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Poverty in the West Bank and Gaza

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ACRONYMS AND ABBREVIATIONS

G	Gaza
GDP	Gross Domestic Product
GNP	Gross National Product
ICBS	Israel Central Bureau of Statistics
MENA	Middle East and North Africa
MOSA	Ministry of Social Affairs
NCPA	National Commission for Poverty Alleviation
NGO	Non-governmental organizations
NIS	New Israeli Shekels
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PECDAR	Palestinian Economic Council for Development and Reconstruction
PECS	Palestinian Expenditure and Consumption Surveys
PPP	Purchasing Power Parity
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UNSCO	Office of the United Nations Special Coordinator in the Occupied Territories
WB	West Bank
WBG	West Bank and Gaza

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POVERTY IN THE WEST BANK AND GAZA

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Executive Summary

1. Poverty is high in the West Bank and Gaza (WBG). In 1998, poverty affected nearly one in every four Palestinians. Though this report focuses on the period prior to the ongoing social and political unrest, its conclusions remain relevant even in these challenging times. Recent events, which have disrupted economic activity, have only served to underscore the link between economic opportunity and poverty reduction in the WBG as poverty is estimated to have risen sharply since the beginning of the current crisis. In order to reverse the rise in the level of poverty, not only is the resumption of normal economic life essential, but also the adoption of policies which lead to long-term development of the Palestinian society.

2. This report complements the study by the National Commission for Poverty Alleviation, *Palestine Poverty Report 1998*. It is intended for a broad audience and hopes to be of particular interest to persons and organizations whose work is concerned with the improvement of the lives of poor Palestinians. The report's overarching objective is to increase our understanding of the causes of poverty in order to find ways to reduce poverty among the Palestinians. Three broad messages which emerge from the report are:

- First, unless the Palestinian territories are able to achieve high levels of economic growth, the prospects for future poverty reduction are not encouraging. Not only will the number of poor Palestinians grow rapidly, but their share in the population will also increase which could become a socially destabilizing factor.

- Second, unless Palestinians gain greater access to external markets and to better paying jobs, whether in Israel or in higher productivity occupations in the WBG, it will be difficult for them to escape poverty. Presently, the majority of poor Palestinians live in households headed by working adults in low-paying jobs that do not provide sufficient income to raise their families to a minimally acceptable standard of living.

- Third, the formal safety net does not have the financial resources necessary to have a significant impact on poverty. Nevertheless, it can play an important role in helping to reduce destitution among households headed by the unemployable poor and even the temporarily unemployed.

3. This summary and Chapters I-IV present the main conclusions of a World Bank review of the poverty situation in the WBG. The report is divided into four sections. Chapter 1 provides an international comparison of the level of poverty and discusses the micro determinants of poverty in the WBG. Chapter II analyzes the impact of economic growth, income redistribution, and labor market developments on poverty in WBG. Chapter III provides a detailed poverty map of the WBG and Chapter IV discusses ways of improving the social safety net.

4. Core conclusions with respect to each of the four components of poverty review in this report are as follows:

(a) *With respect to the poverty rates in the WBG (Chapter I)*

- Poverty is high because of low economic development in the Palestinian territories.
- Social indicators are good, but these may not be sustainable in the future.
- A key determinant of household poverty among the Palestinians is the employment status of the household head.

(b) *With respect to the impact of economic policies on poverty (Chapter II)*

- During 1996-1998, poverty fell in the WBG due to growth in incomes as well as a reduction in inequality in the distribution of income.
- Though job creation in Israel and in public employment in the Palestinian Authority were the main reasons that poverty declined during 1996-1998, these areas are unlikely to be sources for rapid employment growth and poverty reduction in the future.
- Unless the economy grows by 4.6 percent annually, the share of the population living below the poverty line will rise. However, in order to reduce the number of poor in an economy with rapid population growth, GNP must grow by at least 6.7 percent per annum.

(c) *With respect to the poverty map (Chapter III)*

- Poverty varies dramatically among districts. District poverty rates range from 3 to 55 percent of the local population. Poverty is highest in Gaza districts and lowest in Jerusalem. Half of the Palestinian poor live in three districts – Khan Yunis, Gaza City, and Hebron.
- Three of the top five poorest localities are in the West Bank and all from different districts – Al Jiftlik, Yatta, and Ya'bad, with poverty incidence rates ranging between 40 and 51 percent of the local population. The five most affluent localities are urban centers: the Jerusalem localities followed by the towns of Ramallah and Nablus, the poverty rates ranging between 2 and 7 percent.
- Poverty also varies significantly within district. The highest poverty rates in the districts of Nablus, Bethlehem/Jericho, and Ramallah are 4 to 7 times the lowest poverty rate in the district.

(d) *With respect to the safety net (Chapter IV)*

- The minimum amount of assistance needed to raise poor families to the poverty line is 3.6 percent of GDP, but with the present level of targeting efficiency and moderate administration cost, this amount would rise to approximately 10 percent of GDP or about US$ 400 million.
- The formal safety net reached about 30 percent of the poor in 1998 but did not raise a large proportion of them out of poverty. Substantial resources are being depleted since over half of the beneficiary households are non-poor.
- Modest changes in the safety net can be made which could improve its effectiveness. In the future, larger modifications can be considered that would lead to higher coverage of the poor, including the working poor.

5. The sections that follow summarize the main findings of the poverty report by chapter.

A. Chapter I: Poverty Update 1996-1998

6. ***Level of Poverty in the WBG.*** Poverty in the West Bank and Gaza is estimated at 23.2 percent of the population in 1998, equivalent to about 674,000 persons. The overall poverty figures mask significant differences between the West Bank and Gaza. In 1998 the share of the Gazan population living in poverty was 37 percent, more than twice as high as in West Bank where it was 15 percent. Nevertheless, due to the larger population in the West Bank in comparison to Gaza, 43 percent of all Palestinian poor in the WBG live in the West Bank.

7. The poverty rates among female and male-headed households differ markedly in the WBG. In 1998, 26 percent of female-headed households were below the poverty line as compared to 20 percent of male-headed households. However, though poverty rates are higher among female-headed households, these represent only 11 percent of all Palestinian poor households and, due to their smaller average household size, an even smaller share of the poor.

8. ***International Comparison of Poverty Rates.*** Poverty in the WBG is high by regional standards and for a lower middle-income economy with GNP per capita of US$ 1,800 in 1998. This may be because the WBG actually is not as developed an economy as indicated by its income per capita figures. Residents of the WBG face prices of an upper income country due to the high degree of integration between the Israeli and Palestinian economies, but do not receive commensurately high wages. Effectively, this serves to lower the population's purchasing power and sheds light on why poverty in the WBG is unusually high. Once we correct for this, we find that poverty in the WBG lies in the expected range.

9. ***Social Indicators.*** In the WBG, health and education indicators are closer to the level enjoyed by upper middle-income countries rather than to comparator countries. One possible set of reasons for this pertain to the delivery of social services in the WBG. In general, the population has good access to basic services – both in terms of financial access (i.e., affordability) and geographical proximity. Also, because services provided are of good quality, consumer demand remains high. Finally, the services provided are well balanced between primary and tertiary levels so that essential services (such as preventive care) with the broadest welfare impact are widely available. A second set of reasons why education levels, in particular, are relatively high in WBG may be due to the Israeli policies during the occupation that actively discouraged physical investment. Palestinians may have invested heavily in human capital since other forms of investment were limited.

10. ***Characteristics of the Poor.*** Which households are more likely to be poor? The Palestinian Expenditure and Consumption Surveys allow us to identify the determinants of household consumption. Analysis of the survey reveals the following key findings: (i) households with at least one working member are less likely to be poor – underscoring the importance of employment for poverty reduction; (ii) if a household member is employed in Israel, the household is better off than if he or she works in the Palestinian territories; (iii) in the West Bank, households with members employed in the private sector are better off than those with members working in the public sector; (iv) in Gaza, having a second working member in the household helps to significantly increase household expenditures; and (v) the higher the educational level, the higher the household consumption (and less likely for the household to fall into poverty).

B. Chapter II: Growth, Employment, and Poverty

11. National account data indicate that during 1996-1998 incomes rose by 11 percent as measured by GNP per capita. However, the domestic Palestinian economy grew only modestly and GDP per capita rose by about 2 percent in two years. During this period there was a significant decline in the unemployment rate from 22 percent to 16 percent. According to household survey data, we find in 1996-1998 that the proportion of the population living below the poverty line also decreased substantially from 26.9 percent to 23.2 percent.

12. What were the sources of poverty reduction in the WBG? To answer this question, this chapter analyzes two issues concerning the dynamics of poverty. First, we analyze the recent evolution of poverty in the WBG and try to determine the relationship between economic growth and changes in poverty and inequality in the short-term (1996-1998). Second, the chapter analyzes the impact of structural factors on poverty, particularly developments in the labor market in order to draw some conclusions about the prospects for poverty reduction over the medium to long-term.

13. ***Declining Poverty — Income Growth or Redistribution?*** The proportion of households living in poverty in WBG fell by 3.5 percentage points from 1996 to 1998. The reduction in poverty in WBG could have been the result of either growth in average incomes of Palestinian households, poor and non-poor alike, or a reduction in inequality in the distribution in income (as incomes of poor households gained relatively more than those of the non-poor). In the Palestinian territories, half the reduction in poverty occurred due to a reduction in inequality while about 43 percent in the drop was a result in the growth in average real household consumption. However, regional level poverty decomposition show some differences in the relative importance of these factors. In the West Bank, almost 80 percent of the decline in poverty was due to the growth in average real consumption and a decline in inequality of incomes played a relatively small role, whereas in Gaza, only 36 percent of the decline in poverty was attributable to average growth in real consumption with a reduction in inequality playing a bigger role.

14. ***Labor Markets and Poverty.*** During 1996-1998, there was a net creation of 46,000 jobs in Israel and 43,000 jobs in the WBG, of which 13,000 jobs were in the Palestinian Authority. Though the private sector continued to provide the greatest share of employment in the WBG, its importance has declined during 1996-1998 in both regions, as private sector employment growth was only 10 percent compared to 17 percent and 63 percent in the public sector and Israel respectively. The Palestinian poor are more likely to work in the domestic private sector in the WBG than the non-poor. Their characteristics are similar to the Palestinian workers in Israel in terms of education and age, thus, indicating that job opportunities in Israel can pull poor and low skilled Palestinians out of poverty, and their loss can push them into poverty.

15. How did changes in employment affect household poverty levels? Analysis of the household survey data reveals three important findings. First, a large part of the observed decline in poverty rates between 1996 and 1998 were due to higher employment. Job creation contributed 84 percent of the total decline in the head-count index in the West Bank and 46 percent in Gaza. Second, the private sector played an insignificant role at best in reducing poverty in the WBG. Third, though total job creation was lower in Gaza than in the West Bank, poverty decreased more sharply in Gaza.

16. ***Prospects and Policy Implications.*** The substantial decline in poverty rates observed during 1996-1998 occurred even though expenditure growth was relatively modest. This is

unusual by international standards and reflects a high concentration of households with consumption levels close to the poverty line. It is unlikely that this trend will be sustained in the long run. What would be more likely is that much higher growth rates in consumption and GNP will be necessary to achieve similar rates of poverty reduction in the future. If the number of poor in 1998-2003 is to fall, an annual GNP growth rate of 6.7 percent or more is required. However, if the economy grows at about 2.5 percent per annum, then the number of poor could increase by 63 percent assuming that no changes in the distribution of income occur.

17. In the absence of structural reforms, prospects of further poverty alleviation in the WBG are limited. Though in the past, the poverty level in the WBG was reduced by massive job creation in Israel and the public administration, continued expansion of employment in these sectors will be limited. Therefore, any anti-poverty macroeconomic strategy should rely on the creation of jobs in the private sector, especially in the development of an export-oriented private sector. Higher exports could directly benefit the poor who are probably already heavily represented in low wage occupations in the tradeable goods sectors of agriculture and industry. For an economy as small as the Palestinian economy, long run development depends critically on the creation of strong linkages with external markets. Without expanding its foreign markets, the Palestinian economy will find it difficult to attract new investment and to increase worker productivity. Since domestic demand growth is slow, the rapid rise in labor supply will translate into decreasing real wages, increasing unemployment, and consequently, higher poverty rates.

C. Chapter III: A Poverty Map for the West Bank and Gaza

18. District level poverty rates in the West Bank and Gaza vary significantly. The poverty rates in 1997 exceeded 30 percent of the district population in the Gazan districts and Jenin. The poverty rate in the southern part of Gaza exceeded 50 percent in 1997, while it was around 30 percent in the northern part (Jabalya and Gaza City). In the West Bank, the incidence of poverty is highest in the northern- and southern-most parts, where it is above 25 percent, almost double the rates in central West Bank.

19. Combining the household survey data with the census data in order to obtain poverty rates for small geographical localities, we obtain three interesting findings: (1) three of the top five poorest localities (with poverty between 40-51 percent of the local population) are in the West Bank – Al Jiftlik, Yatta, and Ya'bad, though combined they contribute only about less than 10 percent of the total poor; (2) the five localities with the lowest poverty rates (between 2-7 percent) are concentrated in urban areas in the West Bank: the three Jerusalem localities and the towns of Ramallah and Nablus; and (3) the variation of poverty incidence rates within districts in the West Bank is strikingly high, especially in Nablus, Bethlehem/Jericho, and Ramallah. The highest poverty rates is 4 to 7 times the lowest poverty rate in that district.

D. Chapter IV: Social Safety Nets

20. The objective of this chapter is to present issues for consideration in the design of the future safety net based upon analysis of household data and existing research. This report does not propose a safety net design nor advocate the adoption of any particular safety net program. Rather, the hope is that the issues raised will help the Palestinian society in determining an array of programs best suited to the prevailing social and economic conditions while having the flexibility to respond to future changes.

21. ***Description of the WBG Social Safety Net.*** Social protection of the poor in the WBG is from four major sources: the Palestinian Authority, international official assistance, non-governmental organizations (NGOs), and informal family assistance. The Palestinian Authority's two major social welfare programs are the Ministry of Social Affairs' (MOSA) Income Support Program and the Public Works Programs (apart from public sector employment, which has been an implicit social safety net). The other large welfare program is UNRWA's Special Hardship Program which targets ultra poor refugee households. The non-governmental sector appears to play an important role in the provision of aid to the poor. It is estimated that in 1998, there were about 500 NGOs providing various forms of support to poor households in the WBG. Included in this category are religious organizations and networks of which the Al Zakat Committees are among the most prominent.

22. ***The Cost of a Safety Net.*** The scope of the poverty challenge facing the Palestinian society is large and affects one out of every five households. The transfer alone needed to lift families to the poverty line for one year would be about US$ 150 million or about 3.6 percent of GDP. However, with present rates of leakage to the non-poor and assuming only modest administrative costs, the additional resources needed to operate a simple income-transfer program aimed at eradicating poverty in the WBG would have been about US$ 400 million in 1998, or 10 percent of GDP.

23. ***Effectiveness of Social Protection for the Poor.*** The formal safety net in the WBG appears to need significant strengthening. According to preliminary analysis based upon the household expenditure surveys, the coverage of the formal safety net is modest since it reached only about 30 percent of the poor population in the WBG in 1998. The adequacy of the assistance provided in terms of lifting families out of poverty was also low. Though an estimated 57,000 households received social assistance in 1998, almost 40 percent of the beneficiaries continue to live below the poverty line. In addition, social assistance in the WBG suffers from considerable leakage to the non-poor since only 41 percent of aid recipients are poor.

24. ***Improving the Social Safety Net .*** In the short- and medium-term there are ways to improve the safety net with modest investment of time and resources. First, some basic steps can be taken to reduce leakage of assistance from the formal safety net programs to the non-poor by first determining from which specific welfare programs the non-poor benefit and then seeking ways of reducing it. Second, coverage of the poor and reducing leakage to the non-poor can be improved by the devolution of certain aspects of the implementation of MOSA's poverty alleviation programs to the local level. Third, the allocation of resources can be improved by ensuring that those areas or localities with higher levels of poverty receive proportionately greater transfers.

25. In addition to the short-term considerations for improving the ability of the safety net to reduce poverty in the WBG, there are medium to long-term issues that the Palestinian society may want to address to improve the effectiveness of the safety net. The foremost problem is that both the MOSA and UNRWA income transfer programs as well as the public works programs, exclude the working poor and their dependents though this group comprises the majority of the poor. The second issue concerns the integration and complementarity of social programs, both at the national and local levels. Here we refer not only to the large public welfare programs, but also to the services and assistance provided by education and health care providers and NGOs. Better coordination among these programs could help deal with such difficult problems as child poverty. A third long term issue is the need to consider the establishment of a social insurance program. Presently, old age security is predominantly determined by voluntary savings, informal

transfers, and poverty relief measures, making many of the population, especially in the lower income groups, vulnerable to poverty when old age approaches.

E. Conclusion

26. This report aims to shed light on a few aspects of poverty in the WBG. Much more analytical work remains to be carried out, especially in helping to identify what specific economic policies could be adopted to reduce poverty. Important areas that require further exploration are the impact of sectoral policies on poverty. For example, how do transportation policies impact local unemployment and wage rates? Are secondary school drop-out rates higher in poor areas and, if so, what can be done about it? In order to begin answering questions such as these, analysis of the household survey and census results are important sources of information and can begin at the very least to lay the foundation for developing pro-poor sector policies.

Chapter I: Poverty Update 1996-1998

I. Introduction

1.1. The high incidence of poverty in the West Bank and Gaza (WBG) — with an estimated one in four persons living below an acceptable minimum standard of living immediately prior to the current political crisis[1] — places the issue at the center of the agenda of policy makers. Adopting economic and social policies which reduce poverty are critical for the long-term development of the Palestinian society since high levels of poverty are potentially destabilizing, particularly given the complex nature of the political situation in WBG. Thus, the ongoing development of Palestinian institutions, with the help of the donor community, is vital for devising adequate policy responses and designing instruments for helping the poor during a period of rapid and profound change in Palestinian society.

1.2. This report, which was written with policy makers, civil society, and donors as the target audiences, has three objectives. First, it aims to help improve our understanding of the determinants of poverty at the micro and macro levels in order to better identify policies which can reduce poverty. Second, it contributes to the improvement of anti-poverty interventions through better geographical targeting by providing a detailed poverty map. Third, it discusses the effectiveness and efficiency of the safety net in mitigating the vulnerability of the poor and near poor.

1.3. The report is divided into four chapters. After presenting a brief background of the Palestinian economy and its recent developments, Chapter I provides an international comparison of the level of poverty and discusses the micro determinants of poverty in WBG. Chapter II highlights economic issues which are relevant to understanding changes in poverty over time, in particular it discusses the major impact of labor market developments on poverty alleviation in the recent years. Chapter III goes further in the geographical analysis of poverty, by estimating poverty rates for the West Bank and Gaza divided into 42 geographical localities. Finally, Chapter IV discusses a range of feasible options for improving the current formal safety net arrangements, still at an early stage of development.

1.4. The main findings for the West Bank and Gaza in Chapter I are as follows:

- Poverty is high because of low economic development in the Palestinian territories.
- Social indicators are good, but these may not be sustainable in the future.
- A key determinant of household poverty among the Palestinians is the employment status of the household head.

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[1] This report was prepared before the outbreak of the 2000 political crisis. To address the impact of the crisis on poverty, an annex with an analysis of this issue was subsequently added to the report (see Annex 4). The analysis suggests that poverty has increased significantly by the recent events. It is estimated that the level of poverty reached about 30 percent of the population by end 2000 as a result of the severe restrictions imposed on the movement of people and goods, including the lack of access to the Israeli labor market for the approximately 130,000 Palestinians previously working in Israel. The sharp increase in poverty which has occurred since the end of September 2000 is an indication of the vulnerability of the Palestinian population to adverse economic shocks.

II. Economic Background

1.5. The Palestinian economy is characterized by its limited size, large macroeconomic imbalances, and high and variable unemployment rate. In 1998, GDP was an estimated US$ 4.1 billion (excluding East Jerusalem) for a total population of approximately 2.7 million. GNP exceeded GDP by more than 20 percent, primarily due to worker remittances from Palestinian workers employed in Israel. In 1998 GNP per capita was about US$ 1,800, which places WBG at the level of a lower middle-income country. In terms of macroeconomic developments, the period since the signing of the Oslo Agreement in 1993 has been turbulent: after an initial boost in 1994 the Palestinian economy experienced a severe recession with decreasing real GDP per capita in both 1995 and 1996. Real incomes were stagnant in 1997 whereas 1998 was a year of recovery with noticeable growth in real GDP per capita at an estimated 3.9 percent.[2] Growth in real GDP per capita appears to have continued in 1999, although probably at a slower pace.

1.6. The political situation prevailing in WBG sets the Palestinian economy apart from those of other developing countries, given its dependence on policies implemented by Israel. The main channels through which the Palestinian economy is affected are through movement restrictions placed on labor and goods. This impacts the ability of Palestinian workers to access jobs in Israel and of Palestinian goods to access the Israeli market and Israeli ports of entry and exit. These two areas – trade and labor markets – are of critical importance to economic development because the Palestinian economy is small and the domestic private market under present economic and political constraints is too weak to generate sufficient income for its residents. In addition to the economic restrictions placed upon WBG, Israel's larger and wealthier economy also influences the price levels in WBG.

1.7. Restrictions on movements of labor and goods from WBG to Israel, measured by the number of days of closures, were particularly frequent during 1995-1997. In 1996, the number of closure days was highest at 89 days. Thus, more than three months in which Palestinians usually working in Israel could have received comparatively higher wages than in WBG were lost. Also economic activity within WBG was hampered by the closures, both through the drop in demand as a result of lower incomes from Israel and through reduced access for Palestinian traders to the Israeli market.

1.8. Analysis of the two main macroeconomic balances reveal a mixed picture. The balance of payments reflects WBG's high dependency on Israel. The trade deficit is about 50 percent of GDP and almost exclusively with Israel. About 96 percent of WBG exports are to Israel and 76 percent of its imports are from Israel. The trade gap is partly financed by Palestinian worker remittances from Israel and donor aid. The fiscal account is almost balanced once donor assistance, which finances all public investments in WBG, is included. A rapid increase in the Palestinian Authority's (PA) expenditures has so far been financed by an equivalent increase in the PA's current revenues, notably through the revenue clearance system which transfers revenues accrued to the PA from the Israeli authorities. The rapid increase in public consumption resulted primarily from a substantial increase in the number of public sector employees, partly in order to facilitate the necessary creation of public institutions. Another reason may have been to compensate the Palestinian population for the poor economic situation and sharp increase in unemployment in 1995 and 1996. By 1998, government consumption was almost 25 percent of GDP (compared to 15 percent in 1995), which is not only higher than most

[2] Official figures of real GDP do no yet exist for the WBG. Therefore, it is only possible to make estimates on the basis of nominal figures of GDP and other indicators, e.g., price indices and employment figures.

other lower middle-income countries but is also among the highest in the Middle East and North Africa region.

1.9. The unemployment rate in WBG was approximately 12 percent in 1999 which was less than half the level in 1996, where the unemployment rate peaked. The declines in unemployment have most importantly resulted from an increase in Palestinian employment in Israel, which in 1999 amounted to about 125,000 persons, an increase of more than 50,000 compared to the level in 1996. Also a rapid growth in public hiring which at the end of 1999 reached almost 100,000 persons, or about one-fourth of total employment within WBG has contributed to lowering the unemployment rate. However, these two sources of employment creation are unlikely to be sustainable which increases the pressure on the private sector to create jobs for the rapidly growing labor force. Job creation in WBG is hampered by low levels of investment. Private investment in productive activities remains low, around 14 percent of GDP, while public investment amounts to 8 percent of GDP.[3] Workers are primarily concentrated in non-tradeable activities, such as services.

Table I.1
Macroeconomic Indicators in West Bank and Gaza, 1995-1999

	Unit	1995	1996	1997	1998	1999
Population	thousands	2,396	2,518	2,628	2,731	2,842
GNP	US$ millions	3,984	4,070	4,442	4,906	5,255
GDP	US$ millions	3,484	3,619	3,836	4,078	4,327
Real GNP per capita	index 1994=100	93	88	90	97	101
Real GDP per capita	index 1994=100	93	90	89	92	95
Unemployment Rate	percent	18.2	21.8	21.5	16.2	11.6
Total Employment	thousands	428	451	480	540	562
Employment in Israel	thousands	69	73	77	119	126
Public Employment	thousands	59	74	82	87	98
Closure Days	number	57	89	57	14	7

Note: Macroeconomic aggregates and population figured do not include East Jerusalem.
Population figures are mid-year figures. Employment figures are for the third quarter of each year, except for public employment for which are reported end-year figures.

III. Poverty in the West Bank and Gaza, 1996-1998[4]

III.1 Recent Studies of Poverty in the West Bank and Gaza

1.10. This report builds upon the poverty analysis carried out by Palestinian researchers. In particular, it extends the work by Shaban and Al-Botmeh (1995), Shaban (1997) and the National Commission for Poverty Alleviation (NCPA, 1998). The focus of their analysis is on the measurement of poverty in the Palestinian territories and to provide a profile of the poor's characteristics. This section gives a brief summary of the results of this previous research.

[3] The dependency ratio (average number of dependents per worker) in WBG is high due to a youthful population, high rates of unemployment, and low female labor force participation. Labor force participation rates are low such that less than 50 percent of the working age population participates in the labor market, and under 40 percent in Gaza.

[4] Data on poverty are available on the PCBS website: www.pcbs.org.

1.11. The earliest estimates of poverty were provided by Shaban and Al-Botmeh. Their work was largely based on assessing programs that help the poor, since no reliable household survey of expenditure was available at that time. An estimate of the extent of poverty was made by identifying the number of beneficiaries of the Social Welfare Program of the Ministry of Social Affairs, UNRWA's special hardship program and, as a representative of the significant number of NGOs delivering aid to the poor, the Nablus Zakat Committee. As an estimate of poverty in 1995, Shaban and Al-Botmeh find 10 percent in the West Bank and 20 percent in Gaza, or 14 percent in the two areas taken together. According to Shaban and Al-Botmeh, this estimate is almost certainly a lower bound estimate, since there are more poor people than those supported by these three welfare programs.

1.12. In his analysis of living standards in the West Bank and Gaza, Shaban (1997) utilizes data on household expenditure obtained from the Palestinian Expenditure and Consumption Survey, covering the three months of October-December 1995. Though the sample of 1149 observations is relatively small, Shaban's results only differ marginally from those obtained by the NCPA using the full 1996 data-set. Shaban considers two poverty lines, US$ 500 and US$ 650 per capita per year which yield poverty levels of 9.5 percent and 19.1 percent of the population respectively. Furthermore, Shaban finds that average consumption per capita is approximately 40 percent lower in Gaza compared to the West Bank. Using regression analysis, Shaban finds that the significant correlates of (logarithm of) expenditure per capita are the educational level of the head of household, whether the head of household is working in Israel, the district of household residence, and whether the households live in a refugee camp, in rural, or in urban areas.

1.13. The National Commission for Poverty Alleviation's report, *Palestine Poverty Report 1998*, is the most comprehensive assessment of the level of poverty in the Palestinian territories. A significant contribution of the report is the derivation of a poverty line for the West Bank and Gaza. The poverty line for 1998 was estimated at NIS 1,460 per month for a benchmark household of two adults and four children, equivalent to US$ 767 annually per person or US$ 2.1 per day. The poverty lines established by the NCPA vary by household size and adult-child composition. One assumption is that economies of scale exist -- some household expenditures do not increase proportionally with increases in household's size.[5] Also, with respect to composition of the household, NCPA distinguishes between adults and children and the analysis shows that the necessary consumption of a child amounts to 46 percent of the necessary consumption of an adult[6]. Consequently, smaller households generally have a higher level of necessary consumption per capita as have households with relatively few children (see Annex 1.1).

1.14. Shaban (1997), arguing that consumer prices are somewhat lower in Gaza compared to the West Bank, considers it potentially relevant to use different poverty lines in the two regions. So far no systematic analysis of the magnitude of price level differences between the two regions

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[5] For a full description of the methodology behind the establishment of the poverty line for West Bank and Gaza, see the National Commission for Poverty Alleviation's Report (1998) or for a brief overview see Annex 1.1. Analysis of the PECS shows that an increase of 1 percent in the size of the household implies an increase in the necessary consumption of 0.9 percent, suggesting some degree of economies of scale, although limited.

[6] In order to compare consumption levels across households, taking into account economies of scale in household consumption and differences in household composition, the following *adult equivalent conversion factor*, C*, is used: C* = (A+0.46C)^0.89, where A is the number of adults and C is the number of children.

has been carried out, and the NCPA does not consider different poverty lines for Gaza and the West Bank. If consumer prices in fact are lower in Gaza than in the West Bank this will lead to an overestimation of the level of poverty in Gaza.

III.2 General Characteristics of Poverty

1.15. Poverty in the West Bank and Gaza is estimated at 23.2 percent in 1998 – an improvement compared to a level of 26.9 percent in 1996 (see Table I.2). Despite concurrent population growth of approximately 4 percent per year, the absolute number of persons living below the poverty line has declined as well. In 1998 about 674,000 persons in WBG were living in poverty.[7,8] The overall poverty figures mask significant differences between the West Bank and Gaza. In 1998 the incidence of poverty in Gaza was 37 percent, more than twice as high as in the West Bank, where it was 15 percent. Over the period 1996-1998 the incidence of poverty has fallen faster in Gaza compared to the West Bank, thus narrowing the gap in poverty rates.

Table I.2
Poverty Rates in the West Bank and Gaza

		1996			1997			1998		
	Unit	All	WB	G	All	WB	G	All	WB	G
Headcount	% of population	26.9	17.5	46.1	25.3	17.1	41.3	23.2	15.4	37.2
Poverty Gap	% of population	7.2	4.1	13.5	6.7	4.5	11.9	6.0	3.8	10.1
Number of Poor	thousands	743	287	456	691	298	394	674	282	393
Headcount	% of households	23.6	16.2	42.0	22.5	15.7	38.1	20.2	14.5	32.8
Female headed	% of female headed households	25.7	19.9	44.5	29.8	23.6	48.9	25.6	21.7	36.8
Male headed	% of male headed households	23.5	15.9	41.8	21.8	14.9	37.4	19.6	13.7	32.4
Poverty Gap	% of households	6.3	3.8	12.3	6.0	3.7	11.0	5.3	3.6	8.9
Female headed	% of female headed households	7.2	5.6	12.3	8.6	6.6	14.7	7.2	6.8	8.9
Male headed	% of male headed households	6.2	3.7	12.2	5.8	3.5	10.7	5.1	3.3	8.9

Source: Staff calculations based on PECS 1996, 1997, and 1998.
Note: The figure for the total number of poor excludes East Jerusalem.

1.16. The average depth of poverty, measured by the poverty gap index, is also significantly larger in Gaza than in the West Bank. The poverty gap index measures the additional expenditures the average poor person would need to have in order to reach the poverty line, expressed as a fraction of the poverty line. In 1998, the poverty gap was 10.1 percent in Gaza

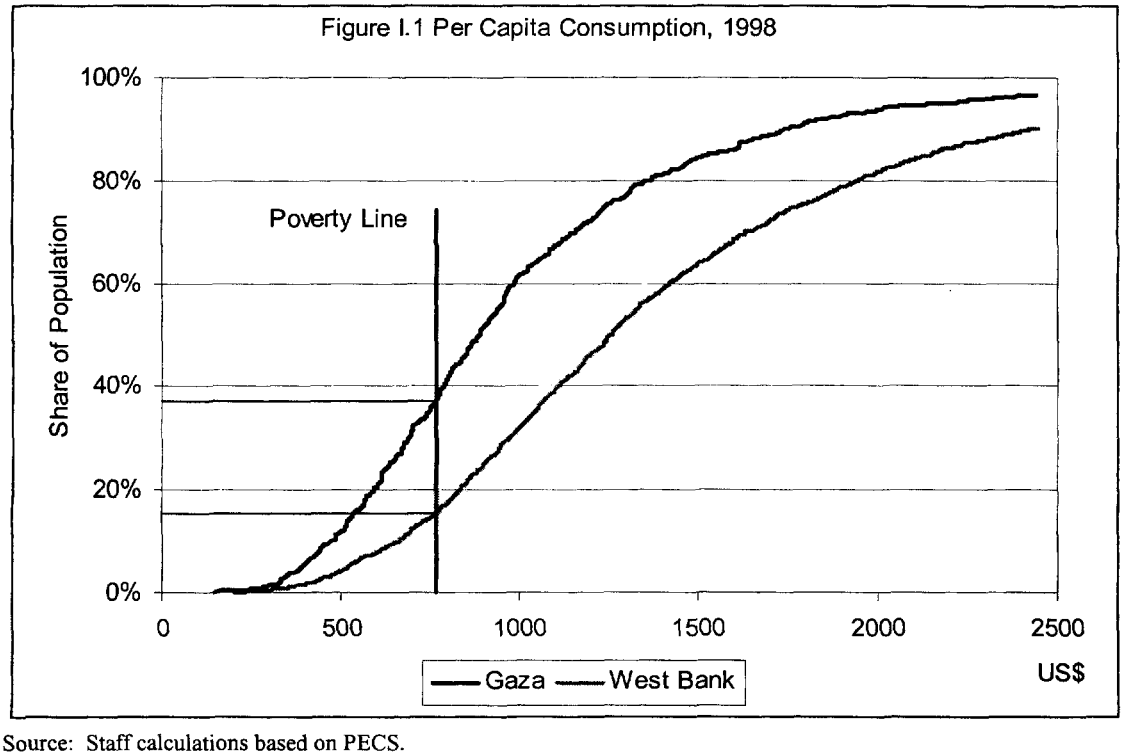
[7] It should be noted that poverty rates based upon the population can differ from household based poverty measures. This is especially true for the WBG where the household size of the average poor and non-poor are eight and seven members respectively. Therefore, the household based poverty rate tends to underestimate the share of individuals in total population living below the poverty line.

[8] In the Palestine Expenditure and Consumption Survey, a somewhat smaller share of population is reported to live in Gaza, approximately 30 percent, than the share actually living there according to the 1997 Census, which reports a share of approximately 35 percent. As the poverty rate is higher in Gaza than in the West Bank, this implies that the average head count index for West Bank and Gaza, based on the Household Survey, will underestimate the number of poor. Accordingly, the number of poor reported in Table I.2 is based on Census survey's shares.

and 3.8 percent in the West Bank, which implies that an additional US$ 208 would have been needed per poor individual per year to alleviate poverty. This would have represented a total amount of about US$ 150 million. For WBG as a whole the poverty gap has declined from 7.2 in 1996 to 6.0 percent in 1998. All the reduction has, however, taken place in Gaza where the poverty gap index in 1998 was 10.1 percent compared to 13.5 in 1996. By contrast, the poverty gap index has been relatively constant in the West Bank. These changes imply a narrowing of the difference in the depth of poverty between the West Bank and Gaza over the period 1996-1998.

1.17. The significant difference in both the incidence and the depth of poverty between Gaza and the West Bank is illustrated in the figure below, which depicts the cumulative distribution of individual consumption in 1998 in Gaza and the West Bank. This graph depicts the proportion of the population consuming less than a given amount in both Gaza and the West Bank. The figure clearly indicates that at any choice of a poverty line, poverty will be higher in Gaza. The steeper slope of the cumulative distribution of consumption around the poverty line in Gaza further indicates that changes in average incomes – positive or negative – will have a greater impact on poverty in Gaza compared to the West Bank.

Figure I.1 Per Capita Consumption, 1998



Source: Staff calculations based on PECS.

Notes: To obtain per capita consumption shown on the x-axis comparable to the poverty line of US$ 767, each household's consumption is first re-scaled to the level comparable to the benchmark household of 2 adults and 4 children, then divided by 6 – the number of individuals in the benchmark household.

1.18. The poverty rates among female and male headed households differ markedly in the WBG. In 1998 26 percent of female headed households were below the poverty line as compared to 20 percent of male headed households. Though poverty rates among female headed households in both the West Bank and Gaza were higher than those of male headed households, surprisingly, the difference is much greater in the West Bank. Female poverty rates were 8 percentage points higher than male poverty rates in the West Bank which is almost twice the difference observed in Gaza. We see this pattern repeated with the poverty gap measurement as

well. Though the poverty gap is generally higher across the board for female headed households than male headed households, the difference is more pronounced in the West Bank than Gaza. However, though poverty rates are higher among female headed households, these represent only 11 percent of all Palestinian poor households. Furthermore, since the average household size of poor female headed households is 3.6 members as against 8.1 members for male headed households, they account for a smaller share of the poor.

III.3 International Comparison of Poverty Levels

1.19. Poverty rates in the Middle East and North Africa region (MENA) are relatively low when compared to other countries at a similar level of development. Data for poverty rates exist for six countries in MENA, namely Algeria, Egypt, Jordan, Morocco, Tunisia and Yemen, as well as for WBG. Of these six countries, only Egypt and Yemen have a poverty rate higher than WBG. In the case of Yemen, the high poverty rate should be seen against the background of a much lower level of average income: US$ 280 as compared to approximately US$ 2,000 on average in MENA. The level of average income and poverty in WBG is roughly the same as in Algeria. By contrast, poverty rates in Jordan and Tunisia are quite low.

1.20. The poverty rate in WBG is significantly above what would have been predicted by regional standards. One possible explanation is that the national income figures for WBG overstate the level of economic development. This could occur if the price level faced by the Palestinians is unusually high compared to their income level in contrast to other developing countries. In order to correct for this, we use the purchasing-power-parity (PPP) exchange rate. Though official figures for the PPP-exchange rate do not exist for WBG, we assume that prices in WBG and Israel are similar due to the high level of integration between the two economies.[9] Thus, the price level faced by the Palestinian population approaches those in developed countries[10], this has a direct impact on the average income in WBG measured at PPP-rates, which corresponds to approximately US$ 1,900, which is more than 25 percent lower than the level in Jordan.

1.21. If we retain this assumption regarding price levels, and correct for purchasing power, we find that poverty in WBG lies in the expected range. Figure I.2 shows PPP-corrected GDP per capita and poverty rates in the MENA as well as an estimated relationship between the two.[11] The graph suggests that the level of poverty in WBG is primarily a result of the low level of economic development, rather than a consequence of large inequalities in the income distribution. The overall level of inequality in WBG tends to confirm this observation. Inequality, measured by a Gini coefficient on per capita consumption, is low in the West Bank and Gaza (0.32 in 1998) in comparison with international standards. Thus, pro-poor policies that coincide with development and growth policies may prove more effective than those seeking a significant redistribution in income.

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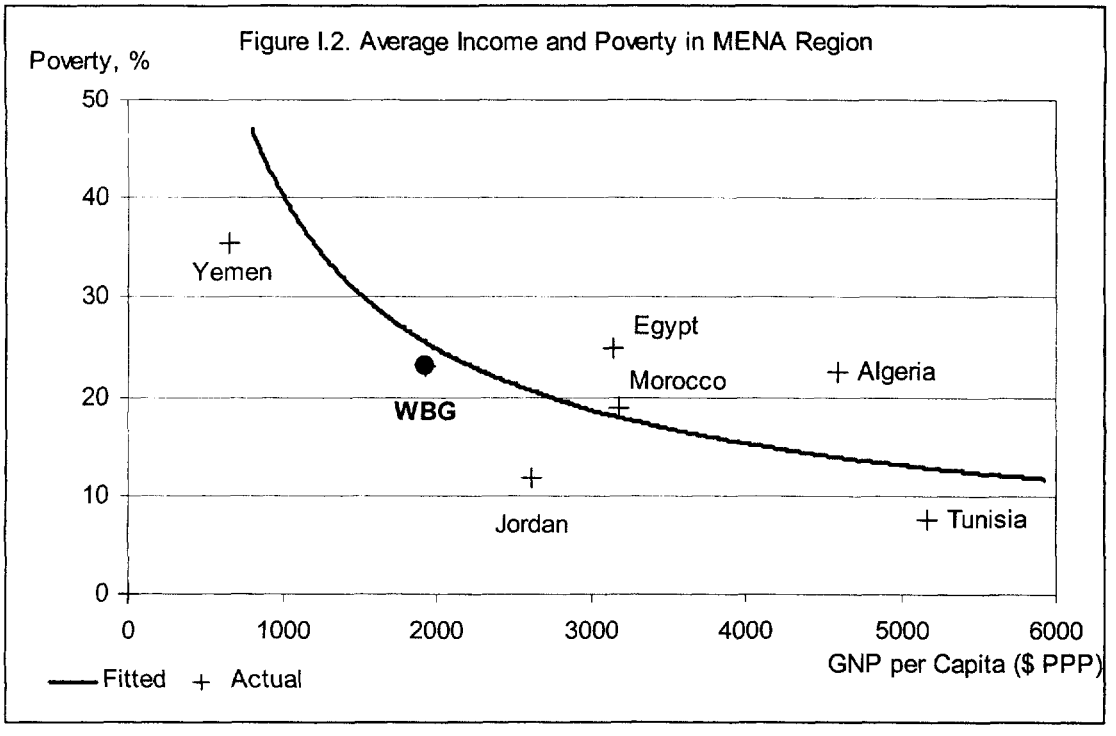
[9] The assumption that consumers in the WBG and Israel face exactly the same prices for all goods and services may be rather strong. Most likely, Israeli prices are the upper level of prices for the WBG residents. Anecdotal evidence and theory suggest that the price level in the WBG may be lower than in Israel for non-tradeable goods. On the other hand, the parallel movement in the price level of tradeable goods in the WBG and Israel, supports the assumption that most consumer prices in Israel and the WBG are nearly the same.

[10] The price level in Israel is less than 10 percent lower than in the United States. By contrast, the price level in the other selected MENA countries is less than half the price level in the United States.

[11] The fitted line is obtained by regressing poverty rates on logarithm of GNP (PPP) per capita using observations for 78 countries as well as regional dummies.



Source: World Development Indicators (2000) and staff calculations.
Note: Poverty measured as percent of population below national poverty line. Poverty figures for Algeria (1995), Egypt (1995-96), Jordan (1997), Morocco (1998-99), Tunisia (1999), WBG (1998), and Yemen (1998).

III.4 Poverty as Measured by Social Indicators

1.22. Poverty is usually measured using a money-based indicator, such as income or consumption expenditures. An alternative approach of measuring the extent of deprivation in a society is to use social indicators since they may be more representative of living conditions and the quality of life of the population. Furthermore, the consumption indicators do not take account of the cost of accessing social services, though they may be unevenly distributed. When comparing key health and education indicators internationally, living conditions in the WBG tend to be closer to the level enjoyed by upper middle-income countries.

1.23. On basic health indicators, such as infant and under-five mortality rates and life expectancy, WBG performs at the level of upper middle countries. When compared with the regional averages, its health indicators are well above average. What is particularly noteworthy, is the low incidence of infant and child mortality rates given the high birth rate in WBG, which most likely results from the relatively high level of education among women of child-bearing age.

1.24. Basic education indicators are also comparable to upper middle-income countries. The male adult illiteracy rate is slightly better than the average for upper middle-income countries, but the female rate falls well below the average of middle-income countries. This is reflective of the pattern seen in MENA of the gender gap that exists in education qualifications. However, in the WBG illiteracy is mostly a generational problem which has affected the older generation. According to the 1997 Census, the illiteracy rate for the group of 20-24 year-olds is only 3 percent and actually slightly lower among women of this age group relative to men. Furthermore, the net primary enrollment rate in WBG is among the highest in the region. The

large gender difference among primary enrollment rates seen in MENA does not exist to any significant degree in WBG. (See Table I.3.)

1.25. Why are health and education indicators in WBG significantly higher than in comparator countries? Though there are insufficient longitudinal social and poverty data that would allow us to draw firm conclusions, we can attempt to identify some possible reasons based upon cross country experience. One possible set of reasons pertain to the delivery of social services in the Palestinian territories. In general, the population has good access to basic services – both in terms of financial access (i.e., affordability) and geographical proximity. Also, because services provided are of good quality, consumer demand remains high. Finally, the services provided are well balanced between primary and tertiary levels so that essential services (such as preventive care) with the broadest welfare impact are widely available. A second set of reasons of why education levels in particular are relatively high in WBG may be due to the Israeli policies during the occupation that actively discouraged physical investment. Palestinians may have invested heavily in human capital since other forms of investment were limited.

Table I.3
International Comparison of Selected Social Indicators

	Mortality Rates		Life Expectancy		Adult Illiteracy		Primary Enrollment	
	Infant (per 1,000 live births)	Under-5 yrs. (per 1,000 live births)	Male (in years)	Female (in years)	Male (% of males)	Female (% of females)	Male (percent, net)	Female (percent, net)
West Bank & Gaza	**24**	**26**	**70**	**73**	**8**	**20**	**97**	**96**
Middle East & North Africa	45	55	66	69	26	48	91	84
Israel	6	8	76	80	2	6	..	..
Jordan	27	31	69	73	6	17	..	..
Low income countries	77	107	59	61	30	49	89	82
Middle income countries	32	38	67	72	10	20	96	94
Lower middle income	33	39	67	72	10	23	95	93
Upper middle income	27	35	67	74	9	11	97	95
High income countries	6	6	75	81	..	..	100	100

Sources: National sources for WBG education indicators. World Development Indicators for other data.
Note: All indicators are for 1998 except primary enrollment rates which are for 1997.

III.5 Characteristics of the Poor

1.26. Which households are more likely to be poor? The Palestinian Expenditure and Consumption Surveys (PECS) allow us to identify the determinants of household consumption. Broadly speaking the determinants of household consumption can be divided into two groups: the first group consists of "fixed" household characteristics such as household size, composition, and location of residence. The second category includes "economic" determinants of household consumption, for example, employment status, and education. In this section we highlight the "economic" determinants, as these are important to understand the recent decline in the poverty rate. The fixed characteristics variables are, however, important in order to identify households with a low level of consumption, and as such are a central element in the analysis in Chapter IV. Annex 1.2 describes the methodology used as well as giving a presentation of the detailed regression results.

Table I.4.
Economic Determinants of Real Household Consumption

Percentage Effect on Real Household Consumption Of	West Bank	Gaza
One additional month worked by head of household in:		
Public Sector	0.3	1.2 *
Private Sector	1.0 *	1.2 *
Israel	2.0 *	3.7 *
One additional month worked by 2nd working person in household in:		
Public Sector	-	1.3 *
Private Sector	-	0.9 *
Israel	1.1 *	0.3
If not working, main source of income from:		
UNRWA or Ministry of Social Affairs	-53.9 *	-29.0 *
Cash Remittances from Palestinian Territories	-24.1 *	-11.2 *
Pension or Inheritance	-3.5	6.9
Land Lease	28.9 *	15.8
Educational level of head of household:		
Can Read and Write	14.0 *	12.4 *
Elementary	21.1 *	18.0 *
Preparatory	25.3 *	18.7 *
Secondary	29.5 *	23.3 *
College	25.7 *	35.4 *
University	39.8 *	37.8 *
Post Graduate	45.7 *	53.8 *

Source: Staff calculations based upon PECS.
Note: * indicates significantly different from zero at the 90 percent confidence level.

1.27. Analysis of the survey reveals that whether household members work, where they work, and what sector they work in are all key factors in determining the household's poverty status both in the West Bank and Gaza (see Table I.4). The key findings are given below and followed by a more detailed explanation:

- Households with at least one working member are less likely to be poor – underscoring the importance of employment for poverty reduction.
- If a household member is employed in Israel, the household is better off than if he or she works in the Palestinian territories.
- In the West Bank, households with members employed in the private sector are better off than those with members working in the public sector.
- In Gaza, having a second working member in the household helps to significantly increase household expenditures.
- The higher the educational level, the higher is the household's consumption (and less likely is the household to fall into poverty).

1.28. First, the results reported in Table I.4 show that work is an important and significant determinant for household consumption. Households with at least one working member have, everything else being equal, approximately 30 to 50 percent higher consumption than households with no working members, who depend on assistance from UNRWA or the Ministry of Social

Affairs, with the largest difference in the West Bank. These results also suggest that the work status is a more important determinant of consumption in Gaza than in the West Bank.

1.29. Second, it makes a significant difference which sector the working member(s) of the household is employed in. Being employed in Israel generally adds more to the level of consumption than being employed in either the public or private sector within the West Bank and Gaza. The effect is larger in Gaza – 3.7 percent per month worked as compared to 2.0 percent – which most likely is due to a larger wage differential between Gaza and Israel than between the West Bank and Israel.

1.30. Third, with respect to employment within the Palestinian Territories, the results show that in the West Bank employment in the private sector adds significantly more to consumption than does employment in the public sector.[12] This difference does not exist in Gaza, where the impact on consumption of one extra month worked is independent of whether work is in the private or the public sector. The difference between Gaza and the West Bank suggests that the remuneration of public sector employees compared to the average wage level is higher in Gaza than in the West Bank, or equivalently that the remuneration of employees in the private sector is relatively low in Gaza. Fourth, the employment of a second person in the household is of significant importance for the level of household consumption in Gaza, which is not the case in the West Bank, except for the case, where the second employed person works in Israel. This difference should probably be seen in the light of the generally lower level of consumption in Gaza compared to the West Bank.

1.31. Finally, the educational level of the household's members have a substantial impact on the level of consumption. In households whose head is illiterate, consumption is about only two-thirds the level of households whose head have a post graduate degree (the highest educational level included in the Household Survey). The pattern is roughly the same in Gaza and the West Bank. This last result suggests that education policies should keep playing a very important role to alleviate poverty in the West Bank and Gaza over the long run. On average, skilled workers are more productive than unskilled workers. They are more adaptable to new technologies, and more mobile. They are, finally, more informed of new labor opportunities. Furthermore, international experience show that the level of education, particularly of women, also has a significant impact on fertility, which is one of the most important determinant of poverty in the West Bank and Gaza. However, it is unlikely that educational attainments have significantly evolved between 1996 and 1998, and to this extent, are not candidate to explain the poverty reduction observed during this period.

[12] One extra month worked in the public sector in the West Bank does not have a significant effect on consumption.

Chapter II: Growth, Employment, and Poverty

I. Introduction

2.1. The economic situation in the Palestinian territories was volatile during 1995-1997. Border closures were frequent, unemployment was high, and the domestic Palestinian economy grew only modestly. However, in 1998 the political situation improved, resulting in greater freedom of movement for the Palestinian population, significantly more employment opportunities, and higher income. The real gains in economic welfare resulted primarily from higher net factor income – that is, income from abroad including Israel – rather than any substantial improvements in the domestic economy.

2.2. What were the sources of poverty reduction in the WBG? To answer this question, this chapter analyzes two issues concerning the dynamics of poverty. First, we analyze the recent evolution of poverty in the WBG and try to determine the relationship between economic growth and changes in poverty and inequality. The focus is on the short-term (1996-1998) due to the limited availability of household expenditure data. Changes in poverty are separated into income growth and redistribution components which are useful for understanding developments among the Palestinian population. Further disaggregation by region (Gaza and the West Bank) is also be carried out.

2.3. Second, the report analyzes the impact of structural factors on poverty, particularly developments in the labor market, in order to draw some conclusions about the prospects for poverty reduction over the medium to long-term. It also analyzes the impact of labor market developments on poverty alleviation in the recent years, and stresses that poor and near poor will remain highly vulnerable to negative economic shocks in the near future, especially in Gaza. Finally, the report draws out the policy implications of these findings.

2.4. The main messages of this chapter are:

- During 1996-1998, poverty fell in the Palestinian territories due to growth in incomes as well as redistribution of income from the non-poor to the poor.

- Though job creation in Israel and in the Palestinian Authority was the main reason that poverty declined during 1996-1998, these sectors of employment are unlikely to be sustainable sources for poverty reduction in the future.

- Unless the economy grows by 4.6 percent annually, the share of the population living below the poverty line will rise. However, in order to reduce the number of poor in an economy with rapid population growth, GNP must grow by at least 6.7 percent per annum.

Table II.1
West Bank and Gaza: Changes in Welfare, 1996-1998

Indicator	Unit	1996	1997	1998
National accounts based indices				
Real GNP per capita	index 1996=100	100	102	111
Real GDP per capita	index 1996=100	100	99	103
Real total consumption per capita	index 1996=100	100	101	105
Real private consumption per capita	index 1996=100	100	100	104
Unemployment rate	percent	21.8	21.5	16.2
PECS based indices				
Average real annual expenditures per capita	index 1996=100	100	99	103
Poverty incidence rate	% of population	26.9	25.3	23.2

Sources: PCBS and staff estimates.

II. Declining Poverty — Income Growth or Redistribution?

2.5. A key question is whether national accounts and the household survey data provide similar results about changes in the population's welfare. At the national level during 1996-1998, the population's economic welfare improved significantly by 11 percent as measured by real GNP per capita. However, real private consumption per capita which is much more similar to the data collected in the household surveys experienced lower gains during these two years. The story revealed by the household surveys for this period supports the aggregate results. Real private expenditures in the survey grew by 2.6 percent as compared to 4.5 percent in the national accounts. Also noteworthy is that both unemployment rates measured at the national level and poverty rates from the household surveys moved in the same direction as well.

II.1 Decomposing the Change in Poverty

2.6. The proportion of households living in poverty in the WBG fell by 3.5 percentage points from 1996 to 1998. When disaggregated regionally, the decrease was much stronger in Gaza with 9 percentage points, than in the West Bank where it was only 2 percentage points. The reduction in poverty in the Palestinian territories could have been the result of either growth in the income of the poor or a redistribution in income from the affluent to the poor. At the economy-wide level this would require an increase in the average real income of the population and/or a reduction in the degree of income inequality within the population. This section decomposes the observed decline in poverty in the WBG into growth and inequality components in order to understand the impact of economic developments on the poor.[13]

2.7. In the Palestinian territories during 1996-1998, real household expenditures grew by 4.5 percent but growth was significantly higher in Gaza than in the West Bank – 5.3 percent in contrast to 3.0 percent. It seems reasonable to assume that the observed growth in real consumption is rooted in growth in real incomes. First, the strong increase in Palestinian employment, both within the WBG and in Israel, led to higher household incomes. Second, there

[13] The poverty decomposition in this section is carried out on the basis of households since poverty lines which are relevant to households rather than individuals are employed. However, since household size did not change much between 1996 and 1998, the dynamic evolution of poverty is the same whether discussed on the basis of household or individuals.

was substantial growth in bank deposits observed during 1996-1998 which is consistent with the rise in real consumption being driven by real incomes, rather than reduced savings[14].

2.8. The second way in which poverty could have been reduced is through a redistribution of income within the population in favor of the poor. This phenomenon could be gauged by changes in inequality, measured using Gini coefficients as seen in Table II.2. Inequality in the Palestinian territories declined during 1996-1998 though the decline was sharper in Gaza than the West Bank. However, since inequality was relatively higher in Gaza in 1996, by 1998 the difference in inequality levels is negligible. Therefore, it appears that redistribution of income within the population did indeed occur.[15]

Table II.2
West Bank and Gaza : Gini Coefficients

Region	1996	1997	1998
West Bank and Gaza	33.2	32.6	31.8
West Bank	31.5	31.2	30.7
Gaza	33.8	32.5	31.0

Source: Staff calculations based on PECS.

2.9. An explanation for the greater fall in the Gini coefficient in Gaza than in the West Bank can be found in Table II.3, which presents the average household consumption by decile in the two regions. In Gaza, the poorest households experienced a relatively stronger growth in real consumption compared to the Gazan population as a whole. The growth in real consumption of the poorest half of the population was about 12 percent as compared to a growth rate of real consumption of only 2.5 percent among the richest half of the Gazan population. In the West Bank, growth in real consumption between 1996 and 1998 has been more even across the population. Among the poorest half, real consumption grew 4.3 percent, while it grew 2.4 percent for the richest half of the population.

[14] PCBS did in fact collect data on household incomes, but this data has not been made available for this study.

[15] Gini coefficients measured in per capita terms, that is, without accounting for the composition of households, are higher than the one reported in Table II.2, because the number of children in poor households is greater than in non-poor households. Gini coefficients are with this alternative definition respectively equal to 38.0, 36.6 and 35.4 for Gaza in 1996, 1997 and 1998; 35.1, 35.0 and 35.0 for West Bank; and 37.1, 36.6 and 36.4 for West Bank and Gaza.

Table II.3.
WBG: Real Equivalent Individual Consumption by Decile

	West Bank			Gaza		
Decile	1996 (in US$ 1998)	1998 (in US$ 1998)	Change (in percent)	1996 (in US$ 1998)	1998 (in US$ 1998)	Change (in percent)
First	504	505	0.2	344	386	12.1
Second	741	767	3.5	492	559	13.6
Third	892	930	4.2	593	672	13.4
Fourth	1,035	1,085	4.8	687	782	13.8
Fifth	1,172	1,244	6.2	802	886	10.5
Sixth	1,340	1,404	4.8	926	988	6.7
Seventh	1,547	1,618	4.6	1,060	1,153	8.7
Eighth	1,818	1,907	4.8	1,258	1,337	6.3
Nineth	2,235	2,318	3.7	1,607	1,643	2.2
Tenth	3,784	3,736	-1.3	2,889	2,812	-2.7
Average	1,507	1,551	3.0	1,066	1,122	5.3

Source: Staff calculations based upon PECS.
Note: To obtain per capita consumption each household's consumption is first re-scaled to the level comparable to the benchmark household of two adults and four children, then divided by six.

2.10. The figures presented above suggest that both growth in average real household consumption and falling inequality have played a role in the drop in poverty rates from 1996 to 1998. In the Palestinian territories, half the reduction in poverty occurred due to a reduction in inequality while about 43 percent in the drop was a result in the growth in average real household consumption (see Table II.4). However, when we analyze the changes in poverty at the regional level, we find a different story. For the West Bank, growth in real consumption has been by far the most important factor behind the observed fall in the poverty rate, since 1.4 percentage points of the total decline of 1.7 percent can be attributed to growth. Conversely, in Gaza change in distribution has been the predominant factor. Of the total decline of 9.2 percentage points in poverty, about 46 percent was a result of a fall in inequality, while about one-third can be to attributed to growth in incomes.

2.11. The results indicate that the relatively poor economic conditions in the WBG in 1997 did indeed depress growth in real consumption, but not to the extent that it increased poverty. Growth picked up in 1998 and poverty was reduced. Growth in real consumption has been stronger in Gaza – which has much higher poverty rates – than in the West Bank. Furthermore, especially in Gaza, improvement in economic conditions particularly benefited the poor leading to a faster reduction in overall poverty among the Palestinian population.[16]

[16] This is consistent with recent work carried out by Dollar and Kraay (2000), *Growth is good for the poor* (mimeo, World Bank) which does a cross country comparison of how economic growth affects the poor and non-poor. The paper can be found on the internet at www.worldbank.org/research/growth/.

Table II.4
Decomposition of Change in Household Poverty Rate
(in percent)

	West Bank and Gaza	West Bank	Gaza
Change in poverty rate	-3.5	-1.7	-9.2
Growth	-1.5	-1.4	-3.3
Distribution	-1.7	-0.5	-4.2
Residual	-0.3	0.1	-1.7

Source: Staff calculations based upon PECS.

III. Labor Markets and Poverty

2.12. Changes in poverty rates among the Palestinian population are strongly influenced by economic developments both in the WBG and Israel. The main channel through which this occurs is the labor market, since the majority of the heads of poor households are the employable – and often the working poor. Among these households, wages constitute the main source of income. After providing an overview of employment developments, this section explores the labor characteristics of the poor and non-poor and estimates the impact on poverty of labor market changes such as access to jobs in Israel and the Palestinian Authority.

2.13. The Palestinian labor market responded flexibly to the harsh economic environment. Political events led to a sharp decline in the employment of Palestinian workers in Israel due to the issuance of fewer Israeli labor permits to Palestinians, an increase in the use of non-Palestinian foreign labor, and frequent border closures, which affected not only the mobility of labor, but also of goods. The share of employed Palestinians working in Israel fell from 30 percent to 17 percent during 1980-1994.[17] Unemployment rose sharply in the 1990s and reached a peak of 22 percent in 1996, and real wages fell. During 1995-1998, there was a strong negative correlation between real wages and unemployment (-0.9). Output per worker declined by 10 percent in this period and the average real domestic wage (excluding Palestinians working in Israel) declined by 18 percent.

2.14. From 1996 and 1998, there was an increase in the number of Palestinians working in Israel of 46,000, and an increase of 43,000 in employment in WBG, of which 13,000 were in the Palestinian Authority.[18,19] The labor market in WBG underwent significant changes, especially in terms of sectoral composition. Though the private sector continued to provide the greatest share of employment in the West Bank and Gaza (62 percent), its importance has declined in both regions. In 1996-1998, employment in the private sector grew by only 10 percent compared to 17 percent and 63 percent in the public sector and Israel respectively (see Table I.1). In Gaza, the public sector overtook Israel to become the second most important employer. In the West Bank, Israel became again an important source of job creation which may be indicative of the easier access the West Bank residents have in contrast to Gazans.

[17] ICBS Data.

[18] Based upon labor force surveys (PCBS).

[19] National accounts data also show the central government wage bill rose from 8.7 percent to 11.4 percent of GDP between 1995 and 1998.

2.15. The picture of slow growth in private employment compared to public employment and especially employment in Israel is reflected in Table II.5, which shows the average number of months worked in the domestic, private and public sector, and in Israel for poor and non-poor households. Two differences among the poor and non-poor are particularly noteworthy. The poor are more heavily represented in the domestic private sector than in other sectors. For example, in the West Bank 72 percent of the working poor are employed in the private sector compared to 63 percent of the non-poor.[20] The other significant difference is that a smaller proportion of the poor obtain jobs in Israel compared to the non-poor. Upon analyzing the characteristics of the employed, what stands out is that the education and age characteristics of the poor working in the domestic private sector and those Palestinians working in Israel are similar. The implication of this is that job opportunities in Israel can pull poor and low-skilled Palestinians out of poverty and their loss can push them into poverty.

Table II.5
Average Number of Working Months Per Household in Each Sector.

	All Households			Poor Households			Nonpoor Households		
	1996	1997	1998	1996	1997	1998	1996	1997	1998
West Bank									
Public Sector	1.4	2.0	2.0	0.7	1.5	1.2	1.6	2.1	2.2
Private Sector	9.6	10.0	10.4	9.0	9.5	10.5	9.7	10.0	10.4
Israel	2.8	3.4	3.8	2.9	2.6	2.8	2.8	3.6	4.0
All	13.8	15.4	16.2	12.6	13.6	14.5	14.1	15.7	16.6
Gaza									
Public Sector	3.0	3.8	4.1	2.1	2.5	3.4	3.1	4.6	4.4
Private Sector	8.6	7.6	8.6	9.0	8.0	9.0	8.3	7.4	8.4
Israel	0.9	1.2	1.8	1.3	0.9	1.2	1.4	1.3	1.9
All	12.5	12.6	14.5	12.4	11.4	13.6	12.8	13.3	14.7

Source: Staff calculations based on PECS.

Note: Averages calculated on the basis of the information provided for the four adults working the most in each household.

2.16. The above description of employment trends does not quantify the importance of job creation in reducing poverty in the WBG. In order to determine this as well as the relative importance of the public, private, and Israeli sectors, we use an econometric model in which the household's probability of being poor depends on adult employment (as measured by the number of months worked by each of the first four adults of the household in each sector)[21]. The main quantitative results are presented in Table II.6 and a more detailed explanation in Annex 1.2. There are four important findings from the analysis.

[20] Heads of household only.

[21] Using logit models to explain changes in poverty is more appropriate than using linear models of consumption, since some of the determinants of consumption may only explain changes in the consumption level of non-poor, which constitute the largest share of the sample (the total sample for the three years is constituted by definition of 78 percent of non-poor). See Annex 1.2 for a detailed presentation of the results.

2.17. First, a large part of the observed decline in poverty rates between 1996 and 1998 were due to higher employment. Job creation contributed 84 percent of the total decline in the head-count index in the West Bank and 46 percent in Gaza.

2.18. Second, though total job creation[22] was lower in Gaza than in the West Bank, poverty decreased more sharply in Gaza. This difference is a result of two factors: jobs have not been created in the same sectors; and the poverty impact of job creation in each sector differs between the West Bank and Gaza. The impact of job creation in public and Israeli sectors on poverty alleviation in Gaza is larger than in the West Bank because (i) the wage gap between jobs in Israel and in the private sector is larger in Gaza than in the West Bank; and (ii) job creation in Gaza particularly benefited the poor.

2.19. Third, the private sector played an insignificant role at best in reducing poverty in the WBG. In the West Bank, the private sector employment helped to decrease the number of poor by about 900 persons while in Gaza, according to the model, it actually led to an increase in the number of poor by 500 persons. The increase in the average number of months worked in the private sector by the poor was significantly lower than the increase among the non-poor.

Table II.6
Impact of Job Creation on Poverty Reduction during 1996-1998 (by sector)

		Poverty Rate (in percent)	Number of Poor (in '000)
West Bank			
	Public Sector	-0.3	-1.6
	Private Sector	-0.2	-0.9
	Israel	-1.0	-4.8
	Total	-1.5	-7.3
Gaza			
	Public Sector	-1.2	-7.5
	Private Sector	0.1	0.5
	Israel	-3.1	-19.5
	Total	-4.3	-26.5
West Bank and Gaza			
	Public Sector	-0.5	-9.1
	Private Sector	0.0	-0.4
	Israel	-1.2	-24.3
	Total	-1.7	-33.8

Source: Staff calculations based on PECS.

2.20. Fourth, other economic determinants of poverty tested in this analysis, namely other sources of income than labor (pensions, land lease, UNWRA assistance, cash remittances from relatives), did not contribute significantly to the changes in poverty levels, both in the West Bank and Gaza. However, these payments may have helped to decrease the depth of poverty suffered by households receiving assistance.

[22] As measured by average number of months worked per household.

IV. Prospects and Policy Implications

2.21. The substantial decline in poverty rates observed during 1996-1998 occurred even though expenditure growth was relatively modest (an implicit elasticity of – 4.9). This is unusual by international standards and reflects a high concentration of households with consumption levels close to the poverty line. It is unlikely that this trend can be sustained in the long run. What would be more likely is that much higher growth rates in consumption and GNP will be necessary to achieve similar levels of poverty reduction. Furthermore, the past declines in poverty could be easily reversed through negative exogenous shocks. For example, closures could push households that had barely dropped out of poverty back below the poverty line. For an assessment of the impact of the recent developments on poverty in the Palestinian territories see Annex 4.

Table II.7
West Bank and Gaza: Poverty in 2003 under Different Economic Growth Scenarios

		GDP Growth Per Capita (in percent per annum)					
		-2.0	-1.0	0.0	1.0	2.0	3.0
GDP growth	in percent per annum	2.5	3.6	4.6	5.7	6.7	7.8
Headcount index							
WBG	(in % of WBG population)	30	27	23	21	19	16
West Bank	(in % of WB population)	21	18	15	14	12	10
Gaza	(in % of G population)	46	43	37	34	31	27
Changes in number of poor							
WBG	in percent	63	46	26	14	1	-13
West Bank	in percent	68	44	24	10	-5	-19
Gaza	in percent	59	47	28	17	6	-9

Source: World Bank staff projections based on the PECS (1998) and PCBS population projections.
Note: This projections are based on the level of poverty in 1998 and assume that no income redistribution occurs.

2.22. One of the driving forces behind the rapid increase in projected poverty is the high population growth rate. According to PCBS, projected annual population growth rates for the period 1998-2003 are the following: 4.4 percent for the West Bank, 5.0 percent for Gaza, and 4.6 percent for the WBG.[23] Population growth rates of this magnitude make maintaining high per capita GDP growth rates more difficult.[24] Also, these averages hide the fact that growth rates among poor households are even higher.

2.23. In order to decrease the number of Palestinians living in poverty in the WBG, the rate of economic growth will have to be well above the recent rates achieved. If the number of poor in 1998-2003 is to fall, an annual GNP growth rate of 6.7 percent or more is required. However, if the economy grows at about 2.5 percent per annum, then the number of poor could increase by 63 percent assuming no redistribution of income occurs.[25] If the economy grows at 4.6 percent

[23] Source: PCBS (1999), *Population in the Palestinian Territory, 1997-2025.*

[24] See Barro and Sala-I-Martin (1995), *Economic Growth*, McGraw-Hill, New York.

[25] Implied elasticities of poverty rates with respect to per capita GDP growth range between –3.0 and –1.8, with an average of –2.4, in the projections reported.

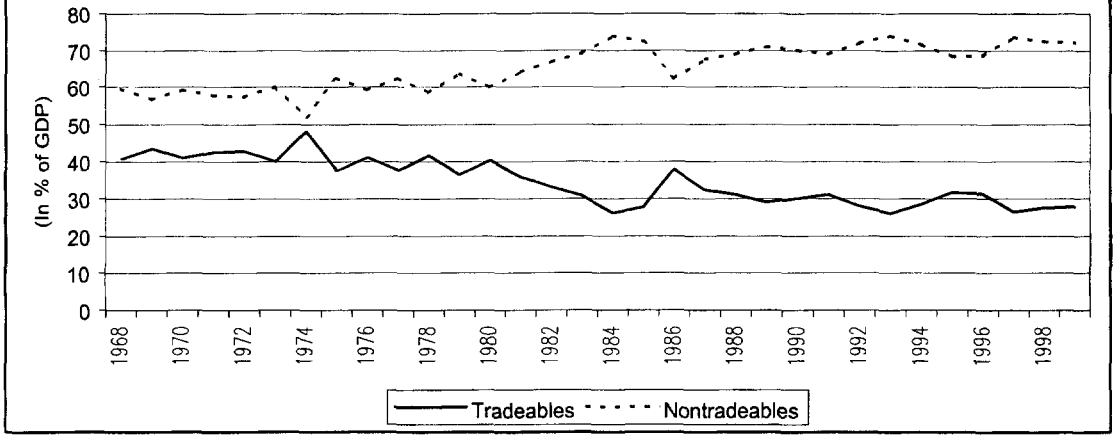
per annum, though the number of poor will increase substantially by 26 percent, their proportion in the population would be maintained at the current level.

2.24. In the absence of structural reforms, prospects of further poverty alleviation are limited. This is particularly the case in Gaza, which has seen its poverty level reduced by massive job creation in Israel and the public administration. Both these sectors have limited prospects for expansion, and increasing their size may even produce negative effects on the development of the private sector. Therefore, any anti-poverty macroeconomic strategy should rely on the creation of jobs in the private sector. But, since 1993, this sector has grown less rapidly than the public sector and under the prevailing policy regime has created either low wage jobs or jobs inaccessible to the poor, in contrast to public sector and Israeli jobs. Therefore, any sustainable poverty reduction strategy would need to adopt economic policies which lead to improving the capacity of the Palestinian private sector to create "good jobs", that is jobs with higher real wages and accessible to the poor or near poor.

2.25. It needs to be emphasized that continued expansion of public sector employment is not an answer to the pervasive poverty in the WBG. Not only is the number of public employees already high in comparison to regional standards or countries at a similar level of development, but a continued increase is a serious threat to the ability of the Palestinian Authority to maintain sound public finances. Countries with high fiscal deficits seldom achieve the necessary growth needed to reduce poverty. Perhaps more importantly, any increase in public employment lessens the number of resources available for creating safety nets and developing poverty alleviation programs for the poor who do not participate in labor markets, such as elderly or handicapped people. Public sector employment is also a threat to the future economic development of the WBG, notably because the scope for productivity gains – and therefore higher real wages – is smaller in the public sector than in the private sector.

2.26. Potential creation of high-wage high-productivity jobs for the poor lies in the development of an export-oriented private sector. Higher exports could directly benefit the poor who are probably already heavily represented in low wage occupations in the tradeable goods sectors of agriculture and industry (see Annex 2). For an economy as small as the Palestinian economy, long run development depends crucially on the creation of strong linkages with external markets. Without expanding its foreign markets, the Palestinian economy will find it difficult to attract new investment, and to increase worker productivity. Being constrained by the slow growth of its domestic demand, the rapid rise in labor supply will translate into decreasing real wages, increasing unemployment, and consequently, higher poverty rates.

Figure II.1
The Share of Tradeables and Nontradeables in the Palestinian Economy



Source: World Bank staff calculations based upon ICES data 1968-1994, and PCBS data 1995-1999.
Note: Tradeables combine the share of agriculture and industry (excluding construction). Non-tradeables are services including construction.

2.27. The tradeable sectors have been losing ground to the non-tradeable sector over the last two decades (see Figure II.1). In particular, export performance has remained extremely poor over the last few years, both vis-à-vis Israel and the rest of the world. Two major constraints have hindered the WBG to compete in these markets: high transaction costs and very limited access to the cheaper inputs supplied on the world markets. The former is mainly attributable to border restrictions and security clearances imposed by Israel; the latter is the result of the combination of current fiscal and trade regimes which add a significant and harmful wedge to the world price of imports from the rest of the world. To implement a strategy to increase trade requires the removal of these two obstacles to export expansion. In addition, better governance in the WBG is necessary to reduce the risk of investment in the Palestinian territories.

Chapter III: A Poverty Map for the West Bank and Gaza

I. Introduction

3.1. A poverty map is a geographical profile of poverty. It provides a picture of which regions are facing the most severe problems of poverty and which regions are more affluent. Poverty maps are used in many developing countries and are useful in the policy planning process as they provide decision makers and donors a means to target development projects or other policy interventions specifically to poor regions, in order to strengthen the impact on poverty alleviation. The effectiveness of a poverty map as a policy-planning tool depends on its level of disaggregation. Clearly, a disaggregated map, that is, a map in which the geographical entities identified are small, provides a better means of targeting rather than a map which includes only broad regions.

3.2. Notwithstanding its small size, there is a striking regional heterogeneity in the poverty levels in the Palestinian territories. The fact that the incidence of poverty in Gaza is more than twice as large as in the West Bank may at first glance indicate that poverty alleviation measures should be concentrated in Gaza. But poverty rates vary considerably both within Gaza and the West Bank, and therefore there may exist substantial scope for improvement in targeting, beyond the distinction between Gaza and the West Bank.

3.3. The purpose of this chapter is to disaggregate poverty rates to the district level, and further, to the locality levels. This information when combined with other social, labor, or establishment data can be exploited in useful ways to help increase the effectiveness and efficiency of programs targeted to the poor – whether safety net, social services, or even private sector development projects.

3.4. The main findings of this chapter based upon 1997 poverty data are:

- Poverty varies dramatically among districts. District poverty rates range from 3 to 55 percent of the local population. Poverty is highest in Gaza and lowest in Jerusalem. Half of the Palestinian poor live in three districts – Khan Yunis, Gaza City, and Hebron.

- Three of the top five poorest localities are in the West Bank and all from different districts – Al Jiftlik, Yatta, and Ya'bad, with poverty incidence rates ranging between 40 and 51 percent of the local population. The five most affluent localities are urban centers: the Jerusalem localities followed by the towns of Ramallah and Nablus. Their poverty rates range between 2 and 7 percent.

- Poverty also varies significantly within district. The highest poverty rates in the districts of Nablus, Bethlehem/Jericho, and Ramallah are 4 to 7 times the lowest poverty rate in the district.

Table III.1
West Bank and Gaza: Poverty at the District Level, 1997

Region	District	Distribution of Poverty (Percent of WBG poor)	Poverty Rate (Percent)	Number of Poor (000's)
West Bank		43.1	17.1	298
	Jenin	8.8	30.2	61
	Tulkarim/Qalqilya	4.8	16.3	33
	Nablus	6.5	12.8	45
	Ramallah	3.0	9.9	21
	Jerusalem	0.4	2.6	3
	Bethlehem/Jericho	3.9	16.5	27
	Hebron	15.5	26.6	107
Gaza		56.9	41.3	394
	Jabalya	9.4	35.4	65
	Gaza City	17.9	33.8	124
	Khan Yunis	19.8	39.3	137
	Rafah	9.8	55.3	68
West Bank and Gaza		100.0	25.3	697

Source: PECS (1997), Palestinian Census (1997) and staff calculations.
Note: Number of poor exclude East Jerusalem.

II. District and Local Poverty Rates

3.5. The higher concentration of poverty in Gaza compared to the West Bank is clearly reflected in Table III.1 which reports the poverty rates at the district level – in total 11 geographical locations – in 1997 calculated on the basis of the household expenditure survey. But these figures also clearly reflect the fact that the incidence of poverty within the regions of the West Bank and Gaza varies significantly across districts. The poverty rate in the southern part of Gaza exceeded 50 percent in 1997, while it was around 30 percent in the northern part (Jabalya and Gaza City). In the West Bank, the incidence of poverty is highest in the northern- and southern-most parts, where it is above 25 percent, almost double the rates in central the West Bank.

3.6. Disaggregating the poverty map further is difficult given the data constraints faced. However, by exploiting the information available in the 1997 Census and combining it with the household survey data, we can provide poverty estimates for 42 localities. Specifically, household surveys are used to identify the correlates of poverty, which in turn are used to predict poverty rates within each district, using the information available in the 1997 Census. A detailed explanation of the methodology used is presented in Annex 3.

3.7. The detailed poverty map is based upon geographical divisions rather than on administrative ones since the two regions are divided into 708 administrative localities, many of which are too small to allow accurate estimates of poverty. Furthermore, since the different localities have different administrative status[26], for policy makers it would be difficult to uniformly implement poverty alleviation policies. Consequently, we use a classification which decomposes the West Bank into 38 entities (excluding East Jerusalem) and with Gaza remaining disaggregated into four districts. The average population in the West Bank geographical units are 42,000 and in Gaza 250,000. In terms of land surface, it represents an average of 136 km^2 per entity. In Gaza, the average surface of each entity is 91 km^2, whereas the corresponding figure for the West Bank is 148 km^2.

3.8. The following Table III.2 reports the estimated poverty rates in each of the 42 geographical entities as well as the estimated number of poor persons. A graphical representation is provided in the subsequent two maps of the WBG. As is apparent from the table, there exist significant differences in the incidence of poverty within district, in addition to the ones observed between districts. At the locality level, poverty incidence ranges from 2 percent to 55 percent of the population. Within districts in the West Bank, we also see significant variation. For example, in the Nablus District, poverty ranges between 7 percent and 51 percent of the local population.

3.9. Upon reviewing the table, we obtain three interesting findings.

- Three of the top five poorest localities are in the West Bank and all from different districts – Al Jiftlik, Yatta, and Ya'bad, though combined they contribute only about less than 10 percent. The poverty incidence rates range between 40 and 51 percent of the local population.
- The five localities with the lowest poverty rates are concentrated in urban areas in the West Bank: the three Jerusalem localities followed by the towns of Ramallah and Nablus. Poverty in these localities range between 2 and 7 percent of the local population.
- The variation of poverty incidence rates within districts in the West Bank is strikingly high, especially in Nablus, Bethlehem/Jericho, and Ramallah. The highest poverty rate is 4 to 7 times the lowest poverty rate within each district.

3.10. The poverty rates provided in Table III.1 and Table III.2 can be useful in targeting projects to the poor as well as resource allocation by the Palestinian Authority, NGOs, or donors. The poverty incidence levels can be used in various ways. For example, if a project has limited targeting capacity, yet wishes to direct its assistance to the poor, it can locate itself in a locality with high poverty rates such as Rafah, Al Jiftlik, or Yatta where about one in two persons reached would be below the poverty line. Projects whose aim is to reach the highest number of poor possible would focus on localities with a large number of poor such as all the districts in Gaza or Yatta, Ya'bad, Hebron, and Dura in the West Bank; but in most cases, these projects would also need to find a way of distinguishing the poor from the non-poor in order to minimize leakage.

3.11. These data can be particularly useful when combined with other social data such as secondary school drop out rates and health indicators. For example, NGOs whose aim is to

[26] Administrative units range from municipalities and village councils to refugee camps and local development committees.

provide health care services to the poor, could combine information on health indicators with the poverty rates in order to pinpoint those populations with the least means to pay for services (and therefore the greatest need for affordable care) as well as low health indicators.

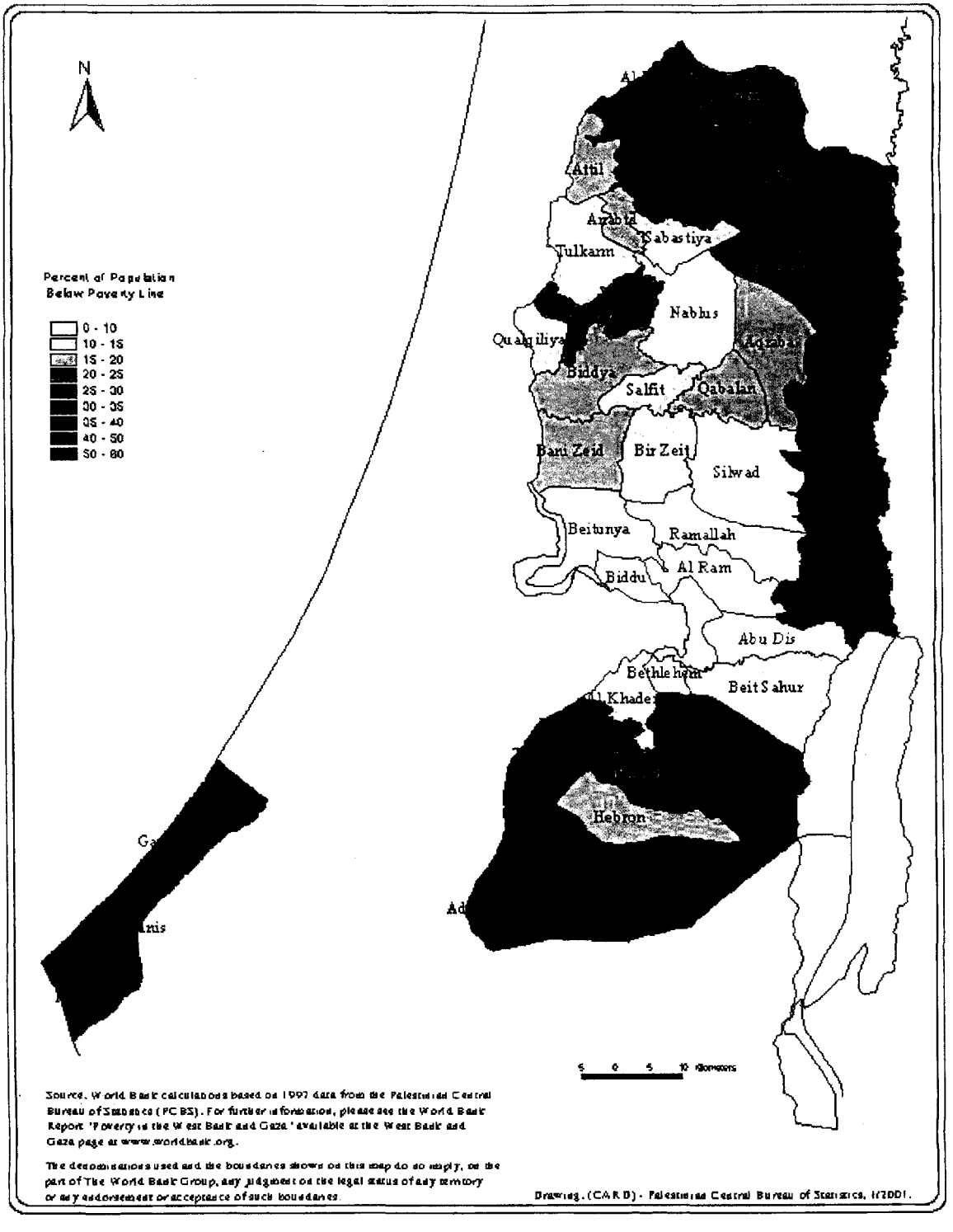
3.12. One cautionary note about the poverty rates presented in Table III.2: since the rates are estimates based upon statistical analysis rather than actual observations, the level of accuracy is lower. Consequently, the poverty estimates should be treated as indicative of the poverty rates in the locality and in using this information for projects, greater emphasis needs to be given to the range within which the poverty rate may fall. This information is presented in Annex Table 3.1 which provides the range within which the poverty rates in each district may fall at the 90 percent confidence level.

Table III.2
West Bank and Gaza: Estimated Local Poverty Rates in 1997

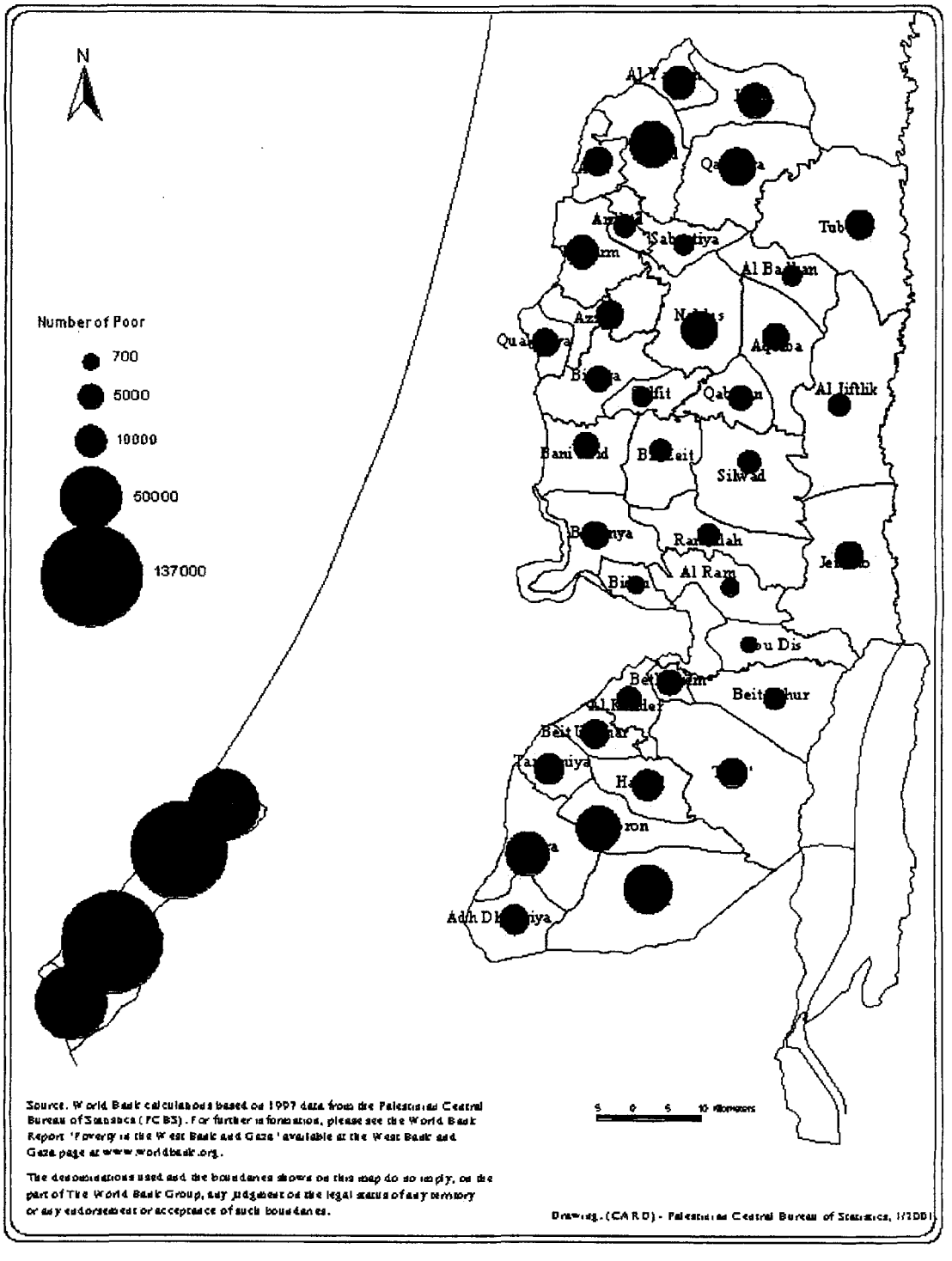
District	Locality	Distribution of Poverty (% of WBG poor)	Incidence of poverty (% of local population)	Number of poor (000's)
West Bank		43.1	17	298
Jenin	Al Yamun	1.5	28	10
Jenin	Jenin	1.8	21	12
Jenin	Ya'bad	3.5	40	24
Jenin	Qabatiya	2.1	31	15
Tulkarim/Qalqilya	Attil	1.0	17	7
Tulkarim/Qalqilya	Tulkarm	1.6	14	11
Tulkarim/Qalqilya	Anabta	0.4	18	3
Tulkarim/Qalqilya	Tubas	0.9	14	6
Tulkarim/Qalqilya	Sabastiya	0.9	23	6
Nablus	Al Badhan	1.1	20	7
Nablus	Aqraba	0.3	14	2
Nablus	Nablus	0.3	24	2
Nablus	Qabalan	0.8	18	5
Nablus	Qualqiliya	2.0	7	14
Nablus	Azzun	0.6	20	4
Nablus	Biddya	0.7	16	5
Nablus	Salfit	0.3	13	2
Nablus	Al Jiftlik	0.4	51	3
Ramallah	Bani Zeid	0.8	17	5
Ramallah	Bir Zeit	0.4	10	3
Ramallah	Silwad	0.5	10	3
Ramallah	Beitunya	0.9	14	6
Ramallah	Ramallah	0.4	4	3
Jerusalem	Ar Ram	0.2	2	1
Jerusalem	Biddu	0.1	4	1
Jerusalem	Abu Dis	0.1	3	1
Bethlehem/Jericho	Jericho	1.0	25	7
Bethlehem/Jericho	Beit Sahur	0.4	12	3
Bethlehem/Jericho	Bethlehem	0.7	9	5
Bethlehem/Jericho	Al Khader	0.6	14	4
Bethlehem/Jericho	Tuqu'	1.1	35	8
Hebron	Beit Ummar	1.0	25	7
Hebron	Tarqumiya	1.3	31	9
Hebron	Halhul	1.3	24	9
Hebron	Hebron	3.4	15	23
Hebron	Dura	3.3	31	23
Hebron	Adh Dhahiriya	1.1	35	8
Hebron	Yatta	4.1	45	28
Gaza		56.9	41	394
	Jabalya	9.4	35	65
	Gaza City	17.9	34	124
	Khan Yunis	19.8	39	137
	Rafah	9.8	55	68

Source: World Bank staff calculation based on PECS and Census (1997)
Note: Figures exclude East Jerusalem

Local Poverty Rates in the West Bank and Gaza



Number of Poor in the West Bank and Gaza



Chapter IV: Social Safety Nets

I. Introduction

4.1. When economic prosperity is insufficiently broad based to raise all segments of a country's population to an acceptable standard of living, the social safety net can play an important role in helping the destitute. At present in the WBG, more than one in five persons are below the poverty line, many of them children who have little control over their own welfare. Therefore, the government has an important role, if not an obligation, to help meet the survival needs of those in society who are unable to adequately help themselves.

4.2. Though a rudimentary publicly financed safety net exists in the WBG, the Palestinian Authority, working with other stakeholders, can enter into a process of prioritizing the population groups in the greatest need, the type and extent of assistance that can be provided and by whom. The WBG has an opportunity that few countries have today — that of designing a publicly supported safety net from its foundation to meet the needs of its population without displacing entrenched interests. Furthermore, the national and local governments also have the opportunity to build a partnership with and support the extension of the non-governmental sector in order to share the financial and other physical and human resource demands of providing an effective safety net.

4.3. The objective of this chapter is to present issues for consideration in the design of a future safety net based upon analysis of household data and existing research. This report does not propose a safety net design nor advocate the adoption of any particular safety net program. Rather, the hope is that the issues raised will help the Palestinian society in determining an array of programs best suited to the prevailing social and economic conditions while having the flexibility to respond to future changes.

4.4. The main messages of this chapter are as follows:

- The minimum amount of assistance needed to raise poor families to the poverty line is 3.6 percent of GDP, but with the present level of targeting efficiency and moderate administration cost, this amount would rise to over 9 percent of GDP or about US$ 400 million.

- The formal safety net reached about 30 percent of the poor in 1998, but did not raise a large proportion of them out of poverty. Substantial resources are being depleted since over half of the beneficiary households are non-poor.

- Modest changes in the safety net can be made which could improve its effectiveness. In the future, larger modifications can be considered that would lead to higher coverage of the poor, including the working poor.

Table IV.1
West Bank and Gaza: The Cost of Alleviating Poverty, 1998
(in US$ millions)

	West Bank	Gaza	Total
Transfers needed to lift all poor to:			
Poverty line	64	89	153
10% below poverty line	43	59	102
15% below poverty line	34	47	81
25% below poverty line	20	28	48
Cost of program needed to lift all poor to:			
Poverty line	232	169	401
10% below poverty line	155	112	267
15% below poverty line	121	90	211
25% below poverty line	71	54	125

Source: Staff calculations based upon PECS.
Note: Transfer refers to actual cash being received by the poor. Cost of program is significantly higher due to inclusion of considerable leakage to nonpoor (computed at existing levels of targeting efficiency and administrative costs.

II. The Cost of a Safety Net

4.5. Prior to analyzing the effectiveness of the present social safety net in the WBG, it is useful first to understand the scope of the poverty challenge facing the Palestinian society. The extent and depth of poverty in the WBG is undoubtedly large, affecting one out of every five households. Based upon the household surveys, the transfer alone needed to lift families to the poverty line for one year would be about US$ 64 million in the West Bank and US$ 89 million in Gaza, or about 3.6 percent of GDP.[27] This amount could increase substantially given leakages to the non-poor and administrative costs.[28] With present levels of leakage and assuming only modest administrative costs, the additional resources needed to operate a simple income-transfer program aimed at eradicating poverty in the WBG would be about US$ 401 million in 1998, or 10 percent of GDP equivalent to almost half of government revenue. This amount is additional to any social assistance already being received and does not include other social protection measures.

4.6. As a comparison to other countries in the Middle East and North Africa region, an estimated 5.7 percent of GDP is devoted to all aspects of the social safety net, including social security, government employee pension schemes, unemployment compensation benefits, and various other social aid items. Given the magnitude of the poverty challenge in the WBG, poverty eradication through cash transfers may not be a feasible objective if other social priorities are to be met.

[27] This figure represents the estimated total dollar amount per year by which poor families are below the poverty line.

[28] Targeting efficiency was approximated by the proportion of aid recipients in West Bank and Gaza which, post-aid, were poor. In 1998, that proportion was 41percent.

4.7. While the estimated cost of complete poverty elimination through income transfers may be prohibitive, reducing poverty to lower levels may well be fiscally feasible. At present, the typical poor family's consumption is 26 percent below the poverty line, but many families fall far below that. Targeting future aid with the goal that no family's income is less than 25 percent below the poverty line would require an estimated US$ 125 million[29]. Targeting aid with the goal of a maximum income gap of 15 percent below the poverty line would, in the same manner, require about US$ 211 million, or an estimated 5 percent of GDP. Thus, while the total "cost" of poverty is large, alleviating poverty by setting such a benchmark (to lift families to a certain distance of the poverty line) may be a goal that is attainable within the Palestinian Authority's budgetary constraints.

III. Assessing Safety Net Programs

4.8. Social safety nets are programs that protect a person or household against the full impact of two adverse circumstances: the head of household's chronic incapacity to work and earn, and a temporary decline in employment and earnings due to adverse and unpredictable events. A well-designed safety net will choose the optimal mix of interventions to best mitigate risk and vulnerability of the population, within a given budget. A safety net is not necessarily the best way to help the poor, since the provision of generalized services such as health, education, public transportation, and sanitation may provide greater improvements to the quality of life of the poor and non-poor alike as well as significantly reducing the risk of poverty over the life-cycle of the family. However, in those cases where basic social and physical infrastructure are widely available and accessible, a safety net can help the poorest in society achieve a minimal acceptable level of existence.

4.9. The criteria employed in assessing a safety net are the program's effectiveness in poverty alleviation, cost efficiency, fiscal affordability, and possibly, developmental impact (e.g., infrastructure creation). Effectiveness is often assessed according to (i) the proportion of the poor who have access to assistance, (ii) the proportion of assistance which is directed to the poor, and (iii) the adequacy of the assistance in raising the household closer to the poverty line. Efficiency criteria determine whether the same level of assistance can be provided but at lower cost. Due to information constraints which are discussed in the following sections, several of the criteria by which social safety nets are judged cannot be adequately assessed within the WBG. Nevertheless, the information available allows for some evaluation of the effectiveness of the current safety net as well as the fiscal affordability of alternate levels of assistance given current safety net interventions[30].

4.10. Safety net programs are often difficult to design and implement successfully for two reasons. The first and foremost difficulty is of distinguishing the poor from the non-poor, especially the near poor – people who are just above the poverty line. The problem is particularly intractable in developing economies where income is not formally reported to the government. Wage income is difficult to assess since standardized accounting and reporting procedures by employers are not common. Also, determining total household income can be complicated in societies where extended family members provide financial or other types of assistance to members in need.

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[29] Using the current level of targeting efficiency and assuming administrative expenses of an additional 5 percent.

[30] The estimated cost of increasing the proportion of poor receiving assistance, or increasing the level of assistance the poor receive, assuming the current targeting efficiency levels.

4.11. The second difficulty with designing safety nets is that aid can create disincentives among the recipients to find alternative sources of income or even to escape poverty, especially if doing so would only marginally improve their welfare. Thus, for example, an unemployed but capable person receiving an income transfer may not search as diligently for a job or may be less flexible in the job he chooses to accept. However, safety nets also have the capacity to create incentives for persons to exhibit positive behavior. For example, a food subsidy targeted to parents whose children attend school can encourage higher enrollments.

4.12. As a consequence of these difficulties in distinguishing the poor from the non-poor and the incentive problems, governments and NGOs use various targeting mechanisms to reach the poor. The three broad types of targeting methods are: individual assessment, geographic or indicator targeting, and self-targeting. Examples of individual assessment programs are programs where a means test ascertains whether a household's income is below the cutoff point, such as through the type of dwelling (with or without electricity or toilet) or the level of household income (if that can be ascertained). Due to information constraints, individual assessment programs are often the most costly to administer.

4.13. Geographic and indicator targeting mechanisms use some indicators which are easy to identify and are sufficiently correlated with income to be useful in identifying the poor. Indicators that may be good predictors of income are land ownership, education, and number of children. Most of these indicators are easily observed and difficult to manipulate in the short run.

4.14. Finally, some programs are designed to be self-targeted, in such a way that the non-poor are discouraged from participating. Examples of self-targeted safety net programs are low-wage public works programs where participants are required to work and subsidy programs of inferior quality goods. While self-targeted mechanisms are designed to screen out the non-poor, some may also screen out the poor. Employment schemes, for example, would be inappropriate safety net programs to address the poor who are aged, infirm, or physically handicapped.

IV. A Brief Description of the WBG Social Protection System

4.15. Safety nets can be publicly or privately financed. In developing economies, private sources – whether households or charitable organizations – play an important and perhaps dominant role in redistributing income from the more affluent to the poor. Governments play a significant role in formal safety nets, but due to its political status, the WBG has only recently been able to begin the development of the public facets of its social protection system. Also, in many of the world's poorer countries, bilateral and multilateral aid organizations can play an important financing role in the provision of safety net programs.

4.16. Social protection of the poor in the WBG is from four major sources: the Palestinian Authority, international official assistance, non-governmental organizations (NGOs), and informal family assistance. This section provides only a brief explanation of the major programs supported by these sources and draws heavily upon the recent *Palestine Poverty Report 1998* which provides an extensive description of these programs' features and target groups.[31] This section does not do justice either to the role of bilateral donors or NGOs in the arena of welfare programs given the diversity of their assistance and the lack of wide documentation of many of their activities.

[31] See *Palestine Poverty Report 1998*, Chapters 4-7.

Table IV.2
Safety Net Programs and Beneficiaries

Source	Year	Beneficiaries	
		No. of Households	No. of Individuals
Ministry of Social Affairs			
Income transfer program	1996	23,379	89,812
Income transfer program	1997	*27,321*	104,957
Martyrs, Prisoners, and Injured Fund	1997	7,057	29,646
UNRWA			
Food aid	1996	21,890	89,280
Food aid	1997	*23,232*	94,753
Food aid plus cash assistance	1996	6,193	
NGOS and religous organizations			
Al-Zakat Committees	1996	27,585	*339,519*
Other charitable organizations	1997	22,615	278,348

Source: *Palestine Poverty Report 1998*
Note: Figures in italics are staff estimates.

4.17. The Palestinian Authority's two major social welfare programs are: (i) the income support program of the Ministry of Social Affairs (MOSA) and (ii) public works programs. PECDAR coordinates a program of labor-intensive community development projects which fund public works to build roads, schools, clinics, water, sanitation and other civil works to poor communities in the WBG. These programs were particularly important during the years when there were significant border closures, providing relief to the households of the working poor.

4.18. The MOSA's income support program represents the single largest welfare program in the WBG and reached about 105,000 individuals by end-1997. These programs are targeted to the families where the primary earner is either absent or partially or fully incapacitated; this includes households headed by the elderly, widows, divorced or abandoned women, and disabled persons. The programs provide support in the form of cash allowances and subsidized health insurance[32] with the monthly income transfer equal to US$ 114 for a family of seven.[33]

4.19. In addition to its income transfer program, MOSA also administers the Martyrs, Prisoners, and Injured Fund which provides cash assistance to families of persons affected by political events. An affiliated program is the Prisoner Rehabilitation Center which provides assistance, mostly in the form of subsidized health insurance, to about 14,600 families of prisoners in 1996, as well as services to help with the reintegration of prisoners into society, such as skills training.

4.20. International donor assistance has played an important role in poverty reduction in the WBG, especially the United Nations. UNRWA's special hardship program is a formal and broad

[32] In Gaza only, beneficiaries are provided a combination of cash and food assistance that equals the cash allowance in the West Bank.

[33] According to the *Palestine Poverty Report 1998*, the transfer amount is fixed at the nominal rate of JD 81 for a family of seven.

based program which targets ultra poor refugee households. The two primary eligibility criteria for receiving assistance under this program are that no capable adult male is present and the households' total income is below the lowest salary received by an UNRWA staff member in its region. Assistance provided is given in the form of food, cash, and shelter rehabilitation. The majority of households receive their assistance only in the form of food supplies valued at about US$5 dollars per individual per month. Particularly destitute households in addition receive cash of US$ 228 per family per year (in 1996) or about US$56 annually per individual. The number of individuals receiving food aid was 94,753 in end-1997 of which, 6,193 households (about 25,000 persons) received cash assistance.

4.21. The non-governmental sector plays an important role in the provision of aid to the poor, though the total amount of assistance is unknown due to the lack of documentation and collection of these data. It is estimated that in 1998, there were about 500 NGOs providing various forms of support to poor households in the West Bank and Gaza. Included in this category are religious organizations and networks of which the Al Zakat Committees are among the most prominent. According to the *Palestine Poverty Report 1998,* the Al-Zakat Committees provided about US$ 9 million, mostly in cash assistance to 27,585 households in 1996. Many other charitable organizations also provide support to destitute groups. In 1997 when border closures were frequent, about two-thirds of these organizations used as their main eligibility criterion lack of income or the absence of the primary breadwinner. In addition, many of the charitable groups also focused their services to particular groups such as women, children, the disabled, and the ill.

4.22. The above description of safety net programs is useful in providing an overview of the contribution of various organizations. However, this information is less useful in allowing us to determine to what extent these programs have been successful in reaching the poor and lifting them out of poverty. Furthermore, the limited financial information does not allow us to determine whether these programs are efficient with low overhead and minimal leakage to the non-poor. Without recourse to program level data, determining the degree of efficiency will not be possible.

4.23. In order to gain a better understanding of the effectiveness of programs, we exploit the information in the household expenditure surveys for 1996-1998. The surveys pose three questions which are useful in understanding the reach of the formal and informal safety net: (i) whether the household received any form of social assistance from any formal source; (ii) whether the household's primary source of income was aid from either the Ministry of Social Affairs or UNRWA; and (iii) whether the household's primary source of income was remittances from relatives within the WBG.

4.24. What is noteworthy and useful about these above questions is that they allow us to link the MOSA and UNRWA beneficiaries and their poverty status. The first question allows us to estimate the total number of families receiving social assistance, that would include aid from any organization operating in the WBG – not just aid by the Ministry of Social Affairs. The second question allows us to link poverty to the household whose *main source of income* was assistance from either the Ministry of Social Affairs or UNRWA — presumably these would be far fewer than the total number of households receiving MOSA or UNRWA aid. (Given the wording of this question, it is not possible to evaluate many basic indicators of effectiveness of the Authority's social assistance programs, including its coverage of the poor, its targeting efficiency, or whether MOSA interventions are helping to alleviate poverty.) The third question allows us to

determine to what extent intra-household remittances are used by households as their primary source of income, thus allowing them to escape from poverty.[34]

4.25. The analysis of the safety net which follows is based on the household expenditure surveys exclusively and, due to limited access to additional data, does not use corroborative data from the MOSA or UNRWA. Therefore, though the analysis based upon the surveys reaches strong conclusions about the effectiveness and efficiency of the safety net, these should be considered tentative. Additional analysis based upon a combination of additional targeted safety net surveys and household level data from the major welfare organizations are essential.

V. Effectiveness of Social Protection for the Poor in the WBG

4.26. The effectiveness of social protection interventions generally centers around two broad criteria: (i) the success of the intervention in achieving its poverty objectives, and (ii) the cost-effectiveness of the program. The most common poverty objective is to reduce the number of persons suffering from poverty, and thus the success of these interventions is usually measured by the proportion of the poor who benefit from assistance (i.e., coverage) and the adequacy of transfers (in terms of raising beneficiaries to the poverty line, or meeting some other program objective). In turn, cost-effectiveness is judged not only by costs (of both the assistance and the administration), but also by the successfulness in targeting assistance to the poor.

4.27. Though data available do not allow us to assess the effectiveness of the public sector poverty reduction programs, the household surveys allow a critical link to be established between poverty status and overall social assistance status (whether or not the household receives some form of social assistance). Thus, it is possible to evaluate the effectiveness of the entire formal social safety net and to offer some broad descriptions of the MOSA's program based on its existing targeting criteria.

V.I. The Overall Formal Safety Net Programs

4.28. The coverage of the formal safety net is modest since it reached only about 30 percent of the poor population in the WBG in 1998. Without further analysis of the individual programs and agencies involved in safety net programs, we can only speculate as to why coverage of the poor is low. One possible explanation is that the large formal safety net programs exclude the majority of poor households by adopting overly stringent eligibility criteria. For example, both MOSA and UNRWA provide aid to families where an able adult male is absent. Since the majority of poor live in households headed by adult males, many of whom are employed, the largest group of poor – the employable poor and their dependents – are disqualified. Another possible explanation for low coverage is that the formal safety net has implicitly adopted a much lower poverty line than the one established by the Palestine Authority and target the poorest households due to the minimal financial resources available for social welfare programs.

[34] The Ministry of Social Affairs maintains a fixed family allowance for aid recipients, based on the number of members in the household, but not all families qualify for the full level of cash assistance. In addition, a large proportion of families receive other benefits (such as health care and educational expenses), which has not been quantified in terms of expense.

Table IV.3
West Bank and Gaza Strip: Coverage and Aid Adequacy
(in percent)

Targeting Indicator by year	WBG	West Bank	Gaza
Proportion of poor receiving formal assistance			
1996	24	12	35
1997	35	27	42
1998	30	23	36
Poor's expenditures as share of poverty line			
1996			
Receiving assistance	75	71	72
Not receiving assistance	77	71	74
1997			
Receiving assistance	69	68	69
Not receiving assistance	78	73	76
1998			
Receiving assistance	68	70	69
Not receiving assistance	77	74	76

Source: Staff calculations based on PECS.

4.29. Regional differences in coverage rates are large with the proportion of the poor who receive aid in Gaza being significantly higher than in the West Bank for 1996-1998 as seen in Table IV.3. Many possible reasons for this could exist, including the difficulty of reaching the poor in the West Bank since they are widely spread, out unlike in Gaza (as seen in Table III.2), targeting mechanisms employed were more suitable to the profile of the Gazan poor (e.g., wage levels on public works programs), or resources were more heavily allocated towards Gaza. This disparity in coverage rates suggest that greater attention needs to be given to various aspects of the program including the project design, choice of targeting mechanisms, geographical location within region, and resource allocation guidelines.

4.30. The adequacy of the assistance provided in terms of lifting families out of poverty was also low. Though an estimated 57,000 households received social assistance in 1998, almost 40 percent of the beneficiaries continue to live below the poverty line. Moreover, the extent of their poverty remains significantly greater than the poor not receiving assistance. Poor households who receive aid had lower consumption levels than those *not* receiving aid (69 percent compared to 76 percent of the poverty line respectively). While this indicates that the deeper poor are receiving the assistance, it is also an indication that the level of assistance was insufficient to alleviate poverty. The lack of the adequacy of formal assistance programs is well documented in the *Palestine Poverty Report 1998* which notes for example that UNRWA's food and cash aid totaled an estimated US$ 116 per individual per year – well below the poverty line for the WBG.

4.31. In addition to the social safety net's limited coverage and low levels of transfers to the poor, social assistance in the WBG suffers from considerable leakage to the non-poor since only 41 percent of aid recipients are poor. While leakage in the WBG compares relatively favorably to other middle-income economies (where on average only 30 percent of assistance is directed to the poorest 20 percent of the population), it represents a large wastage of resources in the poverty alleviation effort. At least among the aid obtained by the poor, a positive sign is that assistance appears to be predominantly directed to the ultra poor with significantly larger proportions of social assistance directed to the first income decile as seen in Table IV.4.

Table IV.4
Targeting Efficiency of Aid to the Poor
(as percent of all households receiving social aid)

Region	Category of Households	Share of Households Receiving Aid 1996	1997	1998
West Bank	Lowest expenditure decile	23	25	22
	2nd expenditure decile	16	15	16
	3rd expenditure decile	14	12	14
	All poor	32	33	29
Gaza	Lowest expenditure decile	16	18	20
	2nd expenditure decile	13	16	14
	3rd expenditure decile	15	13	16
	All poor	59	57	55
WBG	All poor	49	45	41

Source: Staff calculations based on PECS.
Note: The table should be read as follows: in 1998 22 percent of West Bank households receiving aid from formal sources were from the first decile group of the West Bank.

4.32. The formal safety net in the WBG appears to need significant strengthening. Coverage is low, the level of assistance to beneficiaries is inadequate for raising them close to the poverty line, and finally, leakage of assistance to the non-poor is high. The first two problems could stem from the severe financial constraints facing organizations such as UNRWA and MOSA which would significantly restrict expansion of coverage and aid per household. Furthermore, the targeting mechanism used (i.e., "indicator targeting"), at least by the largest cash and food transfer programs in the Palestinian Territories, may require reconsideration. Not only does the targeting mechanism exclude many destitute families, even in the bottom 10 percent of the population, but an unintended consequence may be that assistance is channeled to many non-poor households.

V.II Public Formal Safety Net Programs

4.33. Within the Palestinian Authority's social protection program, while it is not possible to fully evaluate the efficiency or effectiveness of the Social Assistance Program of the Ministry of Social Affairs (MOSA), the household surveys do allow for an estimation of the poverty rates for many of the traditionally targeted MOSA beneficiaries. MOSA's social assistance has eligibility requirements which target families based on the loss of total income or a large proportion of it due to the inability of the primary income-generator to work (due to death, old age, illness, or disability), and not based on living below a certain living standard. Under MOSA, households are not eligible for assistance if they include an adult male member between the age of 18-60 years who is physically fit to earn income (regardless of whether he is actually engaged in an economic activity). Thus, there is a purposeful attempt to target assistance based on permanent poverty (those in need of long term support because of limited capacity to generate income), rather than transitional poverty that might result during periods of natural or economic shocks.

4.34. While the household surveys do not provide information on disability, one of the major beneficiary groups of MOSA assistance, they do provide poverty information on two other key MOSA beneficiary categories: female headed households, and the elderly. Based on the poverty characteristics of these groups, the targeting strategy of the Ministry of Social Affairs would appear to be directed to groups who, indeed, suffer from relatively high poverty rates. In the West Bank, poverty among female headed households and elderly households averages 17 percent, compared to poverty averaging 14 percent for the total West Bank population. In Gaza, poverty among female headed households and the elderly averaged 44 percent in 1998, compared to only 33 percent for the total population.

4.35. Nonetheless, the traditionally targeted groups for MOSA assistance represent just a small percentage of the total poor. In the West Bank, only 17 percent of poor households were headed by solitary women or the elderly, while in Gaza, the proportion was only 15 percent. Thus, some 85 percent of the poor are not among these traditionally targeted groups. Though this does not include the disabled, it remains likely that the substantial segment of the poor are without access to public assistance. It is important that MOSA consider developing alternative strategies to those being adopted, if it wants to direct its assistance to the most destitute.

VI. Improving the Social Safety Net in the WBG

4.36. The safety net in the Palestinian territories is comprised of several programs with a variety of financing and implementation arrangements. The scope of the formal safety net appears limited to about one in three poor and suffers from problems of inadequacy of the transfer levels and leakage to the non-poor. The informal safety net is less well understood and more complex in terms of the financing arrangements, organizational objectives, beneficiary profile, and program effectiveness. Nevertheless, the formal and informal programs may indeed be able to develop a more systematic way of complementing one another's strengths in order to increase coverage of the poor and to provide a minimally acceptable level of assistance that could help support those families suffering from temporary setbacks, as well as to break the cycle of poverty among chronically poor households.

4.37. As mentioned at the beginning of this chapter, we do not propose any particular set of safety net programs. Rather, the focus of this section will be on highlighting key issues for consideration when modifying the safety net. In case new programs are being introduced either by an official organization or an NGO, there are five main questions concerning the design and implementation of a safety net program that should be addressed up front in order to improve the effectiveness and efficiency of the proposed program:

- How much money is available for the safety net and how secure is future funding for the program?
- What is the target beneficiary group?
- What type of assistance should be provided by each individual program (i.e., cash or in kind assistance, education or health services, or infrastructure)?
- What targeting mechanism will be employed to minimize leakage outside the desired beneficiary group?
- Which organizations should deliver the assistance? For large programs, what is the role of and the division of responsibility for administration, implementation, and monitoring at the central and local levels?

4.38. In addition to what questions should be considered in the expansion of the safety net, in the short- and medium-term there are ways to improve the safety net with modest investment of time and resources. First, some basic steps can be taken to reduce leakage of assistance from the formal safety net programs to the non-poor. Statistical analysis of the household surveys (see Annex 1.2) reveals that households whose *main* source of income is either from UNRWA or MOSA are significantly more likely to be poor. On the other hand, 59 percent of the households that benefit from the formal safety net had expenditures above the poverty line. Thus, it appears that some assistance, possibly from government funded safety net programs, is inadvertently reaching the non-poor. Additional survey work needs to be carried out to determine what are the specific programs with low targeting efficiency and the sources of leakage (e.g., targeting mechanism or broadly defined mandates for various programs). Finding out this information should be possible by including a safety net module in the next round of the household expenditure survey or through a more targeted survey of the MOSA beneficiaries.

4.39. A second way of introducing improvements to the safety net, both in terms of coverage of the poor and reducing leakage to the non-poor, is the devolution of certain aspects of the implementation of MOSA's poverty alleviation programs to the local level. Presently, the MOSA has financial and administrative responsibility for the income transfer programs. Though funding of the public safety net program should remain at the central government level especially given the existing revenue collection system, certain aspects of implementation such as, identifying the poorest in their own communities, reconfirming the poverty status of existing beneficiary households, and improving targeting efficiency, could be better carried out at the local level of government administration. The degree of devolution of responsibilities would depend upon the institutional capacity of and financial resources made available to the local offices as well as a clear agreement on the systematic transfer of the required resources between the ministry and the local government.

4.40. A third way of improving the safety net is to improve the allocation of resources such that those areas or localities with higher levels of poverty receive proportionately greater transfers. Though this report has not explored MOSA's geographical distribution of assistance, analysis of the household surveys indicates that at the regional level beneficiary households were not represented in proportion to their contribution to poverty in the WBG.[35] The poverty map in Chapter III could be exploited to help determine the allocation of transfers to the poor. For example, the West Bank has 47 percent of the poor and therefore could receive that amount for transferring to the target households. At the more disaggregated level, geographical localities could also get a share of the transfer income proportionate to the share of the Palestinian poor that reside there. Thus, Yatta and Jenin, which have about 7.5 percent of all Palestinian poor ,would receive about that share of MOSA's income transfer program resources. In terms of the amount of resources allocated for administrative costs, including targeting, areas where the incidence of poverty is low – such as Ramallah and Nablus – may need extra resources for identifying the poor and seeking them out.

4.41. In addition to the short-term considerations for improving the ability of the safety net to reduce poverty in the WBG, there are medium to long-term issues that the Palestinian society may want to address to improve the effectiveness of the safety net. The foremost problem is that both the MOSA and UNRWA income transfer programs as well as the public works programs, exclude the working poor and their dependents though they comprise the majority of the poor. Thus, if MOSA is successful in reaching the majority of its target group, that is the permanent

[35] According to the PECS 1998, 83 percent of poor households whose main source of income was from UNRWA or MOSA lived in Gaza, though only about half of all poor households live there.

poor, then the Palestinian Authority may want to consider expansion to the working poor. However, there are three obstacles that would need to be tackled first: (i) the availability of financing; (ii) the identification of a good targeting mechanism to distinguish the poor from the non-poor; and (iii) a means of transferring income without creating the disincentive to work among the employable poor.

4.42. The second issue concerns the integration and complementarity of social programs, both at the national and local levels. Here we refer not only to the large public welfare programs, but also to the services and assistance provided by education and health care providers and NGOs. An area which highlights the need for better integration among these programs is that of child poverty. The vast majority of the poor are children and youths who have few means at their disposal to improve their own welfare. However, public schools and health clinics could work together with NGOs to identify children and youth at risk of poor nutrition, dropping out of school, or entering into an early marriage. NGOs could ensure that assistance was available to these children to minimize as much as possible their experiencing the symptoms of poverty. One way to deal with this would be for NGOs and the Palestinian Authority to cooperate and establish agreed upon benchmarks (for example, decrease dropout rates among poor children to X percent in the next five years) and then ensure that capable NGOs are present in all geographical areas with high poverty incidence rates.

4.43. In the WBG, the two income transfer programs by MOSA and UNRWA function *de facto* as pension programs for the poor as can be seen by the characteristics of the target beneficiaries, i.e., households headed by the elderly, women, or disabled, but as noted earlier with only a minimal level of aid provided. This raises a third long term issue which is the need to consider the establishment of a social insurance program. Presently, old age security is predominantly determined by voluntary savings, informal transfers, and poverty relief measures, making many of the population, especially in the lower income groups, vulnerable to poverty when old age approaches. A well-structured, mandatory savings plan could help to head off poverty among the elderly in the future. Ensuring financial security for the old and finding the best means to pay for such security is a complex undertaking, which this chapter does not attempt to explore. But, consideration needs to be given to expanding forms of social insurance and mandatory savings are important for the long term to reduce the vulnerability of the general population from falling into poverty.

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Annex 1.1: Households and Census Surveys

A1.1.1. Analysis of poverty in the West Bank and Gaza is based on the raw data of the three Palestinian Expenditure and Consumption Surveys (PECS), for 1996, 1997 and 1998. Data were collected by the Palestinian Central Bureau of Statistics (PCBS) from 4,547 households in 1996, 3,270 in 1997 and 2,851 in 1998, in 12 rounds throughout the survey year (with the exception of the first one, conducted from October 1995 to September 1996). The samples are nationally representative.[36]

A1.1.2. Five types of information are collected for each household: (i) statement of the household members, which contains social, economic and demographic particulars of the household; (ii) statement of the long-lasting commodities and income generation activities; (iii) housing characteristics; (iv) data pertaining to the source of income and labor status; and (v) consumption by products.

A1.1.3. Not available for the analysis were raw data on income, for reasons of confidentiality. However, consumption was preferred to income to measure household welfare since consumption is considered to be less subject to fluctuation due to household smoothing behavior and since it is subject to fewer measurement errors.

A1.1.4. Since information is collected at the household level, information at the individual level is not available. In order to compare households with different structure, the equivalence scale retained by the National Commission for Poverty Alleviation (1998) is used in this report. Household consumption per capita is computed as the total household consumption divided by $E=(A+0.46\ C)^{0.89}$, with A the number of adults (aged 18 and more) and C the number of children in the household.

A1.1.5. Similarly, this note employs the same definition of poverty as was used in the National Poverty Commission report from 1998: the poor are those who can not afford a basic basket of goods consisting of food, clothing and housing, and a minimum of other needs such as health care, transportation and education. Specifically, a household with 2 adults and 4 children is considered poor if its monthly consumption were below NIS 1,292 in 1996, NIS 1,390 in 1997 and NIS 1,460 in 1998. This was approximately the equivalent of a per capita consumption of US$ 2.1 per person a day in 1998.

A1.1.6. The derivation of the poverty line is based on the minimum necessary consumption of a reference household consisting of 2 adults and 4 children. "Necessary consumption" is assumed to consist of food, clothing, and housing as well as household utensils, health and personal care, transportation and education. The first three items corresponds to a "basic basket", whereas including the last group of items results in what is termed as an "expanded necessary basket". The basic basket makes up more than 80 percent of the expanded basket for the reference household.

A1.1.7. When defining the poverty line, a distinction between an absolute and a relative poverty line is often evoked. A common way to determine an absolute poverty line is to calculate the minimum cost of fulfilling human nutritional requirements, typically assumed to be around 2,000 calories per day. While the poverty line derived by the NCPA is based on the reference

[36] See National Commission for Poverty Alleviation (1998), *Palestine Poverty Report 1998*, or PCBS (1998), *Expenditure and Consumption Levels*, for a detailed presentation of sampling methods used to conduct these surveys.

household's actual cost of consumption of food, it is not based on a measure of nutritional requirements. Rather, it is assumed that the cut-off between poor and non-poor is at the 30th percentile of the consumption of the reference households. In this way, the poverty line derived by NCPA is not an absolute poverty line in the narrowest sense.

A1.1.8. The Census survey of 1997 is used for the poverty mapping. The Census covers all persons present in the WBG on the 10th of December 1997, and reports information comparable to the one available in PECS, regarding household's members characteristics, housing characteristics, main source of income and labor status. The reader may refer to the PCBS *Population Report* 1998 for a detailed description of the methodology pursued to conduct the Census survey.

Annex 1.2: Econometric Results

A1.2.1. The survey contains information on whether each household member works and if that is the case, the sector of work, i.e., private or public within the Palestinian territories or Israel as well as the number of months worked within the last 12 months. We limit the analysis to consider a maximum of 4 working persons in each household. The analysis still accounts, however, for more than 97 percent of the total number of months worked. The regression is based on a pooled data set for 1996-1998. In order to highlight differences in the impact on household consumption between the West Bank and Gaza of the various variables, we estimate separate models for the two regions. When interpreting the results, it must be kept in mind that the average level of consumption is approximately 30 percent lower in Gaza than in the West Bank. The dependent variable is log of real household consumption.

A1.2.2. This model therefore describes the marginal impact (in percentage) on consumption of being in one category rather than another one. For instance, in the West Bank, the consumption of an household whose head is post-graduated illiterate is 45.7 percent higher than the consumption of an household whose head is illiterate (the latter category being the benchmark to which other categories of educational attainment are compared). In Gaza, the consumption of an household whose head has worked 12 months over the last year in Israel is 44.4 (3.7 multiplied by 12) percent higher than the consumption of an household whose head has not worked at all, everything else being equal. The key results are summarized in table I.4.[37]

Key to Variable Names:

LRCONS	Log of real monthly household consumption
RW	Relative weight used in the household surveys
C	Constant
ES<i><j>H<i>	Number of months worked by household member i in sector j i = 1-4, 1=head of household j = 2-4, 2=public sector, 3=private sector, 4=Israel
IC4	Main source of income = UNWRA or Ministry of Social Affairs
IC6	Main source of income = Cash remittances from Palestinian Territories
IC8	Main source of income = Pension or inheritance
IC10	Main source of income = Other
A<i>	Age of household member i, i=1,4.
A<i>A<i>	Squared age of household member i, i=1,4.
ED<i><j>	Household members' educational status, i = 1-4, j=1-7, 1 = Illiterate (this category excluded from the estimations to avoid singularity. 2 = can read and write 3 = Elementary 4 = Preparatory 5 = Secondary, vocational commercial and agricultural 6 = Intermediate college 7 = University 8 = Post graduate

[37] The complete results, together with some diagnostic tests, are provided in Annex 1.2.

M<n>	Month, n= 1-36, 36 is excluded from the estimations to avoid singularity.
F	Dummy, head of household is female
AZ<j>	Type of dwelling, j=1-4,1= House, 2=Villa,3=apartment, 4=other. (2 is excluded for the estimations to avoid singularity)
LOC<j>	Location, j=1-3. 1 = City, 2 = Village, 3 = Refugee Camp. 1 is excluded from the estimations to avoid singularity.
LAND2	No access to land
LEQSCALE	Household size measured by the log of the equivalence scale
ES<i>4H<i>Y1	Average months worked in Israel in 1996 by household member i, i=1-4

I. Determinants of Real Household Consumption in the West Bank and Gaza

West Bank

Method of estimation	Weighted Regression
Weight:	RW
Dependent variable:	LRCONS
Number of observations:	7456

Statistics Based on Transformed Data		Statistics Based on Original Data	
Mean of dependent variable	7.85713	Mean of dependent variable	7.84926
Std. dev. of dependent var.	.651115	Std. dev. of dependent var.	.651975
Sum of squared residuals	1636.76	Sum of squared residual	1635.01
Variance of residuals	.222537	Variance of residuals	.222299
Std. error of regression	.471738	Std. error of regression	.471486
R-squared	.482130	R-squared	.484113
Adjusted R-squared	.475089	Adjusted R-squared	.477099
Durbin-Watson statistic	1.68328	Durbin-Watson statistic	1.68567
Sum of weights	7456.00		
F-statistic (zero slopes)	68.4740		
Schwarz Bayes. Info. Crit.	-1.39551		
Log of likelihood function	-4943.52		

Gaza

Method of estimation	Weighted Regression
Weight:	RW
Dependent variable:	LRCONS
Number of observations:	3212

Statistics Based on Transformed Data		Statistics Based on Original Data	
Mean of dependent variable	7.63156	Mean of dependent variable	7.62701
Std. dev. of dependent var.	.656460	Std. dev. of dependent var.	.656428
Sum of squared residuals	671.997	Sum of squared residuals	672.794
Variance of residuals	.216007	Variance of residuals	.216263
Std. error of regression	.464765	Std. error of regression	.465041
R-squared	.514364	R-squared	.513747
Adjusted R-squared	.498754	Adjusted R-squared	.498117
Durbin-Watson statistic	1.77843	Durbin-Watson statistic	1.77318
Sum of weights	3212.00		
F-statistic (zero slopes)	32.9503		
Schwarz Bayes. Info. Crit.	-1.31049		
Log of likelihood function	-2049.41		

Annex Table 1.1

West Bank: Determinants of Real Household Consumption

Variable	Estimated Coefficient	Standard Error	t-statistic
C	7.37E+00	1.11E-01	66.29
ES12H1	2.93E-03	2.24E-03	1.31
ES13H1	9.51E-03	1.53E-03	6.22
ES14H1	2.07E-02	2.33E-03	8.86
ES22H2	-2.21E-04	2.68E-03	-0.08
ES23H2	-4.16E-04	1.67E-03	-0.25
ES24H2	1.07E-02	3.26E-03	3.28
ES32H3	3.53E-03	5.09E-03	0.69
ES33H3	8.48E-03	2.78E-03	3.05
ES34H3	1.55E-02	4.35E-03	3.57
ES42H4	1.55E-02	8.21E-03	1.89
ES43H4	9.63E-03	3.48E-03	2.77
ES44H4	4.63E-03	5.57E-03	0.83
IC4	-5.39E-01	5.39E-02	-10.01
IC6	-2.41E-01	3.23E-02	-7.47
IC8	-3.52E-02	7.10E-02	-0.50
IC9	2.89E-01	8.44E-02	3.43
IC10	-2.60E-01	5.68E-02	-4.57
A1	1.91E-02	2.55E-03	7.50
A1A1	-1.62E-04	2.45E-05	-6.62
A2	5.76E-03	1.81E-03	3.18
A2A2	-3.85E-05	2.37E-05	-1.63
A3	-6.40E-04	1.89E-03	-0.34
A3A3	2.03E-05	2.66E-05	0.76
A4	2.14E-03	2.09E-03	1.02
A4A4	-3.99E-05	3.04E-05	-1.31
ED12	1.39E-01	2.09E-02	6.66
ED13	2.11E-01	2.22E-02	9.51
ED14	2.53E-01	2.38E-02	10.62
ED15	2.95E-01	2.57E-02	11.47
ED16	2.57E-01	3.03E-02	8.47
ED17	3.98E-01	3.24E-02	12.29
ED18	4.57E-01	5.91E-02	7.73
ED22	9.34E-02	2.47E-02	3.78
ED23	1.52E-01	2.16E-02	7.00
ED24	2.01E-01	2.18E-02	9.23
ED25	2.60E-01	2.46E-02	10.56
ED26	2.69E-01	3.13E-02	8.59
ED27	3.23E-01	3.54E-02	9.13
ED28	5.00E-01	1.03E-01	4.85
ED32	5.34E-02	2.69E-02	1.98
ED33	9.98E-02	2.11E-02	4.74
ED34	1.02E-01	2.30E-02	4.43
ED35	1.45E-01	2.85E-02	5.09
ED36	1.74E-01	4.92E-02	3.53
ED37	2.02E-01	4.90E-02	4.12
ED38	2.69E-01	1.33E-01	2.03
ED42	-4.09E-02	2.89E-02	-1.41
ED43	8.70E-03	2.27E-02	0.38
ED44	2.04E-02	2.46E-02	0.83
ED45	2.41E-02	3.11E-02	0.78
ED46	1.55E-02	5.91E-02	0.26
ED47	2.34E-02	6.23E-02	0.37
ED48	-2.89E-01	1.66E-01	-1.74

Annex Table 1.1 (continued)
West Bank: Determinants of Real Household Consumption

Variable	Estimated Coefficient	Standard Error	t-statistic
M1	-3.63E-02	4.76E-02	-0.76
M2	4.56E-02	4.79E-02	0.95
M3	-3.98E+00	4.74E-02	-3.80
M4	-8.69E-02	4.72E-02	-1.84
M5	-1.75E-01	4.75E-02	-3.69
M6	-2.11E-01	4.74E-02	-4.45
M7	-7.85E-02	4.80E-02	-1.64
M8	-8.21E-02	4.73E-02	-1.73
M9	-6.74E-02	4.75E-02	-1.42
M10	-5.92E-02	4.75E-02	-1.25
M11	-1.61E-01	4.78E-02	-3.37
M12	-9.84E-02	4.72E-02	-2.08
M13	-1.74E-01	4.95E-02	-3.52
M14	-1.49E-01	4.97E-02	-3.00
M15	-2.76E-01	5.03E-02	-5.48
M16	-6.48E-02	5.11E-02	-1.27
M17	-2.18E-01	5.20E-02	-4.20
M18	-1.44E-01	5.15E-02	-2.79
M19	-7.14E-02	5.12E-02	-1.39
M20	-3.01E-02	5.13E-02	-0.59
M21	-1.43E-01	5.10E-02	-2.81
M22	-9.87E-02	5.05E-02	-1.95
M23	-1.03E-01	4.95E-02	-2.07
M24	-1.37E-01	4.97E-02	-2.75
M25	-1.11E-01	5.19E-02	-2.14
M26	-4.08E-01	5.21E-02	-7.82
M27	-2.72E-01	5.28E-02	-5.15
M28	-1.40E-01	5.20E-02	-2.70
M29	-2.83E-01	5.26E-02	-5.38
M30	-1.41E-01	5.13E-02	-2.76
M31	-2.05E-01	5.19E-02	-3.94
M32	6.88E-02	5.36E-02	1.28
M33	-2.21E-02	5.31E-02	-0.42
M34	-1.54E-01	5.39E-02	-2.85
M35	-2.57E-02	5.26E-02	-0.49
F	1.90E-02	2.72E-02	0.70
AZ1	-6.29E-01	7.63E-02	-8.24
AZ3	-4.03E-01	7.67E-02	-5.25
AZ4	-1.17E+00	1.24E-01	-9.40
LOC2	-3.38E-02	1.31E-02	-2.59
LOC3	-8.25E-02	2.44E-02	-3.38
LAND2	-7.87E-03	1.34E-02	-0.59
LEQSCALE	4.65E-01	2.73E-02	17.04
ES14H1Y1	-7.77E-03	2.94E-03	-2.64
ES24H2Y1	4.45E-03	1.05E-02	0.42
ES34H3Y1	-5.88E-03	6.63E-03	-0.89
ES44H4Y1	1.42E-02	7.70E-03	1.85

Gaza: Determinants of Real Household Consumption

Variable	Estimated Coefficient	Standard Error	t-statistic
C	7.51E+00	1.48E-01	50.62
ES12H1	1.23E-02	2.52E-03	4.90
ES13H1	1.19E-02	2.14E-03	5.56
ES14H1	3.66E-02	4.38E-03	8.37
ES22H2	1.30E-02	3.09E-03	4.21
ES23H2	9.07E-03	2.54E-03	3.57
ES24H2	3.04E-03	9.78E-03	0.31
ES32H3	4.85E-03	5.33E-03	0.91
ES33H3	-1.64E-03	4.24E-03	(0.39)
ES34H3	4.55E-03	1.55E-02	0.29
ES42H4	1.61E-02	8.32E-03	1.93
ES43H4	1.66E-02	5.66E-03	2.93
ES44H4	-4.74E-03	1.75E-02	(0.27)
IC4	-2.90E-01	3.84E-02	(7.56)
IC6	-1.12E-01	5.16E-02	(2.18)
IC8	6.86E-02	8.00E-02	0.86
IC9	1.08E-01	1.47E+00	1.47
IC10	5.51E-02	7.46E-02	0.74
A1	1.08E-02	3.97E-03	2.72
A1A1	-7.99E-05	3.90E-05	(2.05)
A2	2.73E-03	3.18E-03	0.86
A2A2	-3.61E-06	4.34E-05	(0.08)
A3	-2.39E-03	3.18E-03	(0.75)
A3A3	5.72E-05	4.69E-05	1.22
A4	-2.54E-03	3.38E-03	(0.75)
A4A4	4.62E-05	4.89E-05	0.94
ED12	1.24E-01	3.29E-02	3.78
ED13	1.80E-01	3.49E-02	5.16
ED14	1.87E-01	3.57E-02	5.24
ED15	2.33E-01	3.64E-02	6.39
ED16	3.55E-01	4.55E-02	7.80
ED17	3.78E-01	4.40E-02	8.59
ED18	5.38E-01	9.31E-02	5.78
ED22	1.02E-01	4.03E-02	2.53
ED23	1.21E-01	3.73E-02	3.23
ED24	1.44E-01	3.65E-02	3.95
ED25	1.56E-01	3.75E-02	4.17
ED26	2.02E-01	4.62E-02	4.37
ED27	5.46E-02	5.47E+00	5.47
ED28	3.21E-01	1.97E-01	1.63
ED32	7.45E-02	4.17E-02	1.79
ED33	1.30E-01	3.26E-02	3.99
ED34	1.18E-01	3.53E-02	3.35
ED35	1.42E-01	4.00E-02	3.56
ED36	1.59E-01	7.24E-02	2.20
ED37	2.59E-01	7.08E-02	3.66
ED38	1.28E-01	1.80E-01	0.71
ED42	5.22E-02	4.29E-02	1.22
ED43	1.37E-02	3.43E-02	0.40
ED44	5.85E-02	3.77E-02	1.55
ED45	9.84E-02	4.35E-02	2.26
ED46	3.57E-02	9.09E-02	0.39
ED47	1.54E-01	8.56E-02	1.80
ED48	3.27E-01	4.84E-01	0.68

Gaza: Determinants of Real Household Consumption (continued)

Variable	Estimated Coefficient	Standard Error	t-statistic
M1	-1.55E-01	7.18E-02	(2.16)
M2	-2.68E-02	7.00E-02	(0.38)
M3	-2.83E-01	7.09E-02	(3.99)
M4	-2.21E-02	7.09E-02	(0.31)
M5	-1.43E-01	7.04E-02	(2.03)
M6	-1.71E-01	7.28E-02	(2.35)
M7	-2.27E-01	7.04E-02	(3.23)
M8	-6.34E-02	7.05E-02	(0.90)
M9	-2.78E-02	7.22E-02	(0.39)
M10	-3.47E-02	7.23E-02	(0.48)
M11	-9.05E-02	6.98E-02	(1.30)
M12	-8.28E-02	7.14E-02	(1.16)
M13	-1.70E-01	7.69E-02	(2.21)
M14	-8.02E-02	7.64E-02	(1.05)
M15	-2.55E-01	7.63E-02	(3.34)
M16	-7.73E-02	7.41E-02	(1.04)
M17	-1.33E-01	7.31E-02	(1.82)
M18	-1.25E-01	7.21E-02	(1.73)
M19	-3.50E-02	7.33E-02	(0.48)
M20	-9.22E-02	7.47E-02	(1.23)
M21	-6.25E-02	7.47E-02	(0.84)
M22	-6.78E-02	7.90E-02	(0.86)
M23	-1.77E-01	7.66E-02	(2.31)
M24	-2.03E-01	7.44E-02	(2.72)
M25	-5.58E-02	7.69E-02	(0.73)
M26	-2.11E-01	7.73E-02	(2.73)
M27	-8.49E-02	7.73E-02	(1.10)
M28	-7.40E-02	8.06E-02	(0.92)
M29	-2.93E-01	7.33E-02	(3.99)
M30	-1.68E-01	7.99E-02	(2.11)
M31	-9.44E-02	7.35E-02	(1.28)
M32	-2.46E-02	8.16E-02	(0.30)
M33	-9.25E-02	7.61E-02	(1.22)
M34	-4.59E-02	7.78E-02	(0.59)
M35	4.39E-02	7.62E-02	0.58
F	5.97E-02	4.39E-02	1.36
AZ1	-7.97E-01	8.64E-02	(9.23)
AZ3	-5.52E-01	8.67E-02	(6.36)
AZ4	-1.35E+00	2.15E-01	(6.28)
LOC2	-7.57E-02	2.61E-02	(2.90)
LOC3	-6.26E-02	1.92E-02	(3.26)
LAND2	-5.28E-02	3.06E-02	(1.72)
LEQSCALE	4.47E-01	3.86E-02	11.56
ES14H1Y1	-1.43E-02	5.77E-03	(2.48)
ES24H2Y1	-4.72E-03	2.52E-02	(0.19)
ES34H3Y1	-1.59E-02	2.97E-02	(0.54)
ES44H4Y1	1.53E-02	2.75E-02	0.56

II. Determinants of Poverty in the West Bank and Gaza

A1.2.3. In order to estimate the extent of the impact of labor market changes on poverty, we estimate - separately for the West Bank and Gaza – econometric (logit) models in which the household's probability of being poor depends on adult employment (as measured by the number of months worked by each of the first four adults of the household in each sector). We also take into account the impact of other factors such as age, locality, and education in order to control for other effects.

A1.2.4. Using logit models to explain changes in poverty is more appropriate than using linear models of consumption, since some of the determinants of consumption may only explain changes in the consumption level of non-poor, which constitute the largest share of the sample (the total sample for the three years is constituted by definition of 78 percent of non-poor).

The West Bank

Log of Likelihood Function	-2709.02
Number of Cases	7456
Number of Choices	14912
Fraction of Correct Predictions	0.846164

Gaza

Log of Likelihood Function	-1713.84
Number of Cases	3212
Number of Choices	6424
Fraction of Correct Predictions	0.723848

Annex Table 1.3
West Bank: Determinants of Poverty

Variable	Estimated Coefficient	Standard Error	t-statistic
C	-9.04E-01	1.26E+00	-0.72
ES12H1	-4.88E-02	1.58E-02	-3.09
ES13H1	-4.21E-02	9.21E-03	-4.57
ES14H1	-9.61E-02	1.62E-02	-5.94
ES22H2	-3.30E-02	2.02E-02	-1.64
ES23H2	-2.70E-03	1.08E-02	-0.25
ES24H2	-6.72E-02	2.31E-02	-2.90
ES32H3	7.82E-03	3.23E-02	0.24
ES33H3	-2.10E-02	1.75E-02	-1.20
ES34H3	-4.88E-02	2.90E-02	-1.68
ES42H4	-1.32E-01	6.19E-02	-2.13
ES43H4	-4.98E-02	2.17E-02	-2.29
ES44H4	-5.04E-02	3.86E-02	-1.31
IC4	1.45E+00	2.58E-01	5.61
IC6	5.63E-01	1.68E-01	3.35
IC8	1.71E-01	4.67E-01	0.37
IC9	-7.96E-01	7.58E-01	-1.05
IC10	8.46E-01	2.93E-01	2.88
A1	-5.34E-02	1.48E-02	-3.61
A1A1	5.07E-04	1.37E-04	3.69
A2	-5.13E-02	1.28E-02	-4.00
A2A2	4.65E-04	1.46E-04	3.20
A3	9.21E-03	1.26E-02	0.73
A3A3	-7.47E-05	1.60E-04	-0.47
A4	-6.39E-03	1.37E-02	-0.47
A4A4	5.54E-05	1.84E-04	0.30
ED11	8.13E-01	5.45E-01	1.49
ED12	3.33E-01	5.42E-01	0.62
ED13	2.42E-01	5.40E-01	0.45
ED14	1.44E-01	5.41E-01	0.27
ED15	-2.87E-01	5.46E-01	-0.53
ED16	-2.73E-01	5.57E-01	-0.49
ED17	-8.03E-01	5.84E-01	-1.37
ED21	5.66E-01	3.22E-01	1.76
ED22	2.04E-01	3.18E-01	0.64
ED23	-3.04E-01	2.98E-01	-1.02
ED24	-5.21E-01	2.94E-01	-1.77
ED25	-6.92E-01	3.11E-01	-2.23
ED26	-6.82E-01	3.58E-01	-1.90
ED27	-8.56E-01	3.91E-01	-2.19
ED31	-3.60E-01	2.37E-01	-1.51
ED32	-3.53E-01	2.02E-01	-1.74
ED33	-5.78E-01	1.77E-01	-3.26
ED34	-6.19E-01	1.89E-01	-3.27
ED35	-5.67E-01	2.21E-01	-2.57
ED36	-6.71E-01	3.40E-01	-1.97
ED37	-6.33E-01	3.68E-01	-1.72
ED41	3.15E-01	2.63E-01	1.20
ED42	3.86E-01	2.10E-01	1.84
ED43	-3.18E-02	1.79E-01	-0.18
ED44	1.29E-01	1.86E-01	0.69
ED45	-6.84E-02	2.33E-01	-0.29
ED46	1.39E-01	4.01E-01	0.35
ED47	5.09E-01	4.09E-01	1.24

Annex Table 1.3 (continued)
West Bank: Determinants of Poverty

Variable	Estimated Coefficient	Standard Error	t-statistic
M1	-6.59E-01	3.48E-01	-1.89
M2	-1.11E+00	3.79E-01	-2.93
M3	2.70E-01	3.23E-01	0.84
M4	-2.13E-01	3.30E-01	-0.65
M5	2.90E-01	3.21E-01	0.90
M6	4.33E-01	3.17E-01	1.37
M7	5.98E-02	3.29E-01	0.18
M8	-2.64E-01	3.29E-01	-0.80
M9	-1.03E-01	3.35E-01	-0.31
M10	-7.56E-02	3.23E-01	-0.23
M11	1.59E-01	3.21E-01	0.50
M12	-2.91E-02	3.33E-01	-0.09
M13	3.55E-01	3.34E-01	1.06
M14	-7.68E-03	3.52E-01	-0.02
M15	2.17E-01	3.45E-01	0.63
M16	1.66E-01	3.43E-01	0.48
M17	6.31E-01	3.34E-01	1.89
M18	-2.53E-02	3.52E-01	-0.07
M19	-3.21E-02	3.56E-01	-0.09
M20	-6.18E-01	3.84E-01	-1.61
M21	6.23E-01	3.34E-01	1.87
M22	-2.81E-01	3.75E-01	-0.75
M23	-5.81E-02	3.57E-01	-0.16
M24	1.39E-01	3.43E-01	0.41
M25	-1.99E-01	3.78E-01	-0.53
M26	1.30E+00	3.33E-01	3.89
M27	5.79E-01	3.47E-01	1.67
M28	2.89E-01	3.56E-01	0.81
M29	8.30E-01	3.40E-01	2.44
M30	3.05E-01	3.54E-01	0.86
M31	2.81E-01	3.50E-01	0.80
M32	-1.44E+00	4.85E-01	-2.98
M33	-8.80E-01	4.36E-01	-2.02
M34	-2.79E-02	3.83E-01	-0.07
M35	-3.85E-01	3.98E-01	-0.97
F	-7.10E-02	1.64E-01	-0.43
AZ1	1.80E+00	1.04E+00	1.73
AZ3	7.27E-01	1.04E+00	0.70
AZ4	3.14E+00	1.14E+00	2.77
LOC2	2.47E-01	8.66E-02	2.85
LOC3	2.99E-01	1.53E-01	1.95
LAND2	1.77E-01	8.21E-02	2.15
LEQSCAL	1.53E+00	1.66E-01	9.20
ES14H1Y	4.35E-02	1.93E-02	2.25
ES24H2Y	7.86E-02	6.74E-02	1.17
ES34H3Y	1.50E-02	4.10E-02	0.37
ES44H4Y	-1.70E-02	4.85E-02	-0.35

Gaza: Determinants of Poverty

Variable	Estimated Coefficient	Standard Error	t-statistic
C	-3.29E+00	1.38E+00	(2.38)
ES12H1	-6.46E-02	1.30E-02	(4.97)
ES13H1	-4.68E-02	1.07E-02	(4.39)
ES14H1	-2.01E-01	2.47E-02	(8.13)
ES22H2	-5.32E-02	1.70E-02	(3.13)
ES23H2	-2.72E-02	1.34E-02	(2.03)
ES24H2	1.89E-02	5.03E-02	0.37
ES32H3	-3.07E-02	2.87E-02	(1.07)
ES33H3	1.02E-02	2.19E-02	0.47
ES34H3	-1.31E-01	9.17E-02	(1.43)
ES42H4	-5.47E-02	4.31E-02	(1.27)
ES43H4	-4.97E-02	2.85E-02	(1.75)
ES44H4	2.37E-02	8.93E-02	0.27
IC4	1.10E+00	2.01E-01	5.48
IC6	4.46E-01	2.54E-01	1.76
IC8	-1.00E-01	4.31E-01	(0.23)
IC9	-3.16E-01	6.25E-01	(0.51)
IC10	-3.75E-01	3.78E-01	(0.99)
A1	-2.83E-02	2.03E-02	(1.39)
A1A1	1.76E-04	1.98E-04	0.89
A2	-1.19E-03	1.85E-02	(0.06)
A2A2	2.34E-05	2.37E-04	0.10
A3	-5.68E-04	1.72E-02	(0.03)
A3A3	-1.71E-04	2.43E-04	(0.70)
A4	-2.06E-02	1.78E-02	(1.16)
A4A4	2.10E-04	2.47E-04	0.85
ED11	1.66E+00	6.66E-01	2.50
ED12	1.15E+00	6.58E-01	1.75
ED13	1.02E+00	6.56E-01	1.56
ED14	9.37E-01	6.56E-01	1.43
ED15	8.97E-01	6.54E-01	1.37
ED16	5.24E-01	6.69E-01	0.78
ED17	8.68E-02	6.68E-01	0.13
ED21	-2.23E-01	4.32E-01	(0.52)
ED22	-4.89E-01	4.24E-01	(1.15)
ED23	-5.20E-01	4.10E-01	(1.27)
ED24	-5.85E-01	4.11E-01	(1.42)
ED25	-6.06E-01	4.18E-01	(1.45)
ED26	-7.92E-01	4.55E-01	(1.74)
ED27	-1.17E+00	4.93E-01	(2.38)
ED31	4.00E-01	2.91E-01	1.37
ED32	-1.26E-01	2.43E-01	(0.52)
ED33	-5.18E-01	2.00E-01	(2.59)
ED34	-4.14E-01	2.17E-01	(1.91)
ED35	-5.35E-01	2.41E-01	(2.22)
ED36	-7.27E-01	4.01E-01	(1.81)
ED37	-9.06E-01	4.13E-01	(2.19)
ED41	3.70E-01	3.24E-01	1.14
ED42	-2.17E-01	2.49E-01	(0.87)
ED43	1.91E-02	2.02E-01	0.09
ED44	7.80E-02	2.23E-01	0.35
ED45	4.57E-03	2.55E-01	0.02
ED46	2.16E-01	4.73E-01	0.46
ED47	3.02E-01	4.76E-01	0.63

Gaza: Determinants of Poverty (continued)

M1	1.12E+00	4.00E-01	2.81
M2	8.02E-01	3.97E-01	2.02
M3	1.69E+00	3.93E-01	4.30
M4	9.01E-01	4.00E-01	2.25
M5	1.11E+00	3.94E-01	2.83
M6	1.27E+00	4.06E-01	3.12
M7	1.58E+00	3.91E-01	4.04
M8	9.56E-01	3.96E-01	2.41
M9	8.60E-01	4.08E-01	2.11
M10	9.27E-01	4.06E-01	2.28
M11	9.06E-01	3.95E-01	2.29
M12	1.25E+00	4.01E-01	3.11
M13	1.15E+00	4.24E-01	2.71
M14	8.61E-01	4.31E-01	2.00
M15	1.49E+00	4.23E-01	3.52
M16	6.43E-01	4.21E-01	1.53
M17	1.27E+00	4.08E-01	3.12
M18	1.05E+00	4.03E-01	2.61
M19	6.27E-01	4.16E-01	1.51
M20	1.23E+00	4.22E-01	2.93
M21	7.98E-01	4.23E-01	1.89
M22	7.51E-01	4.49E-01	1.67
M23	1.56E+00	4.33E-01	3.60
M24	1.70E+00	4.16E-01	4.08
M25	6.41E-01	4.36E-01	1.47
M26	1.58E+00	4.30E-01	3.69
M27	1.35E+00	4.27E-01	3.17
M28	1.22E+00	4.51E-01	2.71
M29	1.74E+00	4.08E-01	4.26
M30	1.46E+00	4.40E-01	3.31
M31	9.60E-01	4.14E-01	2.32
M32	4.44E-01	4.92E-01	0.90
M33	1.02E+00	4.37E-01	2.33
M34	2.09E-01	4.63E-01	0.45
M35	-6.20E-02	4.66E-01	(0.13)
F	1.28E-03	2.26E-01	0.01
AZ1	2.63E+00	1.04E+00	2.52
AZ3	1.67E+00	1.04E+00	1.59
AZ4	3.86E+00	1.61E+00	2.39
LOC2	3.30E-01	1.31E-01	2.52
LOC3	3.25E-01	9.82E-02	3.31
LAND2	2.83E-01	1.58E-01	1.80
LEQSCAL	2.31E+00	2.10E-01	11.00
ES14H1Y	9.06E-02	3.02E-02	3.00
ES24H2Y	1.36E-02	1.14E-01	0.12
ES34H3Y	1.55E-01	1.55E-01	1.00
ES44H4Y	-5.40E-02	1.40E-01	(0.39)

III The Relationship Between Consumer Prices in Israel and in the West Bank and Gaza

Key to variable names:

LWB	Log of WBG CPI
LIS	Log of Israel CPI
D12LWB	LWB-LWB(-12) = rate of inflation in WBG
D12LIS	LIS-LIS(-12) = rate of inflation in Israel
U	LWB – 0.968 LIS – 0.133 = residual from the co-integrated relationship

The long term relationship between prices in the West Bank and Gaza and Israel is given by:

Dependent variable	LWB
Current sample	1996:2 to 1999:11
Number of observations	46
Mean of dependent variable	4.72879
Std. dev. of dependent var.	.065960
Sum of squared residuals	.014236
Variance of residuals	.323540E-03
Std. error of regression	.017987
R-squared	.927288
Adjusted R-squared	.925636
Durbin-Watson statistic	.611650
F-statistic (zero slopes)	561.127
Schwarz Bayes. Info. Crit.	-7.91418

Variable	Estimated Coefficient	Standard Error	t-statistic
C	0.133	0.194	0.683
LIS	0.968	0.041	23.688

A1.2.5. This relationship is co-integrated: Price series are both I(1) and residuals are stationary. The estimation of the error-correction model gives:

Dependent variable:	D12LWB
Current sample:	1997:3 to 1999:11
Number of observations:	33
Mean of dependent variable	.056482
Std. dev. of dependent var.	.025990
Sum of squared residuals	.372561E-02
Variance of residuals	.128469E-03
Std. error of regression	.011334
R-squared	.827647
Adjusted R-squared	.809818
Durbin-Watson statistic	1.67957
F-statistic (zero slopes)	46.4199
Schwarz Bayes. Info. Crit.	-8.66521

Variable	Estimated Coefficient	Standard Error	t-statistic
C	-0.007	0.006	-1.148
D12LIS	0.292	0.108	2.719
U(-12)	-0.583	0.119	-4.884
D12LWB(-1)	0.768	0.104	7.362

A1.2.6. The regressions imply a co-integrated relation between price levels in Israel and the WBG. Thus, in case of a shock, price levels may temporarily diverge, but, as predicted by the model, will in the long run converge again. This is not the case of a model in which there is only a relation between inflation rates, where a shock will have permanent effect on price differentials.

A1.2.7. There are in principle two possibilities to explain the relationship observed in price levels: either the price levels are the same or there is a permanent (constant) difference between the two. It is however difficult to find any justification for a permanent and stable difference between the two price levels. If there were two prices, it would mean that they would have different determinants (since the rule of one price would not hold). They would therefore be affected by different shocks, and facing similar shocks, would respond differently.

Annex 2: Average Wage Rates and Breakdown of Job Creation

Palestinian Average Daily Wage in 1998
(in nominal NIS)

	West Bank	Gaza Strip	Israel
Agriculture, Hunting & Fishing	44.7	27.3	64.2
Mining, Quarrying & Manufacturing	52.8	36.9	91.0
Construction	70.6	39.2	109.7
Commerce, Hotels & Restaurants	50.9	33.3	98.2
Transportation, Storage & Communication	67.4	43.1	102.6
Services & Other Branches	57.0	54.1	93.7
Average	*57.6*	*47.5*	*100.0*

Source: PCBS

Breakdown of WBG Job Creation, 1996-1998

	Unit	1996	1998	Change	% Change
Total Employment	thousands	451	540	89	16.5%
- In Israel	thousands	73	119	46	38.7%
- in WBG	thousands	378	421	43	10.2%
- Public	thousands	74	87	13	14.9%
- Private	thousands	304	334	30	9.0%
Share of Total Employment					
- In Israel	Percent	16.2	22.0	5.9	26.5%
- in WBG	Percent	83.8	78.0	-5.9	-7.5%
- Public	Percent	16.4	16.1	-0.3	-1.8%
- Private	Percent	67.4	61.9	-5.6	-9.0%

Source: PCBS

Note: Figures are for the third quarter of each year, except for public employment for which end-year figures are reported.

Annex 3: Methodology for Estimating Local Poverty Rates

A3.1. In order to obtain reliable results for poverty rates in a high number of locations, a large data set is required. The only data set that is large enough to accommodate such fine disaggregation is the Population Census of 1997, which is a comprehensive survey of the entire population in WBG. The Census does not, however, contain enough information to allow direct identification of the poor, since consumption levels of households are not recorded.

A3.2. In order to overcome this obstacle, this chapter combines the analysis of the Household Survey with the information available in the Census. Specifically, Household Surveys are used to identify the correlates of poverty, which are in turn used to predict poverty rates within each district, using the information available in the Census.

A3.3. The number of observations in the Household Surveys on individual districts amounts only to a few hundred. Hence, it would be hazardous to infer anything about the geographical distribution of poverty at a more disaggregated level than the district level, simply because the number of observations for each locality would be far too small to obtain statistically robust results. Thus, the rather limited sample size of the Household Surveys is a major obstacle for drawing detailed poverty maps.

A3.4. To overcome the problem of too few observations, analysis of the Household Surveys is combined with information contained in the 1997 Census, the latter being a comprehensive survey of the WBG population. By using the Census, it is possible to outline the spatial dimension of poverty in much greater detail. The basic idea when combining analysis of the Household Survey with information in the Census is to apply a two-step procedure:

- *First,* identify the determinants of poverty regression analysis using information in the Household Surveys. The regression analysis is carried out under the restriction that the set of explanatory variables used is those, which are included in *both* the Household Surveys and the Census.

- *Second,* combine the parameter estimates obtained from the regression analysis with the average values of the explanatory variables in each locality obtained from the Census to predict the poverty rate in each locality.

A3.5. This procedure is only applied to the West Bank. In Gaza, the already limited surface of the four geographical entities distinguished in the Household Surveys (Jabalia, Gaza City, Khan Yunis and Rafah), renders a further disaggregation less relevant in terms of operational efficiency. Besides, results obtained for Gaza with the methodology described in these paragraphs are statistically less reliable than for the West Bank, with large range of errors. We therefore prefer to report for Gaza the estimates of poverty rates directly derived from the Household Surveys in 1997, and their associated standard errors.

A3.6. For the West Bank, the first step involves estimation of a logit model, using the pooled data set from 1996-1998. The number of observations are 7,456.

A3.7. A number of the important variables, most notably some of the labor market variables (for instance, the number of months worked), which were used in the previous chapters, can no longer be used here, since these variables are not included in the Census. Information on the

employment status of the head of household is, however, included in both the Census and the Household Surveys. On the other hand, we are able to utilize that both the Household Surveys and the Census include information on household ownership of durable goods like a car or a television as well as indicators of the quality of housing, e.g., the type of dwelling or the type of energy used for cooking. These variables can not be interpreted as economic determinants of poverty, but rather a function of the level of income of the household. They were therefore not of any interest in the analysis of the previous chapter. But they may nevertheless be statistically correlated with poverty, and hence important for the identification of the poor.

A3.8. The goodness-of-fit of this model, measured by the fraction of correct predictions for the West Bank may be considered as satisfactory, with 85 percent of observations being correctly predicted to be either poor or non-poor in the sample. Ownership of durable goods (telephone, fridge, video or cooker) is significantly associated with a lower than average probability of being poor, as is the existence of a heating system in the house. The coefficients on educational level and employment status of the head of household mirrors those of Chapter I: a higher educational level reduces the probability of being poor as do working, particularly in Israel. Living in a village, and to a larger extent, in a refugee camp, increases the probability of being poor.

A3.9. There are no obvious comparable administrative entities below the district level, which would have been otherwise a natural choice of disaggregation. The West Bank and Gaza is divided into 708 localities, with different administrative status, from municipalities and village councils to refugee camps and local development committees. This level of disaggregation is too detailed for our purpose since it implies that more than half of localities have a population less than 1,000 habitants (and more than a third with less than 500 habitants), which is too low to be statistically representative. Moreover, the fact that the different localities have different economic status, and their fragmentation, mean that poverty alleviation policies cannot be implemented uniformly at this level.

A3.10. We have therefore chosen to rely on a geographical division rather than on an administrative one. The Palestinian Central Bureau of Statistics proposes to decompose the West Bank into 38 entities (excluding East Jerusalem) according to their geographical, social and economic characteristics plus the four districts of Gaza. The average population for each entity exceeds 60,000 people, with a maximum of 360,000 for Gaza City and a minimum of 5,600 for Al Jiftlik.[38]

A3.11. The subsequent poverty rates at the geographical locality level are shown in Table III.2 in the main text. Annex Figure III.1 reports estimated poverty rates, illustrated with bars and ranked in decreasing order, while thin lines represent their associated intervals of confidence, at the 90 percent level. Within each bar is reported the number of the corresponding area. This information enables us to statistically compare two or more localities. For example, we can say that poverty rates are not statistically different in Bir Zeit and Qabalan (locality 19 and 13), even if the estimated poverty rate in the former region exceeds that of the latter region by more than 9 percentage points. Still, this graph clearly illustrates the statistically significant differences between poor and non-poor areas in the West Bank and Gaza and should help to geographically target the poor.

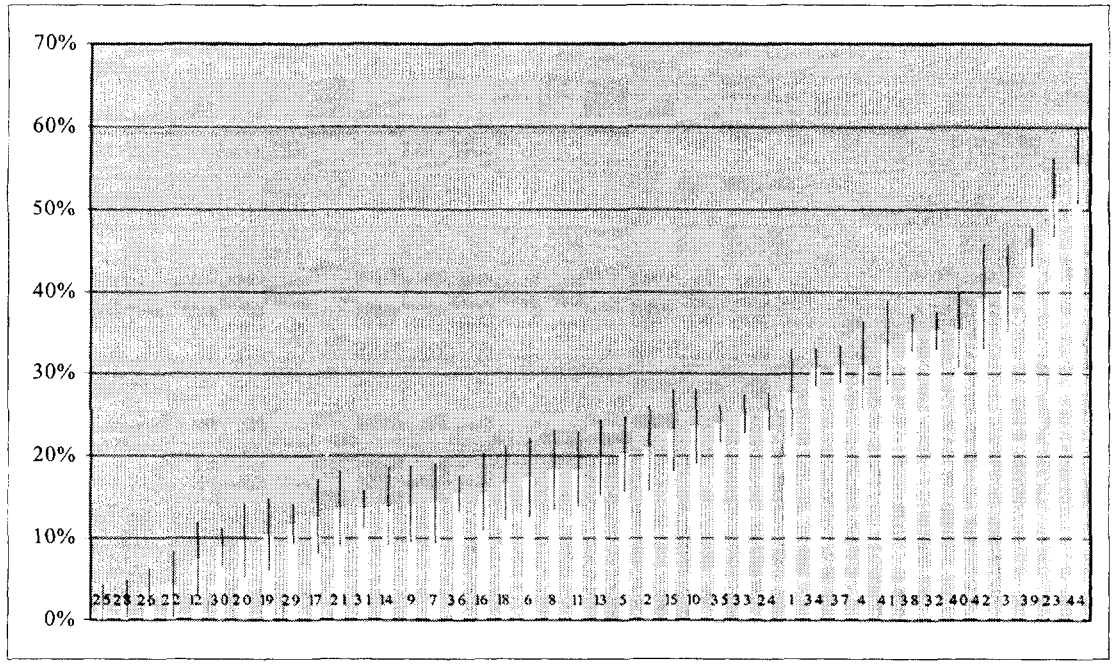
[38] Excluding East Jerusalem, for which the statistical coverage is not representative, the total population covered by the Census amounted to 2.598 million people in 1997. Estimates of local poverty rates are based on the characteristics of this population. However, the population of West Bank and Gaza, excluding East Jerusalem, was ex-post adjusted by PCBS to account for the result of post enumeration, and, accordingly, estimates of the number of poor are based on this adjusted figure of total end-year population.

Annex Table 3.1: Poverty Range and Number of Poor

Code	Locality Name	Poverty Incidence			Number of poor		
		Estimate	Minimum	Maximum	Estimate	Minimum	Maximum
		(% of population)			(units)		
1	Al Yamun	27.6	22.4	32.9	10,136	8,209	12,064
2	Jenin	20.9	15.7	26.1	12,327	9,254	15,401
3	Ya'bad	40.4	35.2	45.7	23,907	20,790	27,024
4	Qabatiya	31.1	25.9	36.4	14,737	12,239	17,235
5	Tubas	20.3	15.7	24.9	7,400	5,720	9,079
6	Attil	17.4	12.6	22.2	7,105	5,134	9,077
7	Tulkarm	14.2	9.4	19.1	10,805	7,109	14,500
8	Anabta	18.3	13.4	23.2	3,075	2,253	3,897
9	Sabastiya	14.1	9.5	18.8	2,160	1,450	2,871
10	Al Badhan	23.6	19.1	28.1	1,816	1,468	2,165
11	Aqraba	18.4	13.8	22.9	5,197	3,912	6,482
12	Nablus	7.4	3.0	11.9	13,845	5,512	22,178
13	Qabalan	19.8	15.2	24.3	4,395	3,378	5,411
14	Qualqiliya	13.8	9.0	18.6	6,096	3,973	8,219
15	Azzun	23.1	18.2	28.0	6,355	5,013	7,698
16	Biddya	15.6	11.1	20.2	5,168	3,656	6,681
17	Salfit	12.7	8.1	17.3	1,938	1,239	2,636
18	Bani Zeid	16.7	12.3	21.2	5,303	3,888	6,719
19	Bir Zeit	10.5	6.1	14.9	2,873	1,660	4,086
20	Silwad	9.7	5.3	14.2	3,370	1,834	4,905
21	Beitunya	13.6	9.1	18.0	6,376	4,273	8,479
22	Ramallah	4.3	0.2	8.4	3,103	154	6,051
23	Al Jiftlik	51.4	46.6	56.1	2,992	2,717	3,267
24	Jericho	25.5	23.2	27.7	6,813	6,202	7,423
25	Al Ram	2.0	0.0	4.3	1,326	0	2,803
26	Biddu	4.0	1.7	6.3	877	380	1,375
28	Abu Dis	2.6	0.3	4.9	714	86	1,342
29	Beit Sahur	11.7	9.4	14.0	3,043	2,450	3,635
30	Bethlehem	8.8	6.6	11.1	5,038	3,738	6,338
31	Al Khader	13.6	11.3	15.9	4,299	3,578	5,020
32	Tuqu'	35.3	33.0	37.6	7,810	7,305	8,314
33	Beit Ummar	25.1	22.8	27.4	6,941	6,311	7,572
34	Tarqumiya	30.7	28.4	33.0	8,697	8,051	9,343
35	Halhul	24.1	21.8	26.4	9,221	8,349	10,093
36	Hebron	15.5	13.2	17.8	23,496	20,038	26,953
37	Dura	31.1	28.8	33.4	22,873	21,196	24,550
38	Adh Dhahiriya	35.1	32.8	37.3	7,705	7,204	8,206
39	Yatta	45.4	43.1	47.7	28,390	26,964	29,816
40	Jabalya	35.4	30.8	39.9	64,884	56,545	73,224
41	Gaza City	33.8	28.6	39.0	124,033	104,966	143,100
42	Khan Yunis	39.3	32.9	45.6	136,845	114,709	158,981
44	Rafah	55.3	50.6	60.1	68,006	62,216	73,795

Source: Staff Calculations based on PECS and Census

Annex Figure 3.1. Poverty Rates in the West Bank and Gaza, 1997
(In % of Population)



Note: Thin lines represent confidence interval of estimated poverty rates at the 90% level.

Key to above graph:

Code	Locality	Code	Locality	Code	Locality
1	Al Yamun	16	Biddya	32	Tuqu'
2	Jenin	17	Salfit	33	Beit Ummar
3	Ya'bad	18	Bani Zeid	34	Tarqumiya
4	Qabatiya	19	Bir Zeit	35	Halhul
5	Tubas	20	Silwad	36	Hebron
6	Attil	21	Beitunya	37	Dura
7	Tulkarm	22	Ramallah	38	Adh Dhahiriya
8	Anabta	23	Al Jiftlik	39	Yatta
9	Sabastiya	24	Jericho	40	Jabalya
10	Al Badhan	25	Ar Ram	41	Gaza City
11	Aqraba	26	Biddu	42	Khan Yunis
12	Nablus	28	Abu Dis	44	Rafah
13	Qabalan	29	Beit Sahur		
14	Qualqiliya	30	Bethlehem		
15	Azzun	31	Al Khader		

Annex 4: Estimates of the Impact of Recent Closures on Poverty

A4.1. As of the fourth quarter of 2000, the areas of the West Bank and Gaza under Palestinian Authority jurisdiction were subject to a tight closure. The approximately 130,000 Palestinians previously working in Israel were prevented from leaving the WBG to their jobs in Israel. Further, for Gaza, the only point of entry for commodities was Karni, through which goods could enter only after security checks and back to back loading/unloading from Israeli trucks. Construction materials were not entering, and passage of other commodities was extremely limited. Palestinian trucks could no longer leave Gaza. In the West Bank, roadblocks throughout the West Bank and around each village and municipality and around greater Jerusalem prevented movement of goods and people. Finally, large irregularities in the transfer of clearance revenue to the Palestinian Authority were observed during this period.

A4.2. The closure of the Palestinian economy undoubtedly aggravated poverty levels. However, as no household surveys was conducted during the period of closure, it is only possible to make estimates of the effect on the incidence of poverty. This annex describes the methodologies used to estimate the impact of current closures on poverty in the West Bank and Gaza.

A4.3. Three alternative methodologies are used and give almost similar results. The first one relies on a macro-economic model, which is used to assess the impact of closures on private per capita consumption, and in turn on poverty, with the help of the elasticity of poverty to private consumption observed during the period 1996-1998. The second methodology consists in estimating a direct econometric relationship between poverty and closures, using monthly data from 1996 to 1998. The third and final methodology consists in using directly our econometric estimates of Chapter II to measure the impact of increased unemployment in Gaza and the West Bank on poverty rates.

A4.4. In the *first* methodology, a macro-economic model is used to project, as a first step, the impact of closures on private consumption. The model is generally used by the World Bank to develop its annual projections, and is a combination of accounting relations and behavioral equations, the latter describing notably private consumption.[39] One important aspect of the model regarding household consumption is the possibility to describe minimum levels of consumption of basic goods. This imply that the model is able to capture both households attempt to smooth consumption, by reducing savings, which would be expected in periods of depressed incomes, and a change in consumption patterns away towards basic goods. To project the impact of closures on private consumption, we use the macro-economic figures reported by UNSCO (2000), which estimate that closures imply a reduction in economic activity within WBG of approximately 50 percent, and that worker remittances from Israel by and large have dried up during the last quarter of 2000.

A4.5. The resulting reduction in private consumption is then linked to poverty through a consumption-to-poverty elasticity of –4.0. The elasticity reflects that the closures do not only have an impact on average consumption but also on the distribution, in particular that closures are expected to be particular harmful to the poorest part of the population. Indeed, the analysis in Chapter II shows that the decline in poverty observed between 1996 and 1998 was both the result of an increased average consumption and of a change in the distribution of consumption, the

[39] A theoretical description of the model can be found in Astrup and Dessus (2001).

interpretation being that job creation in Israel particularly benefited the poor. The numerical value of the elasticity used (-4.0) may be considered conservative compared to the experience of 1996-1998, but nevertheless it reflects that job destruction in Israel to some extent in particular is harmful to the poor.

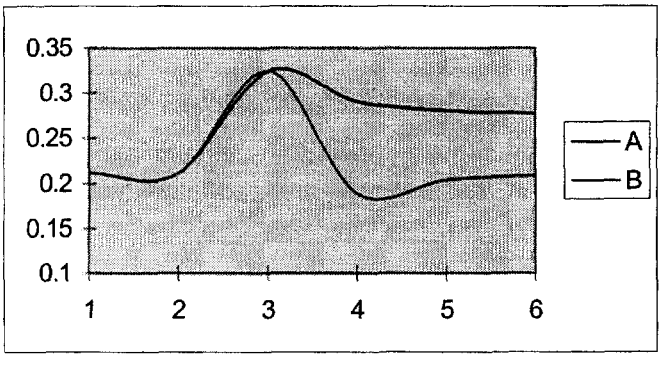
A4.6. This first methodology has the advantage of clearly identifying the channels through which closures can affect private consumption, in a coherent macro-economic framework. It suffers, on the other hand, from some shortcomings, one of them being that the impact of closures on economic activity is not measured, but assumed. Another shortcoming is that it is unable to describe short term changes in household consumption within a single year.

A4.7. The *second* methodology does not suffer from these shortcomings, as it relies on an estimated direct relationship between poverty changes and the incidence of closures using monthly data from 1996 to 1998. Regressions suggest that closures have a (statistically) significant impact on poverty once cumulated over two months. That is to say, a single month of closure does not affect poverty, probably because households consume their savings in order to smooth their consumption. The situation however, changes dramatically following two consecutive months of closures, as savings are exhausted. In this case, poverty increases dramatically. But, if followed by a third month without closures, the situation goes back rapidly to normality, and households reconstitute progressively their savings. Incidentally, the average after-tax household saving rate is estimated on the basis of national accounts close to 1/12, suggesting that a household can support one month without income, but not more.

A4.8. The following system of equations is estimated. The first equation describes the long term impact of cumulated closures on poverty. The second describes short-term adjustment to this relationship, through an error-correction model. The number of observation is 33. In parentheses are reported t-statistics. *Pov* is the poverty rate and *cl* the share of days of closures each month (source: UNSCO).

$$\ln(pov) = \underset{(32.1)}{-1.55} + \underset{(1.5)}{0.44} * (cl * cl_{-1}) + u \qquad \text{R2=0.30 DW=1.15}$$

$$\ln(pov) - \ln(pov_{-1}) = \underset{(0.2)}{0.00} + \underset{(3.1)}{0.64} * (cl * cl_{-1} - cl_{-1} * cl_{-2}) - \underset{(3.5)}{0.47} * u_{-1} \qquad \text{R2=0.62 DW=2.03}$$



A4.9. This model suggests the existence of an over-shooting phenomenon. After two months of closures, poverty increases seriously. But if the situation persists the third month, poverty tends to stabilize itself at a lower level than during the second month. We interpret this phenomenon as an change in the household strategy when it is realized that closure may last for a while. Moreover, formal and informal safety nets, including external assistance, start being implemented and lower the impact of closures on poverty. The following graph illustrates the evolution of poverty in two different scenarios: in the first one (scenario A), we simulate five months of consecutive

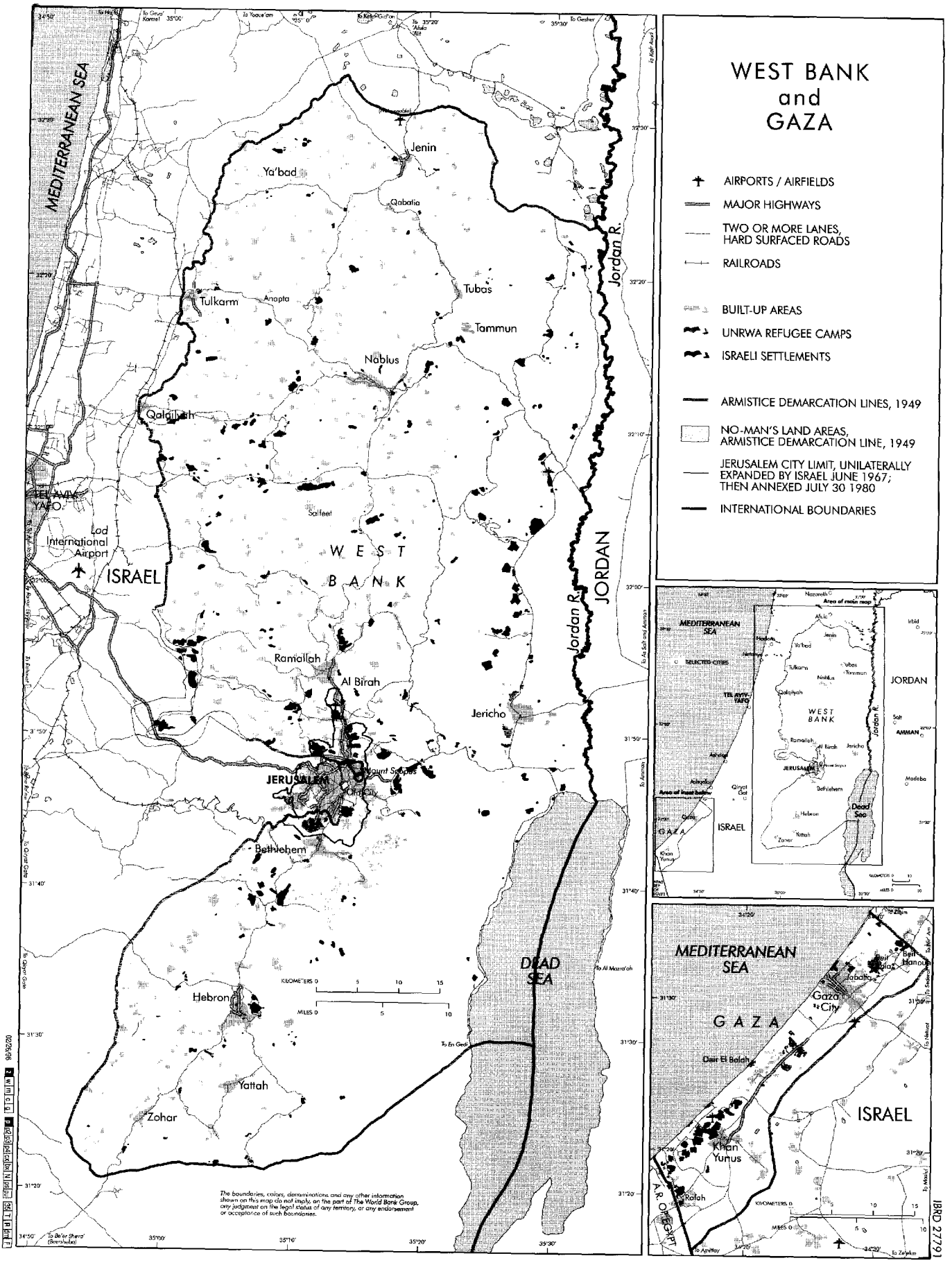
closures, starting in month 2; in the second one (scenario B), closures are removed after two months, that is during month 4.

A4.10. The *third* method consists of introducing recent figures of unemployment, again based on UNSCO's estimates in the logit estimates reported in Chapter II to project poverty rates. This method has the disadvantage that only the impact of unemployment on poverty is taken into consideration.

A4.11. As a matter of comparison, and because the second method presented here can mostly be used to assess the impact of limited in time closures on poverty,[40] we project poverty only until end December 2000. Using the first methodology leads to an estimated poverty rate of 31.8 percent in December 2000 (to be compared to an estimated 21.1 percent poverty rate in the absence of closures). Using the second methodology leads to an estimated poverty rate of 31.2 percent while the third methodology leads to a poverty rate of 29.5 percent. These results clearly underline once again the great fragility of the Palestinian population to closures imposed by Israel.

[40] This, because we have not experienced significant closures of more than two consecutive months during the period 1996-1998. The econometric model is therefore not likely suited to capture the impact of longer closures on poverty.

MAP SECTION


WEST BANK and GAZA
AIRPORTS / AIRFIELDS
MAJOR HIGHWAYS
TWO OR MORE LANES, HARD SURFACED ROADS
RAILROADS
BUILT-UP AREAS
UNRWA REFUGEE CAMPS
ISRAELI SETTLEMENTS
ARMISTICE DEMARCATION LINES, 1949
NO-MAN'S LAND AREAS, ARMISTICE DEMARCATION LINE, 1949
JERUSALEM CITY LIMIT, UNILATERALLY EXPANDED BY ISRAEL JUNE 1967; THEN ANNEXED JULY 30 1980
INTERNATIONAL BOUNDARIES
MEDITERRANEAN SEA
Jenin
Ya'bad
Qabatia
Tulkarm
Anapta
Tubas
Tammun
Nablus
Qalqilyah
TEL AVIV-YAFO
Lod International Airport
ISRAEL
Salfeet
WEST BANK
JORDAN
Jordan R.
Ramallah
Al Birah
Jericho
JERUSALEM
Mount Scopus
Old City
Bethlehem
DEAD SEA
Hebron
Yattah
Zohar
KILOMETERS 0 5 10 15
MILES 0 5 10
The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.
MEDITERRANEAN SEA
GAZA
Beit Hanun
Jabalia
Gaza City
Deir El Balah
Khan Yunus
Rafah
A.R. OF EGYPT
ISRAEL
IBRD 27761