

**An-Najah National University  
Faculty of Graduate Studies**

**Impact of the Current Transportation System on Poverty in  
the West Bank  
(Case Study: Nablus)**

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**Submitted in Partial Fulfillment of the Requirements for the Degree of  
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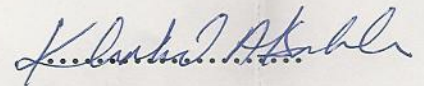
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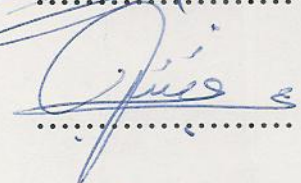
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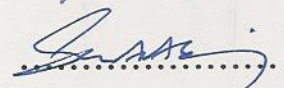
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## DEDICATION

All thanks from my heart for people provided me with there support to achieve this thesis successfully.

To the owners of the glowing hearts and burning vigor.....

To those who sacrificed their money, souls and blood for their faith.....

To those who faced the devil of evil and the devil of craving.....

To Al-Aqsa Intifadah martyrs and all the martyrs of Palestine.....

To the spirit of the struggling martyr, my father.....

To the stubborn heroes and prisoners.....

To those who loved Palestine as a home land.....

To my tender mother, dear brothers and sisters, my fiancé, my parents in law and all my friends

To all of them,

I dedicate this work

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## الإقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

### **Impact of the Current Transportation System on Poverty in the West Bank**

**(Case Study: Nablus)**

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**Abstract**

One of the stated objectives of various international development organizations is “to reduce poverty through sustainable economic development.” Therefore, the question is how can transport systems best contribute to poverty alleviation? There are no direct and easy answers for this question.

There are considerable changes in the transport system operations in the West Bank during the years of the Intifadah and due to the Israeli Occupation Authorities (IOA) measures on the road network. So it is important to study the impact of the current transportation system on poverty and standards of living.

The primary objective of this study is to investigate the impact of current conditions of the transport system on the socio-economic aspects of the Palestinian life, particularly poverty and quality of life (in terms of transport accessibility, expenditures on transport, travel time and cost, affordability of public transportation, and access to markets and employment).

The methodology of this research is based (a) reviewing related studies at the local and international levels, (b) surveying related existing conditions (related transport and socio-economic indicators), and (c) field

surveying of transport and living conditions of selected communities. Nablus City was taken as a case study in this project.

The main findings of this project are:

1. West Bank is facing great numbers of IOA measures, which had a devastating impact on the life of Palestinian people (economic, social, service, and other sectors).
2. Travel time and cost increase in the West Bank are results of closures and checkpoints, which have lead to income decrease and high levels of poverty rates in the Palestinian society.
3. Economic and social issues of the Palestinians have greatly been affected by these measures.
4. Poverty rates have sharply increased during the years of the Intifadah due to multidimensional reasons of unemployment, income decrease, and inaccessibility to work opportunities.
5. The field survey analysis indicates an increase in travel time and cost, decrease in income, change in home style, increase in transport expenditure, and difficulties in access to hospitals, educational institutions and general services. All were results of the closures regimes imposed by Israeli Occupation Forces (IOF).
6. Drivers were also affected by the imposed measures. Less daily trips were made, income has decreased, vehicle maintenance frequency and cost has increased, and travel routes have constantly been changed to pass by the IOF road blocks and closures.

7. The Separation Wall has destructive effects on Palestinian life; isolating communities of each other, inaccessibility to work places, and access difficulties to social and service sites.

Based on these results, it is recommended to continuously consider these closures in negotiating with the Israelis. The Palestinian Authority should continue working hard to remove Israeli checkpoints. Furthermore, the Palestinian Authority should establish measures to counter these effects on Palestinians. The Palestinian Ministry of Transport should also consider supporting the transport sector and re-establishing public transport fares to make the public transport more affordable.

Nablus City was hardly hit by these closures. Therefore, every effort should be made at the official level to encourage investment in the city to strengthen its economy and reduce these effects.

**CHAPTER ONE**  
**INTRODUCTION**

## **Chapter One**

# **INTRODUCTION**

### **1.1 General**

It is clear for all the importance of the transport sector in developing any country or society, with a strong correlation between this sector and other sectors of a country.

Road network plays a main role in geographic linkage between different localities and societies. It provides a good indicator for the level of modernization of the country. When a country develops a strong road network, it is generally considered a modern state.

Transport sector is one of the main sources of the (GDP) for the country. For example, in the United States, transport sector and its related activities form 20 percent of GDP, and it has the largest share of US budget after the military sector in the last two decades (World Highways Magazine, 2005).

In the Palestinian territories, transport sector was ignored during the Israeli occupation, and it suffers from the Israeli Occupation Authorities (IOA) measures, which resulted in an out-dated and deteriorated road network with major engineering deficiencies and traffic operational problems.



By virtue of their noticeably poor recourse base and very high population growth rate, the Palestinian territories (West Bank and Gaza Strip) have always been characterized by excessive dependency on exogenous links, both in regard to trade and employment.

The ongoing conflicts between the Palestinians and Israeli Occupation Forces (IOF) have precipitated numerous forms of damage on local residents and business firms. It is worth noting, however, that the most serious source of damage inflicted on the Palestinian economy during the Intifadah is that ensuring the distortions in the transportation system, which has been imposed by the Israeli authorities.

In addition to their overall devastating consequences on the economy and the labor market, the transport related sanctions have contributed to a sharp rise in the poverty levels in all Palestinian districts. But, more so in those localities, which have suffered most in regard to their transport system.

The IOA imposed several measures and restrictions on movement of people and goods within the Palestinian road network since the eruption of the Palestinian Intifadah in September 2000. The severity and number of these measures fluctuated from time to time and from location to another.

There was a decline in the number of certain measures (earth mounds/walls and trenches) and an increase in road blocks and gates.

These measures targeted particular locations in the West Bank, and aimed at dividing it into geographical zones; north, middle, and south, in addition to the Jordan Valley. The imposed road measures had a severe significant impact on the transportation sector in terms of cost, time, distance, quality of service, physical damages to the road network, and the quality of road pavement.

## **1.2 Background**

The IOA controlled all aspects of the Palestinians life and international border points with Jordan and Egypt. This has involved imposing stiff restrictions on traffic across border points, especially in regard to inspection measures, which added considerably to the time of travel and cost of transportation, and in many cases caused serious damage to transported goods. The net impact of these changes on the mobility of individuals and goods was dramatic.

The transport system in the Palestinian territories witnessed sharp reversal during the past period following the outbreak of the current Intifadah in late September 2000. Most of these reversals were directly precipitated by regulatory sanctions imposed by Israeli occupation authorities within the context of their efforts to quell Palestinian “violence”. In contrast to the policy of localized curfews, which was

adopted during the Intifadah, the current Israeli policy revolves mainly around imposing what is called “internal closure” on the Palestinian territories. The practical manifestations of this policy include the following measures:

1. Obstructing partially or totally the mobility of Palestinians on all West Bank main roads by installing cement blocks and earth barricades across all main roads and on sites located right at the periphery of all major towns. Vehicles which attempt to bypass those barriers might risk being shot at if detected by the Israeli military units.

2. Constructing huge steel gates on major junction points. These gates are opened occasionally and briefly as a sign of “good will” and only within the context of high profile negotiations.

3. A great number of permanent check points have been erected in strategic locations; mainly in sites where road obstruction barriers have been erected.

4. IOF often resort to installing “surprise or flying” check points, which are intended to arrest those upsets who may manage to bypass these check points and this may entail extended delays for passengers and transported goods.

5. Adaptive measures on the Palestinian side.

The transport-related sanctions have precipitated far-reaching consequences on all facets of life in the Palestinian society. Obviously, such these transformations have prompted numerous adaptive and shock-absorbing measures, focused mainly on easing the devastating impact of sweeping disruptions in the transport system.

Palestinians found themselves obliged to identify alternative roads to commuting from their homes to other destinations, farms roads and unpaved roads. Even when the alternative roads were identified, they were often swiftly closed by IOF.

Appendix A shows in pictures the checkpoints and barriers that IOF installed in the West Bank to restrict the movement of both Palestinians people and goods.

All business firms have been severely hit by the drastic distortions in the transport system, yet the type and magnitude of damage suffered by each firm varies from one activity to another and even from one firm to another, mainly in response to its specific location. In general, however, the main forms of damage have related to changes along following indicators:

- A. Distance to or from targeted markets
- B. Transport time
- C. Level of transport fees charged
- D. Duration of delays on checkpoints and border points

E. The amount of damage inflicted on transported goods

Since 2002, IOA has been constructing the Separation Wall, which it states as a security measure to protect Israelis from Palestinian militant attacks. It consists of 8-meter high concrete walls, ditches, trenches, wire fences, patrol roads, and barbed wire.

The Wall does not follow the 1949 armistice line – the Green Line (United Nation borders for Palestine in 1947) – but rather significantly veers eastwards into the heart of the West Bank. In January 2006, 525 km (74.6%) of the total length of the projected Wall is inside West Bank territory. This has created closed areas – 10.1% of West Bank and East Jerusalem land lies between the Wall and the Green Line. Once the Wall is completed, a total of 49,400 West Bank Palestinians living in 38 villages will be included in these areas, (Office for the Coordination of Humanitarian Affairs (OCHA), 2007A).

Communities located close to the Wall once had diverse local economies, with vibrant markets selling goods to Israeli customers, and abundant water and land resources. These communities have seen their living conditions plummet. IOF has created gates in the Wall for passage into the closed areas between the Green Line and the Wall. Residents of the closed areas need to ask for permission from the Israeli authorities to continue living on their land. Palestinians living to the east of the Wall who

want to visit West Bank areas to the west of it need to apply for a permit from the IOA to pass through a Wall gate.

The Wall impairs access to key education and health services, and by isolating wells from the land and destroying water networks and cisterns lying in its path, it creates new water and sanitation needs. The Wall's adverse impact on agricultural production and access to markets has increased food security.

Appendix "B" shows pictures about the access through the Wall and the life Adjacent to the Wall, it explains how the Palestinians are affected by the construction of the Separation Wall.

In its advisory opinion of 9 July 2004, the International Court of Justice (ICJ) found that the Wall constructed in the West Bank is illegal under international humanitarian and human rights law. The Court found: Israel also has an obligation to put an end to the violation of its international obligations flowing from the construction of the wall in the Occupied Palestinian Territory. Israel, accordingly, has the obligation to cease forthwith the works of construction of the wall being built by it in the Occupied Palestinian Territory (oPt), including in and around East Jerusalem. The Court also concluded that Israel has an obligation to make reparation for the damage caused and that Israel is under a responsibility to return the land, orchards, olive groves and other immovable property seized

for purposes of construction of the Wall in the oPt (The United Nations, 2006).

With the latest developments in the peace process, and the Israeli aggression on the Palestinian National Authority (PNA) and the Palestinian public at large, much of the gains on the socio-economic conditions have received a severe blow. Since the beginning of the Intifadah in September 2000, the Palestinian community is under one of the strictest closures, standards of living have deteriorated a great deal, and the economy has lost a lot of its value. Within the present conditions Palestinian households were mostly affected.

### **1.3 Problem Statement**

Due to the restrictions, which IOA imposed on the movement of both Palestinian people and goods, the Palestinian economy is devastated. Poverty rates have increased during the years of the Intifadah with decreases in income rates.

Unemployment in the West Bank is increasing since the start of the Intifadah because the losses of job opportunities in the West Bank itself and in Israel, which also lead to increase poverty in the Palestinian territories.

Current transport system with movement restrictions and IOF measures are main reason for economy crises and the increase in poverty rates and unemployment. In 2007, poverty rate was more than 30 percent,

and the unemployment rate was 24.5 percent in the West Bank (PCBS, 2007).

There have been investments and developments in the transport sector in Palestine. However, there are also serious obstacles facing these developments, which mainly resulted from the IOF imposed measures in terms of movements and travel restrictions of people and goods.

It is important to investigate the linkage between the current transport system with its potential and restrictions and the living conditions of the Palestinians. This will be a vehicle towards spreading awareness and campaign to attracting attention of local, regional, and international communities towards the proper intervention policies and program.

#### **1.4 Objectives of the Study**

There are limited studies that have been done before with the specific objectives of analyzing the impact of the transportation systems on standards of living and on poverty levels in the Palestinian territories. The special conditions in the West Bank include large changes in the transport system operations in the years of the Intifadah and the IOA measures on road network. So it is important to study the impact of the current transportation system on poverty, with the focus on the West Bank.

The primary objective of this study is to investigate the impact of current conditions of the transport system on the socio-economic aspect of the Palestinian life, particularly poverty and the quality of life (in terms of transport accessibility, expenditures on transport, travel time and cost,



affordability of public transportation, and access to markets and employment).

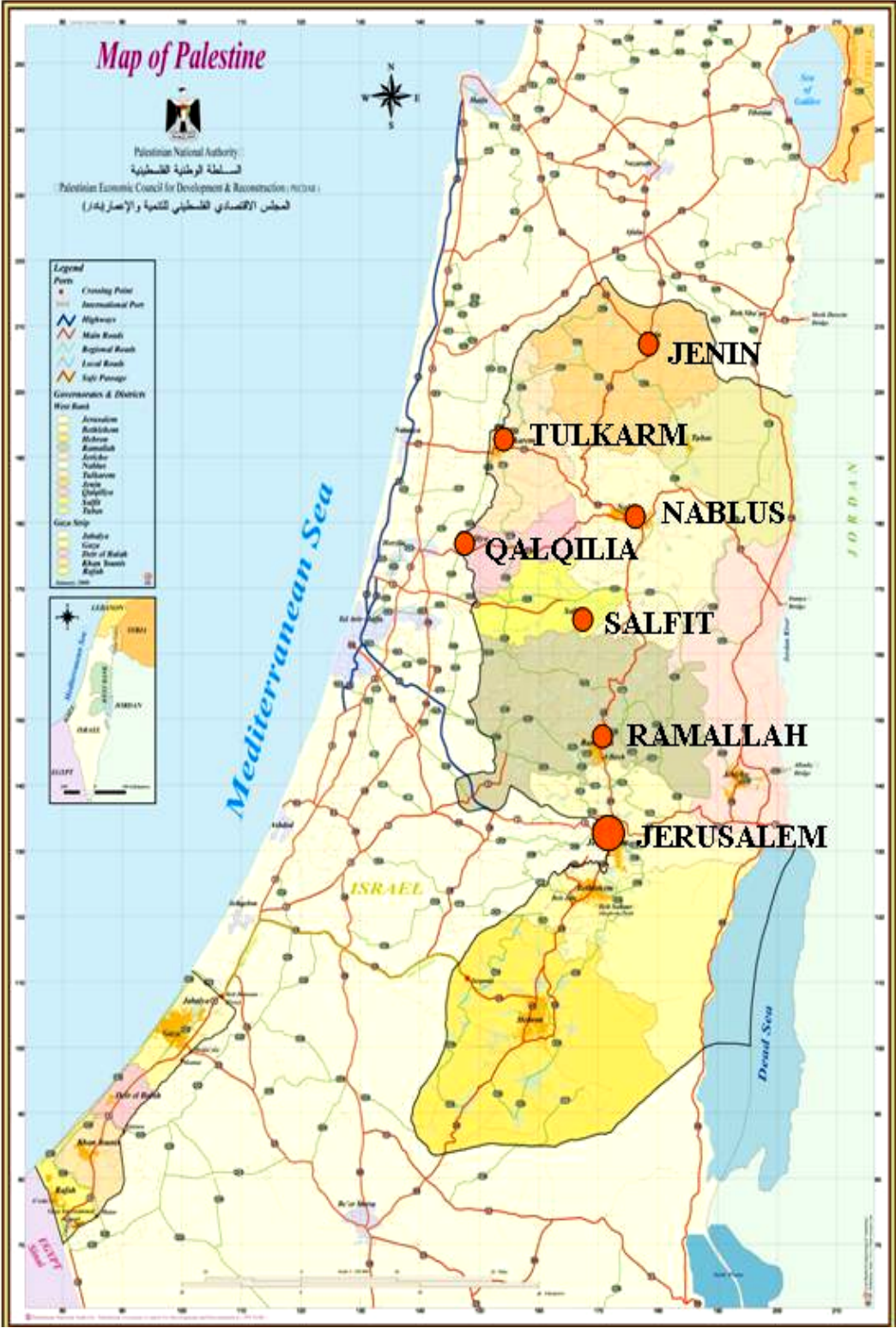
This will lead to exploring ways to improve quality of life for Palestinians through the transportation and road system; and to developing related recommendations.

### **1.5 Study Area**

Palestine is a typical developing country located in a central location in the Middle East. Its significance is represented by its geographic location. Nablus is a major city located in the northern part of the West Bank. The location of the city is shown in Map (1.1).

The study will describe the transport system and living conditions with the various social and economic indicators in the West Bank, and will analyze in further details these conditions and indicators for Nablus City, the case study.

Nablus City was selected as a study case due to the strict closure imposed on it, as it is considered the most restricted city in the West Bank, after Jerusalem. Movement from or to the city is controlled by the IOF checkpoints surrounding it.

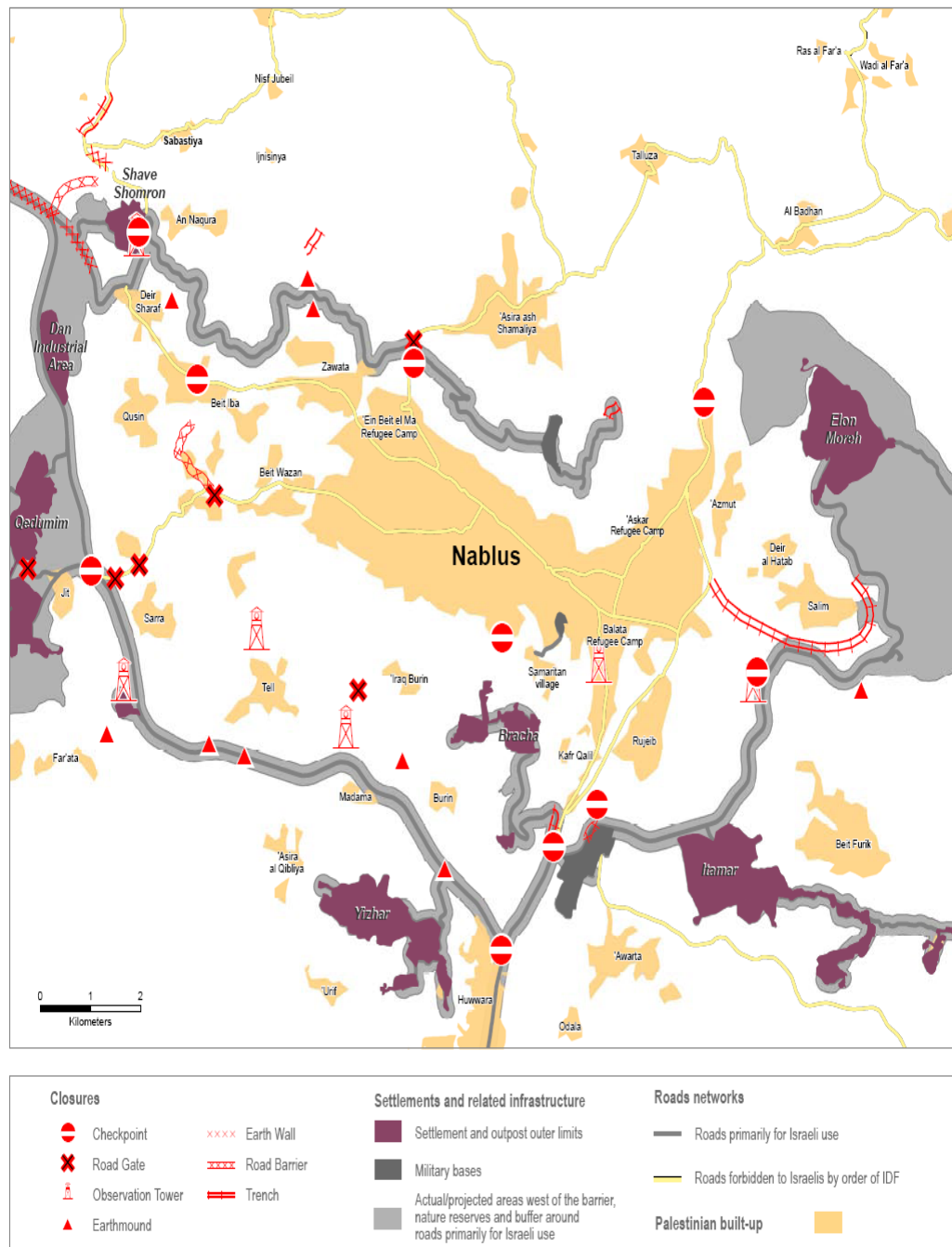


### Map (1.1): Location of Nablus in the West Bank

Nablus City, the economic and service center of the northern West Bank, has a population of more than 130,000 people and serves as a regional hub for an estimated 350,000 people in the governorate (OCHA, 2007B).

Nablus is a market and manufacturing center, a focus for services, an educational center – home to the large An Najah University – and the location of important medical facilities. Nablus has 13 health centers and six hospitals including the major referral hospitals of Rafidiah and Al-Watani. Access into and out of Nablus is, therefore, essential.

Nablus is also considered a center of militant activity by the IOF and has been the focus of large scale military operations. IOF controlled Nablus city by main checkpoints that look like international borders to restrict the movement of both Palestinian people and goods. Map 1.2 shows the check points and other physical obstacles imposed by IOA around Nablus City.



**Map (1.2): Checkpoints and other physical obstacles surrounding Nablus City**

**Source:** (Office for the Coordination of Humanitarian Affairs (OCHA, 2007B).

## **1.6 Thesis Outline**

This thesis contains seven chapters, which are summarized as follows:

Chapter One presents the introduction, background, objectives, and study area.

Chapter Two is the literature review.

Chapter Three discusses the methodology.

Chapter Four describes the transport sector features and its conditions in the West Bank.

Chapter Five focuses on the poverty and socioeconomic conditions in the West Bank.

Chapter Six describes the field survey and analysis.

Chapter Seven provides conclusions and recommendations of this study.

**CHAPTER TWO**  
**LITERATURE REVIEW**

## **Chapter Two**

# **LITERATURE REVIEW**

### **2.1 Introduction**

To place the role of transport in perspective, indirect and direct approaches to poverty reduction should be kept in mind. Indirect approaches involve increasing the efficiency of resource allocation, especially the performance of markets, the flexibility of adjustments, and the fostering of economic growth. Direct approaches are concerned with enhancing human capital formation, especially education and health, and improving access to economic and social opportunities, including labor and product markets, schools, and clinics. Typically, indirect approaches operate at the level of improving overall mobility, while direct approaches operate at the level of improving basic access for the poor (Gannon and Liu, 1997).

Transport services are widely viewed as critical to reducing poverty and promoting growth by providing access to basic services. An efficient and cheap transport system empowers people by providing them political and physical access. Fast and easy access to basic transport and communication also reduces vulnerability to natural and man-made disasters.

## **2.2 Role of Transport in Poverty Reduction**

Gannon and Liu (1997) studied the role of transport in poverty alleviation by the fact that large transport projects are assessed in terms of reducing transport costs, improving efficiency, and promoting economic growth. The contribution of transport operations to poverty alleviation was seen, in general, as indirect and stemming from broadly based economic development. Yet, most direct poverty-targeted interventions (schools, health clinics, nutrition programs, and social services) depend on transport as a complementary input for their effective delivery.

Gannon and Liu (1997) stated that with few exceptions, the distributive impact of transport projects (i.e., how much various social groups gain and lose) and the potential for transport projects to play a direct proactive role in assisting the poor has received little attention.

A key finding of Gannon and Liu's paper is that there was a need to strengthen the direct role of transport interventions in poverty alleviation. This will require building far better knowledge of the transport needs of the poor, and how these needs are best met.

Transport is an intermediate service; it is a means to an end. Transport alone cannot reduce poverty, but it serves a pervasive and crucial complementary role. Transport reduces absolute poverty mainly by increasing economic efficiency by lowering costs and prices and enhancing



opportunities. Transport has no special claim as a cost-effective policy instrument for the redistribution of welfare to the poor (Gannon and Liu, 1997).

The urban poor in developing countries face enormous challenges in their daily lives. Many live in crowded slums within cities or in more remote peri-urban areas with limited access to jobs and social services. Problems of access can be linked to failures of the economy, lack of equity in the provision of services, and poor or unaffordable transport links to enable mobility. This contributes to low living standards, social fragmentation, and problems of social exclusion (Gannon and Liu, 1997).

Baker et al (2005) studied the urban poverty and transport, and they took Mumbai, India as a case study. The goal of their study was to better understand the demand for transport services by the poor, the factors affecting this demand, and the inter-linkages between transport decisions and other vital decisions such as where to live and work.

Understanding these linkages should ultimately help to design transport policies that will help the poor. The study was not intended to be a tool for transportation planning purposes per se, and was not based on a large enough sample size to provide information on trip patterns at a fine level of spatial detail (e.g., at the level of transportation analysis zones).

These goals were addressed by conducting a survey of 5,000 randomly sampled households in Mumbai, India. The study described the salient facts about travel patterns in Mumbai, for both poor and non-poor households. A striking finding of the survey was the extent to which all households-but especially poor households-rely on walking.

Overall, 44 percent of commuters in Mumbai walk to work. The proportion of the poor who walk to work is even higher, 63 percent. Walking is an even higher modal share for non-work than for work trips. A second finding was that public transit remains an important factor in the mobility of the poor, and especially in the mobility of the middle class. Overall, rail remains the main mode to work for 23 percent of commuters, while bus remains the main mode for 16 percent of commuters. It appears that transport is less of a barrier to the poor who live on central Mumbai than it is to the poor who live in the sides of the city (Baker et al, 2005).

Puri (2000) constructed a detailed and informative poverty-access profile that can simultaneously inform Guatemala's poverty reduction and rural transport strategies. In this respect, the presence of an extensive household and community level dataset on transport that can be linked to a living standards survey at the household level – the ENCOVI 2000 (Encuesta Nacional de Condiciones de Vida or The Living Standard Measurement Survey, LSMS) – presents a rare opportunity.

Puri's study (2000) quantified the impact of transport related interventions on welfare and poverty. The specific objectives of the transport-poverty profile were to examine (a) the extent to which access to basic services is already available in Guatemala, (b) determine the linkages between provision of transport infrastructure and services and poverty, vulnerability, and exclusion, (c) the extent to which physical basic access is a limitation in getting access to services in Guatemala, and (d) recommend a set of policy instruments for the Government of Guatemala for increased provision of physical access to transport services.

There were two main conclusions that come out vividly from Puri (2000) study. Firstly, road quality is a critical bottleneck for economic progress in Guatemala, impacting access to markets, employment, and merit services. Lack of road works such as rehabilitation, regular, and periodic repair and improvement works (filling up ditches and repairing holes) is integral to the road network of the country. Providing public means of easily available and affordable transportation will play an important role in integrating Guatemala and providing the poor and the indigenous sections of society with a perception of 'progress' and inclusion.

Secondly, it is important to provide for a decision making structure, within the administration, which is sensitive to the development priorities of the communities and considers their transport needs.

### **2.3 Accessibility**

Around 1.2 billion people live in extreme poverty and have to survive on less than one US dollar per day. Poor people revealed that lack of access to transport infrastructure is considered a major obstacle to overcoming poverty (Weiler, 2004).

The transport problems and needs of the poor are essentially about access. Access is a precondition for the satisfaction of almost any need, especially physical and; therefore, provides a central integrating concept with which to grasp the complex interactions between subsistence, economic, and social needs. Accessibility is defined in terms of provision of access and the ease with which a need can be satisfied. Improvements in transport infrastructure and transport services can enable poor people to meet subsistence, economic, and social needs more easily (Hanmer et al, 2000).

Hanmer et al (2000) defined transport as the movement of people and goods by any conceivable means for any conceivable purposes. It is

integral to attaining a livelihood. It has two elements: transport infrastructure and transport services.

Hanmer et al (2000) made a toolkit aiming to provide a practical guide for government decision-makers in formulating policies for the transport sector that contribute to poverty alleviation. It assumed that users of the toolkit are committed to being more strategic about the goal of poverty reduction and helped explain what it means to have poverty reduction as an overarching policy goal. It aimed to develop a conceptual framework through which policy makers can understand the various dimensions of poverty, identify its causes, and formulate strategic approaches to poverty reduction through appropriate policy interventions.

Gannon and Liu (1997) studied the importance of access for the poor, and that transport has direct impacts on the personal welfare of all income groups. It is generally accepted that access to at least minimal infrastructure services is one of the essential components of personal welfare. Improvements in transport not only provide people with more convenient access to a broad range of socio-economic opportunities, but also have strong income effects by lowering transport cost and hence the prices of consumer goods and services. In these ways, transport exerts a pervasive contribution to the improvement in personal welfare. Understanding the

transmission of these impacts is especially important in assessing transport's direct contribution to poverty reduction.

Transport's impact on personal welfare may be best assessed by examining closely how transport affects people's daily activities. People make trips to workplace, to school and to the locations of social services. Since income is the dominant determinant of individual travel behavior, more trips per person, longer average trip distance, and faster and more comfortable modes of transport are all associated with rising incomes. As incomes grow, people are able to afford access to more employment opportunities and more social interactions. Given normal preferences for these activities, demand for travel increases (Gannon and Liu, 1997).

Access to job opportunities in urban areas, including by non-motorized transport, is necessary for the poor to participate in most income-earning activities. In many developing countries, the urban poor are concentrated on the periphery of urban areas which is far from their workplaces. Many poor workers take several part-time, low-paid jobs at different locations, simply to maintain the very basic level of household income. Many school children have to help their poor parents after school hours to raise household income. Their ability to obtain employment and education is highly dependent on the costs and availability of public transport. Because residential relocation is often very difficult for the poor due to high moving

costs and lack of affordable alternative locations, providing affordable public transport can have an immediate impact on the personal welfare of the urban poor (Gannon and Liu, 1997).

Poor households derive their standard of living from a variety of activities, not all of which are marketed or assigned a monetary value. That standard of living, and its security, depends not only on current income but also on the stock of assets, including the social and human capital, as well as the money and physical assets, at the disposal of the household.

Poverty is thus a multidimensional concept involving the lack of the social and cultural, as well as economic, means necessary to procure a minimum level of nutrition, to participate in the everyday life of society, and to ensure economic and social reproduction. In this general notion of poverty as “exclusion,” accessibility is important, not only for its role in facilitating regular and stable income-earning employment but also for its role as part of the social capital that maintains the social relations forming the safety net of poor people in many societies (World Bank, 2000).

Rural communities depend on access to land, markets and commercial centers. They also rely on farm laborers. In May 2007, 40.4 percent of people in the West Bank (excluding East Jerusalem) reported difficulties getting to work in the previous six months. They cited the primary reasons as physical obstacles, such as checkpoints and road blocks (77.9 percent)

and the inability to obtain permits from Israeli authorities (71.2 percent) (OCHA, 2007B).

Reaching markets has become an expensive and time-consuming problem for farmers and businesses. Since 2000, transport costs have nearly doubled in the West Bank mostly because of delays faced at checkpoints and the more circuitous routes that trucks are being forced to take to avoid roads primarily reserved for Israeli use (see Figure 2.1) (OCHA, 2007B).



## Consumer Price Index (CPI) for transportation and communication in the West Bank<sup>3</sup> (1996-2007)

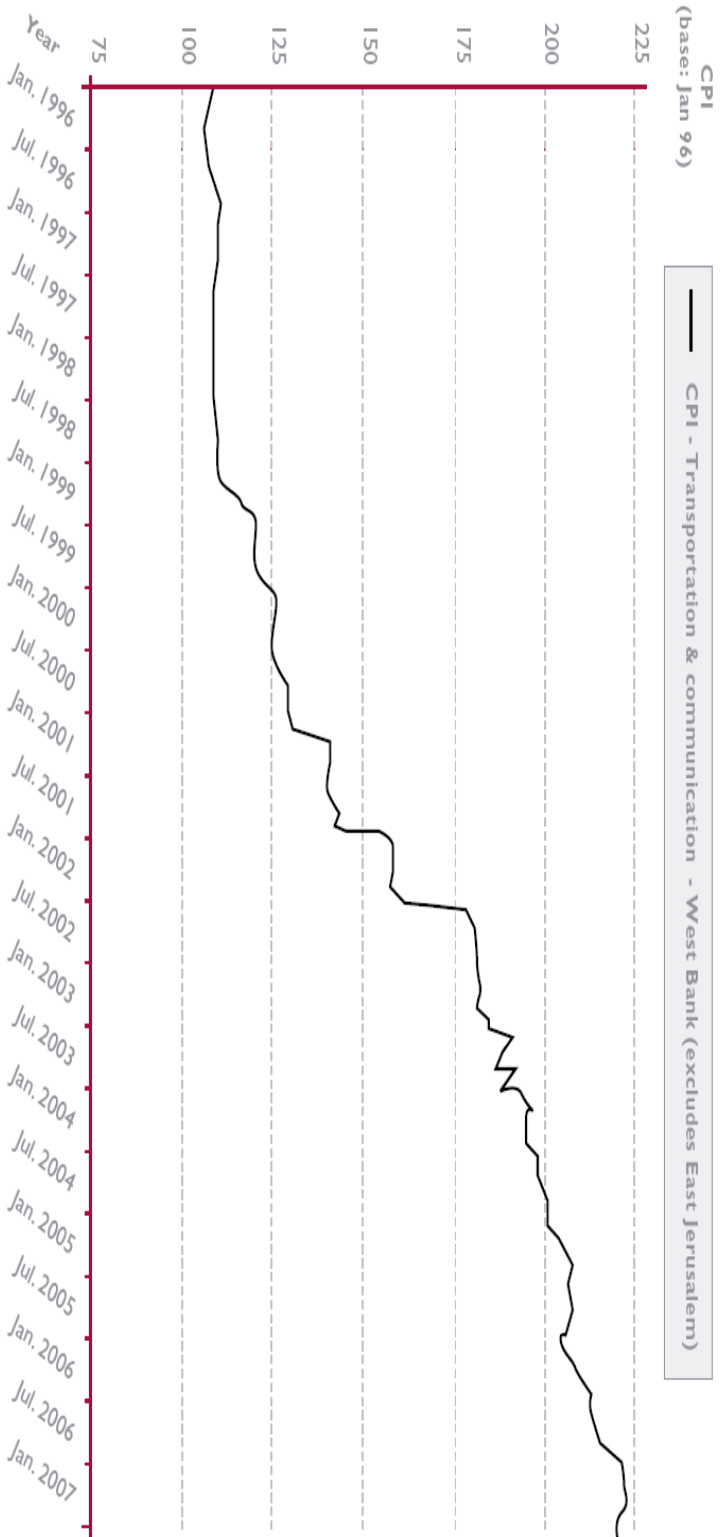


Figure (2.1): Consumer Price Index in the West Bank 1996-2007

Source: (OCHA, 2007 B)

## **2.4 Affordability**

Poor people's inability to access jobs and services is an important element of the social exclusion that defines urban poverty. Urban transport policy can attenuate this poverty, both by contributing to economic growth and by introducing a conscious poverty reduction focus to infrastructure investment, to public transport service planning, and to fare-subsidy and financing strategies. There is a rich agenda of urban transport policies that are both pro-growth and pro-poor, yet which are consistent with the fiscal capabilities of even the poorest countries (World Bank, 2000).

Fare is the dominant feature of public transport services for low-income travelers. Likewise, it is the key policy variable for both the operating companies and for the government, local and even national. As passenger incomes increase, concern over fares starts to be displaced by the concern for quality. Traveler reactions to fare increases or decreases are of major interest to operators of transport services, since they affect patronage; therefore, revenue. This aspect is captured by a standard economic notion of price elasticity, with an established definition, measurement methods, and interpretation (Mitric and Carruthers, 2005).

Affordability refers to the same context, but the concern is different and from a different point of view. It is a concern of the society for its least privileged members. When a fare increase could lead to a loss of poor

passengers and the alternatives are few and inferior, access to jobs and services may be reduced, and social interaction may be affected. This chain of events may lead to social and economic exclusion of those at the bottom of the income ladder. This chain of events needs to be taken into account when tariff changes are being considered. So, concerns about affordability are clearly nested in the larger subject of poverty impacts of transport policy. An affordability index could be defined as the fare expenditure made by a household as a percentage of its income (Mitric and Carruthers, 2005).

Affordability refers to the extent to which the financial cost of journeys put an individual or household in the position of having to make sacrifices to travel or the extent to which they can afford to travel when they want to. While a family on a low income might be able to afford the necessary journeys to work for the income owners of the family, they might not be able to afford trips to school for their teenage children, or for their children to visit a grandparent in a hospital. For such a family, urban transport would, by most standards, be considered unaffordable. So affordability can be considered as the ability to make necessary journeys to work, school, visits to other family members or urgent other journeys without having to curtail other essential activities (Carruthers et al, 2005).

According to Carruthers et al (2005), the form of the Index is relatively simple, and the data for its compilation is relatively easily available:

$$\text{Affordability Index (\%)} = (\text{Number of trips} \times \text{Average cost per trip}) / \text{per capita income}$$

ECORYS Research and Consulting (2004) prepared a report to the World Bank about Labor Mobility, Beneficiaries of Public Transport Services in Eastern Europe and Central Asia (ECA), and discussed affordability of public transport (PT) and social exclusion. In terms of affordability, it is well known that a higher budget buys a bigger radius of action, and therefore a bigger choice of opportunities for activities that better satisfy the needs of the economic subject. One of the key notions should be the geographical range in which a person is able to move to satisfy his needs. The smaller this range the lower the probability for this person to increase his/her welfare. He (or she) may still spend the same percentage of income, but he/she can only afford slower modes and; therefore, get less far.

Many poor people do not have much time available, because it costs them a lot of time to fulfill their basic needs. In fact, when wealth increases, people buy time by buying time saving devices, including faster

transport. These budget notions serve to illustrate how people who fall into poverty face a world getting smaller and a decrease of variety of opportunities: same amount of trips, same percentage of money, and time budget, but a smaller range of action. This mechanism can lead to social exclusion (ECORYS, 2004).

## **2.5 Transport Investment and Economic Growth**

### **2.5.1 The Role of Transport Infrastructure**

Transport infrastructures in the form of roads that can be used throughout the year facilitate the exchange of commodities and enable regular school attendance and fast access to health facilities in case of need (Weiler, 2004).

Investments in transport infrastructure make a direct contribution to poverty reduction if they give poor people access and increase their mobility, if they lower transport costs and make the goods consumed by poor people more affordable and their products more competitive, or if they create employment and increase incomes (Weiler, 2004).

However, the expansion and maintenance of transport infrastructure itself also creates labor and employment-particularly when it is organized in a labor-intensive manner. Employment is also created in transport

service companies and trade. Investments in transport infrastructure can also make an indirect contribution to poverty reduction (Weiler, 2004).

### **2.5.2 Transport Development and Poverty Reduction**

In line with the direct and indirect approaches to poverty reduction, development projects in the transport sector can roughly be divided into three categories: (a) projects that focus on poverty, (b) projects oriented toward efficiency and growth, and (c) efficiency- and growth-oriented projects with components that focus on poverty. The concern is a more detailed understanding of how transport improvements, either focused on poverty or on growth, contribute to poverty reduction (Gannon and Liu, 1997).

In general, a transport project is expected to contribute to poverty reduction through its indirect impacts on economic growth or its direct impact on personal welfare of the poor. What exact impact the project would have on poverty reduction hinges on both the type of infrastructure or services and the areas and people the project serve. It also depends on the operating environment of the project, particularly market structures and government regulations.

In general, local access roads in poor rural and urban areas make only a modest contribution to national income growth, but they are likely to have a direct and significant impact on the daily life of the poor. On the

other hand, inter-city transport modes such as trunk roads, rail, and shipping are of strategic significance to a national economy. They are provided with the objective to stimulate and facilitate national income growth; their impacts on poverty reduction are likely to be indirect (Gannon and Liu, 1997).

The process through which the benefits of transport investments and policies lead to improvements in the standard of living of the low-income groups often involves many links, and the final general equilibrium outcomes and incidence pattern across various groups are very difficult to predict. Investment in the transport sector improves access to economic activities. In general, this dynamic process can be expected to benefit all income groups in society in the form of real income effects and increased opportunities. In addition to improving accessibility, transport investment affects employment.

The provision of transport services, including the construction and maintenance of transport infrastructure, generates demand for labor (often unskilled labor) and provides income earning opportunities for the poor. If a transport project generates jobs for the poor who are otherwise unemployed or under-employed, it contributes to the reduction of poverty (Gannon and Liu, 1997).

In many developing countries, the construction aspect of transport sector development is often viewed equally as important as the service aspect of the sector in promoting economic growth. Finally, it must be aware that transport may have adverse impact on the poor. For example, transport investment typically involves some environmental impact. If the effect is negative, the poor are the least able to respond, adjust or compensate; they may be the most vulnerable and the most “at risk” (Gannon and Liu, 1997).

### **2.5.3 Impacts of Transport on Economic Growth**

Gannon and Liu (1997) stated that sustained economic growth generally contributes to the alleviation of absolute poverty. Therefore, understanding the role of transport in economic growth is central to an appreciation of the role of transport in poverty reduction.

Transport provides intermediate services to facilitate interactions between productive activities. The micro-economic mechanisms through which the benefits of transport investment are translated into income growth are quite well recognized. Transport investment reduces the cost of assembling intermediate inputs for production (raw materials, energy, labor, other intermediate products, and information) from different locations, directly reducing the cost of production.

Reduced cost and improved quality in transport services also reduces the delivered price of products and hence promotes regional and international trade, making it possible for agriculture to commercialize, for



industry to specialize, and for production and employment to expand by exploiting scale economies. Transport investment exploitation contributes to economic diversification as well, which enables economies of scope and increases the economy's ability to handle risks. In a multitude of ways through these mechanisms, transport contributes to economic growth (Gannon and Liu, 1997).

**CHAPTER THREE**  
**METHODOLOGY**

## Chapter Three

### METHODOLOGY

The existing transportation infrastructure and poor transportation services provided in Palestine are inadequate to satisfy both the current and increasing demand for transportation and to facilitate the socio-economic development. Lack of proper transportation infrastructure facilities and services can be an obstacle to the development of the various economic sectors and may hinder the entire development efforts.

The primary objective of this research is to study the relationship between the current transport system conditions and the poverty. In order to achieve this, the following methodology is proposed:

- 1. Review related studies at the local and international levels, in terms of the relationship between the poverty rates and transport operations.**

This includes brief explanations of the role of transport sector operations in poverty studies. Several studies listed various relations and roles of transport and poverty. The headlines of studies are:

- Role of transport in poverty alleviation
- The role of the transport sector in improving the quality of life (and income) can be seen in terms of improving opportunities, reducing transport cost, providing good access (or trade and

passengers), increasing productivity, increasing the social interaction, and reducing unemployment.

- Obstacles facing investments and developments in the transport sector in Palestine, which mainly resulted from the Israeli imposed measures in terms of movements and travel restrictions of people and goods.
- Investigate the impact of current conditions of the transport system on the socio-economic aspect of the Palestinian life, particularly poverty and improving the quality of life.
- The impact of construction the Separation Wall in the West Bank on the Palestinian life and how it separates the Palestinian communities of each other.
- The accessibility of both people and goods in the West Bank, people to attain their needs and goods to the markets.

**2. Review of Related Existing Conditions (Transport Indicators):** Palestinians living conditions over the last several years are surveyed in term of expenditures, consumer price index, trips made, travel time and costs, poverty, unemployment, as well as other related social indicators.

The survey is based on work already conducted by the official Palestinian institutions (such as PCBS and ministries), NGOs, international organizations such as World Bank, OCHA, UNRWA, FAO, etc). The purpose of this review is also to monitor changes in key indicators over the

years (before the Intifadah (September 2000) and at the present time). This review covers the West Bank with its various geographical and administrative localities as much as information is available.

The purpose of these surveys are also to study the various transport indicators (accessibility, affordability, expenditures, travel time and cost, impediments, etc) at the Palestinian national level. These indicators are linked to poverty levels before and after the Intifadah.

**3. Survey of Transport and Living Conditions of Selected Communities:** This is conducted through a questionnaire that was developed for this purpose. Few communities are carefully selected based on travel and restriction conditions such as check points and those affected by the Wall. The survey includes information about the socio-economic conditions, travel time and cost, expenditure on transport, income level, affordability and availability of public transport, and accessibility to public services. All these information are compared with the period before the crisis (September 2000) and at the present time. The questionnaire is distributed via field visits and interviews with individuals.

**4. Data Analysis and Results:** The obtained information from the literature review, the review of investments, and the questionnaire is analyzed using the appropriate statistical analysis techniques and software (SPSS). Information from the questionnaire is coded into the used software. The analysis correlates the poverty conditions with transport. The analysis is done on two levels: the national level based on national data obtained from official sources and the local community level based on the questionnaire. The outcomes of this analysis are the results of the

investigation of the relationship between the poverty and transport in the Palestinian territories.

**5. Conclusions and Recommendations:** Based on the analysis and results, the proper conclusions are drawn and the recommendations are presented as a set of strategies to reduce poverty level through improving the transport system.

**CHAPTER FOUR**  
**TRANSPORT SECTOR AND ITS CONDITIONS IN**  
**THE WEST BANK**

## **Chapter Four**

# **TRANSPORT SECTOR AND ITS CONDITIONS IN THE WEST BANK**

### **4.1 Introduction**

The road and transport sector plays an active role in providing a geographic linkage between various communities and centers. Yet this sector was completely ignored during the Israeli occupation of the West Bank and Gaza Strip. This resulted in an out-dated and deteriorated road network with major engineering deficiencies and traffic operational problems. The distribution of the road network is relatively acceptable, but the quality of its surface and its geometric conditions are generally not acceptable.

Transport sector in the West Bank is one of the most important sectors; due to its contribution to the (GDP) and the provision of working opportunities, relationship to all aspects of Palestinians live and activities, in addition to its vital role in connecting different locations.

West Bank has a transport network containing main, regional, and local roads. Road-based transport is currently the only mode of transport in the West Bank.

The transportation and communication sector contributed 5.7 percent of the total job opportunities in the Palestinian Territory in 2006. The average monthly working days in this sector was 23.1 days, and this is slightly lower than that of the total economic sectors (23.4 days) (PCBS, 2007).



The daily median wage of working days in this sector was 60.0 New Israeli Shekel compared to 73.1 NIS (US \$16.4) in other economic sectors (PCBS, 2007).

## **4.2 Description of the Palestinian Road Network before September 2000**

There is no specific or formal classification to the national Palestinian roads network in the West Bank. According to the past studies, local and international practices, we can classify the roads in the West Bank into four main categories:

1. Main Road: Serves for national or internal district traffic and including road extension within a locality.
2. Regional Road: Branching off from, or lining, main roads.
3. Local Road (Paved and Unpaved): Serves the internal traffics within a locality.
4. Bypass and Settlement Road: Constructed by Israeli Occupation to link the Settlements with each other and with Israel. In 2006, 30 percent of the Palestinian national road network was bypass/settlement roads.

IOA constructed a road network inside the West Bank, which is prohibited, totally or partially, for Palestinian use, Bypass Roads.

Constructing this road network creates new conditions on the ground and Israelis aim to establish infrastructures of their illegal settlements, to

cut roads that connect Palestinian cities, and make discontinuity of Palestinians lands. Palestinians are compelled to use an alternative road routes to attain their needs.

The available data of the Palestinian road network varies according to its source. The PCBS reported that the road length in the West Bank was about 4516 km (PCBS, 2006, B). However, the Ministry of Public Works and Housing (MPWH) reported totally different values. Therefore, the lengths of roads in the West Bank vary according to the source of the data, but the records of the MPWH are more reasonable as MPWH is currently the agency that deals most with the roads. Table 4.1 presents the road lengths by class based on the MPWH records.

**Table (4.1): Lengths of the Roads Network in the West Bank (km)**

Main	Regional	Local	Sub-Total	Bypass	Settlement	Total
489	634	1125	2248	345	621	3214

Source: (MPWH, Unpublished records, 2006)

### **4.3 The Palestinian Road Network Post the Intifadah**

The “Intifadah” broke out in September 2000 as a public uprising against continued Israeli occupation of the Palestinian territories. In an effort to quell Palestinian uprising Israeli authorities closed all commonly used roads. Furthermore, the Israeli army destroyed many sections of the existing road network, especially those near city/town entrances, in an effort to tighten the siege of those communities and to prevent Palestinian

resident's access to these roads, which forced them to use alternative routes of lower quality. Traffic on these routes was relatively crowded because of the roads low capacity. In addition, alternative routes were not prepared nor designed to carry increased traffic load, which resulted in a premature deterioration of road pavements. It also resulted in a remarkable increase in trip length, travel time, and travel cost.

The transport system in the Palestinian territories witnessed a sharp reversal during the past period following the outbreak of the current Intifadah in late September 2000.

Since the start of Palestinian second Intifadah (September 2000), IOA took a several measures on the roads network especially at the entrances of Palestinian cities. These measures affect all aspects of Palestinians life: social, economical, educational, and psychological.

IOA constructed many barriers around the Palestinian cities, closed the main roads that connect the cities, prohibited the Palestinians passing through these roads. In addition to these measures and barriers, IOA made an internal closures and curfews on Palestinian cities.

IOA claim for these measures and barriers as "Security Measures ", to protect the IOF from the Palestinians attacks.

A person who examines the conditions on land can obviously be sure that these measures aim to restrict the Palestinian movement, add amore difficulties on Palestinian life, and make complicated conditions on social, economical, and psychological life of the Palestinians. These closures

severely impact the humanitarian and socio-economic situation of the Palestinians in the West Bank.









The barriers were constructed in the West Bank with considerable engineering design criteria; there are indications that the barriers are going to act as checkpoints at the entrances of Palestinian cities forming borders between states.

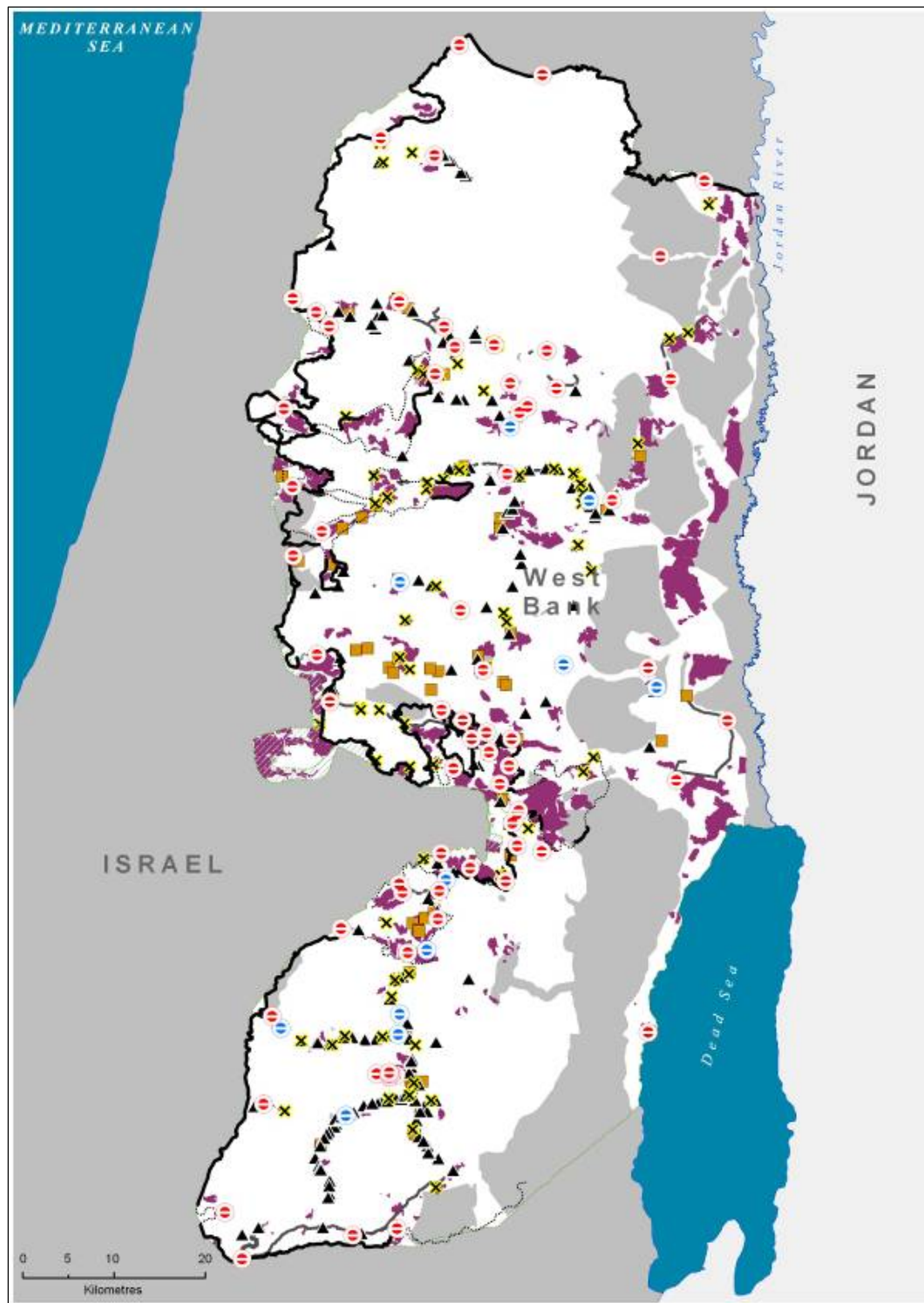
The barriers were constructed on the Palestinian areas by the IOF fragmenting the Palestinian land into fully and partially isolated groups. The checkpoints that were mainly constructed at the entrances of the Palestinian cities and villages allow the passing for the Palestinians after checking the identity and the goods.

Table 4.2 shows the types and definitions of barriers that were constructed in the West Bank.

Map 4.1 shows the types of barriers constructed by IOF which are spread all over the West Bank.

**Table (4.2): Barriers Types, Definitions, and Symbols on Figure**

<b>Type of Barrier</b>	<b>Definition</b>	<b>Symbol on Figure</b>
CHECKPOINT	A barrier manned by the IOF, Border Police and/or private security companies with observation towers and other physical blocks used to control pedestrian and vehicular access.	
PARTIAL CHECKPOINT	An established checkpoint structure operating periodically.	
ROAD BARRIER	A fence or other physical barrier of more than 100 meters in length, which runs alongside a road primarily reserved for Israelis. This obstructs the free passage of Palestinian people, vehicles and animals onto, off, or across the road.	
EARTH WALL	A series of earth mounds alongside a road used to prevent vehicles from crossing.	
ROAD GATE	A metal gate used by the IOF to control movement along roads.	
EARTH MOUNDS	A mound of rubble, dirt and/or rocks to obstruct vehicle access.	
ROAD BLOCK	A series of one meter concrete blocks to obstruct vehicle access.	
TRENCH	A ditch dug across or alongside a road to prevent vehicles from crossing	



**Map (4.1): Barriers Constructed by IOF in the West Bank**

Source: (OCHA, 2007A)

The number of barriers changed from time to time according to the political situations, but generally no real improvement of Palestinian movement in West Bank, and the number of barriers increased since the disengagement in July 2005 (OCHA, 2007A).

According to the OCHA report, there were (607) barriers in April 2008 (OCHA, 2008A). The numbers of closures and barriers are tabled by type in Table 4.3.

**Table (4.3): Number of closures by type (April 2008)**

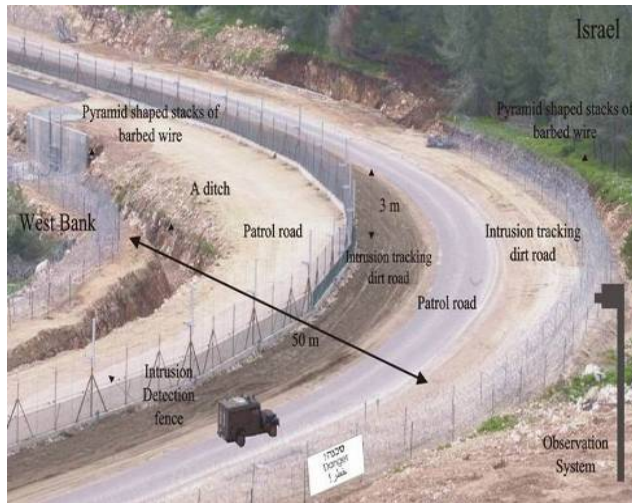
Type of Barrier	Number
CHECKPOINT	71
PARTIAL CHECKPOINT	17
ROAD BARRIER	75 (124.701 Km)
EARTH WALL	33 (16.237 Km)
ROAD GATE	84
EARTH MOUNDS	238
ROAD BLOCK	72
TRENCH	17 (33.478 Km)
<b>TOTAL</b>	<b>607</b>

Source: (OCHA, 2008A)

#### 4.4 The Segregation Wall in the West Bank

Since 2002, the Government of Israel has been constructing a Wall, which it claimed as a security measure to protect Israelis from Palestinians militant attacks. It consists of 8-meter high concrete walls, ditches, trenches, wire fences, patrol roads, and barbed wire (See Figure 4.1).

Fence and Barriers:



**Spans 50 meters wide consisting of: Barbed, Wire, Patrol roads, Electronics, Trace Sand, and Ditches**

Concrete Wall



**The Wall is made up of 8-9 meter concrete slabs**

**Figure (4.1): Samples of Construction of the Wall**

Source: (OCHA, 2007B)

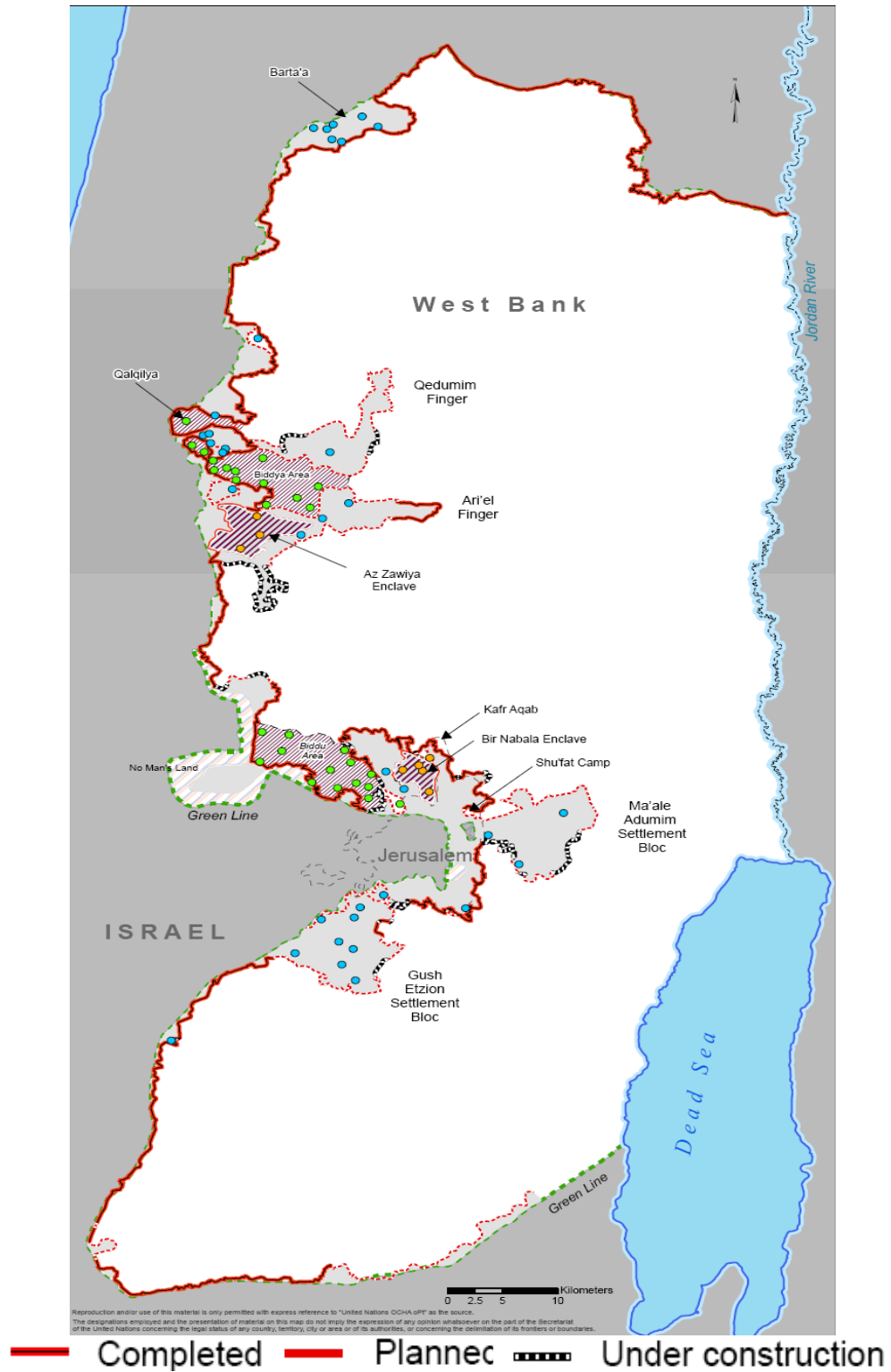
The Wall does not follow the 1949 armistice line (the Green Line) but rather significantly veers eastwards into the heart of the West Bank. In January 2006, 525 km (74.6 percent) of the total length of the projected Wall is inside West Bank territory. This has created closed areas (10.1 percent) of West Bank and East Jerusalem land that lie between the Wall and the Green Line. Once the Wall is completed, a total of 49,400 West



Bank Palestinians living in 38 villages will be included in these areas (OCHA, 2007A).

Communities located close to the Wall once had diverse local economies, with vibrant markets selling goods to Israeli customers, and abundant water and land resources. These communities have seen their living conditions plummet.

Map 4.2 shows the route of the Segregation Wall in the West Bank. Based on (OCHA) study in July 2008, the route contains the lengths already constructed, under construction and planned lengths until June 2007.



**Map (4.2): Route of the Segregation Wall in the West Bank, July 2008**

Source: (OCHA, 2008B)

#### **4.4.1 Access through the Wall**

There are 60 gates in the Wall that allow some access to land, however, fewer than half are open to Palestinians. Residents of the closed areas need to ask for permission from IOA to continue living on their land. Palestinians living to the east of the Wall who want to visit West Bank areas to the west of it need to apply for a permit from IOA to pass through Wall gates. Gates are generally open 3 times a day, some times for only 20 minutes and can be unpredictable (OCHA, 2007A).

The Wall impairs access to key education and health services, and by isolating wells from the land and destroying water networks and cisterns lying in its path, it creates new water and sanitation needs. The Wall's adverse impact on agricultural production and access to markets has increased food insecurity.

The Wall has lead to severe deterioration in the Palestinians' quality of life, as it restricted the movement and free transportation for 647 thousands Palestinians forming one third the Palestinians living in the West Bank, including restricting their ability to reach their agricultural land (Abu-Eisheh, 2004).

The Wall cuts off public transportation lines for a number of communities, which the Wall isolates. The number of links connecting a community with others is reduced for many of the impacted communities, while about half the total length of the roadway network in the West Bank will lie behind the Wall (Abu-Eisheh, 2004).

#### **4.4.2 The Effect of Closures and IOA Measures**

As noticed from Figure (4.1), the IOA barriers are spread all over the Palestinian areas, however, add more difficulties to the life of Palestinians. The Israeli measures are mainly concentrated around the cities of Nablus and Qalqilya, and the Jordan Valley. Many types of checkpoints exist around the city of Nablus, making complete and continuous closure of the city.

The Jordan Valley forms the center of farming sector in the West Bank. It is controlled by number of checkpoints (Alhamra, Tyaseer, and Bardalah), which restrict the accessibility to the lands in the valley.

For Palestinians, the Jordan Valley is an integral part of the West Bank. An estimated 53,000 Palestinians live in the Jordan Valley (including the population of Jericho) with an economy based primarily on agriculture.

The measures in the Jordan valley restrict the movement of the farming goods, which made a big loss in the farming sector and the economy of the Palestinians.

According to Alquds Newspaper 2006, the IOA restricted the movement of the Palestinians on the roads connecting the areas around the Jordan Valley, and classified it as Israeli roads, which needed a permission from IOA to pass on it (Al-Sahili, 2007).

Several studies were done to document the IOA measures and its effect on transport sector in the West Bank. The Palestinian Political and

Economical Researches (MAAS) indicated a decreasing of 40 percent in the employment in transport sector due to the IOA measures on this sector (Al-Sahili, 2007).

The Palestinian Central Bureau of Statistics (PCBS) 2003, studied IOA measures on the movement of travelers in 2001, concluded that there was an increasing of (14 to 111 percent) in trip length, (58 to 325 percent) in trip time, (8 to 48 percent) in using unpaved roads, (10 to 58 percent) in trips done, (32 to 114 percent) in the fare of trip, and (12 to 270 percent) in the maintenance expenditure for vehicles (Al-Sahili, 2007).

From the PCBS study (2003), there are obvious indicators of strong effect of IOA measures on transport sector, and sharp increase in the costs of transport operations.

In 2002, IOF invaded the Palestinian cities, imposed curfews, separated the cities into complete closed areas, closed the roads between the cities, and restricted the movement of the Palestinians and goods.

In 2004, Palestinians start to use paved roads and pass through the checkpoints which are controlled by IOA after checking their identities and goods.

Opinion Polls and Survey Studies center at An-Najah National University made a survey to assess the impact of IOA measures on the movement of the Palestinians. The study selected a sample of 860 persons in the West Bank and 501 persons in Gaza in March 2005. In this period, the IOA announced that there were some easements on the Palestinian movement (Al-Sahili, 2007).

The study proved that the claim of IOA was not true, and the survey indicated that the increase in the average of trip time was 235 percent, and 243 percent in trip length, with respect to the values before the start of the Second Intifadah.

Palestinians had to walk more than 25 times the original distance to get to their farm lands compared to conditions before the constructing of the Wall, and spent much longer time traveling because of the increase in trip lengths (Abu-Eisheh, 2004).

#### **4.5 Conditions around Nablus City**

The checkpoints still restrict the movement of Palestinian people and the goods; take the form of permanent infrastructures, and look like international borders such as (Huwwarah, Beit Eiba, and Awarta). The closure of Nablus fragments the middle of West Bank from its north.

Nablus used to be the capital of the Palestinian economy. IOA closure to the city converts Nablus from the capital of the Palestinian economy to the capital of poverty (Almasri, 2005).

Nablus City, the economic and service center of the northern West Bank, has a population of more than 130,000 people and serves as a regional hub for an estimated 350,000 people in the governorate.

Nablus is a market and manufacturing center, a focus for service center, an educational center to the large An-Najah National University, and the location of important medical facilities. Nablus has 13 health

centers and six hospitals including the major referral hospitals of Rafidia and Al Watani. Access into and out of Nablus is, therefore, essential (OCHA, 2007B).

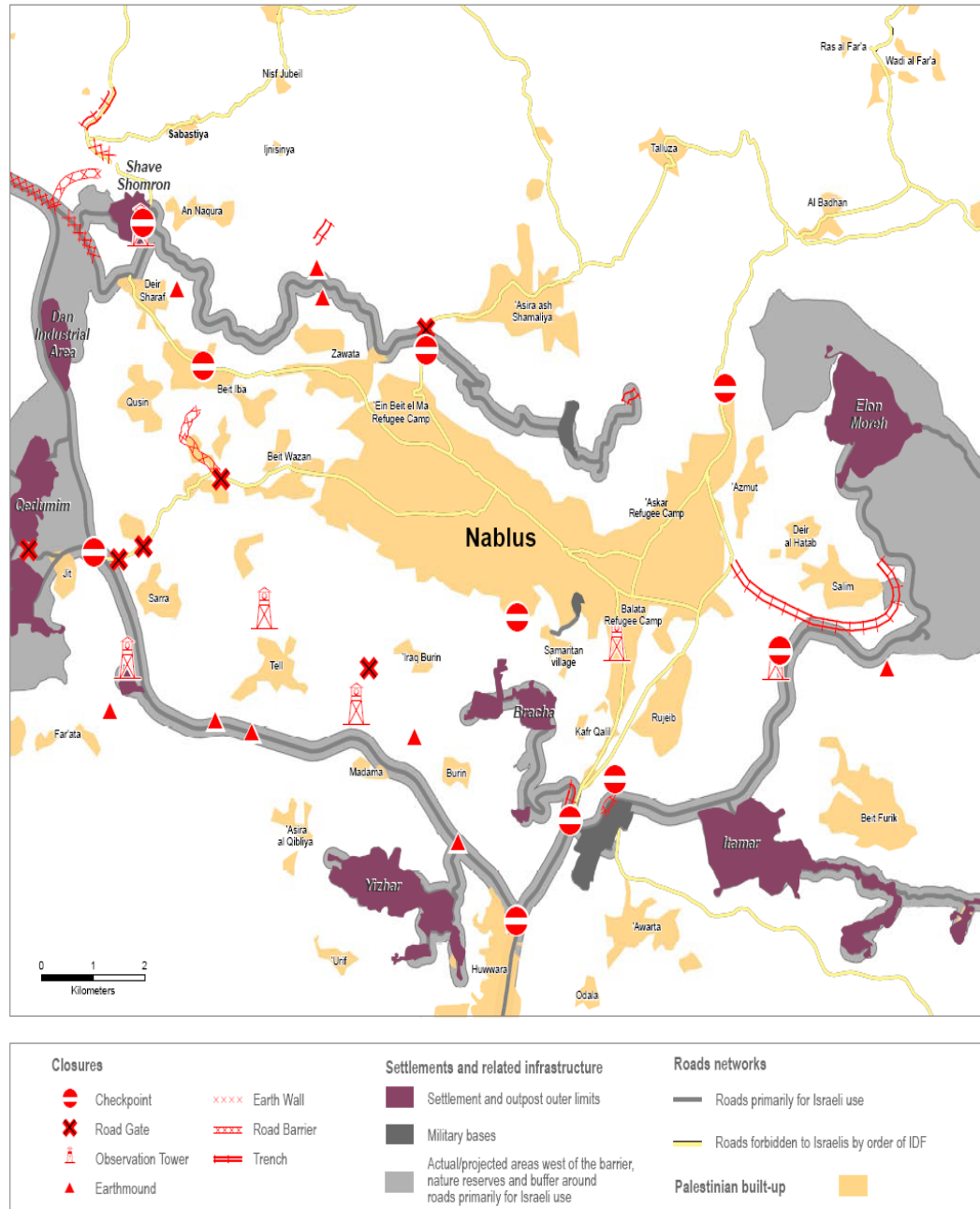
Nablus is considered a center of IOF militant activities and has been the focus of the Israeli large scale military operations. The IOF conducts almost nightly search and arrest campaigns into Nablus and surrounding villages, in addition to its three refugee camps. Between June 2005 and April 2007, for example, the IOF conducted over 1,000 search and arrest campaigns in Nablus Governorate – an average of more than 10 each week (OCHA, 2007B).

Nablus is encircled by 14 Israeli settlements and 26 outposts (see Map 4.3). The settlements are connected to each other by a series of roads used primarily by settlers that stretch around the city and across Nablus Governorate (OCHA, 2007B).

These roads are in turn linked to ten checkpoints, including seven encircling Nablus City. All Palestinians going in and out of Nablus are required to cross these checkpoints. In April 2007, only 10 percent of Nablus buses (22 out of 220) and 7 percent of Nablus taxis (150 out of 2,250) had permits to access and use the checkpoints around Nablus City (OCHA, 2007B).

In addition, more than 70 obstacles installed by the IOF block the road junctions and physically prevent Palestinian traffic from reaching the roads used primarily by settlers. Palestinian vehicles also need a permit to

travel on these roads. Palestinians caught without a permit can be fined or prosecuted (OCHA, 2007B).



**Map (4.3): Closures around Nablus City**

Source: (OCHA, 2007B)



Under these conditions, it is impossible for the Nablus economy to function normally. Unemployment in Nablus governorate increased by 44.5 percent between 1999 and 2006 (18.2 to 26.3 percent). Many businesses, no longer accessible by customers and traders, have been forced to relocate to smaller towns and villages. These new centers, however, cannot substitute for the large urban markets in terms of the volume of customers and levels of trade. There are also persistent difficulties for patients reaching hospitals and students reaching schools and universities (OCHA, 2007B).

The Israeli measures on the road network have negative effects on all aspects of the Palestinian life. Transport sector still face a closure by IOF, which forced the Palestinians to use alternate routes of lower quality and forced them to pass through lengthy roads. Trip time increased and trip cost increased, as well (as will be detailed later in this thesis).

In addition to the IOF imposed road closures. The Palestinian road network can generally be characterized by its low capacity, inadequate cross-sectional elements (lanes, lane width, side slopes, cross slopes, super-elevation, shoulders, ...etc), poorly designed horizontal and vertical alignments, and inappropriate traffic control devices (signs, signals, markings, and grade-separation). As a result of the poor road geometric conditions and the non-existing traffic safety program, road accidents have reached alarming rates in the Palestinian territories.

**CHAPTER FIVE**  
**POVERTY AND SOCIOECONOMIC CONDITIONS**  
**IN THE WEST BANK**

## **Chapter Five**

# **POVERTY AND SOCIOECONOMIC CONDITIONS IN THE WEST BANK**

### **5.1 Introduction**

West Bank is one of the areas with high levels of poverty, which is a product of political, demographic, economic, and social causes.

The restrictions on freedom of movement that Israel has imposed on Palestinians since the outbreak of the second Intifadah are the primary cause of the decline of the Palestinian economy and chronic increases in unemployment and poverty across the Occupied Territories (Palestine Monitor, 2007).

More than seven years into the outbreak of the latest round of the Israeli-Palestinian conflict (the second “Intifadah”), the West Bank economy is in deep economic crisis. The closure regime, the multi-faceted system of restrictions on the movement of goods and people both within the West Bank and through Israel to the rest of the world, tightened by the IOA during this round of conflict and further reinforced by Israel’s construction of the Separation Wall, translated into a sharp reduction in economic activity, greater unemployment, and increased poverty (The World Bank, 2006B).

Despite the efforts of economic recovery in 2004 and 2005, with growth rates of 6 percent per year, current (2007 and 2008) real per-capita income still remains about 30 percent below their pre-Intifadah level, with

46 percent of Palestinian population living in poverty, and unemployment rates above 23 percent (The World Bank, 2006B).

Economic prospects for West Bank remain grim and highly dependent on political outcomes. Recent growth was pulled by expansionary (but unsustainable) fiscal policy, banking credit to the economy, a relaxation of closures that permitted more Palestinian workers to find jobs in Israel in 2004 and 2005 (compared to the first years of the Intifadah), and recovery in private consumption. None of these recent trends are likely to continue over the period ahead (The World Bank, 2006B).

## **5.2 Economic and Social Conditions**

Since the outbreak of the second Intifadah in September 2000, Palestinian labor flows to Israel have been substantially reduced. From a peak of 150,000 workers in early 2000 - generating an annual average income of over \$800 million - Palestinian daily labor flows to Israel have been reduced to less than 20,000 in 2004. The Palestinian economy, with the aid of donor countries, has been able to absorb only a small amount of this excess labor supply through employment generation schemes and other emergency programs (Balian, 2004).

### **5.2.1 Economic Condition**

The Palestinian economy had shown signs of recovery in 1998 as a result of increased private investments and funding from donor countries. However, this process came to an abrupt end in September 2000.

The rapid deterioration of economic conditions indicates the fragile and weakened state of the economy before September 2000. The prolonged closure imposed on the Occupied Territories has led the Palestinian economy into paralysis and severe recession. The overall impact of the closures, sustained for over 2001 and 2002, has been devastating for Palestinians economic, commercial and social life. Everyday activities, such as going to work or gaining access to basic services, especially health and education, have been curtailed. The World Bank has characterized the situation as “economic dislocation” or “economic canonization” (Hawari, 2003).

The sharp decline in Palestinian purchasing power and disruptions to the transport of goods has led to a situation in which the food industry is at 60% of its capacity, while light industries work at less than half their capacity. Palestinians are forced to depend on Israeli products; the IOF facilitates access of Israeli products to Palestinian markets by letting Israeli products pass the checkpoints (Hawari, 2003).

The World Bank estimates that even if there were a political solution to the ongoing conflict and a lifting of the closures, it would take the Palestinian economy at least two years to recover to a pre-Intifadah per

capita income level (Hawari, 2003). At present, the closure is not lifted and the Palestinian economy is still in crisis.

Trade routes from the northern West Bank to Nablus and further to the south or into the Jordan Valley have been severed for northern residents. Vendors of perishable products such as vegetables and fruit have limited access to markets. Yet the sale of agricultural products has become particularly important and is one of the few economic alternatives for the increasing number of unemployed who previously worked in Israel (Palestine Monitor, 2007).

A report by the World Bank published in May 2007 stated that economic recovery and sustainable growth within the West Bank would “...require a fundamental reassessment of closure practices, a restoration of the presumption of movement, and review of Israeli control of the population registry and other means of dictating the residency of Palestinians within the West Bank and Gaza” (Palestine Monitor, 2007).

Palestinian has to expend more on transportation during the Intifadah. PCBS publishes the household expenditures in the Palestinian territories every year. Table 5.1 shows the Palestinian expenditure on transport in several years before and after the Intifadah.

**Table (5.1): Average Monthly Household Expenditure on Transport in the West Bank**

<b>Year</b>	<b>Avg. Expenditure on Transport (NIS)</b>	<b>Monthly Income (NIS)</b>	<b>% of Monthly Income</b>
<b>1996</b>	100.00	1195	8.37%
<b>1998</b>	108.53	1575	6.90%
<b>1999</b>	119.51	1705	7.01%
<b>2000</b>	127.73	1795	7.11%
<b>2001</b>	145.48	1685	8.63%
<b>2002</b>	177.28	1700	10.43%
<b>2004</b>	202.05	1760	11.48%
<b>2005</b>	208.18	1830	11.37%
<b>2006</b>	220.49	1925	11.45%
<b>2007</b>	222.80	1855	12.01%
<b>June 2008</b>	231.83	1800 (estimated)	12.88%

Source: (PCBS, 2008A)

From Table 5.1, it is clear that the expenditure on transport increased by different rates. Based on year 1996, with the average expenditure of 100, until 2000, there was approximately 27 percent increase in transport expenditure. After the start of the Intifadah, household transport expenditure has reached 231.83 NIS in June 2008. This is an increase by nearly 80 percent compared to year 2000.

As shown in Table 5.1, the expenditure percent of monthly income has increased during the years of the Intifadah, about 8.6 % in 2001, and increased to more than 12 % in 2007, which clearly indicates that the changes occurred in transport operation lead to higher expenses on transport in the West Bank.

### **5.2.2 Unemployment**

One of the major factors in the present economic crisis causing the dramatic deterioration of living conditions in the Occupied Palestinian Territories is the high rate of unemployment. This is largely due to the loss of jobs in Israel and in the private sector. Within weeks of the outbreak of the Intifadah, approximately 100,000 Palestinian jobs in Israel were lost, out of a total of 130,000 (excluding East Jerusalem). By December 2001 – 15 months into the Intifadah – another 60,000 jobs had been lost inside the Occupied Territories due to a decrease in demand, which forced businesses to dismiss workers (Hawari, 2003).

Tightened border closures with Israel, within the Palestinian Territories, and with the rest of the world have all worked against the creation of new employment opportunities. This structural adjustment shock has dramatically increased the rates of unemployment and poverty in both, the West Bank and the Gaza Strip (Balian, 2004).

PCBS publishes an annual report about the unemployment in the Palestinian territories. Table 5.2 shows the unemployment rates in the West Bank for the period 2000-2007.



**Table (5.2): Unemployment Rates in the West Bank 2000-2007**

<b>Year</b>	<b>Unemployment Rate</b>
<b>2007</b>	24.5 %
<b>2006</b>	25.0 %
<b>2005</b>	26.1 %
<b>2004</b>	29.2 %
<b>2003</b>	32.0 %
<b>2002</b>	38.1 %
<b>2001</b>	30.4 %
<b>2000</b>	21.7 %

Source: (PCBS, 2007)

Rates in Table 5.2 indicate that there is a clear increase of unemployment in the West Bank during the years of Intifadah, especially in the first four years after its eruption, when Palestinians experienced daily closures and restrictions of movement due to the IOF imposed road measures.

### **5.2.3 Investment in Transport Projects**

Investments in transport infrastructure make a direct contribution to poverty reduction if they give poor people access and increase their mobility, if they lower transport costs and make the goods consumed by poor people more affordable and their products more competitive, or if they create employment and increase incomes (Weiler, 2004).

Transport projects are expected to contribute to poverty reduction through its indirect impacts on economic growth or its direct impact on personal welfare of the poor.

Investment in the transport sector improves access to economic opportunities by reducing transport costs. Provided transport market structures are reasonably competitive, this will be reflected in a reduction in prices for both freight and passenger services.

The consequences of road closures and travel restrictions in the West Bank during the years of the Intifadah severely influenced the transport sector. The share of the employed persons in the transport sector was estimated at 4.7% of the total labor force in the Palestinian territories in 1999, 4.9% in 2000 (The World Bank, 2006A).

The PCBS reports the share of employed persons in transportation, storage, and communication sector out of total employment in the West Bank. These percentages were 6.0% in 2005, 5.7% in 2006, and 5.1% in 2007 (PCBS, 2008B). Although the employment share for transportation was not separated from communication and storage, it is well-known that the highest portion of these percentages is for the transportation sub-sector. The aforementioned percentages indicate that the employment share has declined over the years of the Intifadah.

Due to the underdeveloped status in the West Bank, the transportation sector contribution to the gross domestic product (GDP) of the Palestinian territories is limited. Although the GDP of the Palestinian territories has been slightly improving, transportation infrastructure investment is still low compared to other developing countries (The World Bank, 2000).

The daily median wage of working days in this sector was 65.4 New Israeli Shekel (NIS) in 2004 compared to 62.2 NIS (US \$13.9) in other economic sectors (PCBS, 2005). On the other hand, the total number of enterprises working in land transport sector was 190 in 2002 and 273 in 2005.

Palestinian Economic Council for Development and Reconstruction (PECDAR) has a total of 87.889 million of US\$ with 736 of executed and partially executed road projects from 1994 to 2006 (PECDAR, 2007).

Table 5.3 shows the amounts of road maintenance and rehabilitation expenditures in the Palestinian territories (1996-April 2007) by the Ministry of Public Works and Housing (MPWH).

**Table (5.3): MPWH Road Maintenance and Rehabilitation Expenditures in the West Bank (1996-April 2007)**

<b>Year</b>	<b>West Bank (\$1000)</b>
<b>1996</b>	0
<b>1997</b>	2,058.80
<b>1998</b>	1,578.90
<b>1999</b>	3,207.70
<b>2000</b>	1,190.20
<b>2001</b>	3,071.30
<b>2002</b>	1,000.00
<b>2003</b>	1,500.00
<b>2004-April 2007</b>	11,120.00
<b>Total</b>	24,726.90

Source: (MPWH, 2004, 2007)

MPWH, as many ministries or organizations, has difficulties in executing road projects, due to the political constraints in the country which was also reflected on the transport sector in the West Bank.

Table 5.3 shows that the total expenditure on the road sector was US\$8.0356 million during the years 1996 to 2000 (average annual expenditure = \$1.607 million), and it was US\$16.6913 million for the years 2001 to 2007 (average annual expenditure = \$2.3845 million). Most of these expenditures were donated by the international community and a smaller portion was self-financed by the PNA budget.

With no doubt that the transport projects contribute to decreasing unemployment and increasing the income, which would lead to reducing the poverty rates.

#### **5.2.4 Social Conditions**

The effects of Israeli measures in the Occupied Palestinian Territories since September 28, 2000 have been a decline in employment, trade, and investment. Above all, these measures have paralyzed civilian systems and created an emergency situation for the population: food shortages, problems with fresh water, electricity and access to healthcare, the accumulation of garbage in the streets, and so on. In such conditions, high levels of poverty and despair prevail and weaker sectors of the population, such as children, pregnant women, the sick, and the old are particularly vulnerable (Hawari, 2003).

Restricting movement of goods and persons exacerbates the humanitarian crisis in the occupied Palestinian territory by deepening

unemployment and poverty, preventing health care, interrupting education, and generally humiliating the Palestinian people individually and collectively. Furthermore problems of access to educational and health services are part of the detrimental impact of the IOA imposed measures on Palestinian livelihoods.

Israeli settlements in the occupied Palestinian territory, deemed illegal by the international community, continue to exacerbate the conflict, with detrimental repercussions on the living conditions of the Palestinian people.

The crisis has affected different social groups differently. Adolescents are particularly vulnerable. Of an age to understand the economic hardships that their families face but generally too young and inexperienced to be able to help much, they are particularly susceptible to trauma and to feelings of powerlessness and rage.

Teachers are reporting an increase in violent behavior at school; many adolescents see no sense in continuing their education, and dropout rates in this age cadre appear to have risen markedly during the Intifadah. However, this age group has a very limited chance of finding employment in the formal labor market, given the strong negative relationship between the level of education and unemployment observed in the West Bank (The World Bank, 2003).

In view of the drastic escalation in the restrictions imposed by Israeli authorities on mobility across the regular road network in the Palestinian territories, and because of high risks encountered by young men on Israeli

checkpoints, the vast majority of students have been forced to move their residence from their home towns to rented apartments close to their respective universities. This has stimulated a massive exodus of young men and women to such major towns like Nablus, Ramallah, Bethlehem and Gaza. Expectedly, this has precipitated far-reaching consequences in several directions, especially in regard to cost implications and, more importantly, on the academic, social and behavioral attitudes of students themselves (Za'noon, 2002).

Restrictions on the freedom of movement of Palestinians have seriously affected their access to medical care, including emergency medical treatment. Many villages are cut off from major urban centers and; therefore, hospitals and medical specialists. With no alternative route available, Palestinians in these areas are forced to travel through checkpoints to access medical treatment, whether it is routine or urgent.

The UNRWA Jerusalem Health Center epitomizes difficulties in refugees' access to Agency services. Whereas about 10,000 visits per month were completed between August and October 2003, mostly of patients coming from outside the city, visits have dropped considerably by more than half in July 2004. In January 2005, this number continued to drop, falling to 4,112 visits, with a marked decrease in visits from patients with non-communicable diseases and registering infants for vaccinations. Furthermore, over 6,600 refugees in three UNRWA-conventional Jerusalem hospitals had received secondary health care in 2003. Most such patients will no longer be able to access the city when the barrier is completed (The United Nations, 2005).

### **5.3 The Separation Wall and West Bank Fragmentation**

The West Bank is increasingly fragmented; Israeli settlements are prevalent throughout the West Bank. They are illegal under international law; roads primarily for settlers use connect the settlements with Israel. Palestinian access to the majority of these roads is prevented or restricted by: checkpoints, roadblocks, and a permit system for vehicles wanting to travel on them.

The construction of the Wall has led to the requisition of approximately 35,000 dunums (3,500 hectares) of West Bank land. The Wall buffer zone in the northern West Bank, including the area where the Wall is located, covers approximately 62,890 dunums (6,289 hectares) of West Bank land. In this approximately 150 - 200 meter buffer zone on the West Bank side of the Wall, no building is permitted without IOF approval (The United Nation, 2006).

When the Wall is completed, over ten percent (10.2%) of West Bank land will be isolated in the area between the Wall and the Green Line. This includes some of the most fertile land and water reserves in the West Bank. In October 2003, the area between the Wall and the Green Line in the northern West Bank was declared closed by military order. All Palestinians living in this area are required to obtain 'permanent resident' permits from the IOA. Non-resident Palestinians who need to enter the area, in particular farmers, must apply for a visitor permit to access their farmlands and water resources through designated gates (OCHA, 2007B).

Eligibility requirements for Palestinians needing visitor permits have become increasingly stringent. Consequently, fewer Palestinians are obtaining such permits. Those who are unable to prove direct ownership of the land - for example, relatives to landowners such as nephews, uncles, cousins and grandchildren, landless laborers, sharecroppers, and leaseholders – find that their access to the closed areas is now virtually impossible (OCHA, 2007B).

The land between the Wall (projected and constructed) and the Green Line comprises some of the most fertile in the West Bank. Approximately 5,000 Palestinians currently reside in these closed areas and once the Wall is completed, a total of 49,400 West Bank Palestinians living in 38 villages will be included (The United Nation, 2006).

Where the Wall has been constructed, Palestinians face economic hardship due to restrictions of access to their land to harvest crops, graze animals, and earn a living. Palestinians have also been cut off from schools, universities, and specialized medical care by the Wall. The damage caused by the destruction of land and property for the Wall's construction will take many years to recover from and hinder Palestinian development should a political situation allow this (The United Nation, 2006).

The closed areas of the West Bank are no longer accessible for most West Bank Palestinians. Palestinians living east of the Wall have faced increased difficulty accessing their farm land in the closed areas. The result is widespread loss of agricultural livelihoods. Unemployment levels in areas close to the Wall have increased (The United Nation, 2006).



PCBS made a survey in August 2005 to study the impact of the expansion of the Separation Wall on the socioeconomic condition of the Palestinian households in the localities in which the Wall passes through in the West Bank. The results of the survey were as follow (PCBS, 2006A):

- More than 60% of the Palestinian households in the Palestinian localities affected by the wall depended on Agriculture as a main income source before the construction of the wall, against 53.1% depend on this source after the construction of the wall
- 49.9% depended on wages and salaries from Israeli working sectors as a main income source before the construction of the wall, against 35.9% depend on this source after the construction of the wall
- 21.6% depended on Social assistance before the construction of the wall and 25.1% depend on the same source after the construction of the wall
- 20.3% of the Palestinian households in the Palestinian localities affected by the wall depended on household projects as a main income source before the construction of the Wall; against 19.1% depend on this source after the construction of the wall.
- 88.9% of Palestinian households in the localities affected by the wall that have some members attending higher education used detour roads in order to reach their (universities and colleges) as a method of adaptation with the difficulties they face, and 69.1% of the households were forced to be absent from (university and college) due to the closure.

- As a result of the survey, 42.1% of the Palestinian households in the localities affected by the expansion and annexation wall indicated that separation from the health services (hospitals and medical centers) in the main cities formed an obstacle for them to get the required health services, (PCBS, 2006A).

From the results of PCBS survey, it is clear the devastating effect of the Separation Wall on all aspect of Palestinian life. Further, the impact of the expansion of the Wall is still changing the realities on the ground; cutting roads, isolate localities, destroying farms ...etc.

In conclusion, all these road closures and travel restrictions, accompanied by the depressed economic conditions, had sever impacts on the livelihood of the Palestinians in general. These measures have increased travel expenses, and transportation has become less affordable, especially for the low income groups who were the most hardly hit by these crises. In addition, these measures fragmented communities and isolates residents from social support networks. Furthermore, the social ties and relationships are weakened.

#### **5.4 Poverty Rates in the West Bank**

The devastation of the Palestinian economy has had direct repercussions on the impoverishment of the individual. USAID predicted as early as December 2000 that the situation would lead to the occurrence of ‘a humanitarian crisis – measured in high malnutrition rates, increased morbidity and mortality (Hawari, 2003).

The PCBS poverty report in the Palestinian territories in 2006 showed that the poverty rate increased by 10.4 percent since the start of the Intifadah. Table 5.4 shows poverty rates in different years before and after the Intifadah.

**Table (5.4): Poverty Rates in the Occupied Palestinian Territories**

<b>Year</b>	<b>Poverty Rate</b>	<b>Deep Poverty</b>
<b>2007</b>	30.3 %	18.3 %
<b>2006</b>	30.8 %	18.5 %
<b>2005</b>	29.5 %	18.1 %
<b>2004</b>	25.6 %	16.4 %
<b>2001</b>	27.9 %	19.5 %
<b>1998</b>	20.3 %	12.5 %

Source: (PCBS, 2007)

Poverty statistics reported in Table 5.4 are based on an official definition of poverty developed in 1997 by PCBS. The definition combines absolute and relative features and is based on a budget of basic needs for a family of 6 persons (2 adults and 4 children). Two poverty lines have been developed according to actual spending patterns of Palestinian families. The first, termed “deep (absolute) poverty line,” was calculated to reflect a budget for food, clothing and housing. The second line “relative poverty line (poverty rate)” adds other necessities including health care, education, transportation, personal care, and housekeeping supplies. The two lines have been adjusted to reflect the different consumption needs of families based on their composition (household size and the number of children) (PCBS, 2007).

Table 5.4 shows an increase in poverty rates during the current crisis compared with the eve of the Intifadah. The results indicated that the poverty rates reached 30.8% in 2006. The poverty rate has increased by 10.4% since the eve of the Intifadah.

### **5.5 Transport Affordability**

The concept of affordability is widely used when discussing urban public transport fares in the presence of low incomes and poverty, but it is not universally accepted as being meaningful (Mitric and Carruthers, 2005).

Fare is the dominant feature of public transport services for low-income travelers. Likewise, it is the key policy variable for both the operating companies and for the government, local and even national. As passenger incomes increase, concern over fares starts to be displaced by the concern for quality.

Traveler reactions to fare increases or decreases are of major interest to operators of transport services, since they affect patronage; therefore, revenue. This aspect is captured by a standard economic notion of price elasticity, with an established definition, measurement methods, and interpretation (Mitric and Carruthers, 2005).

When a fare increase leads to a loss of passengers at the low end of the income scale, the operator is concerned because of the loss of revenue, but not more than that.

Understanding the concept and having some knowledge of the values of price elasticity in this context is necessary for the operator to make informed decisions about setting tariffs (sufficiency includes a requirement to know also about costs).

In the West Bank, transport cost has doubled or tripled in the years of the Intifadah. In 2006, there was an increase of 13.6 percent in transport expenditure compared with 2005 (PCBS, 2006B) as an impact of the IOF imposed road measures.

As a result of all these conditions of closures, checkpoints, imposed road measures that have lead to a sharp increase in travel cost, limited job opportunities, movement restrictions, limited access to jobs, and high poverty levels, it is logical for transportation to be less affordability in the West Bank.

The affordability may be expressed in terns of *affordability index*. The Affordability Index (AI) is expressed in the following formula (Carruthers et al, 2005).

$$\text{Affordability Index (\%)} = (\text{Number of trips} \times \text{Average cost per trip}) / \text{per capita income}$$

For Nablus City, the average family daily income was 65.2 NIS and the average number of working days per month was 22.2 work-days (PCBS, 2007). Therefore, the average family income is calculated to be 1447.44 NIS per month. In addition, the average weighted expenditure on

transport out of the total family income is calculated to be approximately 26.5 percent (based on field surveys; see Chapter 6). As a result, the Affordability Index (AI) for a family in Nablus was calculated to be 26.5 percent.

Table 5.5 shows the Affordability Indices for cities in the world (Carruthers et al, 2005).

**Table (5.5): Affordability Index Values for International Cities**

<b>City</b>	<b>Affordability Index</b>
<b>Sao Paula</b>	11 %
<b>Mumbai</b>	9 %
<b>Chennai</b>	8 %
<b>Brasilia</b>	6 %
<b>Amsterdam</b>	6 %
<b>Moscow</b>	4 %
<b>Seoul</b>	4 %
<b>New York</b>	3 %
<b>Los Angeles</b>	3 %
<b>Mexico City</b>	3 %
<b>Cairo</b>	3 %
<b>London</b>	2 %
<b>Bangkok</b>	1 %

Source: (Carruthers et al, 2005)

Comparing Nablus City with other world cities (shown in Table 5.5), it is clear that the AI in Nablus City is more than double the highest AI of world cities shown above. Therefore, public transportation is less affordable for the Palestinians, especially in Nablus City compared to other world cities.

Furthermore the Palestinian income has decreased during the years of the Intifadah and this what makes the transport unaffordable for most families in the Palestinian society; income decreasing + travel cost increasing = unaffordable transport.

In conclusion, all these road closures and travel restrictions, accompanied by the depressed economic conditions, had sever impacts on the livelihood of the Palestinians in general. These measures have increased travel expenses, and transportation has become less affordable, especially for the low income groups who were the most hardly hit by these crises. In addition, these measures fragmented communities and isolates residents from social support networks. Furthermore, the social ties and relationships are weakened.

**CHAPTER SIX**  
**FIELD SURVEY AND ANALYSIS**



## **Chapter Six**

### **FIELD SURVEY AND ANALYSIS**

Survey is one of the main instruments to collect data of any study and get accurate results and analysis. Many forms of survey can be used such as direct interviews with people or indirect by calls, feedbacks, and emails.

This study uses the direct interviews with people by distributing a questionnaire and filling it while the surveyor is present. There were two types of questionnaires used in this study, driver's survey and general public.

#### **6.1 Purpose of Survey**

The purpose of this survey is to collect data from the people and drivers about the impact of Israeli measures on the time and cost of transport operations during the second Intifadah. The survey form was also designed to know the effect of the current transport system on the accessibility to services such as hospitals and schools. The survey will also help studying the changes in standards of livings of Palestinians due to the current travel procedures and conditions.

In general the survey is intended to describe the effect of the current transportation system on the poverty under the Israeli imposed measures on the transport sector.

This field study surveys the primary factors affecting the Palestinian transport operations such as accessibility, affordability, number of Israeli checkpoints passed, expenditure on transport, and travel time and cost.

## **6.2 Survey Methodology**

Data were gathered through a questionnaire that was developed and distributed at selected locations representative of the population that are affected by the current transport system, the questionnaire was distributed in the period of (20/10/2007 to 10/11/2007).

Two forms were used; one for drivers and another for the public. There are selected locations that the survey was distributed at in Nablus Governorate to represent various population sectors considering people numbers and the geographic distribution of the communities as much as possible.

Nablus Governorate contains one city, several towns, villages, and three camps. The city was divided into five neighborhoods for the purpose of this survey. Selected villages around the city were surveyed, and two camps in eastern and western parts of the city were also selected for this survey.

The two main Israeli checkpoints around Nablus City were selected as representative locations. These are Huwwarah and Beit Iba checkpoints (the southern and western entrances of Nablus City).

The driver's questionnaire was distributed at the locations of public transport sites such as bus stations, taxi offices, as well as at the main Israeli checkpoints around Nablus City. Furthermore, cargo trucks were also surveyed at their parking stations.

Both questionnaire forms are presented in Appendices C and D

### **6.3 Sample Size**

To achieve acceptable results, the sample size should be sufficient, representative of various groups, and illustrative of the population. It is generally recommended for such type of surveys that the sample size be a percentage of the population.

A total of 800 forms for the general public and 200 forms for drivers were distributed, a total of 1000 questionnaire forms. Table 6.1 shows the locations, which were surveyed and total number of questionnaires distributed at these locations; the retained forms were 763 of general survey and 167 of drivers.

The sample size was initially designed as a percentage of the population, with a 95% confidence level and a standard error of  $\pm 0.05\%$ . The 1000 forms (800 for the general survey and 200 for the drivers) will achieve 95% confidence and 3.5% standard error.

**Table (6.1): Survey Distribution with Number and Location**

<b>General Public Survey</b>		
<b>Location</b>	<b>Number of Questionnaires</b>	<b>Notes</b>
Nablus City	<b>200</b>	<b>Includes the Camps*</b>
Villages	<b>200</b>	<b>Selected villages around Nablus City**</b>
Beit Eba Checkpoint	<b>200</b>	<b>The western entrance of Nablus City</b>
Huwwarah Checkpoint	<b>200</b>	<b>The southern entrance of Nablus City</b>
<b>Total</b>	<b>800</b>	<b>Total sample size distributed</b>
<b>Drivers Survey</b>		
Beit Eba Checkpoint	<b>50</b>	<b>Taxis and buses which park at the checkpoint</b>
Huwwarah Checkpoint	<b>50</b>	<b>Taxis and buses which park at the checkpoint</b>
Taxi and Bus Stations	<b>50</b>	<b>Inside the city of Nablus</b>
Trucks and Others	<b>50</b>	<b>Trucks and other types of cargo vehicles***</b>
<b>Total</b>	<b>200</b>	<b>Total sample size distributed</b>

\* Ala'in Refugee Camp and Balata Refugee Camp

\*\* South (Beita, Aqraba, and Jamma'ien), North (Tallozah and Northen Aseerah), West (Sabastieh and Borqah), and East (Beit Forik and Beit Dajan).

\*\*\* includes small, large, and heavy trucks, cement mixture vehicles, and trailers

## **6.4 Survey Results and Analysis**

### **6.4.1 General Public Survey**

#### **General Data**

Based on forms distributed and collected, about 63.9 percent of the people that fill the survey are married and 36.1 percent are single. As far as the place of residence, 68.4 percent are from Nablus City, 7.5 percent from Jenin, 3.7 percent from Qalqilia, 4.2 percent from Tulkarem, and 16.3 percent from other cities.

With regard to current jobs, 13.9 percent are students, 24.3 percent are laborers, 30.8 percent are in the public sector, and the rest are from the private and commercial sector.

Summary of results for the general information collected is included in Appendix E.

#### **Checkpoints Number and Travel Route**

People were asked if they had to change their original travel route because the Israeli imposed road measures and checkpoints. The results were 92.3 percent of the people had changed their travel route, and 78.5 percent had to use unpaved roads to get to their destinations.

Furthermore, 44.0 percent had to pass three checkpoints or more to get to their destination, 28.1 percent had to pass two checkpoints and 28.0

percent had to pass only one. People of Nablus City had to cross at least one checkpoint to enter or exit the City.

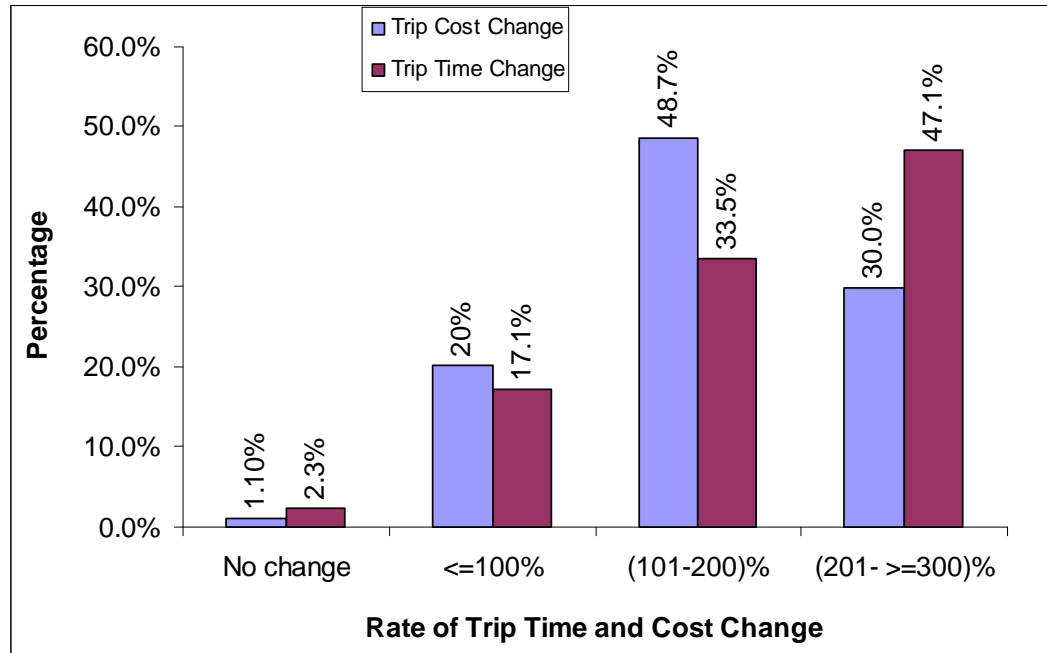
Table 6.2 shows the cross-relationship between the place of living and the number of checkpoints passed. This table indicates that large percentages of people had changed their trip route during the Intifadah, which shows the effect of the Israeli checkpoints on the Palestinian life in the northern districts of the West Bank.

**Table (6.2): Number of Checkpoints Passed and Route Change With Respect to the City of Residence**

<b>District</b>	<b>Number of Checkpoints</b>			<b>Route Change</b>	
	<b>1</b>	<b>2</b>	<b>3 or more</b>	<b>YES</b>	<b>NO</b>
Nablus	52 %	25 %	43 %	93.3 %	6.7 %
Jenin	0.0 %	57.9 %	42.1 %	98.3 %	1.7 %
Qalqiliah	21.4 %	17.9 %	60.7 %	100 %	0.0 %
Tulkarem	15.6 %	50 %	34.4 %	100 %	0.0 %
Others	28.2 %	24.2 %	47.6 %	81.4 %	18.6 %
<b>Overall</b>	<b>28 %</b>	<b>28.1 %</b>	<b>44 %</b>	<b>92.3 %</b>	<b>7.7 %</b>

### **Changes in Travel Time and Cost**

Figure 6.1 shows the changes occurred in trip time and cost during the years of Intifadah.

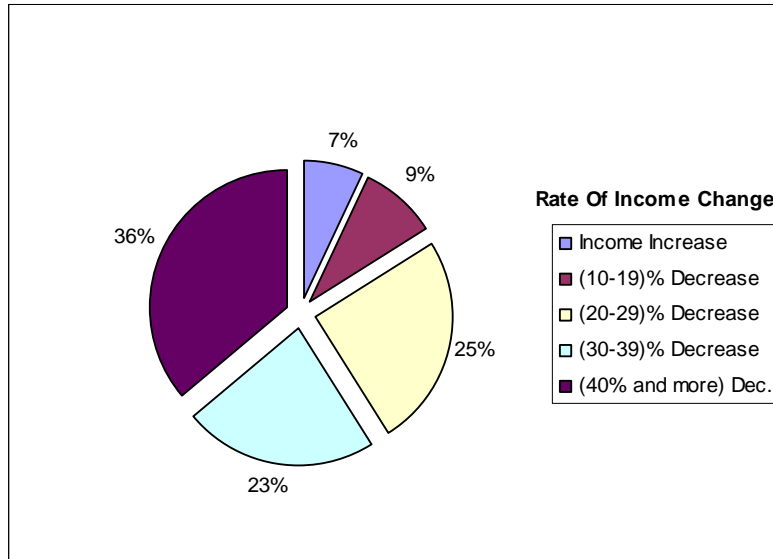


**Figure (6.1): Trip Time and Trip Cost Change during the Intifadah**

It is clear that there is an increase in trip time and cost in the West Bank, which is a result of closures and imposed road measures by IOF.

### **Income Changes and Effects on Life Style**

The IOA measures affect all aspects of Palestinian life, specially the workers and their incomes. About 93 percent of the Palestinians had a decrease in there income during the Intifadah with respect to the years before 2000. Nearly 36 percent of which had a decrease of income by 40 percent or more. See Figure (6.2).



**Figure (6.2): Changes in Palestinian Income during the Intifadah**

Multi reasons are playing role in income decrease for the Palestinian people. Transport operations cost is one of the reasons, which had an effect on the Palestinian disposable income change.

People were asked about the reasons of their income decrease. The results were: about 24 percent was for the travel and access difficulties, more than 23 percent were for the increase in transport cost, 17 percent were for limited job opportunities, and about 36 percent were because of the increase in the cost of living.

Table 6.3 shows the percent of income decrease with respect to the reason for such decrease.



**Table (6.3): Percent of Income Decrease and its Reasons**

<b>Percent of Income Decrease</b>	<b>Reason For Income Decrease</b>			
	<b>Access Difficulty</b>	<b>Increase in Transport Cost</b>	<b>Limited Job Opportunities</b>	<b>Increase in the Cost of Living</b>
<b>(10 – 19) %</b>	8.4 %	23.9%	10.3%	57.4%
<b>(20 – 29) %</b>	23.4%	28.4%	14.3%	33.9%
<b>(30 – 39)%</b>	32.3%	21.7%	12.3%	33.7%
<b>40 %</b>	15.1%	15.0%	30.8%	39.0%
<b>&gt; 40%</b>	14.6%	16.8%	27.2%	41.4%
<b>Overall</b>	<b>24.1 %</b>	<b>23.5 %</b>	<b>16.8 %</b>	<b>35.6 %</b>

It is clear from the results in Table 6.3 that the reasons related to the current transportation system in the West Bank have effects on income decrease for the Palestinians. The group, which experienced income decrease by 20 to 30 percent, was primarily related to transportation reasons (access difficulty and transport cost increase).

About 95 percent of the residents of Nablus Governorate had income decrease by different rates. The rates of income decrease reflect the effects of Israeli imposed measures on the aspects of Palestinians life.

Table 6.4 shows the cross relationship between the income difference according to the city of residence.

**Table (6.4): Percent Income Change with the respect to the Place of Residence**

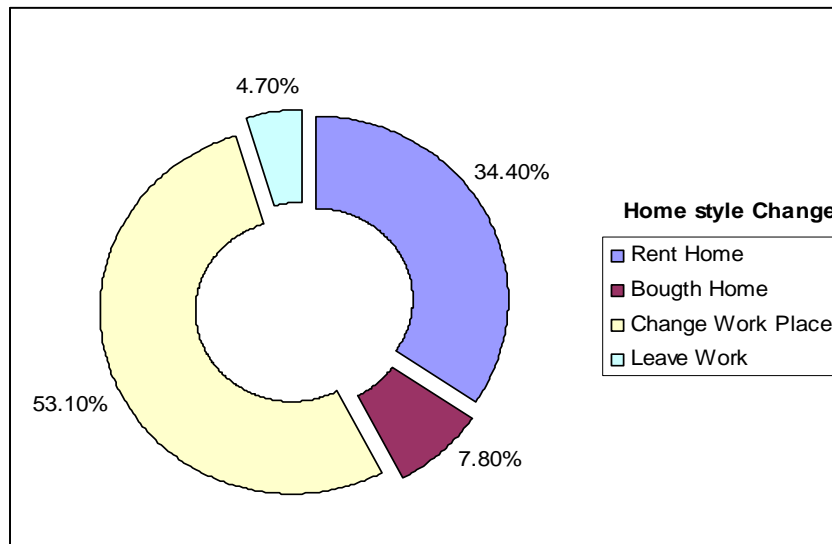
<b>Governorate</b>	<b>Percent Income Change</b>				
	<b>Income Increase</b>	<b>- 10 %</b>	<b>- 20 %</b>	<b>- 30 %</b>	<b>- 40% and more</b>
Nablus	5.4%	9.8 %	24.6 %	25.5 %	34.7 %
Jenin	1.2%	8.6 %	31.6 %	18.3 %	40.3 %
Qalqiliah	2.5%	13.2 %	39.3 %	21.4 %	23.6 %
Tulkarem	3.4%	19.7 %	17.6 %	24.9 %	34.4 %
Other Places	9.6%	26.9 %	24.2 %	16.5 %	22.8 %

The current transport system in the West Bank had great effect on the social aspects of the Palestinian life; 80.6 percent of the people indicated that current transport system is the main cause of inaccessibility to hospitals, schools, and public service institutions.

Approximately 81 percent had less number of social trips during the current Intifadah, and the main cause of this decrease is the current transport system particularly inaccessibility and increase in trip time and cost. Furthermore, 74.9 percent did not make recreational trips during the current Intifadah because of current transport system of inaccessibility, checkpoints passing, and increase in trip cost and time.

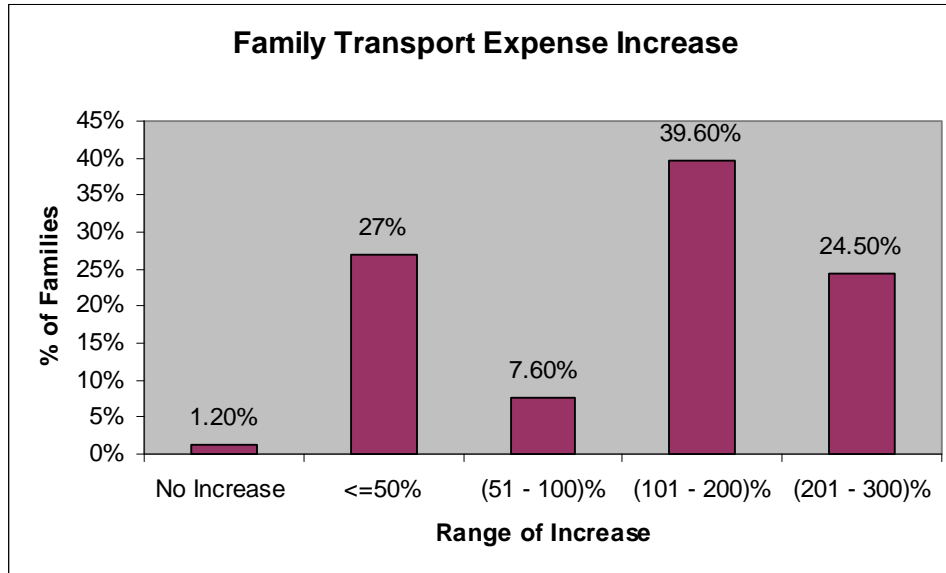
People in the West Bank had sometimes to discontinue their work, to leave their job, or change work place due to the current transport conditions. About 76.4 percent indicated that the difficulty in the current transport system was the main reason for working discontinuously or being absent for work.

In order to continue their work under the current transport conditions, Palestinians had to change their home living style. Figure 6.3 shows the percentages of people who changed their home style by renting a new home, buying a new home, changing the work place, or leaving work.



**Figure (6.3): Changes in Palestinian Home Style during the Intifadah**

Palestinian families had to pay a higher portion of their income on transport expenses. About 53 percent of the Palestinians spend 10% to 30% of their family budget on transport and travel. Figure 6.4 shows the transport cost increase for the Palestinian families during the Intifadah.



**Figure (6.4): Family Transport Expense Increase during the Intifadah**

For Nablus City, the study case in this thesis, Table 6.5 shows the family's percent expenditure on transportation out of the total family income.

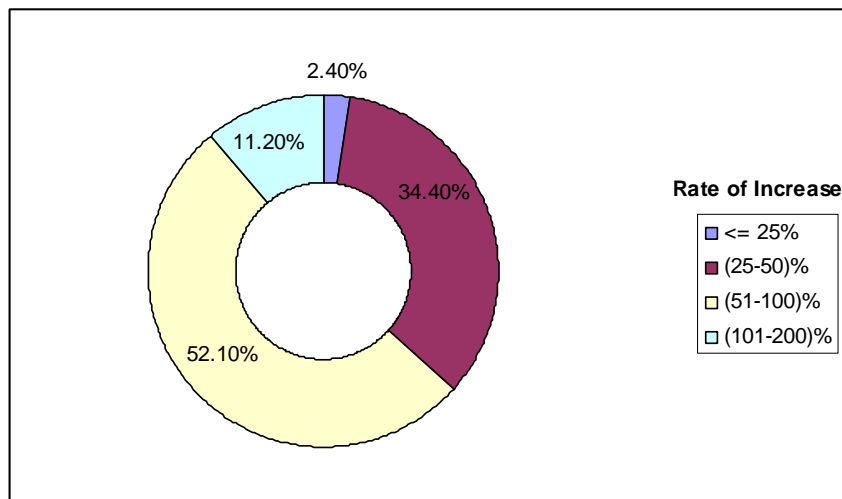
**Table (6.5): Family Transport Expense for Nablus City**

Portion expenditure on transport	10% and less	(10-30)%	(31-60)%	60% and more
Percent	14.4%	56.8%	21.9%	6.9%

### Transporting of Goods

The transport system deals with moving people and goods to different places. The current transport system in the West Bank had an affect on the ability to transport goods to the different markets. About 37.0

percent of the people could not transport their goods to the markets. More than 85 percent had an increase in the cost of transporting goods, of which 63.3 percent had to pay 50 percent or more of the original transporting cost (see Figure (6.5)).



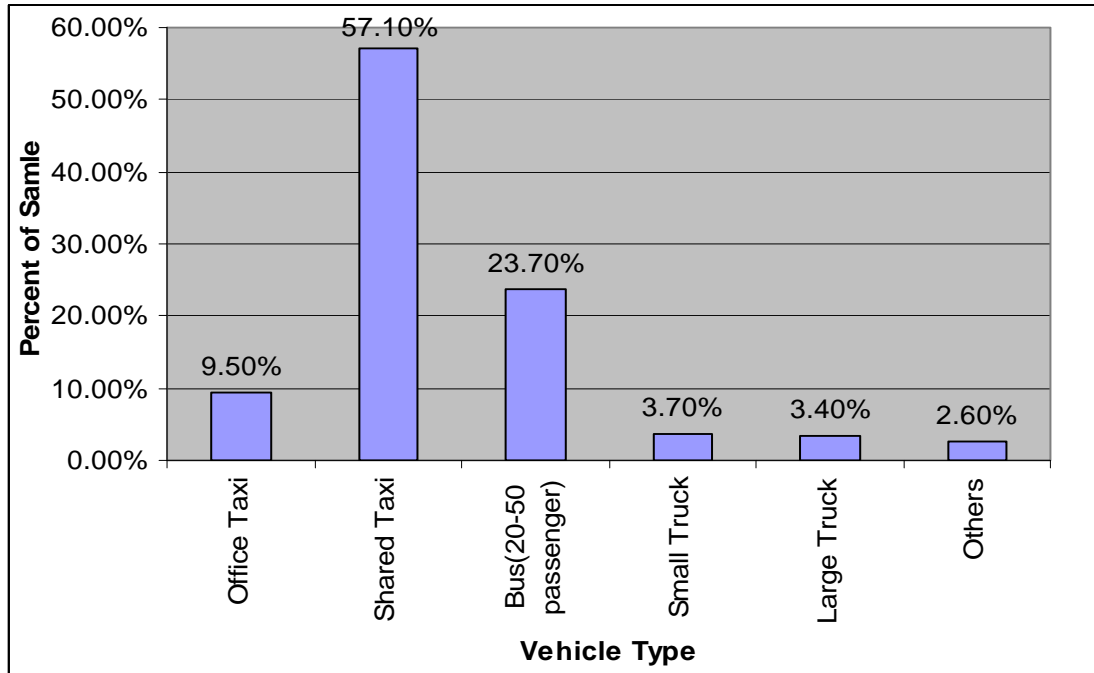
**Figure (6.5): Percent Increase in Transporting Goods during the Intifadah**

#### **6.4.2 Driver's Survey**

##### **General Results**

As mentioned in Table 6.1, drivers' survey was made to collect data about the drivers since these are people who travel between cities more frequently than the general people, and there are special issues related to drivers.

The surveyed drivers were drivers of taxis, buses, trucks (small and large), and other types of vehicles. Figure 6.6 shows the distribution of types of vehicles used by the surveyed sample.

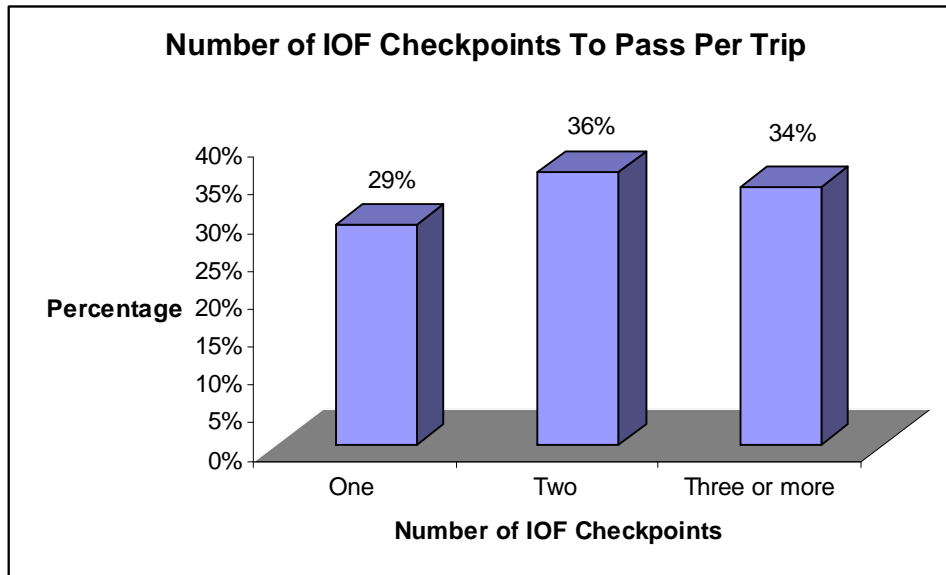


**Figure (6.6): Distribution of Vehicle Type for the Surveyed Drivers**

### Checkpoints and Travel Route

About 90% of the drivers had to change their travel route because of the checkpoints and the IOF imposed road measures. Some public transport drivers had to change the designated service line and work on other lines since the original lines were blocked by the IOA.

Figure 6.7 shows the number of checkpoints that drivers had to pass during their regular trips.

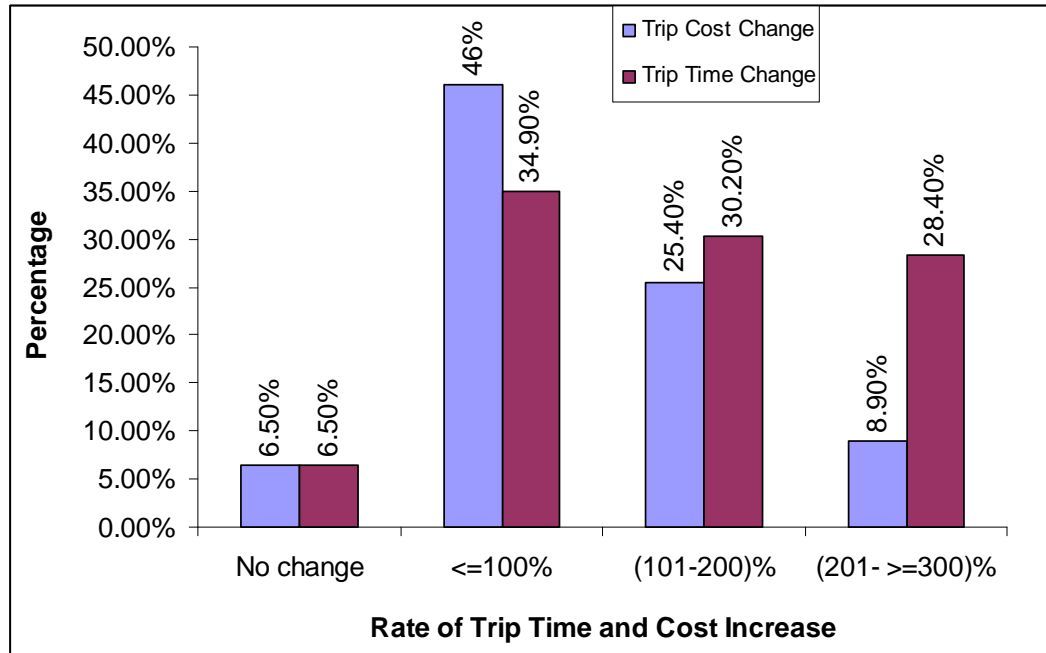


**Figure (6.7): Number of IOF Checkpoints**

It is interesting to indicate that about 70 % of the drivers had to pass two checkpoints or more in their trips. This reflects the effects of IOF imposed road measures on road and public transport lines.

### **Changes in Travel Time and Cost**

Figure 6.8 represent the changes in trip time and cost during the Intifadah because the IOF checkpoints and IOA imposed road measures.



**Figure (6.8): Trip Time and Trip Cost Change during the Intifadah**

Figure 6.8 indicates a clear increase in trip time and cost; about 60 percent of the people had tripled their trip time, while the rate of cost increase was slightly less. However for drivers, time is money; time spent waiting at checkpoints is worth money. The longer the time spent waiting at checkpoints, the less number of trips made during a day. This was also clear from the drivers' answer to the number of trips made before and after the Intifadah. Under the current conditions, drivers make half the number of trips they used to make before the Intifadah.



### Drivers Income Changes

As a result of a very high increase in trip time and less number of daily trips made because of the closure system, the drivers' resultant income is decreasing.

About 99 % of the drivers in the West Bank had a decrease in their income during the years of the Intifadah. Furthermore, about 60 % of the drivers had a decrease of 40% or more of their income, and the reasons were primarily related to the IOA road measures and closures.

Table 6.6 shows the percentages of income decrease and the reasons for this decrease.

**Table (6.6): Drivers Income Decrease and its Reasons**

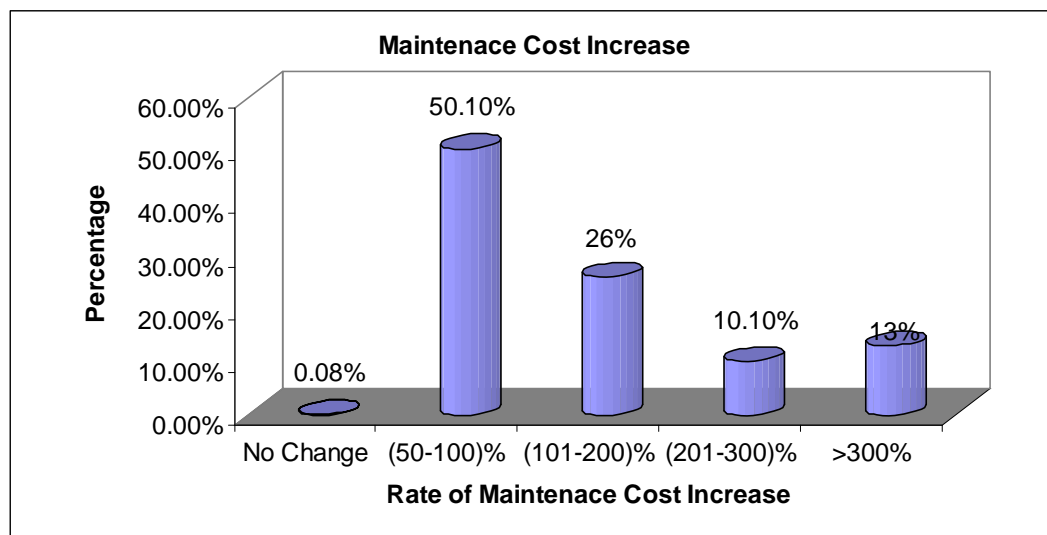
Percent of Decrease	Cause of Income Decrease			
	Access Difficulty	Increase of Transport Cost	Limited Job Opportunities	Increase in the Cost of Living
(10 – 19) %	20%	50%	10%	20%
(20 – 29) %	19%	33%	25%	23%
(30 – 39)%	27.5%	12%	9%	51.5%
40 %	36%	15%	23%	26%
> 40%	24%	27%	18%	31%
<b>Overall</b>	<b>31.4 %</b>	<b>13.0 %</b>	<b>20.1 %</b>	<b>35.5 %</b>

It is clear from Table 6.5 that current transport system in the West Bank and the IOA imposed measures are main reasons for the decrease in driver's income.

### **Vehicles Maintenance and Cost**

During the Intifadah, drivers had sometimes to use unpaved roads and agricultural roads to get to their destinations. These roads, of course, have poor quality and engineering design. About 94% of drivers had to use such roads to get to their destinations.

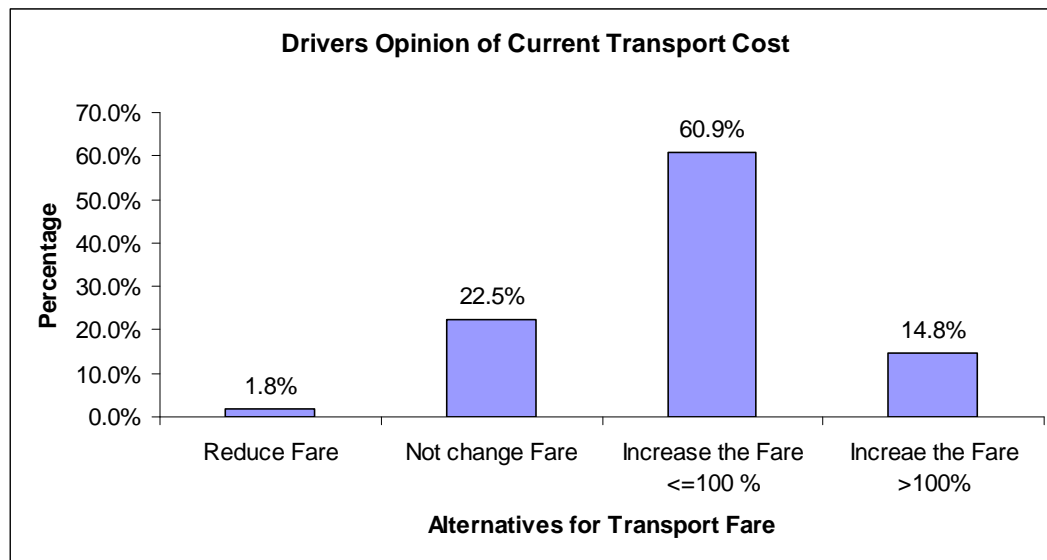
As a result of using such roads, the number of maintenance work for vehicles has increased, and consequently the maintenance cost. About 98% of drivers had maintenance cost increasing. Figure 6.9 shows the rate of vehicles maintenance cost increase during the years of the Intifadah.



**Figure (6.9): Vehicles Maintenance Cost Increase during the Intifadah**

From Figure 6.9, it is clear that about half the drivers had to pay double or more of the original cost for vehicle maintenance. This, obviously, will lower their level of income.

Drivers were also asked about their opinion of the current fare in the West Bank in light of current conditions; the driver's answers are presented in Figure (6.10).



**Figure (6.10): Drivers Opinion about Current Transport Fare**

The chart explains that about 75% of drivers suggested increasing the fare. Without doubt, the IOA measures affect directly the drivers demand to increase fares in the West Bank; closures and checkpoints reduce the daily number trips and their net income.

## **6.5 Summary and Conclusion**

The current transport system in the West Bank was severely affected by the IOA imposed measures during the years of the Intifadah. These effects were reflected into the various components of this system.

In general, trip time and cost have increased; more than 75 percent of the surveyed people experienced twice or three times increase in trip cost compared to the original trip cost before the IOF imposed travel restriction measures. Approximately, the same percentage experienced an increase in trip time. The majority of Palestinians had to change their original travel route during the Intifadah to get to their destinations.

Palestinians were forced to pass Israeli checkpoints when traveling, and the number of checkpoints varied according to the place of residence and the current security conditions on the ground. About 70 percent of the Palestinians had to pass two or more Israeli checkpoints during their regular trips.

There are many reasons of income decrease in the West Bank. Increase in the cost of living is the main reason, limited job opportunities is also one of the reasons. Nevertheless, reasons related to the current transportation conditions are also considered as major causes of income decrease in the West Bank, particularly for people who experienced a drop in their income by (30-40) percent.

The current transport system in the West Bank had also affected the life style for the Palestinians in terms of renting a new home, buying a new home, changing the work place, or leaving the work. These were actions

people made to overcome the obstacles imposed by the various road measures.

The IOA imposed road measures not only affected people, but it also affected the transporting of goods. Cost of transporting goods was sometimes doubled compared to the cost before the current Intifadah.

Drivers have also suffered from the IOA imposed road measures sector in the West Bank. They experienced an increase in travel time and cost, decrease in the daily number of trips made, and an increase the number of maintenance operations for their vehicles. These all have resulted in lowering their level of income.

According to the above results obtained from the survey, it is obvious that family and driver's income has decreased, expenditure on transport has increased, and this has lead to increase in poverty rates in the West Bank.

Furthermore, the analysis of the field survey indicates that transportation has become less affordable for Palestinians specially in Nablus City where its AI was calculated to be 26.5, which is very high (less affordable) compared to several cities in the world.

The current transport conditions in the West Bank described in Chapters 4, 5 and 6 are one of the main reasons for Palestinians' income decrease, which has a direct effect on their economical conditions and standards of living in the West Bank.

**CHAPTER SEVEN**  
**CONCLUSIONS AND RECOMMENDATIONS**

## **Chapter Seven**

# **CONCLUSIONS AND RECOMMENDATIONS**

### **7.1 Introduction**

Closures and checkpoints imposed by the IOF are the main causes of the crises of the Palestinian life, and they affect all sectors of the Palestinian society including the transport sector.

These measures not only affect the Palestinian society at presence, but also limit the opportunities for development and reconstruction, which Palestinians are continuously trying to do.

### **7.2 Conclusions**

Based on data collected and analysis, the following conclusions can be drawn:

- Restrictions of movement for both Palestinians and their goods result in huge losses in the commercial activities and forced people to decrease their social activities to avoid traveling through checkpoints.
- The IOA policies and measures on transport sector are taking the form of institutionalization of the checkpoint system, which seems as international borders. These fragment the West Bank by placing

checkpoints at strategic sites to control the main roads and cut off the Palestinians communities from each other.

- The IOA measures focused on large Palestinian cities, such as Nablus City. Nablus City was the capital of Palestinian economy in the West Bank. At present, Nablus is surrounded by a number of different types of IOF checkpoints, which make the city under a complete closure.
- The IOA restricts the use of some roads for Palestinians, which results in a two road networks; one for the Palestinians and another for the Israelis, all in a small geography area. This increases difficulties in accessing destinations for the Palestinians, and restricts the geographic and demographic expansion in the Palestinian societies.
- Travel time and cost increase in the West Bank are also some of the main results of closures and checkpoints system. This leads to decrease in net income and contributes to high levels of poverty rates in the Palestinian society.
- As a result of travel restrictions, which lead to a sharp increase in travel cost, transportation has become less affordable; almost unaffordable as the affordability index (AI) for Nablus City was much higher than the highest AI for world cities. The same results are expected for other Palestinian cities. Therefore, transportation in



Palestinian cities under the current conditions is among the least affordable in the world.

- Palestinian goods are also facing the same restrictions as people. This is critical especially for the agricultural products, which suffer from closures and time waiting at checkpoints to transport these goods to the different local markets as well to the international borders.
- The IOA restriction of movement to Palestinian goods has decreased the amounts exported, and sometimes the goods were perished while waiting for permission to travel at checkpoints.
- The expenditure in transport operations has increased in the Palestinian territories due to the current conditions in the transport sector. The increase in travel time and distance has lead to an increase in transporting cost.
- The IOA imposed measures have effects on the social life in the West Bank such as accessibility to hospitals, educational institutes, and public services.
- The poverty rates have increased during the years of the Intifadah (30.3% in 2007) compared to the conditions prior to year 2000 (20.5% in year 1998). Imposed road restrictions one of the main reasons for the sharp increase which have devastating effect on the Palestinian economy.

### 7.3 Recommendations

This study showed the impact of the IOA imposed measures on transport sector in the West Bank, and the impact of the current transport system on poverty and standards of living.

As a result of this study, the following recommendations are depicted:

- It is concluded that IOA imposed measures on transport sector has destroyed the transport infrastructures. Therefore, it is recommended that the Palestinian related ministries to execute more road projects to develop this sector and reconstruct what has been destroyed.
- Due to the movement restrictions of people and goods, it is recommended that the Palestinians related ministries provide facilitation measures for transporting goods and help reduce their suffering. The Palestinian government could reduce taxes on drivers and vehicles.
- Field survey concluded that travel time and cost has increased during the Intifadah, which makes transport unaffordable to many Palestinians. Therefore, it is recommended that the Palestinian Authority financially support the transport operation to reduce the fares and reduce the household transport expenditure.
- The erected IOF checkpoints in the West Bank are the main factor of Palestinian crises, and without removing these checkpoints the

development projects will be difficult to execute. Therefore, the Palestinian negotiator should constantly put this issue on top of their priority list in the negotiation with the Israelis.

- The Palestinian Authority should keep actively launching media campaigns at the local and international levels to show the devastating effects of IOA imposed measures on the life of the Palestinians. The popular and political movements against the construction the Separation Wall in the Palestinians areas should remain active. Furthermore, these issues should be submitted to the related international courts and human rights organizations. These will work as pressure tools to remove these measures.
- The Palestinian Ministry of Transport and Ministry of Public Works and Housing should improve the efficiency of road network, and this will be achieved by continuous maintenance and rehabilitation projects. This will create more job opportunities and improve the level of income for laborers.
- The Palestinian Ministry of National Economy should initiate programs to support the traders and facilitate the commercial activities to strengthen the national economy.
- The World Bank, in cooperation with the related Palestinian ministries, sponsored a study, which is "Transport Sector

Development Plan" in 2006. This development plan covered various transport issues and sub-sectors including improving institutional capacity and overall sector management, improving internal mobility, and improving connectivity for a total estimated investment of US\$ 873 million over a five-year period. The Palestinian National Authority should capitalize on such efforts, adopt the plan, and start implementing its comprehensive action plan to develop and improve the Palestinian transport sector.

- More researches and database building should be done on transportation sector to cover its various aspects, some of which are:
  - ✓ The related Palestinian ministries should construct and continuously update a detailed database about transport sector.
  - ✓ Researchers should continuously update the information included in this research to document the changes of these conditions.

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## **APPENDICES**

## **APPENDIX (A)**

### **PICTURES OF BARREIRES AND CHECKPOINTS TYPES**

- **CHECKPOINT**
- **PARTIAL CHECKPOINT**
- **ROAD BARRIER**
- **EARTH WALL**
- **ROAD GATE**
- **EARTH MOUNDS**
- **ROAD BLOCK**
- **TRENCH**

### *A.1 Checkpoint*



### *A.2 Partial Checkpoint*



### *A.3 Road Barrier*



#### *A.4 Earth Wall*



#### *A.5 Road Gate*



#### *A.6 Earth Mounds*





### ***A.7 Road Block***



### ***A.8 Trenches***



## **APPENDIX (B)**

### **ACCESS AND THE LIFE ADJACENT THE WALL**

***B.1 Farmers at Qaffin Gate wait for the IOF to let them pass.***



***B.2 The Gilo checkpoint in Bethlehem, 1.5km inside the West Bank.***



***B.3 The Wall runs through the middle of Abu Dis in East Jerusalem, fragmenting this once bustling urban centre and dividing Palestinian families from their traditional service providers***



***B.4 The Wall near the Palestinian village of Ras 'Atiya (Qalqiliya).***





**APPENDIX (C)**  
**GENERAL PUBLIC SURVEY**



جامعة النجاة الوطنية  
كلية الدراسات العليا  
هندسة الطرق والمواصلات

**\*\*الاستبيان العام**

يقوم احد طلاب كلية الدراسات العليا / هندسة الطرق والمواصلات في جامعة النجاة الوطنية بإعداد رسالة ماجستير بعنوان : (( أثر نظام المواصلات الحالي على مستوى المعيشة في المجتمع الفلسطيني )) وتأثير الإجراءات الإسرائيلية على قطاع النقل والمواصلات في الضفة الغربية .

ومن الوسائل المهمة في الدراسة إجراء استبيان مباشر مع المواطنين ,يرجى من الأخوة والأخوات الإجابة على الأسئلة بموضوعية تامة بغية مساعدتنا في تحقيق هدفنا المرجو من هذا الاستبيان، مع الشكر الجزيل.

أرجو وضع إشارة حول الحالة التي تنطبق عليك:

- (1) ما هو عمرك ؟ \_\_\_\_\_
- (2) ما هي حالتك الإجتماعية ؟
  - (1) أعزب
  - (2) متزوج
  - (3) غير ذلك
- (3) مكان السكن
  - (1) نابلس
  - (2) جنين
  - (3) قلقيلية
  - (4) طولكرم
  - (5) غير ذلك
- (4) ما هو عملك ؟
  - (1) طالب
  - (2) عامل
  - (3) موظف حكومي
  - (4) قطاع خاص
  - (5) مؤسسات أهلية
  - (6) تاجر
  - (7) غير ذلك
- (5) كم متوسط عدد المرات التي تنتقل فيها من وإلى نابلس أسبوعياً ؟
  - (1) (مرة واحدة أسبوعياً)
  - (2) (2-4 مرات)
  - (3) (خمس مرات او اكثر )
- (6) كم عدد الحواجز التي تجتازها للوصول إلى غايتك ؟
  - (1) حاجز واحد
  - (2) حاجزين
  - (3) ثلاثة حواجز أو أكثر
- (7) هل تغير مسار رحلتك في ظل هذه الانتفاضة ؟
 

لا  
نعم
- (8) هل تستخدم طرق غير معبدة أو طرق زراعية أثناء تنقلك ؟

لا

نعم

(9) مقارنة بما كان الحال عليه قبل انتفاضة الأقصى فان تكلفة الرحلة الحالية ازدادت بمقدار:

- (1) الضعف أو أقل  
(2) ضعفين  
(3) ثلاثة أضعاف فأكثر  
(4) لم يتغير (بقي كما هو)

(10) أيضاً بعد اندلاع انتفاضة الأقصى فان زمن الرحلة الحالية ازداد بمقدار :

- (1) الضعف أو أقل  
(2) ضعفين  
(3) ثلاثة أضعاف فأكثر  
(4) لم يتغير (بقي كما هو)  
(11) هل هنالك فرق بين مستوى دخلك قبل الانتفاضة وخلالها ؟

لا

نعم

\*إذا كانت إجابتك ( نعم ) فما هي نسبة التغير بمستوى الدخل :

- (1) حصل زيادة في مستوى الدخل  
(2) انخفاض 10%  
(3) انخفاض 20%  
(4) انخفاض 30%  
(5) انخفاض 40% فما فوق  
(6) غير ذلك

\* إذا حصل انخفاض بمستوى دخلك فان السبب هو :

- (1) صعوبة التنقل  
(2) زيادة تكاليف المواصلات  
(3) قلة فرص العمل  
(4) ارتفاع تكاليف المعيشة مقارنة مع الحال قبل الانتفاضة  
(12) هل كان لصعوبة نظام المواصلات السبب الرئيس لانقطاعك عن أداء واجباتك أو لغيابك عن عملك لأكثر من يوم ؟

لا

نعم

(13) هل اضطررت إلى تغيير نمط سكنك بسبب وجود الحواجز ؟

لا

نعم

\*إذا كانت إجابتك نعم فإن التغير الذي حصل هو :

- (1) استأجرت سكن  
(2) اشتريت بيت آخر  
(3) غيرت مكان عملي  
(4) تركت عملي

(14) كم فرد من أسرتك يضطر للسفر عبر الحواجز ؟ \_\_\_\_\_

(15) كم تقدر تكلفة المواصلات من ميزانية أسرتك ؟

- (1) 10% أو أقل )  
(2) 10-30% )  
(3) 30-60% )  
(4) 60% فأكثر )

(16) كم مقدار الزيادة بتكاليف المواصلات لأسرتك خلال الانتفاضة مقارنة بما قبلها ؟

- (1) 50% أو أقل )  
(2) 51% الى 100% )  
(3) ضعفين  
(4) ثلاثة أضعاف فأكثر  
(5) لم يتغير (بقي كما هو)

(17) هل أثر نظام المواصلات الحالي على إمكانية وصولك إلى المستشفيات والعيادات الصحية أو المدارس أو الجامعات أو أماكن الخدمات العامة ؟

لا

نعم

(18) هل أثر نظام المواصلات الحالي على عدد الزيارات الاجتماعية التي تقوم بها؟

\* إذا كانت إجابتك نعم فما هو السبب في رأيك؟- يمكن أن تختار أكثر من سبب  
 (1) الحواجز ومدة الانتظار عليها (2) تكلفة التنقل  
 (3) عدم التمكن من الوصول نهائيا (1) غير ذلك

(19) هل تقوم برحلات ترفيهية ؟

لا

نعم

\* إذا كانت إجابتك لا فما هو السبب في رأيك؟ - يمكن أن تختار أكثر من سبب  
 (1) الحواجز ومدة الانتظار عليها (2) تكلفة التنقل  
 (3) عدم التمكن من الوصول نهائيا (1) غير ذلك

(20) إذا كان لعملك صلة بنقل البضائع أجب عن السؤال التالي، هل تتمكن من إيصال منتجاتك إلى الأسواق والمستهلكين؟

لا

نعم

(21) هل هنالك تغير بتكلفة النقل للبضائع مقارنة بالحال قبل الانتفاضة ؟

لا

نعم

\* إذا كانت الإجابة نعم، فكم نسبة الزيادة بأجور النقل للبضائع خلال الانتفاضة؟

(1) (25% أو أقل ) (2) (25-50%) (3) (50-100%)

(4) (100-200% فأكثر ) (4) (أكثر من 200% )

انتهت الأسئلة

نشكر لكم تعاونكم وبارك الله فيكم

الباحث : م. نزار عطوي

بإشراف : د. خالد الساحلي

د. فيصل الزعنون

## APPENDIX (D)

### DRIVERS SURVEY



بسم الله الرحمن الرحيم  
**جامعة النجاح الوطنية**  
**كلية الدراسات العليا**  
**هندسة الطرق والمواصلات**

**\*\*الاستبيان الخاص بالسائقين**

يقوم احد طلاب كلية الدراسات العليا / هندسة الطرق والمواصلات في جامعة النجاح الوطنية بإعداد رسالة ماجستير بعنوان : (( أثر نظام المواصلات الحالي على مستوى المعيشة في المجتمع الفلسطيني )) وتأثير الإجراءات الإسرائيلية على قطاع النقل والمواصلات في الضفة الغربية .

ومن الوسائل المهمة في الدراسة إجراء استبيان مباشر مع المواطنين ,يرجى من الأخوة والأخوات الإجابة على الأسئلة بموضوعية تامة بغية مساعدتنا في تحقيق هدفنا المرجو من هذا الاستبيان، مع الشكر الجزيل.

### أرجو وضع إشارة حول الحالة التي تنطبق عليك:

- (1) ما هو عمرك ؟ \_\_\_\_\_
- (2) ما هي نوع المركبة التي تقودها ؟
- (1) تاكسي مكتب (2) تاكسي عمومي / خط (3) باص (20 - 50 راكب) (4) سيارة شحن أو كابينة (5) شاحنة كبيرة (6) غير ذلك (.....)
- (3) ما هي حالتك الاجتماعية ؟
- (1) أعزب (2) متزوج (3) غير ذلك
- (4) مكان السكن
- (1) نابلس (2) جنين (3) قلقيلية (4) طولكرم (5) غير ذلك
- (5) كم عدد الحواجز التي تجتازها في خط سيرك ؟
- (1) حاجز واحد (2) حاجزين (3) ثلاثة حواجز أو أكثر
- (6) هل تغير مسار رحلتك في ظل هذه الانتفاضة ؟
- نعم لا
- (7) كم عدد الرحلات الأسبوعية التي كنت تقوم بها قبل الانتفاضة ؟ \_\_\_\_\_
- (8) كم عدد الرحلات الأسبوعية التي تقوم بها حالياً؟ \_\_\_\_\_
- (9) هل هنالك فرق بين مستوى دخلك قبل الانتفاضة وخلالها ؟
- نعم لا
- \*إذا كانت إجابتك ( نعم ) فما هي نسبة التغير بمستوى الدخل :
- (1) حصل زيادة في مستوى الدخل (2) انخفاض 10% (3) انخفاض 20% (4) انخفاض 30% (5) انخفاض 40% فما فوق (6) غير ذلك
- \* إذا حصل انخفاض بمستوى دخلك فان السبب هو :
- (1) صعوبة التنقل (2) زيادة تكاليف المواصلات (3) قلة فرص العمل (4) ارتفاع تكاليف المعيشة مقارنة مع الحال قبل الانتفاضة (10) مقارنة بما كان الحال عليه قبل انتفاضة الأقصى فان أجرة النقل الحالية ازدادت بمقدار:
- (1) الضعف أو أقل (2) ضعفين (3) ثلاثة أضعاف فأكثر (4) لم يتغير (بقي كما هو)
- (11) أيضاً بعد اندلاع انتفاضة الأقصى فان زمن الرحلة الحالية ازداد بمقدار :
- (1) الضعف أو أقل (2) ضعفين (3) ثلاثة أضعاف فأكثر (4) لم يتغير (بقي كما هو)
- (12) هل تستخدم طرق غير معبدة أو طرق زراعية أثناء تنقلك أو أنك اضطررت لاستخدامها خلال الانتفاضة لعدم السماح لك بالتنقل على الطرق الرئيسية ؟

لا

نعم

(13) هل زادت عدد مرات تصليح المركبة خلال الانتفاضة ؟

لا

نعم

(14) هل زادت تكاليف صيانة المركبة خلال الانتفاضة ؟

لا

نعم

\*إذا كانت إجابتك ( نعم ) فإن نسبة الزيادة هي :

(1) (50%) (2) (من 50% إلى 100%)

(3) (من 100% إلى 200%) (4) أكثر من ضعفين

(15) مقارنةً بوضع الحواجز والطرق والوضع الاقتصادي الفلسطيني, ما هو رأيك

بالنسبة لأجرة النقل ؟

(1) إبقاء الأجرة كما هي (2) تخفيض الأجرة قليلاً

(3) زيادة الأجرة الضعف أو أقل (4) زيادة الأجرة أكثر من الضعف

انتهت الأسئلة

نشكر لكم تعاونكم وبارك الله فيكم

الباحث : م. نزار عطوي

بإشراف : د. خالد الساحلي و د. فيصل الزعنون

## APPENDIX (E)

### GENERAL INFORMATION OF GENERAL PUBLIC SURVEY

## AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18.00	3	.4	.4	.4
	19.00	11	1.4	1.5	1.9
	20.00	14	1.8	1.9	3.7
	21.00	17	2.2	2.3	6.0
	22.00	20	2.6	2.7	8.7
	23.00	23	3.0	3.1	11.7
	24.00	26	3.4	3.5	15.2
	25.00	32	4.2	4.3	19.4
	26.00	35	4.6	4.7	24.1
	27.00	44	5.8	5.9	30.0
	28.00	41	5.4	5.5	35.4
	29.00	40	5.2	5.3	40.7
	30.00	41	5.4	5.5	46.2
	31.00	32	4.2	4.3	50.5
	32.00	31	4.1	4.1	54.6
	33.00	31	4.1	4.1	58.7
	34.00	27	3.5	3.6	62.3
	35.00	26	3.4	3.5	65.8
	36.00	20	2.6	2.7	68.4
	37.00	22	2.9	2.9	71.4
	38.00	14	1.8	1.9	73.2
	39.00	15	2.0	2.0	75.2
	40.00	6	.8	.8	76.0
	41.00	11	1.4	1.5	77.5
	42.00	4	.5	.5	78.0
	43.00	5	.7	.7	78.7
	44.00	7	.9	.9	79.6
	45.00	7	.9	.9	80.6
	46.00	8	1.0	1.1	81.6
	47.00	13	1.7	1.7	83.4
	48.00	13	1.7	1.7	85.1
	49.00	10	1.3	1.3	86.4
	50.00	12	1.6	1.6	88.0
	51.00	6	.8	.8	88.8
	52.00	7	.9	.9	89.7
	53.00	5	.7	.7	90.4
	54.00	7	.9	.9	91.3
	55.00	6	.8	.8	92.1
	56.00	5	.7	.7	92.8
	57.00	6	.8	.8	93.6
	58.00	7	.9	.9	94.5
	59.00	7	.9	.9	95.5
	60.00	9	1.2	1.2	96.7
	61.00	6	.8	.8	97.5
	62.00	5	.7	.7	98.1
	63.00	3	.4	.4	98.5
	64.00	4	.5	.5	99.1
	65.00	1	.1	.1	99.2
	66.00	1	.1	.1	99.3
	74.00	1	.1	.1	99.5
	75.00	1	.1	.1	99.6
	77.00	1	.1	.1	99.7
	78.00	1	.1	.1	99.9
	80.00	1	.1	.1	100.0
Total		751	98.6	100.0	
Total		762	100.0		



## MARITAL STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	275	36.1	36.1	36.1
	Married	487	63.9	63.9	100.0
	Total	762	100.0	100.0	

## HOME PLACE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nablus	521	68.4	68.4	68.4
	Jenin	57	7.5	7.5	75.9
	Qalqiliah	28	3.7	3.7	79.5
	Tulkarem	32	4.2	4.2	83.7
	Others	124	16.3	16.3	100.0
	Total	762	100.0	100.0	

## JOB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	106	13.9	13.9	13.9
	Labour	185	24.3	24.3	38.2
	Governmental Employee	235	30.8	30.8	69.0
	Special Sector	104	13.6	13.6	82.7
	Community Institutions	38	5.0	5.0	87.7
	Traders	40	5.2	5.2	92.9
	Others	54	7.1	7.1	100.0
	Total	762	100.0	100.0	

جامعة النجاح الوطنية  
كلية الدراسات العليا

أثر نظام المواصلات الحالي على الفقر في الضفة الغربية  
(حالة دراسية : نابلس)

إعداد  
نزار شحادة عثمان عطوي

إشراف  
د. خالد الساحلي  
د. فيصل الزعنون

قدمت هذه الأطروحة استكمالاً لمتطلبات درجة الماجستير في هندسة الطرق و المواصلات  
بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين  
2008

ب

أثر نظام المواصلات الحالي على الفقر في الضفة الغربية

(حالة دراسية: نابلس)

إعداد

نزار شحادة عثمان عطوي

إشراف

د. خالد الساحلي

د. فيصل الزعنون

### الملخص

إن أحد أهداف منظمات التنمية والتطوير العالمية هو تقليل الفقر من خلال استمرارية التنمية الاقتصادية، ولذلك فإن السؤال هو: كيف يمكن لعمليات المواصلات أن تقلل الفقر؟ إن إجابة هذا السؤال ليست مباشرة أو سهلة.

هنالك تغيرات كبيرة على عمليات نظام المواصلات في الضفة الغربية خلال سنوات الانتفاضة وذلك بسبب إجراءات سلطات الاحتلال الاسرائيلي على شبكة الطرق، لذلك فإنه من المهم دراسة تأثير نظام المواصلات الحالي على الفقر ومستوى المعيشة.

إن الهدف الأساسي من هذه الدراسة هو البحث في أثر الظروف الحالية لنظام المواصلات على النواحي الاقتصادية الاجتماعية لحياة الفلسطينيين، وخصوصاً الفقر، وتحسين جودة الحياة من نواحي الإيصالية والانفاق على المواصلات ووقت وثمان التنقل وتوفر وتحمل المواصلات العامة والوصول إلى الأسواق والعمالة.

وتتلخص طريقة العمل في هذا البحث بالنقاط التالية: (أ) مراجعة الدراسات ذات العلاقة على المستوى المحلي والعالمي، (ب) مسح الظروف الحالية والمؤشرات المواصلات من إنفاق وعامل أثمان الاستهلاك، ووقت وثمان التنقل والفقر والبطالة، بالإضافة الى بعض المؤشرات الاجتماعية، (ج) إجراء مسح على المواصلات والظروف المعيشية لمجتمعات مختارة.

إن طريقة العمل السابقة ستستخدم في دراسة أثر نظام المواصلات الحالي في الضفة الغربية على الفقر، وإجراءات سلطات الاحتلال الاسرائيلي المفروضة على قطاع الطرق وعلى حياة الفلسطينيين، مع التركيز على مدينة نابلس كحالة دراسية في هذا المشروع.

ت

إن النتائج الرئيسية لهذا المشروع هي :

- تواجه الضفة الغربية عدداً من إجراءات سلطات الاحتلال الاسرائيلي والتي تهدف إلى تدمير حياة الفلسطينيين من النواحي الإقتصادية والإجتماعية والخدمات وقطاعات أخرى.
- لقد إزداد وقت وثمان التنقل بسبب الاغلاقات والحواجز الاحتلالية مما أدى الى انخفاض الدخل وارتفاع في مستويات الفقر في المجتمع الفلسطيني.
- لقد ازدادت مستويات الفقر بشكل حاد خلال سنوات الانتفاضة وذلك لأسباب متعددة من البطالة وانخفاض مستوى الدخل وعد الايصالية لأماكن العمل وغيرها.
- لقد تأثرت النواحي الاقتصادية والاجتماعية للفلسطينيين بشكل كبير بسبب اجراءات سلطات الاحتلال الاسرائيلي.
- لقد أشارت نتائج تحليل الاستبيان في هذه الدراسة الى ارتفاع في وقت وزمن التنقل والى تغيير في نمط المسكن والى زيادة في الانفاق على المواصلات وصعوبات في الوصول الى المستشفيات والمعاهد التعليمية وامكن الخدمات العامة ,وذلك بسبب الاغلاقات وقيود الحركة المفروضة من قبل سلطات الاحتلال الاسرائيلي.
- لقد تأثر السائقين أيضاً بالإجراءات المفروضة من قبل الاحتلال, مما أدى الى نقصان في عدد الرحلات اليومية لهم وزيادة في عدد مرات تصليح المركبة وتغيير مسار الرحلة الاعتيادي.
- لقد كان لجدار الفصل العنصري آثار مدمرة على حياة الفلسطينيين حيث عزل التجمعات السكانية عن بعضها البعض وأدى الى عدم تمكن الفلسطينيين من الوصول الى أماكن العمل والمرافق الاجتماعية وأماكن الخدمات العامة.
- بعد مناقشة النتائج التي حصلنا عليها من المسح الميداني ومن دراسة أثر الإجراءات المفروضة من قبل الإحتلال على قطاع المواصلات في الضفة الغربية, فإنه يوصى بأن تؤخذ

ث

تلك الإجراءات بعين الاعتبار في المفاوضات مع الاسرائيلين والعمل بحزم وقوة على إزالة الحواجز، وإنشاء دائرة تخطيط تهدف الى وضع الخطط التي من شأنها التقليل من آثار الإجراءات المفروضة على الفلسطينيين، وكما يوصى بأن تدعم وزارة المواصلات الفلسطينية أجور المواصلات لتخفيضها على المواطنين.

هنالك تأثيرات كبيرة للإجراءات الاسرائيلية على مدينة نابلس من الناحية الاقتصادية والاجتماعية والتجارية وقطاعات اخرى، وذلك بسبب الاغلاق التام وقيود الحركة، لذلك يوصى بتخصيص ميزانيات اضافية ومشاريع استثمارية لتقوية اقتصاد المدينة والتقليل من آثار الاجراءات الاحتلالية.