crisis, but reverting to their previous share of around %15 by 2018. Relatives and family members as well as trade/worker unions also played an important role in 2013, mainly in Gaza Strip. But the significance of such social solidarity diminished in the following years to around %10 in both regions.

Table (6.7): Reported Source of Assistance, 2014 ,2013, and 2018[39]

Source of Assistance	2013		2014		2018	
	WB	GS	WB	GS	WB	GS
Ministry of Social development	55.1%	30.3%	41.4%	28.0%	51.4%	32.8%
Other PA agencies	5.3%	6.3%	12.9%	10.0%	10.0%	7.3%
Political parties	0.1%	0.6%	0.6%	10.6%	2.0%	7.0%
Zakat	3.2%	0.8%	3.9%	3.0%	7.2%	5.8%
International development agencies	9.8%	14.7%	7.2%	26.0%	2.7%	15.3%
UNRWA	13.7%	64.6%	23.7%	73.7%	20.1%	71.1%
Foreign and Arab countries	0.0%	0.3%	0.8%	3.0%	0.0%	2.1%
Charities/ religious organization	2.7%	5.6%	1.6%	23.7%	5.6%	15.8%
Relatives/ Family members	17.7%	22.6%	16.9%	7.7%	5.9%	7.2%
Friends/neighbors/charitable people	6.6%	2.7%	5.5%	5.9%	9.8%	4.2%
Trade / Worker unions	0.0%	33.6%	0.3%	15.2%	0.2%	6.2%
National banks	0.2%	0.0%	0.0%	0.2%	0.0%	0.0%
Local reconciliation committee	0.0%	0.1%	0.1%	0.4%	0.4%	0.6%
Others	2.9%	0.5%	5.3%	3.8%	1.9%	1.0%
Total	100%	100%	100%	100%	100%	100%

Palestinian fisherman in Gaza, 2010. ©FAO/Marco Longari

[39] Sources of assistance are not mutually exclusive. Some households reported receiving assistance from more than one source

Palestinian farmer shows a Bean crop at his farm in Al - Nasariya village in the Jordan valley 4 March 2019. ©FAO/Alaa Bardeneh

Chapter 7: Main Conclusions and Policy Recommendations

The report shows that just over half of the households, equivalent to 1.67 million individuals, in Palestine are either severely, moderately or marginally food insecure. Most of these households reside in Gaza Strip, constituting %69 of these two levels as opposed to %12 in the West Bank. Such a difference is mainly attributed to the drastic spatial divergence in the economic conditions. This can be manifested in multiple facets. Real GDP per capita in Gaza Strip is one third of the West Bank's, while unemployment rate is about three time as much. Wages in Gaza Strip are much lower, less than half of the West Bank's.

The dire economic conditions in Gaza Strip are attributed to the negative shocks that have struck this region over the past years. It started with the breakout of the Second Intifada in the end of 2000, when Israel Band all access from Gaza Strip to the Israeli labor market and culminated in 2007 as Israel imposed a blockade in the wake of Hamas's military takeover. Economic conditions had been further exacerbated with the recurrent wars that Israel waged against Gaza Strip, shattering the economy and pushing the economy into deep and prolonging economy. Coupled with economic repercussions of the Palestinian political polarization, these shocks have disproportionately worsened the well-being of the most vulnerable. Consistently, the report confirms that along with the general economic collapse in the Gaza Strip, level of food security has deteriorated over time as more households have become poorer, less resilient, and more food deprived. The far-reaching policy implication of the linkages between level of food security and economic conditions is that the Israeli blockade should be lifted and that the political polarization should be ended in order to dramatically improve food security conditions in Gaza Strip such that they converge to a similar level as the West Bank. Put differently, food security conditions can only further deteriorate unless these constraints are lifted.

Nevertheless, with little hope that the status quo will be favourably change in the foreseeable future, a number of interventions can be utilized to partially improve the food security conditions mainly in Gaza Strip. More aid resources, from the Palestinian government or international institution like the UNRWA and WFP should further focus on disproportionately targeting vulnerable households in Gaza Strip. International institutions should exert extra efforts to reverse the decrease in the value of assistance that food insecure households have experienced over the past years. In addition, the assistance programs in the West Bank should be limited to the severely food secure household and mainly those residing in area "C", those lacking supporting non-financial assets, and female headed households. Such measures are necessarily vital but are regarded as copying mechanisms at best. Sustainably enhancing food security entails installing programs that empower vulnerable households, for example, via income generating projects and intensifying efforts to allocate a greater share of resources to proven economic empowerment programs. Allocating a greater share of available social protection resources to such programs and expanding the number of beneficiaries, is expected to help pull disadvantaged households out of the poverty and food insecurity trap.

Chapter 8: Food Security Experienced Scale

Food Insecurity Experience Scale (FIES): SDG2 indicator 2.1.2

The Concept of FIES

SDG Indicator 2.1.2. is defined as the "prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)". FIES is a peer reviewed measurement metric, developed by the FAO[40] to measure food insecurity on the base of self-reported food-related behaviours and experiences associated with increasing difficulties in accessing food due to resource constraints by an individual or a household. This indicator provides internationally comparable estimates of the proportion of the population facing moderate or severe difficulties in accessing food. It is used to establish the baseline for the indicator for SDG2, target 2.1, and will be used to monitor the progress towards achieving SDG2.

The FIES is a statistical scale, like other widely accepted scales, designed to measure unobservable traits such as aptitude/intelligence, personality, and a broad range of social, psychological and health-related conditions.
No single tool can account for the many dimensions of food and nutrition security. The FIES complements the existing set of food and nutrition security indicators. Used in combination with other measures, the FIES has the potential to contribute to a more comprehensive understanding of the causes and consequences of food insecurity and to inform more effective policies and interventions. Because the FIES is easy for professionals and institutions from any sector to use, its inclusion in diverse types of surveys can help strengthen links between different sectorial perspectives, for example, between agriculture, social protection, health and nutrition.[41]

FIES Questions, analysis and Interpretation

The FIES survey module consists of eight questions regarding people›s access to adequate food that are asked as follows: During the last 12 months, was there a time when, because of lack of money or other resources:

1. You were worried you would not have enough food to eat?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?

The set of eight questions compose a scale that covers a range of severity of food insecurity. Rather than looking at actual food consumption, experience-based food insecurity scales provide an accurate assessment that can be used to place individuals or households along the food insecurity continuum that includes hidden hunger, by accounting for individuals or households› expected behaviours in times of limited food access.

Figure 1: Food Insecurity Continuum and FIES

[40] http://www.fao.org/in-action/voices-of-the-hungry/fies/en/
[41] ibid

- With increasing severity, the quantity of food consumed decreases as portion sizes are reduced or meals are skipped (moderate-to-severe food insecurity)
- Severe food insecurity is characterized by feeling hungry but not eating, or not eating for an entire day, due to lack of money or other resources.

The FIES survey module is easily integrated into various types of population surveys. However, responses to the questions must always be analysed together as a scale, not as separate items. Comparability of results across countries is achieved using statistical techniques borrowed from the toolkit of Item Response Theory (IRT) models, commonly used in the educational and psychological testing fields.[42]

FIES in Palestine

FIES module have been included in the SEFSec questionnaires of 2018. The questionnaires were addressed to 9,675 adults (18 years of age and above) selected randomly among the households interviewed as part of the survey sample.

Table 1: FIES Prevalence of Moderate to Severe and Severe Food Insecurity by Population Group 2018

	Population Group	Moderate to Severe (%)	Severe (%)
Refugee Status	Refugee	35.4	5.6
	Non-Refugee	19.8	3.6
Sex of Head of Households	male	25.8	4.3
	Female	30.0	5.8
Region	West Bank	9.3	1.6
	Gaza Strip	51.6	8.6
	Palestine	26.0	4.4
locality type	Urban	27.6	4.6
	Rural	11.5	1.5
	Camp	35.9	6.8

Prevalence of Moderate to Severe Food Insecurity

High prevalence of food insecurity at moderate levels can be considered a predictor of various forms of diet-related health conditions of concern in the population, associated with micronutrient deficiency and unbalanced diets. The results of FIES analysis on 2018 indicated that the prevalence of moderate to severe food insecurity among the Palestinians reached %26.3.

Looking at the results, as reported in table 1, shows a huge disparity between the West Bank and Gaza. The prevalence of moderate to severe food insecurity reached %51.6 among Gazans population and %9.3 among West Bankers. Less disparity is seen when data is examined by refugee status, with the prevalence of moderate to severe food insecurity reaching %35.4 and %19.8 among refugee population and non-refugees, respectively. Differences were also prevalent when locality type is considered with highest prevalence's of moderate to severe food insecurity witnessed among camp dwellers (%35.9), followed by Urban dwellers (%27.6), while rural dwellers witnessed the lowest prevalence with %11.5.

Women headed households in Palestine have traditionally faced higher levels of poverty and food insecurity. This is confirmed by 2018 FIES results indicating that the prevalence of moderate to severe food insecurity reached %30 among female headed households compared to %25.8 among male headed households.

FIES Prevalence of Severe Food Insecurity

Severe levels of food insecurity, imply a high probability of reduced food intake and therefore can lead to more severe forms of undernutrition, including hunger.

[42] https://www.rasch.org/rmt/rmt161o.htm

The disparity between West bank and Gaza is confirmed for the prevalence of severe food insecurity. The prevalence of severe food insecurity characterizes only %4.4 of the all Palestinians, but almost doubles (to %8.6) among Gazans, while more than halves (to %1.6) among West Bankers. The disparity decreases when refugee status is considered. As much as %5.6 of refugees are characterized by prevalence of severe food insecurity, compared to %3.6 of non-refugees. Also, the prevalence of severe food insecurity by locality type follows the same trend as moderate to severe food insecurity, with refugees facing the highest prevalence of severe food insecurity (%6.8) followed by urban population (%4.6) and finally rural population (%1.5).
Lower differences are witnessed as well when the sex of the head of the household is considered, with %4.3 of male headed households facing severe food insecurity compared to %5.8 of female headed

Comparing FIES results to the National Food Insecurity Prevalence measured through SEFSec:

The Food insecurity Prevalence presented in chapters xx-xx result from a context specific methodology that was developed in consultation with various stockholders. It combines 3 main pillars (Resilience Capacity Index, diet quality and quantity[43] and assets-based poverty[44]) measured quantitatively to address the food insecurity status of the households using a subjective decision matrix agreed by stakeholders on the bases on -3way cross tabulation results of the analysed pillars.
Albeit the specificity of each of the two measures makes comparability between the two impossible[45], for the purpose of examining the difference in food insecurity measured through the different methodologies, the following table presents the results of food insecurity measured through FIES and SEFSEC on comparable units (individuals).

Prevalence of food insecurity among Palestinians 2018 – FIES versus SEFSec

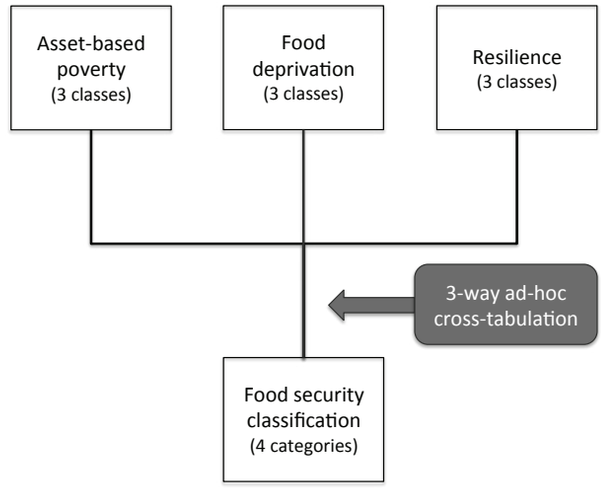
		FIES	SEFSec (individuals)
	Population Group	**Food Insecure % Moderate to Severe**	**Food Insecure % (moderate + Severe)**
Refugee Status	Refugee	35.4	45.39
	Non-Refugee	19.8	25.06
Sex of Head of Households	male	25.8	32.0
	Female	30.0	42.45
Region	West Bank	9.3	11.6
	Gaza Strip	51.6	68.6
	Palestine	26.0	32.7
locality type	Urban	27.6	34.5
	Rural	11.5	17.6
	Camp	35.9	44.2

[43] A combination of food security score and food insecurity access scale.
[44] See annex xx for more details.
[45] There is no absolute measure of Food Insecurity and the different methods adopted and evaluate different aspects of hunger and its effects.

Annexes

Annex (A) - SEFSec Methodology

The SEFSec methodology, uses a three-pillar approach to reflect the multi-dimensional drivers of food insecurity in Palestine, including: poverty (based on household ownership of assets), food deprivation (Food Consumption Score (FCS) to capture dietary quality and the Household Food Insecurity Access Scale (HFIAS) to capture food consumption quantity), and resilience (to capture household's capacity to adapt and transform in the face of shocks or stressors relying on assets, income generating activities, basic services, and social safety nets).



The three components – poverty, food consumption, and resilience – are combined to assess households in four categories as shown in the table below.

	Resilience	Deep poor	Poor	Non poor
Severely food deprived	Low			
	Medium			
	High			
Moderately food deprived	Low			
	Medium			
	High			
Not food deprived	Low			
	Medium			
	High			

The resulting food security groups are defined as:

	Severely food insecure	Households with a severe or significant consumption gap that they cannot counter through economic means or coping mechanisms.
	Moderately food insecure	Households that face issues with either the quantity or quality of food consumed, which they cannot address due to their limited financial means or without employing irreversible coping options.
	Marginally food secure	Households that risk not being able to maintain sufficient food consumption, and households that have adequate financial means but did not adapt their diet to an acceptable level.
	Food secure	Households that have sufficient food consumption which they will be able to maintain without the use of coping strategies while meeting their essential food and non-food needs.

(see Appendix A)

Annex B – Poverty Measures

The annual Socio-Economic and Food Security survey includes three types of information suitable to support poverty analysis:

- data on expenditures
- data on incomes
- data on owned assets.

The SEFSec methodology includes poverty among the dimensions defining the food security status of a household. The classification of households was carried out according with an asset-based measure of poverty. The advantages of using asset indexes are both conceptual and practical. Conceptually, asset ownership clearly reflects long-term wealth, which is closely related to living standards. In terms of practical advantages, data collection is quicker, easier, more reliable, less susceptible to bias, and less culturally sensitive than collection of data on income and expenditures. The asset based measures based on data collected with SEFSec were assessed on their ability to correlate with current expenditure (the gold standard of measurements) and to reproduce changes in welfare through time.
A wide set of variables on households' ownership of consumer durables is collected during the SEFSec. These data can be used to construct an index of asset ownership that may have a stable relationship with total expenditures over time. After a comparison among alternative methodologies to produce asset-based poverty measures a regression approach was preferred to principal component analysis and count-indexes methodologies.
A set of dummy variables was created to represent the ownership of eight durable items and three household's characteristics strongly correlated with total expenditures:

Asset Ownership

- Central heating
- Vacuum cleaner
- VCR/DVD
- Telephone
- Cell phone
- Computer
- Microwave
- Private car.

Dwelling characteristics

- Heating from gas, kerosene and electric power

Demographic characteristics

- Household size
- Refugee status

The 10 dummies were included as independent variables in a regression where the depend variable was the total household expenditure. The regression was carried out on PECS data obtaining the weights (i.e. the regression coefficients) to apply to SEFSec data on assets ownership and household characteristics. In this way an estimated value of total expenditures was assigned to each observation included in the SEFSec database.
Households were classified into three poverty groups, according to absolute poverty lines estimated annually by PCBS using PECS, data, taking into account price inflation (PCBS 2012):

- Deep poor households. Households falling below the «deep poverty» line. The deep line is based on a budget for food, clothing, and housing; households falling below this line are in a situation of dire poverty.
- Poor households. Households falling below the National Poverty line but above the «deep» poverty line. The National needs line adds in consideration of other necessities such as health care, education, transportation, personal care, and housekeeping supplies.
- Non-poor households.

References

Langworthy M., Smith L.C., Sagara B. 2014. Review of Palestine SEFSec Food Security Analysis Methodology. Report 1, March 18th.

PCBS. 2012. *Living standards in the Palestinian Territory: expenditure, consumption, poverty, 2011*. Palestinian National Authority, P

Annex C – Food Consumption Indicators

The SEFSec methodology introduces a food consumption variable in the food security analysis. This is done by combining two indicators of food consumption which are both relevant in Palestine:

- the Food Consumption Score (FCS) to capture dietary quality
- some elements of the Household Food Insecurity Access Scale (HFIAS) to assess dietary quantity.

These factors incorporate households' ability to consume a sufficient quantity and quality of food for an active, healthy life while providing stable results over time in the Palestine context given (1) the dynamics of economic instability in the country; (2) continuing nutrition transition; and (3) the widespread consumption of calorie-dense, nutritionally-inferior foods that are high in sugars.

The Food Consumption Score (FCS)

FCS is the standard WFP proxy indicator of household's access to food. It is a composite score measuring dietary diversity, frequency of consumption and relative nutritional importance of different food groups. While FCS is able to capture the dietary quality situation, it does not fully capture the amount of food people eat.

Calculation of FCS takes into account the number of food groups consumed by a household over a period of seven days (dietary diversity); the number of days a particular food group is consumed (food frequency); and the relative nutritional importance of different food groups.

Food group	Type of Food	Weigths
Cereal and tubers	Wheat, rice, bread, potatoes and other grain	2
Pulse	Dried beans , lentils etc.	3
Vegetables	All type of vegetables	1
Fruits	All type of fruits	1
Meats	Red, white meat and eggs	4
Dairy products	Milk and youghurt	4
Sugar	Dried fruits, sugar, jam and sweets	0.5
Oil/fats	Olive oil, other vegetable oils	0.5
Others	Thyme, dukka, tea, coffee, spices	0

The SEFSec survey captures 9 groups and each group is allocated a score (weight) based on its nutrient density (see table below). The frequency of each group (number of days consumed by the household) is multiplied by its score and then added all food groups.

The higher the FCS, the more diverse and nutritional is the diet. The FCS is used to categorize household in three groups using appropriate cut-offs (the same employed for food security classification in Iraq):

- a 'poor' food consumption (FCS <=45) consists of cereals (bread and rice), potatoes, sugar and oil consumed on a nearly daily basis, vegetables 4 times during the 7 days prior to the survey and very rare consumption of animal products and fruit;
- a 'borderline' diet (45> FCS<= 61) is similar but includes a slightly more frequent consumption of vegetables (5 a week), and consumption;
- an 'acceptable' diet (FCS>61) is yet more diversified with consumption of the various food groups on a nearly daily basis.

The Household Food Insecurity Access Scale (HFIAS)

The HFIAS was developed by the USAID funded Food and Nutrition Technical Assistance to be valid across different cultural contexts. It is based on the responses of 9 questions, five of which are about food security aspects:

5. Did you or any household member eat a smaller meal than you felt you needed because there was not enough food?
6. Did you or any other household member eat fewer meals in a day because there was not enough food?
7. Was there ever no food at all in your household because there were not resources to get more?
8. Did you or any household member go to sleep at night hungry because there was not enough food?
9. Did you or any household member go a whole day and night without eating anything because there was not enough food?

The questions refer to what the household experienced in the 30 days preceding the survey. Households who answered positively to any of the above questions are classified as having "insufficient dietary quantity".

Classification of households in food deprivation groups

The two indicators of food consumption are combined together to form three "food deprivation" categories through the following decision matrix.

	Insufficient dietary quantity	*Sufficient dietary quantity*
Poor dietary quality	Severely food deprived	Moderately food deprived
Borderline dietary quality	Severely food deprived	Moderately food deprived
Acceptable dietary quality	Moderately food deprived	Not food deprived

The food deprivation categories are then used to determine the final food security classification (see Appendix A)

Annex D – Resilience Measure

Household resilience is the 'capacity that ensures adverse stressors and shocks do not have long-lasting adverse development consequences' (TWG-RM, 2013: p. 6). This concept captures better than kindred concepts, such as vulnerability, the household ability to absorb, adapt and transform in the face of shocks or stressors sustaining their livelihood. Even more important, resilient households are also more able than others to recover after a loss caused by a shock.

Therefore, the SEFSec 2018 also includes a resilience dimension in the classification of household food security status (refer to Annex A). The SEFSec adopts a globally recognized indicator of resilience: the Resilience Capacity Index (RCI) developed by the United Nations Food and Agriculture Organization within the Resilience Index Measurement and Analysis (RIMA) model (Alinovi et al., 2008 and 2010; FAO, 2013; FAO, 2016)[46].

Using the most updated RIMA model[47], the RCI is estimated as a latent variable depending of pre-determined dimensions, referred to as pillars, as well as of food security indicators. The model employs the following four pillars as well as food security indicators:

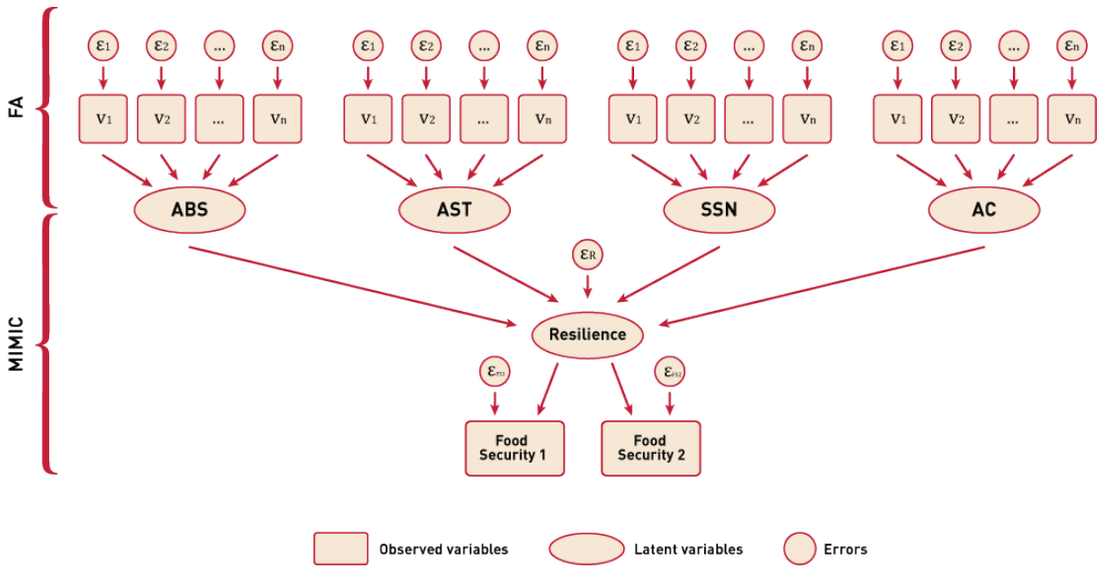
	Resilience Pillars and Food Security	Indicators
Physical dimensions	Assets (AST)	• Dummy indicating whether the household owns or not its house • Monthly rental value (in NIS) of the household dwelling • Wealth index on the consumer durable assets • Tropical Livestock Unit (TLU)[48] • Agricultural land (in hectares) owned by the household
	Access to basic services (ABS)	• Walking distance in minutes to get to the nearest pharmacy • Walking distance in minutes to get to the nearest elementary school • Walking distance in minutes to get to the nearest health centre • Dummy indicating whether the household suffers any cut off in water • provision • Dummy indicating whether the household suffers any cut off in electricity • provision • Percent of household members with health insurance

[46] FAO. 2016. RIMA-II: Resilience Index Measurement and Analysis II. Rome. Available at www.fao.org/3/a-i5665e.pdf.
[47] For the differences between the RIMA I and RIMA II models please refer to FAO, 2016.
[48] TLU standardizes different types of livestock into a single unit of measurement. The conversion factor adopted is: 0.7 cows; 0.5 cattle and calves; 0.1 sheep/goats; 0.02 poultry; 0.01 beehives; 0.01 fish.

	Resilience Pillars and Food Security	Indicators
Capacity dimensions	Adaptive capacity (AC)	• Average years of education of household's members • Share of active household members • Number of income-generating activities • Number of different sectors that members are employed in • Share of household members with full-time employment • Dummy equal to one if no household member suffers of disabilities
	Social Safety Nets (SSN)	• Value of cash assistance (in NIS) received by the household members • Value of in-kind assistance (in NIS) received by the household members • Value of other type of assistance (in NIS) received by the household members
Outcome of resilience	Food Security	• Monetary value (in NIS) of per capita food consumption, including bought, own-produced, and received for free (as gifts or part of a conditional project) food • Household Dietary Diversity Score

The RCI is estimated in a two-step procedure. First, the resilience pillars are estimated through Factor Analysis from observed variables. Second, a structural equation model (the Multiple Indicator Multiple Causes -MIMIC- model) is employed to predict the RCI, which identifies the relation between the pillars and the indicators of food security. The latter is considered the outcome of resilience.

The RCI is then normalized on a scale between 0 and 1, identifying three classes according to terciles in the index distribution: low (RI ≤ 3/1), medium (3/1 ≤ RI ≤ 3/2) and high (RI > 3/2) resilience. Finally, each household is associated to a given resilience tercile: this contributes to the identification of the final food security status of each household (see Annex A).



Annex E - Prevalence of Food Insecurity: Panel versus Cross-section approach

The SEFSec survey has been implemented using panel sampling approach for 3 consecutive rounds (2014 ,2013 and 2018)[49]. While keeping the panel sample over the three rounds, an additional sample was introduced in 2014 to compensate for attrition (households who were no longer reachable or existing or willing to participate in the survey) and with the aim of maintaining the representativeness of the sample. This annex is presenting the comparison in households food insecurity estimates analyzed employing a panel sampling approach versus estimates produced using the same analytical methodology (i.e. analyzing each data set individually using all observations in the dataset) but employing a cross sectional approach[50].

[49] Panel sampling is a sampling method based on first selecting a group of participants through a random sampling method and then asking that group for (potentially the same) information repeatedly over time.

[50] Cross Section samples: a cross-sectional study (also known as transverse study, prevalence study) is a type of observational study that analyzes data from a population, or a representative subset, at a specific point in time.

Both sampling approaches have advantages and disadvantages that are documented in the literature. [51] In principle, the decision to use one or the other relies on the topic of the research, the hypothesis being tested and the type of analysis to be performed. A summary of the advantages and disadvantages are presented in the table below.

Table 1: Panel versus Cross Section: advantages and disadvantages

Panel	Cross Section
Advantages	
Analytical	
- Repeated observations of the same individuals over time show processes of change - The temporal order of effect and cause is known when using panel data, - Permits correlating past and present behaviors	- Provides good controls over the measurement process - Offers information for a descriptive analysis - Allows anyone to analyse the data to draw conclusions.
Practical	
- No sampling design is needed for subsequent surveys	- Affordable studies method. - Offers completeness of key data points - Provides better precision in the sampling process
Disadvantages	
Analytical	
- Progressively becomes less representative of the population (due to dropouts) - Panel data sets are much harder to manage	- Requires a larger sample size to provide accuracy - Prone to biased results (due to non-response) - Does not offer data about causal relationships
Practical	
- Observing individuals over time is challenging and the number of individuals lost in subsequent panel waves ("panel attrition") may be substantial - Repeated measurements may elicit stereotypical and streamlined answers - Panel studies are costly as they involve long-term investments in terms of financial and human resources	- Requires a defined population group to be successful - Unable to measure incidence

SEFSec Sample

The total sample of the three rounds of SEFSec is presented in table 1. The total number of panel sample, i.e. those households who occurred in each of the three rounds is 6360 households. Thus, the Annex presents two sets of numbers for each of the years considered, one resulting from the analysis of the full cross section sample for each of the years (8174 ,7500 and 9098 for 2014 ,2013 and 2018 respectively) and the other resulting from the analysis of the panel sample (6360 in each of the years).

Table 1: Sample Size of SEFSec survey 2014 ,2013 and 2018

	2013	2014	2018
Total Sample (households)	7500	8174	9098
Maintained Panel	7500	7452	6360
Analysed panel in 2018	6360	6360	6360
Analysed cross section in 2018	7500	8174	9098

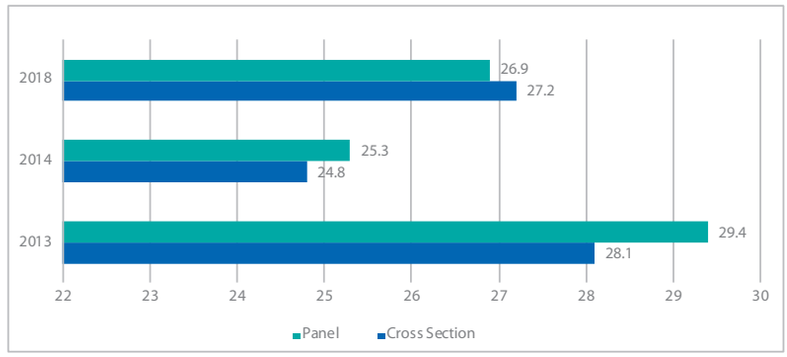
Food Insecurity Levels in Palestine

Based on the panel sample analysis (6360 households), the prevalence of food insecurity among Palestinian Households was %25.3 ,%26.9 and %29.4 in 2014 ,2013 and 2018, respectively. The results using the cross section full sample data collected during the three respective years showed slightly different results. As presented in figure

[51] Rindfleisch, Aric and Malter, Alan and Ganesan, Shankar and Moorman, Christine. (2008). Cross-Sectional Versus Longitudinal Survey Research. Journal of Marketing Research - J MARKET RES-CHICAGO available at: https://www.researchgate.net/publication/253731155_Cross-Sectional_Versus_Longitudinal_Survey_Research.

1, the food insecurity was lower in 2013 and %28.1) 2014 and %24.8 respectively), while it was slightly higher in 2018 %27.2)) when compared to panel results.

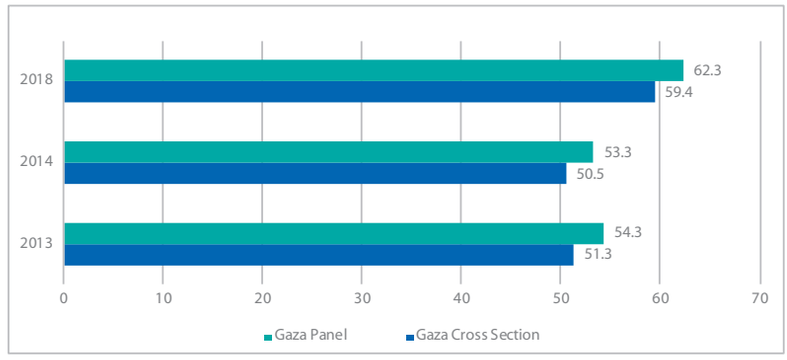
Figure 1: Food Insecurity Incidence in Palestine, panel versus cross section in 2014 ,2013 and 2018

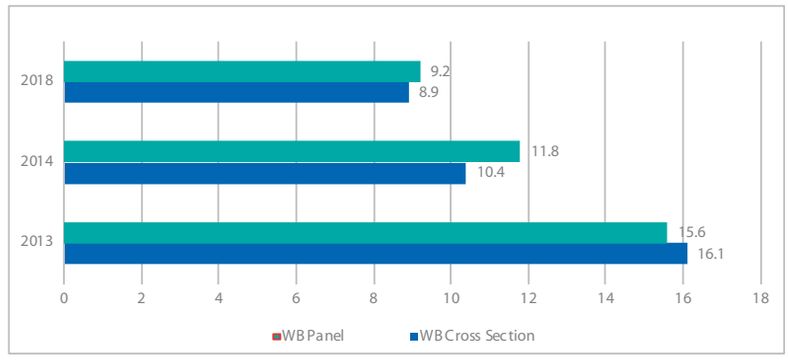


Food Insecurity by Region

As pictured in Figure 2, except for the 2013 occurrence in the West Bank, comparing data between the Gaza Strip and West Bank, cross section data analysis resulted consistently in significant lower incidence of food insecurity when compared to panel sample.

Figure 2 Food Insecurity Incidence by Region: Panel versus Cross Section in 2014 ,2013 and 2018





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