

# Beyond Coping. Risk Management in the West Bank

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# **Beyond Coping. Risk Management in the West Bank**<sup>1</sup>

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# **MICROCON Research Working Papers 42**

**Abstract:** Concerned with the equation of risk management behaviours, the research analyses whether risk management in context of armed conflict is different to that observed during natural disasters and economic crises. Based on the case study of the West Bank during 2000-2004, this investigation uses primary data about household's perceptions, the Palestinian Expenditure and Consumption Survey and a conflict data set to explore how the characteristics of the occupation-produced shocks unfold into the household's risk management. The distinctive features observed in the risk-related behaviour of West Bank Palestinians indicate that the standard risk management framework needs to be adapted to intregate the endogenous, multidimensional and dynamic nature of conflict-produced shocks.

Keywords: Risk Management, vulnerability, occupied Palestinian Territories.

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'Famine here is a special case...We can be starving one day because there is no supply of food, and we can have more food than we even need another day because we can freely fish and cultivate our lands and go to work...Food security to us is mostly related to the political situation....We are food secure if the Israelis leave us alone and stop trying to make our lives a nightmare. If they do that, then we can be food secure because we can earn a living, cultivate our land, raise our animals, eat fish and import food as we desire.' A Palestinian, Ash-Shaate Refugee Camp, the Gaza Strip, 2007

#### 1. Introduction

The paper presents the results of the PhD Thesis 'Coping, Adapting and Resisting: A Critical Analysis of Risk Management during Armed Conflict'. The objective of this research is to contribute to the understanding of how people deal with anticipated and actual losses associated with the uncertain events and outcomes produced by socio-political shocks<sup>3</sup>.

Risk is a central feature and factor of life of all communities and its management has been one of the most challenging preoccupations of mankind. In development research the study of risk has gained relevance due to the findings of studies on inter-temporal welfare dynamics, which show large fluctuations in income over relatively short periods of time, suggesting substantial short-term movements into and out of poverty<sup>4</sup> (Baulch and Hoddinott, 1999). One of the central motivating factors in the dynamics of poverty is the risk event, whose characteristics in terms of spread, predictability and intensity largely contributes to explaining the fact why most of the poor are 'not always poor' but 'sometimes poor'. However, in much analysis on development and in the design of anti-poverty policies, risk has largely remained on the periphery, 'an add-on in more general analyses' (Dercon, 2005: 2).

According to Beck (1998), although risk is a commonly used term, applied to nearly every human action, yet it remains poorly understood and poorly defined because the analysis of risk management hinges crucially on its definition. Generally, risk is composed of a cause, about which there may be some uncertainty, and an effect or impact about which there may also be some uncertainty<sup>5</sup>. Despite the importance of the causes of risk for its understanding, risk is commonly

<sup>&</sup>lt;sup>3</sup> The term shocks connotes risk events that are unexpected and are of high magnitude, and produce high damage due to their concentration on persons of high vulnerability and low resilience (Payne and Lipton, 1994). Based on the characteristics of the risk events produced during armed conflict this investigation uses both terms, shock and risk event, interchangeably.

<sup>&</sup>lt;sup>4</sup> Most panel data suggest that between one-fifth and half the people below a 'poverty line' at the time of the survey are not usually poor, but have been pushed into poverty, sometimes by life-ccyle events but ofen by damaging fluctuations (Sinha and Lipton, 1999).

<sup>&</sup>lt;sup>5</sup> Economists have referred to risk as uncertain events (probability of occurrence) and outcomes (expected utility) with a known or an unknown probability distribution (Sinha and Lipton, 1999).

understood through two of its elements - uncertainty and impact -, and classified by impact variables - the occurrence level (micro, meso, and macro), the spread (idiosyncratic or covariate), the severity and the frequency of shocks (Sinha and Lipton, 1999).

In this sense, it is not surprising that risk-related behaviours are equated regardless of the nature of the risk event, whether it is natural, health-related, social, economic, political and environmental. Since most of the knowledge on risk management is drawn from contexts of natural disasters, economic or health-related crises (e.g. Alderman 1996; Besley, 1995; Dercon, 1996; Dercon and Krishnan, 1996; Devereux, 1992; Fafchamps, 1992; Morduch, 1991; Rosenzweig and Wolpin, 1993; Rosenzweig and Binswanger, 1993; Udry, 1995), this is used as the standard framework to understand risk management; and within these lens researchers and development practitioners approach the risk-related behaviour of households during conflict. Although there have been important contributions in recent years (e.g. Verpoorten, 2007; Bundervoet, 2007; Körpf, 2004; Bozzoli *et al.* 2010; Nandi and Maio, 2010; Brück *et al.*, 2010b) Goodhand *et al.*, 2000; UNSCO, 2005; Nillesen and Verwimp, 2010b), there is a need to research the effects of armed conflict on risk management.

Addressing this gap is important not only to to understand the vulnerability of households in conflict but also to challenge the common mismatch between the structures and institutions of international aid and the characteristics and dynamics of armed conflicts (Leader, 2000).

For example, in the case of the Israeli-Palestinian conflict, there is a disconnection between the facts on the ground and the diplomatic policies of international action, foreign aid policies and programmes (Keating *et al.*, 2005). The paradox of the last decade is that, although the explicit aim of donor's assistance has been to support the Palestinian-Israeli peace process, donors do not recognised the process of territorial fragmentation produced by the construction of the Wall<sup>6</sup>, the Israeli policy of closure and the expansion of the settlement structures; and act as if aid could be effective in the absence of a political settlement; as if the development effort in the occupied Palestinian territories (oPt) could proceed independently of the evolution of the bilateral political process and developments in Israel and in the oPt (Le More, 2005).

<sup>&</sup>lt;sup>6</sup> The Wall has been differently defined: Security Fence by the Israelis, Separation Barrier by the UN Secretary General and the donor community in the field; and the Wall by the Palestinians, the UN General Assembly and the International Court of Justice. Taking into account the different historical and national narratives, the high level of political sensitivity surrounding the Israeli-Palestinian and the need to abide by the highest standards of accuracy and impartiality, the terms used in this paper have been considered and selected in full knowledge of their meaning and implications of their usage.

By working around on accommodating the realities being experienced by the Palestinians and being used as a means to keep the peace process going, aid has facilitated the disconnection between the diplomatic efforts and what is taking place on the ground (Shearer and Meyer, 2005). The aid programmes and policies, in spite of the proven causality between the Israeli policy of closure and the construction of the Wall and the reduction in Palestinian welfare (World Bank, 2004b; UNCTAD, 2006; OCHA, 2007), assume risk events transitory and leave the causes out of the picture. By ignoring the root causes, the aid programmes and policies equate the risk-related behaviours of households in conflict with that observed during natural disasters or economic crises, and defined vulnerability as an economic failure masking the collapse of livelihoods and locking the Palestinians into a vicious circle of economic subsistence and ex-post coping, which enables people to stand still by preventing them moving ahead.

Motivated by this scenario and the gap in the literature on risk management of households in conflict, the research pursuits the hypothesis that risk management - determinants and strategies - to anticipated and actual losses associated with the risk events and outcomes produced by armed conflicts is not the same as the risk management produced by covariate natural or economic shocks. In order to test this hypothesis two questions have been posed: why is the standard risk management framework developed for low-income countries not suitable to contexts of armed conflict? How do the specific characteristics of conflicts unfold into the risk management? These questions are addressed by, on the one hand, merging the literature on risk management in developing countries with the studies of armed conflicts, particularly the Complex Emergency approach; and on the other hand, by an empirical study of the West Bank during the Second Intifada, which relies on the Palestinian Expenditure and Consumption Survey (PECS), primary data about households own perceptions of risk events and strategies, and a conflict data set.

The structure of the paper is as follows: Section 2 reviews the literature bringing forward the elements of why the standard framework of risk management is not suitable to context of armed conflict. Section 3 describes the case study, the research methods and the data. Section 4 discusses the results around the three elements of risk management: the risk events, the strategies, and the factors influencing choice and output. Section 5 concludes and proposes steps for future analysis.

# 2. Why is the Risk Management Framework not Suitable for Contexts of Armed Conflict?

The risk management debate was firstly motivated by discussions on rational behaviour in premarket societies. During the 1960s this was an issue of discussion among anthropologists, whether substantivists or formalists. While the former argued that choices of behaviour in pre-market societies were not economically rational as individuals were motivated by the principles of reciprocity and redistribution (Dalton, 1961; Cook, 1966), the latter argue that individuals in premarket societies are capable of rational-maximizing behaviour and that conventional economic theory is fully applicable to pre-market societies (Posner, 1980).

This unsettled debate stimulated further research within the different disciplines. On the one hand, economists carried out studies to assess households' rational allocation decisions and the aversion and preferences towards risk in developing countries. Although there are divergent views (Antle, 1987), the majority of the studies concluded that farmers do take rational choices, mostly determined by moderate risk aversion (Binswanger, 18980; Hazell, 1982). Alderman and Paxson (1992) did not agree with the findings as they ignored other factors that may overestimate or underestimate the level of risk aversion. According to them, the well-known problems of information asymmetries and deficiencies in the ability to enforce contracts as a result of incomplete or absent insurance and credit markets may explain why households in developing countries will not effectively manage risk<sup>7.</sup>

On the other hand, social scientists joined the debate and carried out extensive research exploring household responses to drought (e.g. Jodha, 1975; Watts, 1983). They found that households are not irrational or passive victims but rational actors taking proactive short and long term responses to deal with adverse events even in the context of imperfect credit and insurance markets. Parallel to these studies, Sen formalized the Entitlement approach and put forward important aspects for the debate of risk management in developing countries (Sen, 1981). According to Sen, vulnerability to famine is largely attributable to one's ability to command food through all legal means, and that such ability is determined by one's ownership of tangible assets and the rate at which one can exchange these for food. This approach challenged the view of supply-side aspects such as the existence of credit and insurance schemes and gave significant relevance to demand failure in the causes of famine.

This emphasis on demand-failure opened a big window for exploring household responses to crisis in the following decade. During the 1990s, a large body of research, focusing on the relationship between household responses and the characteristics (spread, predictability and intensity) of the risk events has illustrated the wealth of behavioural and institutional responses that emerge to fill the holes left by market failures. As regards the process, they observed that risk management is a forward-looking, dynamic and comprehensive process, where households juggle between different actions simultaneously and the choice of the mechanism depend on the relative costs and benefits

<sup>&</sup>lt;sup>7</sup> A great part of the studies on risk management has been interested in the relationship between financial markets and the effectiveness of risk management, the latter measured in terms of consumption and income smoothing. It has been particularly explored within the theories of consumption see for example Bhalla (1980), Deaton (1991, 1992, 1997), Zeldes (1989), Morduch (1995), Udry (1990, 1994).

of each strategy within a competing set of short-term consumption and long-term sustainability (Davies, 1996; Corbett, 1989; Devereux, 1992, 1993, 1999). Households manage (at least partially) to limit consumption risk by embarking on informal risk management strategies, which range from informal credit, savings and insurance schemes, solidarity networks and self-insurance strategies such as income smoothing strategies and the accumulation and de-accumulation of assets, the so-called 'buffer-stock strategy'. The mechanisms have been categorized differently, for example, if they are formal (market- and state-based) and informal, individual, household or community based; whether they aim to reduce, mitigate and cope with risks (Holzman and Jorgensen, 2000); to reduce the ex-ante riskiness of the income-process (risk management) or the ex-post impact of the shock (coping strategies) (Alderman and Paxson, 1992); or whether they pursuit to smooth consumption or income (Morduch, 1995).

Income smoothing strategies are adopted in response to continuous exposure and they aim to affect the ex-ante riskiness of the income process by reducing income variability through actions that change the asset base or change the mix of income-generating activities from a given asset base (Morduch, 1995). Reallocations occur among assets whose returns are less than perfectly correlated, or into assets with less variable returns (Rosenzweig and Binswanger, 1993). Theoretically, as long as the different income sources are not perfectly covariate, then there will be a reduction in total income risk from combining two income sources with the same mean and variance or through income-skewing, i.e. resources are allocated towards low risk low return activities (Dercon, 2000). Income smoothing strategies can also be ex-post strategies, adopted when a crisis looms and are particularly important when the shock is economy-wide. When a large negative shock occurs, both the usual household activities and the local income earnings are unlikely to be sufficient and households need to intensify the usual income-based strategies and adopt additional actions to prevent destitution such as labour supply adjustments, increased labour force participation, temporary migration, longer working days, etc. (e.g. Kochar, 1999; Dercon and Krishnan 1996; Ellis, 2000).

Consumption smoothing strategies are usually adopted when the principal source of production and insurance strategies have failed and aim to cope with an unusually severe or unexpected shock<sup>8</sup>. They can be classified into those that smooth consumption inter-temporally through saving behaviour and those that smooth consumption spatially, through risk sharing. Inter-temporal smoothing may be accomplished through borrowing and lending in formal and informal markets, accumulating and selling assets and storing goods for future consumption. Risk sharing

<sup>&</sup>lt;sup>8</sup> The implications of unpredictable shocks have been studied by the theories of Life Cycle and Permanent Income hypothesis (Romer, 1996; Carroll, 1997) as well as the buffer-stock model (e.g. Deaton, 1992; Zeldes, 1989; Alderman, 1996)

arrangements may be accomplished through formal institutions (such as insurance and futures markets, and forward contracts) and informal mechanisms including state-contingent transfers and solidarity transfers between friends, neighbours, relatives, professional groups etc. Generally, when shocks are repeated over time and the crisis becomes chronic and its effects permanent, consumption smoothing strategies are overall more difficult since the crisis exhausts the means and the available strategies are less effective<sup>9</sup>. One of the questions widely addressed by economic studies on risk management has been whether covariate shocks limit consumption smoothing. For example, while risk sharing is less effective during society-wide shocks because the risk can not pooled among members in the group (e.g. Townsend, 1994; Fafchamps, 1992; Besley, 1995), self-insurance through savings becomes a usual mechanism although it is affected by the drop in the asset's rate of return and terms of trade produced by covariate shocks (e.g. Deaton, 1997; Udry, 1994; Devereux, 1993).

All these studies highlight the limitations and opportunities of the strategies according to the spread, intensity and predictability of the shock while bringing forward the wide scope of actions. The household's responses to risk are so varied that it is natural to ask whether real holes remain in the effective market structure. The emerging consensus is that holes in ineffective insurance and credit markets exist, especially for the poorest households. But in general, the holes are a good deal smaller that many had assumed (Morduch, 1995). This consensus establishes a bridge between supply and demand determinants, i.e. between market and household constraints. Households operating at near-subsistence income levels may strengthen the motive for consumption and income smoothing more than anyone else since the consequences of a bad income in a given year - both in terms of sensitivity and resilience - would be catastrophic under such circumstances. If market imperfections limit the possibilities for consumption and income smoothing, poverty restricts even further as it controls the household's ability by influencing market access, household's assets base and comparative advantage, access to high-return activities, the link between consumption and income activities, etc.<sup>10</sup>.

Either case – supply or demand determinants -, the Risk Management approach emphasizes the risk outcomes, over other elements of households' vulnerability, i.e. risk events and households

<sup>&</sup>lt;sup>9</sup> Research on the influence of the intensity of risk events on consumption smoothing has been mostly focused on its repetitive nature (e.g. Morduch, 1995; Deaton, 1992, 1997; Alderman, 1996; Webb and Reardon, 1992; Devereux, 1999).

<sup>&</sup>lt;sup>10</sup> A great part of this literature explores savings behaviour through the interlinakges between consumption, income, liquidity constraints and production. Empirical accounts of buffer stock behaviour with liquidity constraints see Rosenzweig and Wolpin (1993), Udry (1995), Alderman (1996), Fafchamps *et al.* (1998), De Waal (1989), Paxson (1992). On the relationship between income smoothing and household's assets base see Dercon (1996, 2000), Jacoby and Skoufias (1997), Jalal and Ravallion (1998).

responses<sup>11</sup>. And leaving the risk events on a secondary position, integrated into the analysis only by its characteristics of spread, intensity and predictability, the risk outcomes has been restrictively addressed, mostly as a purely economic failure, associated with household's assets. We could say that there are two interconnected reasons that may explain why the nature of the risk event lies on the periphery and consequently why the standard framework of risk management is not suitable to context of armed conflict.

The first reason of concern is about the lack of information on risk events as it is difficult to collect and therefore scarce. This lack of available information has led researchers to proxy shocks by factors other than their causes. Risk events are often proxied by residuals obtained from actual income and some measure of permanent income (e.g. Kochar, 1995; Jalal Ravallion, 1998); and also from the variability of change of impact indicators (coefficient of variation on the impact variables) such as earnings, income, assets, returns to labour, yields per unit of land, prices, labour, etc. (e.g. Townsend, 1994, 1995; Kinsey *et al.*, 1998<sup>)</sup>). At other times, when information is available, the shocks are proxied either by year and location dummies that estimate the distribution of village level shocks, differentiating between bad and good years, or by the shocks themselves, crop failure, rainfall variability, etc. (e.g. Dercon and Krishnan, 2000; Paxson, 1992). However, even in these cases where there is detailed information about the shocks, the analysis does not distil information about the cause-related issues households care about when they are exposed to a particular risk event. It is rare that the nature of the shock is unpacked. This leads us to the second explanation.

The second reason explaining the lack of relevance of the nature of the risk events has to do with a general portrayal of risk events as exogenous (Duffield, 1994). This assumption comes from the general perception that while the causes of the risk are beyond human influence, their effects, i.e. the outcomes, can be influenced.

The explanation of exogeneity was first implicitly raised by Sen (1981) in his understanding of famine in Ethiopia. As the determinants of the household's entitlements are only confined to economic factors (ownership of tangible assets and the exchange rate), risk events are implicitly considered exogenous and exposure to risk events is generic across households, while relative poverty is the effective variable that would explain the differential household vulnerability across

<sup>&</sup>lt;sup>11</sup> Alwang *et al.* (2001) review the different approaches to vulnerability explaining the differences through their focus, whether it is on the risk events, strategies and outcomes. While environmentalists (including those concerned with disaster management), sociologists and health practitioners focus on the outcomes, within the field of economics, the Asset and the Food Security approaches focus mostly on the responses (e.g. Swift, 1989; Moser, 1998; Devereux, 1992); and the Poverty Dynamics and Risk Management centre on the outcomes (e.g. Baulch and Hoddinott, 2000; Deaton, 1996; Paxson 1992).

households and community groups (Deng, 2004). By saying that vulnerability to famine is the result of relative poverty and/or failure of households to use their ability to avoid it, Sen favours a restrictive view of famine as an economic disaster (Devereux, 2001; De Waal 1990) that imputes the root causes of vulnerability to poverty and market forces (Keen, 1994).

Influenced by Sen, the different approaches to risk management explaining the phenomenon of survival during crises neglect the issue of power, as they consider only the victims of famine, and focus mostly on assets. Sen's exclusion of risk events has been questioned. Watts (1991) argues that this omission is a deliberate way of avoiding engagement with the highly politicised context within which famines invariable occur. However, Devereux (2001) further notes that the Entitlement approach seeks to analyse how famines happen rather than why they happen; and this focus could explain why Sen excludes the main characteristics of civil war from the Entitlement approach. Indeed, although the general proposition states that a person starves either because the person does not have the ability to command enough food or because the person does not uses his/her ability to avoid starvation, Sen's approach focuses analysis on the former.

The Complex Emergency (CE) approach questions the portrayal of risk events, such as those encountered during armed conflicts, as exogenous by studying their characteristics in detail. Just as natural disasters, they damage social services, market networks and agricultural enterprises while at the same time they increase the demand for the essential services such features normally provide. Unlike natural disasters, however, armed conflicts systematically and deliberately violate individual and group rights to reproduce and secure an adequate livelihood, by eroding and destroying the political, economic, social and environmental systems as well as blocking and manipulating coping strategies. Thus, one of the most important and unique characteristics of the phenomenon is its deliberate threat to self-sufficiency (Duffield, 1994; De Waal, 1990; Keen, 1994).

Furthermore, CE approach contributed enormously to the unravelling of important characteristics of armed conflict. The nature of armed conflicts is multi-dimensional, setting up complex and multi-layered systems in which different conflicts interact with one another (Duffield, 1994). They have a double-time dimension. While they produce structural changes embedding the society and therefore the on-going economic, social and political processes, they are not static but in continuous transformation (Cliffe and Luckham, 2000). Conflict does not occur linearly, where conflict and peace represent opposite ends of a continuum, but rather coexist in different degrees of intensity and it rarely occurs a one-off shock and shocks may often result from the slower structural processes of social disintegration (Keen, 1998).

An interest in the characteristics of conflict-produced shocks has recently appeared among those studying the impact. Comparing to other type of shocks, war-produced shocks tend to have a more destructive and wider impact as it affects human, natural, economic and physical assets influencing substantially the recovery period (Justino, 2007; Bodea and Elbadawi, 2008). Nillesen and Verwimp (2010b) in their discussion about the effects of violent conflict on household preferences and portfolio choice bring forward distinctive features of conflict-produced shocks. According to them war shocks can not be treated as natural disasters or health related risk events because they last longer (e.g. Fearon, 2004), may reoccur (e.g. Collier, Hoeffler and Söderbom, 2004) and install fear and anger in the affected population (e.g.Al Sarraj, 2003; Fearon and Laitin, 2003).

As it will be discussed in the results sections, little by little, efforts are being made by scholars and practitioners to unpack the intrinsic and unique characteristics of political crises such as armed conflict and extend it to the micro level in order to explain how these-above mentioned features unfold and are responded by the households. This is also the challenge of this research. Once we know that the risk management framework is not suitable to context of armed conflict because conflict-produced shocks are endogenous, dynamic and multidimensional, then we need to identify the micro-implications of the CE approach into the household's risk-related behaviour.

Based on the recent literature and the results of this research, this research believes that in the same manner that the risk management framework was adapted to context of developing countries, where there is uncertainty and markets are imperfect, another adaptation is required that integrates the characteristics of conflict-produced shocks.

Before the results of the empirical analysis are presented, the following section presents the study framework.

# 3. The Study Framework: the Case Study, Research Methods and Data.

Being the purpose of this research to place risk at the centre of the analysis, the understanding and operationalization of the conflict has received particular attention. In this manner, this section presents in detail the case study, the West Bank during the Al-Aqsa Intifada, and the data illustrating the conflict-produced shocks during the period 2000-2004.

## 3.1 The West Bank during the II Intifada

This research is set in the West Bank during the period 2000-2004, the years immediately following the onset of the Al-Aqsa Intifada in September 2000. Rather than exploring the Israeli-Palestinian conflict during these years, this investigation focuses on one of its four dimensions: the

Israeli occupation of the Palestinian territories<sup>12</sup>. Given the different realities of the tree territories comprising the oPt – the Gaza Strip, the West Bank and Jerusalem – this research focuses solely on the situation of the West Bank.

As Article 42 of the Hague Regulations stipulates, a 'territory is considered occupied when it is actually placed under the authority of the hostile army', and that the occupation extends 'to the territory when such authority has been established and can be exercised'<sup>13</sup>. Furthermore, the Tribunal of the Nuremberg trial in the Hostage  $Case^{14}$  detailed that a territory is occupied even when the occupying forces had partially evacuated certain parts of the territory or lost control over the population, as long as it could at any point in time re-assume physical control of that territory. This puts forward the notion that the definition of a legal regime of occupation is not whether the occupying power exercises effective control over the territory, but whether it has the ability to do so at any point in time.

One way to illustrate the occupation is by the system of control which Israel has set out since the beginning of the occupation of the West Bank and the Gaza Strip in 1967. To meet this end, its military authorities had by 2004 issued over 2500 military orders altering pre-existing laws regulating all aspects of the daily life in the oPt (Al Haq, 2005). Passed by the Area Commander of the Israeli military forces, who assumed all legislative, executive and judicial powers, they effectively extended military jurisdiction over the oPt, and continued to apply this following the signing of the Oslo Interim Agreements. The net effect has been the consolidation of Israeli juridical control over the oPt by creating two systems of legal bodies - one applying to Israeli Jews, and the other to native Palestinians - with a gradual transformation of zoning laws, regional planning and the transfer of land acquisition to the benefit of the former national group, and to the detriment of the latter (Heiberg and Øvensen, 1997).

The consolidation of Israel juridical control over the oPt during the period 1967-1988 has been summarized by Raja Shehadeh in his book Occupier's Law (1989). Four legislative stages are outlined. In the first stage (1967-1971) the military government established its control over transactions of immovable property, the use of water and other natural resources, the power to

<sup>&</sup>lt;sup>12</sup> The Israeli-Palestinian conflict contains four main questions or axes (e.g. Roy, 2007; Escudero, 2006): i) the refugee issue and the right of return created by the 1948 and 1967 wars and the subsequent Israeli occupation of the Palestinian territories (Mardam-Bev and Sanbar, 2004); ii) the situation of the Palestinians of Israel, those that stayed within the limits of the 1948-created state of Israel (Bishara, 2001); the status of the city of Jerusalem, one of the most extreme points of friction between Israelis and Palestinians (Tamari, 2003); and the Israeli occupation of the Palestinian Territories, which started in 1967 during the Six-Day war (Shehade, 1989).

<sup>&</sup>lt;sup>13</sup> Regulations Annexed to the Fourth Hague Convention Respecting the Laws and Customs of War on Land of 1907 (Hague Regulations). <sup>14</sup> The Hostage Case is the name given to the case number 7 of the Nuremberg Proceedings on May 10, 1947.

expropriate land, the authority to operate banks and over the regulation of municipal and village councils. In this period also the system of control over the movement of individuals was established (identity cards, travel permits, driving licenses and licenses for professional practices). The following years from 1971-1979 were primarily aimed at the transfer of Arab lands to the control of Jewish settlement councils. This involved amending Jordanian land laws to facilitate zoning 'public' lands to the benefit of Israeli bodies and for acquisition of local land by 'foreign' companies. The third phase (1979-1981) involved the transfer of authority and power from the Israeli Military Government to the newly established Israeli Civil Administration, and the extension of Israeli law to apply to Jewish settlers so that they would not be subject to the jurisdiction of the West Bank and Gaza courts. The last phase highlighted by Shehadeh is the decade of the 1980s, which marked the consolidation of Israeli control over expropriated land, which in 1991 constituted more than 60% of the total area of the oPt. Besides, in this period military orders were issued to regulate fiscal policy governing the oPt, particularly those pertaining to the collection of taxes and revenues, and of the flow of funds to the territories.

The decade of the 1990s was greatly shaped by the end of the first Intifada and the Oslo Peace Process. The Oslo Accords provided a framework for transferring powers and responsibilities to the Palestinian National Authority (PNA) and for Israel redeployment from the Gaza Strip and the West Bank. However, as no final settlement was agreed, the geographical demarcation agreed in the interim agreement as a transitory measure remained permanent resulting in the oPt as a sum of non-contiguous Palestinian areas surrounded by a contiguous area under Israel Authority<sup>15</sup>. Furthermore, Israel, regardless of whether or not it has transferred specific parts of the territory to Palestinian self-rule, retained control over foreign relations, external security, security for Israelis (including settlers in the oPt), and territorial jurisdiction over military installations, Israeli settlements and East Jerusalem, which enabled to remain an occupant.

In September 2000, clashes exploded at Al-Aqsa Mosque in occupied East Jerusalem between Israeli forces and Palestinian worshippers angered by the visit made by the then opposition leader Ariel Sharon and Israeli forces to the Al-Sharif compound. This event proves to be the opening sequence in the largest sustained Palestinian uprising against Israeli occupation. This crisis, far from representing a break with the recent past, is a logical and inevitable extension of it. The Al-

<sup>&</sup>lt;sup>15</sup> See Map 2 for an ilustration of the geographical demarcation in the West Bank. By virtue of this agreement, the oPt were divided into three areas, A, B and C. Area A, comprising 17% of the oPt, is where the PNA established central political institutions and was empowered to provide socio-economic services as well as a security infrastructure, internal security, public order, and the administration of the specific civil spheres. Area B, containing 24% of the territory, is under Palestinian civil control and Israeli security control and comprises the majority of the Palestinian rural communities. Finally Area C – around 60% – is under full Israel control, except over Palestinian civilians (Declaration of Principles on Interim Self-Government Arrangements, September 13, 1993; Interim Agreement on the West Bank and the Gaza Strip 24-28 September, 1995).

Aqsa Intifada did not emerge in a vacuum but emanated from the context that characterized the entire Oslo Peace Process and its impact on Palestinians. The Oslo Peace Process was neither an instrument of decolonization nor a mechanism to apply international legitimacy to the Israeli-Palestinian conflict. Instead, it is framework that has accentuated a skewed balance of power and has created a dysfunctional environment for negotiations<sup>16</sup>. By the year 2000, after seven years of the Oslo process, more than five years after the establishment of the Palestinian Authority, and considerable external assistance - valued at approximately \$ 3 billion between 1994 and the third quarter of 2000 (Le More, 2008) – living standards were lower than before the process began with per capita income levels in the oPt were estimated to be about 10% below their pre-Oslo level (Erickson, 2001).

During the period of the II Intifada, the Israeli occupation has been characterised by the territorial, socio-economic and political fragmentation produced by the Israeli policy of closure, the use of violence by the Israel Defence Forces, and the construction of the Wall. The following OCHA map illustrates the West Bank in 2004.

<sup>&</sup>lt;sup>16</sup> Assessments about the Oslo Peace process and its consequences can be found for example in Keating *et al.* (2005), Álvarez-Ossorio (2003), Roy (2001a), Rabbani (2001) and Pacheco (2001).

#### Map 1: The Fragmentation of the West Bank in 2004



As it can be observed from the map, East Jerusalem and the West Bank has become a collection of isolated areas and enclaves separated from one another. The fragmentation stands in sharp contradiction to the sine qua non of territorial contiguity as the basis for an economically and politically viable state and has catastrophic socio-economic consequences<sup>17</sup>. The following table contains some of the output indicators for the period 1999-2004.

Table 1: Socio-economic indicators

	1999	2000	2001	2002	2003	2004
GDP real per capita change in the oPt (accumulated from 1999)		9.6	-26.5	-37.3	-36.8	-38
Budget deficit (in percentage)	6					8.6
Trade balance (% GDP)	-63.6	-55.4	-43.3	-61.1	-53	-64.4
Total PNA trade with Israel/total PNA trade (%)	67.1	71.12	78.6	53.4	75.1	66.8
Population (in millions)	3.08	3.12	3.33	3.45	3.73	3.637
In the West Bank	1.97	2.04	2.12	2.19	2.367	2.33
In the Gaza Strip	1.12	1.16	1.21	1.26	1.37	1.37
Total employment (thousand)	588	597	508	486	591	607
In public sector	103	115	122	125	128	131
In Israel and Settlements	127	110	66	47	53	48
Unemployment rate (% of labour force)	21.7	24.6	36.2	41.2	33.4	32.6
% Households under poverty (2.1\$ per person per day)	20	27	37	51	47	48
Courses DCDC. The Decenter data and World Deals estimations						

Sources: PCBS. The Poverty data are World Bank estimations

<sup>&</sup>lt;sup>17</sup> UNCTAD (2006), FAO (2003, 2007), UNSCO (2005), Sletten and Pederson (2003), World Bank (2002, 2003a,2003b, 2004a, 2004b), OCHA (2007), OCHA and UNRWA (2003, 2004, 2005) and FAO (2003, 2006).

Since 2000 the situation has aggravated deep-seated structural weaknesses and vulnerability to external shocks arising from prolonged occupation, foreign aid disbursements and mismanagement of the PNA, as manifested by volatile economic growth, persistent, high unemployment rates and chronic internal and external imbalances. The PNA, disposed of critical economic resources or factors of production needed to create and sustain productive capacity, have created extreme dependency on employment in Israel and overall on the foreign aid as a source of Gross National Product growth (UNCTAD, 2006); and restricted the kind of indigenous institutional development, it failed to lead structural reform that is economic, social, and political (Roy, 2001a).

Against all odds, the Palestinian economy continues to function and defies the devastating conditions of those four years. Three main factors explain why the economy and society as a whole was able to withstand such conditions (UNCTAD, 2006; World Bank, 2004b): the reliance and cohesiveness of Palestinian society and the informal safety nets and innovative responses developed by enterprises; the ability of the Palestinian Authority to continue functioning and employing at least 30 per cent of those who are currently in work; and the increase in disbursements of donor support for budgetary solvency, relief and development efforts. However, continuing defying the Israeli occupation has a price to pay: the profound decline of living conditions. Household expenditure has decreased dramatically; since 1999 food consumption has fallen by around one third<sup>18</sup>; poverty doubled, reaching almost 50% of the population and 16% under severe poverty (less than 1.6 US\$ per person per day) (World Bank, 2004b). Human capital has been particularly hit. Over one million students and over 44,000 teachers in 2000 schools were affected by movement restrictions (PCBS, 2005b); 50% of households reported difficulties in accessing health care and the number of mental health patients receiving treatment at community health centres increased by 39% within the period 2000-2004 (OCHA, 2005a).

# 3.2. Data and Research Methods

The empirical research was conceived as an informal collaborative investigation with key stakeholders engaged with the use of risk management strategies as indicators of vulnerability. The objective was not only to collect data but most importantly to do research as a reflective process linked to development practice and policy-making. In order to do so, a great part of the research was carried out in the oPt. During the 12 months of the fieldwork, discussions with key stakeholders were held to check the relevance of the hypothesis, availability of data and

<sup>&</sup>lt;sup>18</sup> According to the FAO Food Security Assessment carried out in 2003, 40% of the oPt Palestinians was food insecure and another 30% was under threat of becoming food insecure (FAO, 2003).

possibilities for partnerships<sup>19</sup>. Collaborative action-research proposals were presented to the Palestinian Central Bureau of Statistics<sup>20</sup> (PCBS) and the United Nations Food Agriculture Organization<sup>21</sup> (FAO), both working in the micro-analysis of risk management during the period 2000-2004.

In order to study how the specific characteristics of conflicts unfold into the risk management, the empirical analysis counts on primary and secondary data. Concerning the primary data, informant individual- and group-based interviews<sup>22</sup> were carried out to explore Palestinians' perceptions on the risk events (sources, objectives, causes) and their response mechanisms (actions and motivations). Far from drawing national inferences or making representative statements<sup>23</sup>, the interviews aimed at exploring the risk management strategies beyond the household surveys, whose questions related to risk management seemed to have been imported from contexts of natural disasters and economic crises.

Secondary data, such as the Palestinian Expenditure and Consumption Survey (PECS) and a conflict database, were used to explore the characteristics of the conflict-produced shocks, their relationships with risk management strategies and risk management profiles.

Since 1996 and approximately on a yearly basis, the PECS provide information about the standards of living and patterns of consumption and expenditure among Palestinian households in the oPt. For the purpose of this research, the PECS for 2004 is used<sup>24</sup>. It contains information about risk management strategies and others socio-economic characteristics collected during 2004 for a sample of 3,098 private households, whose usual residence is the oPt. Based on a stratified cluster systematic random sample, the survey has been stratified by region, governorate and type of locality (rural, urban, refugee camp). Besides these geographical levels, the village of residence of the household was made available for the purpose of this research. The availability of the village is

<sup>&</sup>lt;sup>19</sup> See Appendix 1 for details on the consultations.

<sup>&</sup>lt;sup>20</sup> The PCBS is an independent body within the PNA and is responsible for the Palestinian household surveys such as the Palestinian Expenditure and Consumption Survey (PECS), Palestinian Census, the Palestinian Labour Force Survey (LFS), as well as other relevant surveys monitoring the impact of the Israeli measures following the onset of the second Intifada.

<sup>&</sup>lt;sup>21</sup> FAO carries out the Palestinian food security assessments (FSA). At the time of the field work, it was preparing the questionnaire for the 2006 FSA.  $^{22}$  Sec. A result in the contract of the 2006 FSA.

<sup>&</sup>lt;sup>2</sup> See Appendix 1 for details on the interviews.

<sup>&</sup>lt;sup>23</sup> The selection of the interviewees did not aim to be representative either geographically or in terms of household socio-economic characteristics. Given the movement restrictions within the West Bank, the interviewees were selected based on accesibility. The sensitivity of the questions in terms of household finance and position towards Israel, required an atmosphere of confidence and trust, which also influenced the selection process.

<sup>&</sup>lt;sup>24</sup> It is to be noted that the different PECS rounds lack an homogenous questionnaire (PECS 2004 is the only round containing risk management data) and a common stratification level. Most of the studies rely on 1998 and 2004 rounds, see for example World Bank (2004a, 2004b), UNSCO (2005), FAO (2006), UNCTAD (2006), Astrup and Dessus (2001).

of particular relevance for this research as it is the furthest geographical unit, where both household and conflict data converge.

The conflict data includes conflict-produced shocks illustrating the different dimensions of the Israeli occupation at the governorate and village level during the period 2000-2004. With the overall aim to understand the occupation and its time- and location-specific dimensions, historical and current accounts were revisited in order to operationalize the occupation into a data set. The starting point was the survey 'Livelihoods, Shocks and Coping Strategies of World Foof Programme (WFP) beneficiaries in the oPt' which provided information about the shocks households suffered in 2004.

Type of risk	Affected households (In percentage)
The Wall & security zones	71
Israel army incursions	66
Limited access to land, work and markets	61
Curfew	54
Illness	41
Drought or irregular rains	36
Crop pest	16
Livestock pests	10

Table2: R	isk events	in the	West	Bank

Source: World Food Programme

The shock that affects the most is this produced by the Wall. In June 2002, the Government of Israel began the construction of the Wall<sup>25</sup>. In October 2005, it was declared that 75% of the length of the Wall (constructed and projected) is inside the West Bank territory; 10% of the West Bank land (including Jerusalem) had been either confiscated for the construction of the Wall or was trapped between the Wall and the Green Line, the so-called 'seamed zone'; 15 Palestinian communities were enclosed in these zones, physically separated by the Wall from the rest of the West Bank<sup>26</sup>. The Wall isolated the land, water resources and basic services of a far greater number

<sup>&</sup>lt;sup>25</sup>The Wall is a complex series of of ditches, trenches, roads, razor wire, electronic fences and concrete walls within the West Bank. In areas where the Wall has been constructed, military orders are issued creating a new strip averaging 150-200 metres on the West Bank sides of the Wall, where new construction is prohibited (OCHA and UNRWA, 2004). See Map 4 for the status of the Wall construction in December 2003.

<sup>&</sup>lt;sup>26</sup> *Humanitarian Impact of Barrier Updates* have been carried out by OCHA and UNRWA since 2003 following a request of the Humanitarian Emergency Policy Group (HEPG) comprising the European Commission. the European Union (EU) President, the World Bank, United States Agency for International Development (USAID), Norway and United Nations Special Coordinator Office for the Middle East (UNSCO).

of Palestinian, who require specific access permits and are subject to the opening hours of the wall gates<sup>27</sup>.

As regards the Israeli army incursions, since the outbreak of the Al-Aqsa Intifada, the Israel Defence Forces (IDF) have been redeployed in the West Bank. The violence reached its peak in 2002, when IDF reoccupied the main cities, towns and some villages in the West Bank and imposed twenty-four hour curfews on their populations. During the period 2000-2004, the villages of the West Bank underwent an average of 1142 hours under curfew<sup>28</sup>. Figures for casualties and other losses often vary widely from source to source and sometimes from report to report issued by a single organization. These discrepancies have been illustrated by Esposito (2005). He examined a wide range of sources such as human rights organizations, the IDF, the PNA and the United Nations (UN). The following is an extract of the table compiled by Esposito.

	<b>B'Tselem<sup>1</sup></b>	Al-Haq <sup>2</sup>	PHDIP <sup>3</sup>	IDF	PNA	PRCS <sup>4</sup>	UN
Palestinians							
Killed	3,022	3,470	3,572		3,880		3,437
Injured		27,600	53,000		42,345	27,770	33,770
Permanently			2,500				
disabled							
In detention	7,366	8,000	8,000				
Israelis							
Killed	919		1,008			942	
Injured			1,008	989		6,008	5,961
Physical Damage							
Houses destroyed	3,700	542	720				
Houses and public			11,553		7,633		2,751
Buildings			-		-		-
damaged							
Trees uprooted					1,252,537		

Table 3: Losses in the four-year anniversary (2000-2004) of the Al-Aqsa intifada

1. Israeli Information Centre for Human Rights; 2. Palestinian NGO for human rights; 3. Palestinian Health Development Information Project; 4. Palestinian Red Crescent Society.

Finally, the third mentioned shock refers to the access limitations mostly related to the policy of closure, the Wall and the Israeli infrastructure in the West Bank. In its most descriptive and sterile way, closure is a recently-coined term referring to the policy of physical barriers and permit requirements used to control the movement of Palestinian goods and persons across borders - between the oPt and third countries and between the oPt and Israel – and within the West Bank and Gaza Strip. Although Israel has controlled Palestinian movement since the occupation of the

<sup>&</sup>lt;sup>27</sup> Out of the 63 Wall gates in September 2004, 23 are open for Palestinian use. The permits requirements and opening time depend on the type of gate (agricultural, road, school, seasonal, settlements or checkpoint). For example, agricultural gates allow access to agricultural fields, green houses and orchards located on the opposing side of the Wall. Farmers must obtain a green permit to cross the gate to their fields. Opening times depend on the specific gate but in many instances they are open three times a day for an hour or an hour-and-a-half. Another example are the school gates, whose opening coincide with school hours twice daily and they are only open to children and teachers (OCHA and UNRWA, 2004).

<sup>&</sup>lt;sup>28</sup> Curfew data has been obtained from UNRWA and OCHA data bases.

Palestinian Territories started in 1967, it was just in 1991 when a restrictive system of control was introduced and enforced through personal permits and checkpoints placed along the Green Line. During the 1990s, the policy of closure was consolidated due to the division of the territory into zones of Palestinian and Israeli control as demarcated during the interim period of the Oslo Accords (Roy, 2001b). Most of its implementation took place in the course of the second Intifada. Within a period of 20 years the closure policy passed from a set of entry and exit restrictions into Israel, any other third countries as well as between the Gaza Strip and the West Bank (external closure) to a sophisticated system of permits, roads and physical obstacles (internal closure) that limit and control the movement of goods and people within the West Bank (World Bank, 2002).

In October 2004, there were in the West Bank approximately 60 checkpoints and more than 460 physical obstacles such as roadblocks, road-gates, earth-mounds, roadblocks and trenches<sup>29</sup>. Nearly all of these obstacles are located along the roads primarily reserved for Israeli use to connect the settlements, military areas and other infrastructure<sup>30</sup> in the West Bank, as well as with Israel. Palestinians require a permit or are compelled to use an alternative road network of secondary and more circuitous roads. In July 2004 just 1% of the West Bank Palestinians and 7% of the licensed cars hold the 'Special Movement Permit at Internal Checkpoints in Judea and Samaria' and during the first four years of the Intifada, the permits to work in Israel and in the settlements decreased by 59% in the West Bank (Lein, 2001). The impact of the restrictions of movement, as we have previously described, are profound, as the roads and other obstacles have created isolated Palestinian enclaves fragmenting the entire livelihoods<sup>31</sup>.

In order to look for data capturing the shocks produced by the army incursions, the Wall and the movement restrictions, we rely on secondary sources from Palestinian, international and Israeli organizations which have carefully monitored the occupation within the context of the Palestinian-Israeli conflict. The following table contains the data illustrating the three dimensions – use of violence, land annexation and movement restrictions - of the Israeli-occupation during the period 2000-2004.

<sup>&</sup>lt;sup>29</sup> OCHA *Movement and Access Report* and *Weekly Briefing Notes* monitor on a monthly and weekly basis respectively the movement restrictions in the oPt. See Map 5 for an illustration of the closure policy.

<sup>&</sup>lt;sup>30</sup> According to OCHA satellite and field work analysis, in 2005 there are 450,000 settlers living in 145 settlements in the West Bank (including East Jerusalem) occupying 16,375 hectares (40% of the West Bank's land and 20% of the West Bank population) (OCHA, 2007). See Map 3 for an illustration of the Israelis structures in the West Bank. Recent accounts of the evolution of the settlements can be found in Etkes and Ofran (2005), Lein (2002) and OCHA (2007).

<sup>&</sup>lt;sup>31</sup> For a review of the impact of closure on Palestinian livelihoods see for example, UNSCO (2005), OCHA (2005b), Al-Haq (2005), Roy (2001b), Aranki (2004), Brown (2004), Lein (2001) and Bornstein (2001).

	Data	Source	Time coverage	Unit of analysis
	No. Palestinians killed	B'Tselem	From October 2000	Village
CE		PRSC	From September 2000	Governorate
E OI	No. Palestinians injured	PRSC	From October 2000	Governorate
IOL	No. Hours under curfew	OCHA	From October 2003	Village
•		UNRWA	From July 2002	Village
	No. Of settlements	PCBS	1967 – 2005	Governorate
LAND	Settlements, built-up areas & municipal boundaries	PCBS	2005 and 2001 (respectively)	Governorate
I OF	Settlers population	PCBS	1996-2005	Governorate
IOI	Amount of confiscated land	OCHA	From October 2003	Village
NEXAT	Amount of confiscated land for the construction of the Wall	PCBS	August 2003 & March 2004	Governorate
AN	Village Wall proximity	Own construction	June 2002 – December 2004	Village
S OF T	No. Of checkpoints & roadblocks per governorate	OCHA	2000, December 2003, January 2004, March 2004, July 2004, Neyamber 2004	Governorate
TIONS	Index of village closure <sup>1</sup>	Own construction	December 2003, January 2004, March 2004, July	Villages included in
RIC			2004, and November 2004	PECS
REST M	Village Wall Enclosure <sup>2</sup>	Own construction	June 2002 – December 2004	Villages included in PECS

Table 4: Data proxing the occupation during 2000-2004

1. Based on OCHA maps, it measures the degree of proximity between the village and its natural centre (assumed as the closest community with a hospital) and ranks the degree of movement restrictions between 0 and 5 depending on the type of obstacle (manned- or unmanned-operated) and the type of road where the obstacle is located (main or secondary). See Appendix 2 for details on its construction.

2. Based on OCHA maps it describes how much the Wall encloses the village, specifically how many village sides (ranging from 0 to 4) are within 1km of the Wall.

The operationalization of the Israeli occupation of the West Bank during 2000-2004 is one of the value added of this research as it brings forward the risk events by illustrating its characteristics in a comprehensive and specific (time and location) manner. Unlike in other conflict areas, the Israeli-Palestinian conflict is a well-documented reality. Governmental institutions, Non-governmental Organizations (NGOs) and international organizations continually monitor its progress, producing a myriad of data. Since the micro-analysis of conflict is highly constrained by the lack of data (Justino, 2007), the availability of data about the Israeli-Palestinian situation offers a great opportunity to understand more about the understanding of conflict and the behaviour of households in such contexts.

#### 4. The Results: the Risk Management of Households in Conflict

The results present the micro-implications of the CE approach into household risk behaviour, specifically how the characteristics of armed conflict unfold into the risk management. By analysing the case study of West Bank during 2000-2004, the research identifies some of the distinctive features and elements of risk management in contexts of armed conflict.

The first micro-implication is a general one and emerges from the study of the risk-management framework for developing countries and the literature on the causes, effects and characteristics of armed conflicts. Thus, the research argues that risk events need to be placed at the centre of the analysis of risk management of households living in armed conflicts. If the assumption of risk events as exogenous has allowed labelling risk in a generic manner, focusing on the characteristics of spread, intensity and predictability, and putting the risk events on a secondary level, then assuming them as endogenous has the reverse effect, which is to place them at the centre of the risk management process. This means that risk events, household responses, and the determinants and outcomes of risk management need to be studied within the context of their causes.

# 4.1 The Risk Events

As we have mentioned, because of a lack of information or the assumption of exogeneity, the impact of the risk event captured most of the attention and the study of the nature of the risk event was often restricted to the study of its unpredictability, spread and intensity. However, in context of armed conflict the risk events need to be studied within their causes and this requires to move beyond these characteristics and integrate its nature in holistic manner. This means that risk events also need to be understood by their specific source (use of violence, asset looting, movement restrictions, economic embargoes, etc.) and the nature of the conflict (ethnic cleansing, economic subjugation, land occupation, etc.) as well as by its intrinsic features as highlighted by the CE approach (multidimensional, endogenous and dynamic).

These features that describes the risk event nature are relevant for the risk management process. They contain information about the breath of exposure, the intensity of the impact as well as the capacity and possibilities to deal with its consequences. Besides it contains information the households care about when managing the risk - such as the possible timing, the avoidance margin, the competing set of objectives to trade-off, the options available, the conflict overall objectives and rationale, etc. However, beyond a general account of the importance of risk nature, its effects into household vulnerability and household risk management are not explicitly approached in the

emerging literature on risk management of households in conflict. If it is true that the causes are brought in, the wide range of nature-related characteristics of the risk events are rarely raised in the analysis.

# Multidimensionality

In the analysis of risk management there is a tendency to use the magnitude of the shock as catchall term describing the intensity of conflict; and other intensity variables such as the spread, frequency and duration are yet to receive much attention<sup>32</sup>. Thus, the magnitude of conflictproduced shocks illustrated by continuous or dummy variables representing a particular risk event (e.g. death, house damage, detainment, displacement, movement restrictions, etc.), is used to indicate the extent of the absence or presence of armed conflict (e.g. Bundervoet, 2007; Shemyakina, 2006). While there is a growing tendency to illustrating the direct effects of armed conflict by a set of variables (e.g. Verpoorten, 2007; Chamarbagwala and Moran, 2008; Voors *et al.*, 2010), it is common to find conflict simplified into one unique factor. Violence is the instrument of war, which is most often illustrated (e.g. Rodríguez and Sánchez, 2009; Brück *et al.*, 2010b; Bozzoli *et al.*, 2010). In fact, proxying conflict by the intensity of violence - high, medium or low depending on the number of casualties - is in line with one of the most common ways of categorizing conflict. While this could be enough to explain certain armed conflicts or certain periods of an armed conflict, it can be a misleading simplification for others such as the Israeli occupation of the oPt.

The analysis across time and across occupation variables illustrate that the intensity of the conflict is reflected by multiple shocks, which do not necessarily behave similarly across time and whose simplification into one single shock could cause a loss of information<sup>33</sup>. While the conflict was characterised by intense violence during the period 2000-2002, it was mostly shaped by movement restrictions and land annexation during 2003-2004. Thus, if we focus on this last period, the dimensions of the conflict gaining relevance were not so much related to violence but to space and land. Despite the low violence the conflict was in a process of intensification due to the Israeli policy of closure and the construction of the Wall.

## Double Time Dimension

<sup>&</sup>lt;sup>32</sup> The longer the period of conflict, the more likely it becomes that households liquidate their productive assets, abandon them to become refugees, etc (see ODI Livelihoods and Chronic Conflict Working Papers Series). However, a short war can also strongly affect household welfare, especially if the conflict-produced shocks (e.g. violence, asset looting or displacement) are frequent, intense, widespread and if the households were already vulnerable at the outset of the conflict (e.g. Stewart; 1997; Justino, 2007).

<sup>&</sup>lt;sup>33</sup> See Appendix 3.

The second nature-related aspect of the conflict-produced shocks is about its duration and the double time dimension it may contain, where temporal and structural changes cohabit. If the start of the conflict introduces a long-term widespread structural change in the fundamental structure of the economy and society, unremitting shocks of a variable nature bring about micro-scale or short-term outcomes that cannot be disregarded. Thus, in this sense the concern is not so much about whether chronic conflicts can be treated as shocks but how to differentiate between temporary shocks and structural changes.

The double time dimension of conflict can be observed in the oPt through the policy of closure and the Wall. On the one hand, the policy of closure introduces structural change into the economy and in society due to the fragmentation of the territory and the subsequent breaking down of the relationship with Israel and between West Bank districts and between rural and urban communities. For example, there has been a change in the nature of employment. As regards the private sector, compared to pre-intifada levels, by 2004, 16% of pre-2000 services and industrial sector enterprises and 14% of construction and internal trade companies had permanently closed (PCBS, 2004b). Major sources of employment have been shifting to the agriculture and services sectors including the PNA institutions<sup>34</sup>. There has been an increase in the proportion of part-time jobs, in governmental jobs, in family business and self-employment, mostly in subsistence agriculture and in the trade sector, where incomes are low and intermittent (World Bank, 2004a). The location of employment has changed from cities to towns or villages in order to reduce the cost and the probabilities of movement restrictions (UNSCO, 2005).

On the other hand, the policy of closure and the Wall have also a dynamic nature, which cannot be disregarded. Palestinian livelihoods are affected by short-term shocks produced by the continuous changes in the instruments and procedures of the policies of movement restriction or land annexation. For example, when there are changes in the requirements for holding a permit, in the type of physical obstacle blocking the road, in the opening hours of Wall gates, etc. These changes introduce physical and administrative shocks, which accompanied by the absence of law or its arbitrary application are characteristics of a system of control that permeates the tempo of daily life affecting every single aspect of the individual and collective livelihoods of a wide range of the population. At the individual level, it creates a sense of powerlessness; at the family level, it obstructs the ability of households to chart a purposeful existence for their members; and at the community and national levels, it prevents systematic planning for the future.

<sup>&</sup>lt;sup>34</sup> Compared to pre-Intifada levels, in 2004 there were 67% less Palestinians working in Israel or Israeli settlements. Employment shocks were partially absorbed by the Palestinian domestic economy, which created approximately 30,000 new jobs (UNCTAD, 2006).

The importance of uncertainty in context of armed conflict have been brought up by macro-level studies focusing on the links between conflict and development. Stewart (1997) observed that an increase in uncertainty is one of the causal factors that explain the two-way causality between conflict and low-income countries. At the micro level, it is an area rarely addressed and hence more research is encouraged. One of the most important contributions is the work of Bundervoet (2007) and Verpoorten (2007), who use uncertainty to address the endogenous nature of conflict-produced shocks. They argued that while the model of consumption under liquidity constraints developed by Deaton (1991), the so-called buffer-stock model, focuses all the uncertainty on income, in the context of conflict, savings (both liquid and physical) are also affected because of looting and destruction of assets.

## **Endogenous** Nature

In an attempt to understand the causes of uncertainty and more generally, the endogenous nature and rationale of the occupation-produced shocks in the West Bank, we have analysed how the different shocks interact and have asked the Palestinians about their own perceptions about occupation-produced shocks.

As regards the risk events interactions, the correlation analysis showed a couple of interesting relationships, which are worth noting and encourage further analysis (across time) about whether shocks are complementary or substitute<sup>35</sup>.

The fact that the number of obstacles is positively related to low violence (injuries and curfew) but also to the construction of the Wall and to the number of settlement structures brings in the question of whether it is a 'temporary' security measure or whether it serves geo-political interests related to the maintenance of the settlements and the construction of the Wall.

One the one hand, as discussed in Section 3 and illustrated in Maps 2, 3 and 5, the policy of closure (proxied by the number of obstacles) is, above all, a mean of protecting Israeli settlers and of securing the Israeli road network within the occupied territory, which, in the long-term, clashes with the possibility of a continuous Palestinian state within the 1967 borders and, in the short-term, negatively affects the Palestinian economy and living conditions. Firstly established in 1991, it can not be seen as an *ad hoc* measure linked to Palestinian security performance. Instead, it needs to be understood in the context of the Israeli occupation and other policies within the oPt, which are aimed at expanding control and transforming the physical landscape. The policy of closure

<sup>&</sup>lt;sup>35</sup> See Appendix 3.

On the other hand, the relative positive and strong relationship between the Wall's confiscated land and the number of obstacles could be an indication of their complementarity. While the Wall's confiscated land integrates some of the important settlements, there are many of them that are left on the west side and hence in need of the policy of closure. The Wall is not only a tool to annex land, but also a permanent tool to restrict the movement between the West Bank and Jerusalem as well as within the West Bank, between the east- and west-side of the Wall. There are serious concerns that it will become the final border

These shocks relationships and particularly their rationale were further explored with primary data. The following scheme summarises the results of the interviews as regards the household's perceptions of the conflict-produced shocks during the second Intifada.



Figure 2: Risk events as perceived by West Bank households

Palestinian self existence within the 1967 borders

In spite of the limited scope of the interviews and therefore the need for further research, they reveal an interesting picture of the occupation-produced shocks in the oPt. Vis-à-vis the objectives, and one of the most important outputs of the interviews was the shift from the risk events (noted in small font in the scheme) to the objectives of the shocks. The shocks are not perceived simply as isolated and temporary but rather they are an integral part of a three-factored chain composed of an overall cause (Israeli occupation), short-term objectives (violence, land annexation, movement restrictions), middle-term objectives (economic strangulation and social fragmentation) and the long-term objective (preventing a Palestinian self-existence within the 1967 borders).

This approach to the risk events recognises the nature of the risk within the specific context of vulnerability in the oPt. It includes the endogenous, multi-dimensional, dynamic and chronic nature of the occupation, which deliberately threatens not only households' economics or social capital but also their existence within the 1967 borders. Within this context, the endogenous character of the occupation-produced shocks goes beyond asset's uncertainty and a predatory behaviour. Instead it pursues livelihoods uncertainty and a wider strategy of domination and dispossession.

This research argues that the endogenous nature of armed conflict needs to be assessed by taking into account the objectives and inter-relationships of the different shocks within the overall conflict context and objectives. There would be a fundamental difference if the shocks of movement restrictions produced by the policy of closure are thought as a security measure or as a strategy of dispossession and domination. If it is the latter, it is to be expected to have a more comprehensive and deeper impact on the affected population but also to elicit a stronger response from that affected population, who will understandably claim strongly for their lost rights and stolen entitlements.

#### 4.2 The Risk Management Strategies

In contexts of armed conflict, risk management has proven to be crucial, as the outcomes of conflict depend on the reactions to the effects of conflict at the micro level. As Stewart *et al.* (2001) argues, the so-called resilience, explains the relatively moderate effects of conflict households' welfare. For example, in the oPt, one of the reasons explaining why the economy and society have not collapsed during the period 2000-2004 are related to the Palestinians' capacity and mechanisms to manage the drop in their welfare (UNCTAD, 2006).

Despite its importance, while the literature of armed conflicts has paid considerable attention to the role of war entrepreneurs in establishing markets of violence and war economies (Keen, 1998; 2000; Collier and Hoeffler, 1998), there has been much less focus on the analysis of livelihoods strategies of civilian populations in conflict. Although some progress has been made in the recent years<sup>36</sup>, there is a need for research in the identification of risk management strategies during armed conflict. At the moment, although different risk-related behaviours have been observed (e.g. Verpoorten, 2007; Bundervoet, 2007; Körpf, 2004; UNSCO, 2005; Pain and Lautze, 2002; Nillesen

<sup>&</sup>lt;sup>36</sup> See for example the following studies addressing risk management of households in conflict: buffer-stock behaviour (Shemyakina, 2006; Deininger, 2003; OCHA, 2005; Bundervoet, 2007; Verpoorten, 2007; Guerrero-Serdan, 2009; Nandi and Di Maio, 2010; Rodríguez and Sánchez, 2009; Chamarbagwala and Morán, 2008); risk-sharing (Pain and Lautze, 2002; Körpf, 2004; Goodhand *et al.*, 2002; Harvey, 1998; Colleta and Cullen, 2000; Pinchotti and Vewimp (2007); income smoothing (Brück, 2002, UNSCO, 2005, Bundervoet, 2007; World Bank, 2004a, Lein, 2004, Deng, 2004; Nillesen and Verwimp, 2010b; Bozzoli *et al.*, 2010) ); and risk preferences (Voors *et al.*, 2010).

and Verwimp, 2010b), there is a tendency to focus on the households responses observed in natural disasters and economic crises disregarding the causes and hence the effects that armed conflict may have in the nature and in the specificities of the strategy adopted.

The importance of the causes in the analysis of risk management was firstly raised by Davies (1996) in her critique to the strategies' sequencing (Corbet, 1989) and their use as indicators<sup>37</sup>. Thus, following her argumentation, the second micro-level implication of the CE approach is that risk management strategies need to be defined by their causes taking into account the full characteristics of the shocks.

When shocks are endogenous and risk events must be placed at the center of the risk management process, the analysis of household risk management strategies cannot be carried out independently of the causes, as these provide information about the dynamics of power between the strategies of the conflict-produced shocks and the strategies of the conflict-affected households. The fact that armed conflicts systematically and deliberately destroy household and community asset bases and block responses establishes a particular link between the strategies and the risk events, and makes them inter-dependent. As the CE approach well notes, despite the fact that studies on risk management, particularly those on coping strategies, has informed policy debate on proactive responses taken by people exposed to armed conflict, the studies fail to recognise that some coping strategies may involve the transfer of assets away from those in distress (Duffield, 1994).

The following table reporting the actions observed in different surveys<sup>38</sup> in the oPt is a good illustration of the way risk management strategies are being analysed in context of armed conflict.

<sup>&</sup>lt;sup>37</sup> The complexity of human livelihoods makes it very difficult to establish clear-cut categories making any classification somewhat artificial (Davies, 1996). The mere fact of using a particular strategy can indicate nothing about household vulnerability (see findings of de Waal (1989) and Jodha (1975) of people choosing hunger rather than selling their assts); it requires instead other type of information beyond the strategy descripcion such as the causes and the household's motivation to choose a specific set of strategies portfolio.

<sup>&</sup>lt;sup>38</sup> 'Impact of the Israeli Measures on the Socio-economic Status of the Palestinians', Palestinian Centre Bureau of Statistics 2005; 'Palestinian Public Perceptions Survey', Institut Universitaire d'Etudes du Développement 2001-2004; 'Livelihoods, Shocks, and Coping strategies of the WFP Beneficiaries in the oPt', World Food Programme 2004; 'Food Security Assessment: West Bank and Gaza Strip', Food Agriculture Organization 2003.

Type of strategies	Risk management strategies	Used	Not used	Not applicable
	Postponed payment of bills	73	27	0
	Reduced expenditure	69	31	0
	Borrowed money (informally)	41	59	0
Inter-temporal	Used savings	32	59	9
consumption	Sold jewellery	9	88	3
smoothing	Sold durable goods	1	99	0
e	Sold or mortgaged land or house	1	89	10
	Used savings in Israeli banks	0	59	41
	Borrowed from banks/ financial institutions	0	96	4
	Worked in farming or breeding livestock	28	57	15
Income	Searched for other work	26	72	2
smoothing	Sent family member to work	6	90	4
	Sent student family member to work	4	79	17
Risk sharing	Obtained assistance from family and friends	14	86	0

Table 5: Frequencies distribution across risk management strategies (percentage)

Source: Palestinian Expenditure and Consumption Survey (2004), Palestinian Centre Bureau of Statistics

Considering these 14 actions, we connote a restrictive view and a clear emphasis on ex-post intertemporal consumption mechanisms on detriment of income smoothing strategies and risk sharing. Given the importance of these other actions during chronic crisis as well as in covariate and intense shocks, where consumption smoothing actions are less useful, one wonders why the intensification of the usual income smoothing actions and the adoption of new mechanisms taking into account the rise of the informal economy and the households' withdrawal from the monetized economy have not been explored and included in the questionnaire. Regarding risk sharing mechanisms, they have been compiled into one single broad action 'relying on friends and family', which results in a very poor description of the resilient solidarity behaviour and the emerging forms of social capital beyond family and friends.

This emphasis on inter-temporal consumption mechanisms has to do with the great interest in consumption smoothing behaviour of poor households<sup>39</sup>. Although one can not simply look at the smoothness of consumption and know which type of smoothing is at work (Morduch, 1995), the theories of consumption have dominated the analysis and these are constructed on the assumption of a perfect market and hence the lack of need to reduce risk ex ante<sup>40</sup>.

Nonetheless, the focus on ex-post and inter-temporal consumption smoothing in the oPt can be misleading. On the one hand, the duration of the Israeli-occupation and more specifically the time

<sup>&</sup>lt;sup>39</sup> For a good review on the literature on risk and consumption see Alderman and Paxson (1992).

<sup>&</sup>lt;sup>40</sup> The interest on consumption is also shared by the Food Security approach, which has largely contributed to the analysis of risk management.

gap between the onset of the II Intifada and the reporting period of the risk management strategies adopted (any month during 2004) requires the inclusion of ex-ante risk management strategies. The reason is because there is a need to capture the dynamic and structural nature of the risk management responding to the short- and long-term changes of the livelihoods. On the other hand, regarding the focus on consumption, in the context of armed conflict, consumption cannot be considered as the only basic human need within a hierarchy of concerns and therefore the emphasis on those actions that aim to protect expenditure is insufficient. As it will be explained in the next section, managing household economics to secure consumption is a piece of a jigsaw of other immediate and long-term needs related to the household's vulnerability.

This narrow perspective observed in the oPt surveys was confirmed by the outcomes of the interviews. As might be expected, one of the consequences of the portrayal of risk beyond the risk event as discussed previously, is the widening of the scope of risk management strategies. In addition to the actions included in PECS, the following responses were reported by the interviewees.

Consumption-based strategies	Income-based strategies	Livelihoods-based strategies
Eat less and worse Making less last longer Merge households among kin Obtain assistance from community associations, civil groups, professional groups, trade unions, people's committees, charities and religious groups Obtain assistance from international organizations	Migrate outside the oPt and within the oPt Work (and stay) in Israel illegally Access restricted areas for searching for jobs or working in the agricultural fields. Use someone else's movement permit to find work somewhere else Use barter Self-production In-kind payments Moving the business from the town to the city or far from closure obstacles Selling at the checkpoints Pay someone to harvest the crop if you cannot access the agricultural field. Reduce wage employment and rely on family work Replacing risky members with women and elderly in the household labour supply	Permanence in the oPt Have children Construct houses without licenses (those living in areas C in the West Bank) Continue with life in spite of the associated-risk produced by violence, restrictions of movement and land annexation: keep going to the university despite the long journey, celebrating life-cycle events, etc. Support or join armed groups

Table 6: Risk management strategies as reported by interviewees.

First of all, it is worth noting that both income and consumption-based strategies are reported beyond the limits and generalizations imposed by PECS or other households surveys, illustrating the responses to the fragmentation and the building of forms of social and economic capital. For example, as a response to the closure-produced economic structural changes, and in line with UNSCO (2005) findings, communities located near closure obstacles are drained of economic activity and they re-locate to where there is freer movement. Small shops and services have been

localized, by expanding directly into small town and rural communities, in order to reach consumers, unable to purchase goods far from their community. In the same manner, industry and agricultural operations have been relocated to minimize travel, therefore reducing transportation costs, securing cheaper inputs and minimizing risk. In addition, the contraction of the circulation of cash due to growing unemployment and reduced economic activity is offset by reduced domestic demand and by finding alternatives to the use of cash as a means of payment, such as increased non-waged labour, share-cropping, barter and in-kind payments.

The household's responses also illustrate the shift in the traditional labour patterns produced by closure. There is an increased role of women and grandparents in the labour force, which substitutes for lost male income; a continuing reliance on employment and markets in Israel in spite of the risk of being caught, closure-imposed constraints for commuters in terms of costs and time and the conditions of life if they decide to stay in Israel for extended periods; an increase in self-employment, such as opening small-shops, which enables workers to avoid the obstacles faced by commuters but barely affords enough income to cover daily necessities; and on waged work in other parts of the West Bank such as Ramallah.

Related to these geographical and economic re-configurations is the question about how the analysis of risk management can capture the structural and dynamic dimensions of the conflict. As previously discussed, in context where conflict is chronic and shocks are repeated over time, the analysis of risk management requires to capture the continuous process of change in the household's livelihoods.

Given the general lack of panel data, a way of reflecting this double time dimension of conflict into the risk management process would be to use Davies (1996) distinction between coping and adapting behaviours. Coping strategies are those short-term and transitory activities, which are reserved for periods of unusual stress, and permit people to cope with disruption of the normal bundle of entitlements within the prevailing rule system. Adapting strategies are adopted long-term as a result of a structural change in the rule system and imply a permanent change in the mix of activities required for subsistence irrespective of the year in question.

However, these two behaviours are not distinguishable by their activities and one needs to know the reasons for doing them, the timing of their adoption, their sustainability, their effectiveness, degree of dependency, frequency and length of use (Davies, 1996). Understanding risk management behaviour with respect to these aspects is by far a more complex task than simply monitoring whether or not particular activities are being undertaken and assuming their relationship with household vulnerability. It is, indeed, argued that a lack of information about these factors is the reason why the complexities of adaptation have not been fully grasped (Shafer, 2002). There is a need to modify accordingly the surveys questionnaires.

Disregarding the structural changes occurring during long periods of stress allows focusing on expost strategies and using them as catch-all terms to describe everything that households do over and above primary productive activities. It has simply become synonymous with the socio-economics of the household or more recently with livelihood security or vulnerability failing to account for locational specificities and changes over time. In the context of chronic crises, this focus could be rather speculative because it could imply that people do cope and that household insecurity is a transitory phenomenon even if the livelihoods are exhausted. Given the dynamic and structural changes introduced by the conflict-produced shocks, particularly in chronic conflicts, which produced fundamental and irreversible changes in local livelihood systems, presupposing that people cope even in subsistence economies, which are no longer viable from the point of view of livelihood security, masks the collapse of livelihood systems and blind policy makers and researchers to the need for a radical re-appraisal of the requirements of people's livelihoods in conflict-affected areas. Reinforcing coping strategies once livelihoods have been eroded could lock the people into a vicious circle of subsistence and coping.

In the context of oPt, one dilemma that policy makers face is how to support adaptation strategies without reinforcing the process of fragmentation produced by the policy of closure. While rural and small town villagers perceive their own adaptation and coping measures as positive developments, worthy of support, the Palestinian Authority and a great part of the donor community want to avoid strengthening unsustainable structural changes in the belief that closure will eventually disappear and access conditions, both internally and across borders, will steadily improve.

This research argues that key issue is to identify actions that address the social and economic fragmentation while transforming the current status quo and contributing hence to a lasting reduction in the Palestinian vulnerability. For example, supporting subsistence agriculture could be one of those actions as it has become a resilient buffer for a wide range of households against closure; and it is bound-up in sensitive issues (land, territory and control over resources) that need to be tackled to change the power dynamics which have governed the sectorial allocation of aid and have underwritten the process of Palestinian fragmentation. Other example could be the strengthening of the social capital. Given the importance of the tight-knit Palestinian social structure in preserving their national cause (Hanafi, 2005), and of the informal safety nets in whistanding the deteriorating conditions of the II Intifada (World Bank, 2004), there is a need to legitimize and support the grassroots associational life, which has been neglected in favour of the

donor-driven creation of a civil society through the support of (unelected) NGOs, whose power base and prestige has been supported through heavy funding.

To finalise this section, it is worth noting the new set of strategies contained in the third column of Table 6, such as the permanence (as opposed to migration), having children (to contribute to the demographic growth), constructing without licences, continuing with daily life, supporting and joining armed groups. These activities, referred as livelihood-based strategies, have to do more with the overall livelihood vulnerability than with the household mapping of consumption and income. In fact, they are more related to the long-term objective of the Israeli-occupation of preventing the existence of the Palestinian state within the 1967 borders. Although the issue about the strategies' motivation is addressed in the next section, it has already been seen that unlike in other type of crisis, armed conflicts introduce uncertainty in the assets. In the oPt, it is the uncertainty in the land that provokes the livelihood-based strategies.

# 4.3 The Factors Influencing Risk Management

The last set of micro-implications regards the factors influencing risk management. In the same manner that the risk events and the strategies, the determinants of risk management – choice and outcome - need to be portrayed within there causes.

One key aspect, although rarely researched, is that of the household's motivation to choose the strategies' portfolio. Within the framework of risk management in developing countries, it is generally assumed that responses are generally taken to deal with the short-term income-fluctuations and more particularly to deal with the anticipated or actual loss of income associated with uncertain risk events and outcomes.

However, as raised in Table 6 and by the emerging literature, the risk-related behaviours observed among households affected by conflict suggest the existence of other motives beyond the mapping of consumption and income. For example, despite the relevance of the accumulation of livestock as a substitute for savings and of investment in human capital as facilitator for economic mobility, livestock was not used as a buffer-stock (Bundervoet, 2007; Verpoorten, 2007) and human capital was depleted (Deininger, 2003; Shemyakina, 2006; Chamarbagwala and Morán, 2008) because of the riskiness attached to the assets. The consequences of risky assets also are illustrated in the income smoothing strategies. Households concerned with their own security adjust their labour supply by replacing the highly risky members (primarily men within a certain age range) with low-profile members (e.g. women, children and the elderly) (Körpf, 2004; UNSCO, 2005; Rodríguez and Sánchez, 2009). Furthermore, Bundervoet (2007) notes that assets riskiness also affect the investment allocations. The asset-rich households do not reduce their allocation of low-risk low-return activities because assets cannot provide anymore the insurance required by the investment in high-risk activities.

All these behaviours may suggest that risk management in the context of armed conflict seems to responds to the multi-dimensional effects of armed conflict, in which security-orientated behaviour may be significant. Managing household economics to secure consumption is a piece of jigsaw of other immediate and long-term needs, which are directly related to the specific context of vulnerability. While in Burundi and Rwanda, Verpoorten and Bundervoet framed the vulnerability context through asset's riskiness explained by a predatory behaviour, in the West Bank, as the Figure 1 illustrates, a strategy of land dispossession purses the uncertainty of people's livelihoods by economic strangulation and social fragmentation.

The fact that people's risk-related behaviour seems to responds to specific experiences or the context goes in line with the emerging research examining the impact of exposure to conflict on household's preferences (Robson, 2002; Hobfoll, 1989). Particularly, Voors *et al.*, (2010) studies the social-, risk- and time-preferences in context of conflict. They found that individuals affected by conflict are more altruistic, risk seeking and have higher discount rate, which suggest indeed, that household's preferences are endogenous and respond to experiences or the context. Given the influence of household's preferences (particularly those pertaining to evaluate risk and discounting the future) on consumption, saving and investment behaviour, this type of finding, although needs further corroboration, is of great importance to the study of risk management of households in conflict.

The ample approach to household's motives of risk management has several implications. Firstly, the fact that there are other reasons beyond consumption and income mapping makes explicit the power dynamics between the two belligerent parties in a context of political vulnerability. It is often the case where the outcomes of a risk event, say poverty or food insecurity, are often the outcomes of strategies pursued by armed-conflict winners. For example, as Duffield (1991) noted the Dinka of Barhr el Gazal in Sudan have been subjected to extensive cattle raiding and looting from the mid 1980s, which resulted in famine conditions. The Dinka were subject to these raids not because of their poverty, but because of their natural wealth in cattle. Their vulnerability to these raids has been described as part of a long-term process of political de-legitimisation. Another example showing how political vulnerability manifests itself in displacement and appropriation of property may be that of the occupation of the Palestinian Territories.

While in contexts of exogenous risk events, vulnerability is more associated with the level of assets; in the context of endogenous shocks, the source of risk needs also to be considered since it impacts people differently according to its target, whether it is ethnic, location, or welfare related. When looking into the sources of risks and observing the complexity of power relations and the political dimension of the crisis, vulnerability cannot be attributed to market or poverty failure, nor characterized as a temporary shock if its continuation is advantageous to the powerful (Duffield, 1994). Thus, in situations of armed conflict the vulnerability of a community, household or individual is closely related to powerlessness, i.e. the political and economic process of neglect, exclusion and exploitation (Le Billon, 2000). During wars, power and powerlessness determine the distribution of entitlements among and within different groups. Those who lack power are unable to safeguard their basic, political, economic and social rights and may find it difficult to protect themselves from conflict-produced shocks.

Secondly, the wide range of motives for risk management opens a window to the portrayal of the response mechanisms as everyday forms of resistance<sup>41</sup>. The fact that armed conflicts systematically and deliberately destroy household and community asset bases and block responses establishes a particular link between the strategies and the risk events and makies them interdependent. Taking into account the interlinkage of motives and the objectives of the occupationproduced shocks, the resistance of the Palestinian population to the occupation could be measured by the continued strength of the parallel economy and social unity.

Set in a context of class struggle, Scott' resistance framework challenges crucial aspects (related to form intentions and gains) of what are acts of resistance. The author of the *Weapons of the Week* and *Everdy day forms of Resistance* states that there are no unique or predefined forms of resistance as they are influenced by the intensity and structure of the system of domination (Scott, 1985). The better our recognition and appreciation of it, the better we may be able to assess whether they are being resisted, or in what ways they are perceived of being capable of being resisted or not; and the better we may recognise certain actions as being forms of resistance.

The acts of resistance do not necessarily need to be intentional, principled-based and effective (Scott, 1990). There is a general belief to consider acts of resistance as coming from a conscious body exercising an intentional act. This has to do with our tendency to think of resistance as actions that involve at least some short-term individual or collective sacrifice in order to bring about a long-term collective gain (Scott, 1985). Distinguishing between self-indulgent and principled and selfless actions is one thing but to use them as the basic criteria to determinate what constitutes resistance is 'to miss the very wellsprings of the oppressed politics' (Scott, 1985: 26). For example, in the oPt, where the government of Israel exercises total control, the goal of resistance is not necessarily to overthrow or transform a system of domination but rather to survive within it.

According to Scott, the intentions are inscribed in the act of everyday form of resistance. In the oPt, where material interests of appropriating groups are directly in conflict with the oppressed – via land, state and movement – we can infer the intentions from the nature of the actions themselves. It is for this reason that Scott's above-mentioned definition of resistance places particular emphasis on the effort to frustrate material and symbolic claims from dominant groups. It is not a coincidence that the cries of 'land', 'state' and 'bread' that lie at the core of Palestinian resistance are joined to the basic material survival needs of the household. Everyday domination and everyday resistance flows from these same fundamental material needs. Thus, the understandable

<sup>&</sup>lt;sup>41</sup> '...any act(s) by member(s)of the class that is (are) intended either to mitigate or deny claims (e.g. rents, taxes, deference) made on that class by super-ordinate classes (e.g. landlords, the stte, owners of machinery, moneylenders) or to advance its own claims (e.g. work, land, charity, respect) vis-à-vis these superordinates classes (Scott, 1985: 22).

desire to survive – by ensuring physical safety, food supply, income, etc. – identifies the sources of resistance to the claims of the oppressor (Scott, 1985). Consumption from this perspective is both the goal and the result of resistance and counter-resistance<sup>42</sup>. Therefore, ignoring the self-interest element of involvement in the conflict is to ignore the determining context. It is precisely the fusion of self-interest and collective principles that is the vital force animating the resistance (Scott, 1985). Thus, when the Palestinian react in a utilitarian and individualistic fashion against the powerful forces destroying their assets and blocking their livelihoods, they are also engaging in their nationalist struggle. In acting to marginally increase their chance of survival against devastating odds, they are also carrying acts of resistance.

This conception of risk management strategies as everyday forms of resistance was found during the interviews carried out during the research field work. Palestinians acknowledged the political struggle in everyday life by referring to strategies and overall risk management behaviour with the Arabic word, *sumud*. Gaining a central place in Palestinian political discourse during the 1970s, the symbol of *sumud* (steadfastness, persistence, endurance) points to two characteristics that can be ubiquitously found among Palestinians. On the one hand, preserving deep roots in the homeland; on the other, stubbornly going on with life and keeping hope for the future despite all the adversities that are faced, including occupation, discrimination, expulsion, and international negligence. At its core, *sumud* refers to the refusal to give up on Palestinian rights and dignity.

Also in this line, Daines and Seddon (1991) argue that coping strategies, although they are essentially 'defensive' strategies providing little potential for changing the circumstances, are a form of resistance. All struggle involving an active engagement with the immediate environment has the potential for development into a more extensive forms of struggle with greater capacity of expanding the room of manoeuvre and for changing the conditions within which the struggle takes place. Thus, without dismissing the risk to romanticize the weapons of the weak that are unlikely to do more than marginally affect the various forms of exploitation that the oppressed confront, the effectiveness of the acts of resistance cannot be used as a determining factor in deciding whether a behaviour is or not an act of resistance. Given the endogenous nature of conflict-produced shocks, resistance cannot just be considered as those acts contributing to a revolutionary consequence and/or be selfless, the actions that take place at the most basic individual level with the most limited and immediate objectives should be recognised as acts of resistance.

<sup>&</sup>lt;sup>42</sup> Lifting this argument to the meso and macro level, where the causes of violence are discussed and portrayed to a greater extent as greed vs grievance, we can find a parallelism with Duffield's critique of Collier's argumentation (about shifting the causes of violence from grievance to greed). Duffield states that even though warring parties usually base themselves on narratives of grievance, it is greed that is the primary force. Greed is both the goal and the result of grievance-motivated resitance (Duffield, 2001).

The third and last implication of the various motives of household's in conflict risk management is that it leaves room to explain other risk management behaviour such as the livelihoods-based strategies. Recalling from Table 6, the Palestinians, in response to the movement restrictions and the annexation of land promoted by the Government of Israel to maintain the settlement structures within the West Bank, engage in high-risk activities to manage the households economics and also to claim for their rights of movement and living within the territory as set by 1967 Israeli-Palestinian borders. It could be said that the multiple and interlinked effects of armed conflict unfold into risk management by blurring the boundaries between consumption-stress-driven and other livelihood needs related to the context of vulnerability.

Understanding the factors influencing risk management during armed conflicts requires a shift from the risk outcomes to the risk events. If the assumption of risk events as exogenous factors has allowed taking away the casualty from the risk events and defining the risk management determinants purely through economic factors (mostly associated with poverty or assets), then acknowledging the endogenous nature of factors entails apportioning some part of the cause to the risk events themselves and using them as effective variables that would explain the differential household vulnerability seen across households and community groups. Furthermore, the linkages between the indirect and direct effects of war are important. While some research explicitly recognises their linkage (e.g. Verwimp, 2005a; Richards, 1996) it is common to ignore the interconnection and present the indirect effects as the ultimate explanatory factor. However, if it is acknowledged that during armed conflict, household's impoverishment is often the goal of strategies pursued by armed conflict-produced shocks. More generally, there research is encouraged to unpack the power dynamics between the strategies of the conflict-affected households and those of the conflict-produced shocks.

The study of the determinants of the use of violence by the emerging literature and the riskmanagement profiles constructed within the framework of this investigation, are good test beds to link symptoms with causes and start understanding the multiple and interlinked causes of risk management.

As regards the determinants of the use of violence (e.g. Nillesen and Verwimp, 2010b; Justino, 2008, Guichaoua 2007), the oPt is a good laboratory to study the different approaches because the extensive information on the determinants of militia fighters, and particularly about suicide bombers. Within this context, it could be said that there are two main narratives: the studies of Berrebi (2003) and Krueger and Malecková (2003) that analyses suicide attacks by economic

variables; and the work of Saleh (2004b) and other authors<sup>43</sup> that explains the strategy of Palestinian suicide bombers through the risk events.

One of the limitation of the first type of narrative is that it fails to consider the full range of stressors – economic, political, social and physiological – and restricts its attention to economic factors consigning other factors to a black box. By implicitly assuming that the utility function of Palestinian militants depends only on economic variables such as education and poverty and nothing else, the authors did not investigate other factors related to economics that can cause political tensions. In its place, they argue that 'instead of viewing terrorism as a direct response to low market opportunities or ignorance, we suggest it is more accurately viewed as a response to ideological factors, political conditions and long-standing feelings of indignity and frustration that have little to do with economics' (Krueger and Malecková, 2003: 119).

According to Saleh (2004b), this detachment of economic factors from ideological motives neglects the nature of the political struggle; and fails to account for the socio-political pressures resulting from it, such as anger, frustration and alienation as well as the desire for retaliation and revenge on behalf of the individual's commitment to nationalist aspirations of freedom and independence, which are not irrational or gratuitous but linked to the consequences of the territorial fragmentation occurring in the oPt.

In order to delineate the importance of economic variables in the Palestinian political struggle, Saleh decided to move beyond poverty and education and attempted to understand the suicide attacks (suicide shootings and bombers) by proxying the IDF military operations<sup>44</sup> through the number of Palestinian killed and the policy of closure through per capita income and unemployment. According to his estimated models suicide, while an increase in the Palestinian per capita income as well as a reduction in unemployment rate will reduce Palestinian attacks against Israel, particularly shooting attacks, a reduction of the suicide attacks will just take place if Israel halts its policy of selective targeting of Palestinian political leaders<sup>45</sup> (Saleh, 2004b).

<sup>&</sup>lt;sup>43</sup> Yom and Saleh (2994), Kashan (2003) and Al-Sarraj (2003).

<sup>&</sup>lt;sup>44</sup> Killings, injuries, home demolitions, detention of suspect Palestinians without charge or relatives of suspect. confiscation of land, etc.

<sup>&</sup>lt;sup>45</sup> Yom and Saleh's (2004) data base of suicide attacks – shootings and bombings which occurred during the second Intifada - revealed that out of 87 individuals, 44 of them had been exposed to IDF military measures. Fearon and Laitin (2003) explain that brutal and indiscriminate actions can increase participation in violence by turning 'local non-combatants into rebel forces'. Along with this view, is the analysis of the psychiatrist Eyad Al Sarraj: 'the people who are committing suicide bombings in this Intifada are the children of the first Intifada-people, who witnessed so much trauma as children. So as they grew up, their own identity merged with the national identity of humiliation and defeat and they avenge that defeat at both the personal and national levels' (Al Sarraj, 2003:37).

The second approach to the multiple and interlinked causes of risk management is the construction of risk management profiles. Thus, in order to understand the relevance of the risk events over the outcomes, and address the risk management strategies within their causes, groups were set, based on the specificities of the oPt and availability of data, to illustrate household asset base and residence's location characteristics. While the household asset base proxies the household-related determinants of income smoothing and risk sharing, the village's location illustrates partially the geography of conflict<sup>46</sup>.

Table 7: Variables included in the risk management profiles

Risk management strategies	Occupation-produced shocks <sup>1</sup>
Relying on subsistence agriculture	No.Palestinian killed
Adjusting household labour supply	Village wall proximity
Family risk sharing	Village closure index
Community risk sharing <sup>2</sup>	Village wall enclosure
Cor	trol variables
Aggregate measures of poverty (poverty line)	and vulnerability (maximum coping period)
Households demographics (sex, age, househol	d size)
Employment of the household head (status, job	o location, employment sector, dependency ratio)
Education level of the household head	
Land and livestock ownership.	
Community population size	
Location type (rural, urban, refugee camp)	
Governorate of residence	
Distance to the city	
(1) Out of the conflict data, four variables we	re selected to represent the Israeli occupation in 2004 at
the village level	
(2) The strategy of community risk sharing i	ncludes informal borrowing and postponing payment of
bills. Although these two last strategies ar	e normally considered as inter-temporal consumption
smoothing examples, in the context of the oP	t they are more risk sharing related. Informal borrowing

shooting examples, in the context of the ort they are more risk sharing related. Informal borrowing rarely occurs with moneylender schemes but is a common practice among in-laws and neighbours; given the flexibility of payment among them one can argue that informal borrowing follows a rationale which is more characteristic of spatial than inter-termporal consumption smoothing (World Bank, 2004a). As for the delay in the payment of bills, it has been possible because government and private companies have assumed their costs; by subsidizing electricity and water bills, the government and private companies have allowed these services to continue despite the non-payment of bills (Sletten and Pederson, 2003).

In the analysis of these conditional associations, rather than being interested in the specific extent of use of risk management strategies in different conflict settings (according to nature and intensity), we are interested in the type of change<sup>47</sup> the control variable introduces into the relationship studied; i.e. how different is the relationship 'strategy-shock' among households exposed to similar type of shocks but differentiated by household's comparative advantages in terms of consumption poverty, demographics, skills and labour endowments? How different is the

<sup>&</sup>lt;sup>46</sup> Conflict-produced shocks can target people based on their welfare, ethnic origin, location, etc. In the case of the oPt, where the issue of contention is related to land and more generally space, as Hanafi (2008) argued, residence location is particularly relevant in determining conflict geography.

<sup>&</sup>lt;sup>47</sup> The change is classified according to three behaviours: i) the control variable introduces changes in the direction of the association; ii) the control variable introduces changes just in the shape of the relationship; iii) the control variable introduces no changes in the association.

relationship 'strategy-shock' among households exposed to similar type of shocks but differentiated by residence's location characteristics?

Regarding the relationship between income smoothing strategies and shocks, we have observed that despite the importance of the strategies of farming and adjusting household labour supply during covariate and long crises, in the context of armed conflicts such as the oPt, their reliance seems to be determined by the nature of the shock. Thus, while the use of income smoothing strategies decreases (sometimes in a non-linear manner) with the intensity of violence and Wallrelated shocks, it increases with the intensity of village closure<sup>48</sup>. Assuming that the intensity of the shocks increases the need to use income smoothing strategies then, a reduction of income smoothing can be interpreted as either the household's lack of means or access to the means is blocked<sup>49</sup>. The difference observed across the shock types seems to back up the blockage hypothesis. It is as if the violence- and the Wall-related shocks exercise bigger pressure on income smoothing strategies than the closure-related shocks. In fact, the space of movement and hence the possibility for a livelihood is reduced to a greater extent by violence and Wall enclosure than by the village closure. While violence confines the people to their homes and the Wall to their villages, village closure restricts household movements between the village and the natural centre, which has been assumed to be the closest village or city with a hospital.

In order to test for the lack of means hypothesis, the negative relationships were examined across households<sup>50</sup>. We observed that households, regardless of their comparative advantages (skills and labour endowments or capital access), living in high-violence and Wall-enclosed villages rely on income smoothing strategies to a lesser extent than those living in low-violence and Wall-affected locations. This comparison seems to suggest that access to agricultural land and labour markets in high conflict-affected villages is not determined by household assets as much as by IDF violence and Wall-related enclosure, which deliberately block the access and restrict movement not only reducing the options relying on the markets but also those depending on the informal economy and subsistence forms of living.

<sup>&</sup>lt;sup>48</sup> See Appendix 4 Part I for the frequency distribution of income smoothing strategies across conflictproduced shocks at the village level. <sup>49</sup> In theory, it could be that the decrease in use of risk management strategies may reflect an improvement in

the family economic situation. However, this seems unlikely in the context of this study, since average income in 2004 continued to fall and poverty rates continued to be higher than they were prior to the crisis (World, Bank, 2004a). <sup>50</sup> See Appendix 4 Part II for the negative and significant conditional associations.

The analysis of the conditional associations distributions shows a low number of modifier effect variables<sup>51</sup>. Bearing in mind the limitations of the bivariate analysis, this lack of change in the directional nature of the relationship could be an indication of the little space of manoeuvring that the occupation-produced shocks leave to other factors to radically influence the impact of the shock on the income smoothing strategies. In addition, the fact that the majority of the modifier effects are introduced by location and not by household characteristics is in line with the previously raised argument that community characteristics influence the exposure, the impact and the ability to bounce back. In order to further research this, future analysis is needed to assess whether the community power to override the nature of the relationship between income smoothing conflict-produced shocks is because of public infrastructure, political ideology, presence of armed groups, proximity to Israeli infrastructure, etc.

In the case of risk sharing profiles<sup>52</sup>, we noted that the majority of the factors introducing modifier effects were related to the location of the households rather than their comparative advantages in terms of skills, welfare or labour endowments. However, if we compare the distribution of the conditional relationships between income smoothing and risk sharing strategies, the household variables seem to be more relevant among the latter than the former; it is as if risk sharing is more under the control of households than income smoothing actions, whose choice and effectiveness seem to be more affected by violence and the policy of closure.

Within the conditional associations of risk sharing, we studied the cases where risk sharing seems to be more resilient. In line with the contradictory and complex processes affecting social capital during conflict (e.g. Pinchotti and Verwimp, 2007; Goodhand *et al.*, 2000; Körpf, 2004), we observed that the Palestinian reliance on risk sharing across shock intensity changes across strategies and shocks type. Unlike the income smoothing, the conditional analysis provides a scarce empirical basis and prevents any conclusion to be drawn. Based on the risk sharing profiles, further analysis is encouraged to explore the determinants of risk sharing. But rather than giving all the attention to the type of social capital<sup>53</sup>, it is suggested to include the factors that appeared relevant in this preliminary analysis such as nature of the group (e.g. family, community or nationality-based, etc.), which sets up membership restrictions and the norms of reciprocity and trust; the source of the shock (e.g. IDF violence, village closure, Wall-related closure and land annexation,

<sup>&</sup>lt;sup>51</sup> Control variables are said to introduce modiffer effects when they change the direction of the association. For example, poverty would be a modiffer effect control variable if the poor households reduce the use of farming when village violence increases, while non-poor households increase farming as village violence increases. See Appendix 4 Part III contains a summary of the type of behaviour observed in the studied conditional associations.

<sup>&</sup>lt;sup>52</sup> See Appendix 5.

<sup>&</sup>lt;sup>53</sup> For a debate about bridging and bonding social capital in context of armed conflict see Colleta and Cullen (2000), Richards (1996), Harvey (1998) and Körpf (2004).

etc.) influencing the creation and destruction of social capital; as well as the household and community characteristics shaping both the strength of social capital and exposure to the conflict.

#### 5. Conclusions and future analysis

The aim of this paper was to investigate the micro implications of the CE approach into the household risk behaviour, specifically how the characteristics of armed conflict unfold into the households risk management.

By analysing the case study of West Bank during the period following the onset of the II Intifada, the research identifies some of the distinctive features and elements of risk management of households in conflict demonstrating that that there is much to understand beyond the explanations offered for conflict-related coping. In fact, there is enough evidence to belief that risk management responds to household conflict experiences and shocks characteristics. In the same manner that the risk management framework was adapted to developing countries, contexts characterised by uncertainty and liquidity constraints, it also needs to be adapted to contexts of armed conflict, where risk are endogenous, dynamic and multidimensional.

Overall, one needs to move beyond the illustration of the conflict by single, exogenous and temporary shocks and integrate its different dimensions and time dynamics capturing the overall rationale. The identification of household risk management strategies need to illustrate the building forms of capital within the specific context of vulnerability, where actions of coping, adapting and resisting respond to a jigsaw of interlinked immediate and long-term motivations – economic, security, and powerlessness. If vulnerability can not be attributed to market or poverty failure because its continuation is advantageous to the powerful, then the determinants of risk management can not be viewed merely from an economic viewpoint, detached from the political context which influences the distribution of entitlements among and within different groups.

Since very little is known about the risk management process in the context of conflict, efforts are needed to explore it from scratch without the lens of risk management during natural disasters or economic crises. To start with, and in line with the work of Brück *et al.* (2010) about the identification of violent conflict in micro-level surveys, it is important that household surveys are modified accordingly containing information about conflict-produced risk events and risk management strategies. Vis-à-vis the former, the characteristics of spread, intensity and predictability should be studied together with the specific causes and the intrinsic features – multidimensional, dynamic and endogenous. Regarding the latter, the strategies' efficiency and sustainability as well as the households' dependency and motivation need to be explored. Of

course, this is a more demanding exercise in terms of coding, data interpretation and so forth, but it can be certainly enriching.

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# Map 2: Oslo peace process geographical demarcation of the oPt



Map 3: The Israeli settlements and other structures in the West Bank 2005

Source: OCHA





Source: Palestinian Negotiations Affaire Department (NAD) and Negotiations Support Unit (NSU)





Source: OCHA

# **APPENDIX 1 : CONSULTATIONS AND INTERVIEWS**

Consultations

Туре	Organizations chosen
Organizations or institutions directly involved with the analysis of Palestinian responses to the crisis	World Food Programme United Nation Special Coordinator Office for the Middle East United Nations Food Agriculture Organizations Acción contra el Hambre Stop the Wall Campaign, Palestinian Central Bureau of Statistics International Palestinian Youth League United Nations Relief and Works Agency for Palestinian Refugee in the Near East
Palestinian research institutes carrying out micro-analysis of the conflict	Palestinian Economic Policy Research Institute (MAS) Palestinian Society for Regional Studies, Applied Research Institute Jerusalem (ARIJ), Academic Society for the Study of International Affairs (PASSIA).
Israeli (and Palestinian) Non- governmental organizations	Alternative Information Centre (AIC) Israeli Information Centre for Human Rights (B'Tselem) Machsom Watch Beit Salom, Israeli Committee Against House Demolitions (ICHAD).
Donors	The European Union (EU) World Bank
The Spanish Development Agency and Spanish NGOS	Agencia Española de cooperación internacional para el desarrollo Asociación para la cooperación con el Sur (ACSUR las Segovias) Paz y Tercer Mundo (PTM) Solidaridad Internacional Movimiento para la paz (MPDL) Cruz Roja

#### Focus groups participants

Group	Number of people	Gender	Location
1	4	4F	Bethlehem
2	4	4M	Nablus
3	6	4M, 2F	Hebron

#### Individual interviewees

	Gender	Age	Location	Occupation
1	М	35	Bethlehem	Teacher
2	F	31	Nablus	Social worker
3	М	42	Hebron	Street vendor
4	М	22	Bethlehem	Student
5	М	37	Qalqilya	NGO worker
6	М	55	Bethlehem	Hotel manager
7	F	32	Salfit	Secretary
8	М	60	Jericho	Shop keeper
9	М	43	Ramallah	Unemployed
10	М	37	Ramallah	Waiter
11	М	29	Ramallah	PC programmer
12	М	41	Bethlehem	Shop owner
13	F	55	Qalqilya	Housewife
14	F	23	Nablus	Student
15	М	55	Nablus	Unemployed
16	М	62	Bethlehem	Guard
17	М	38	Jericho	Tea seller
18	М	34	Bethlehem	Housewife
19	М	32	Qalqilya	Seamstress
20	F	45	Jenin	Vegetable seller
21	F	52	Jenin	Teacher
22	F	55	Nablus	NGO worker
23	М	19	Ramallah	Shop vendor
24	М	22	Nablus	Street vendor
25	М	55	Ramallah	Agriculture

# **APPENDIX 2: MOVEMENT RESTRICTION INDEX**

Based on the type of roads (primary and secondary), and the type of obstacle (manned (checkpoint) and unmanned(roadblock), the following assumptions have been made. Firstly, Palestinians generally want to avoid checkpoints either because they don't hold a permit when required or because they want to avoid the long waiting time or the humiliation that often takes place at the checkpoint. Secondly, the main road is preferred as it is better paved and it is a faster route. Based on them, the closure index has been constructed to measure the degree of movement restrictions imposed on the main and most direct routes and on identifiable alternative secondary roads connecting the village with its natural centre. The natural centre has been defined as the closest town or village with a hospital. It coincides almost always with the governorate capital. In the case of the governorate capital the village index equals 0.

Table 2: Mo	vement restric	tions index		
1 <sup>st</sup> Road	2 <sup>nd</sup> road	Score	Explanations	Legend
		0	People and vehicles will use the main road.	
		0		_ = clear road
	$\Delta$	0	People and vehicles will use the main road.	
Δ		1	Private vehicles (including trucks) are forced to use a secondary road.	= checkpoint
				$\Delta$ = roadblock
			People will travel by public transport on the main road. In this case, Palestinians have to get out of the car, cross the roadblock by foot and get into another vehicle.	
Δ	Δ	2	People, as above, and trucks will use the <i>back-to-back system</i> (trucks will be off-loaded and then reloaded at the other side of the roadblock.), dramatically increasing transport costs.	
		3	Secondary roads are the only option in order to avoid checkpoints	
	Δ	4	People and private vehicles are forced to use the back-to-back system.	
		5	People and private vehicle traffic are compulsorily subject to permit possession or check.	

The following table provides the status of closure of main (M) and secondary (S) roads as well as the closure index (R) for each specific sampled village across time.

Village	Natural Centre	1	Dec0	3	Ja	n 20	04	М	arch	04	Ju	ıly 20	04	No	vem	ber	Ap	ril 2	005	Aug	gust	2005	Ja	anua 2006	ry	Ju	ne 20	006
	Centre	м	S	R	м	S	R	м	S	R	м	S	R	м	<u>2004</u>	R	м	S	R	м	S	R	м	<u>2000</u>	R	M	S	R
Ad Doha	Bethlehem			0			0			0			0			0			0			0			0			0
Al 'Aza (Beit Jibrin) RC	Bethlehem			0			0			0			0			0			0			0			0	-	-	0
Ash Shawawra	Bethlehem	Δ		1	Δ		1	Δ		1	Δ		1	Δ		1	Δ		1			0			0	-	-	0
'Avda Camp	Bethlehem	-	-	0	-		0	-		0	-	-	0	-		0	-		0			0	-		0	<u> </u>	-	0
Beit Iala	Bethlehem		-	0			0	-		0		-	0	-		0			0			0	-		0	<u> </u>	-	0
Beit Sahur	Bethlehem		-	0			0	-		0		-	0	-		0			0		-	0	-	-	0	<u> </u>	-	0
Bethlehem	Bethlehem	-	-				0	-		0		-	0	-		0			0		-		-	-	0	<u> </u>	-	
Wadi al 'Aravis	Bethlehem	Λ	Λ	2	Λ	Λ	2	Λ	Λ	2	Λ	Λ	2	Λ	Λ	2			0			0	-		0	<u> </u>	-	0
Za'tara	Bethlehem			-			-			-			-			-	Λ		1			0	-		0	<u> </u>	-	0
Adh Dhahiriya	Hebron	Δ	Λ	2	Δ	Λ	2		Λ	2	Δ	Λ	2		Λ	2	Δ		1	Λ		1	-		3	<u> </u>	-	3
Al Arrub Camp				2			2			2			2			2		Λ	2		Λ	2	Λ	Λ	2		Λ	2
Al Fawwar Camp	Hebron		Λ	2		Λ	2		Λ	2		Λ	2		Λ	2		Δ	2			2			-	<u> </u>		-
As Samu'	Hebron	Δ		2			2			2	Δ	Δ	2	-		4		Δ	2		Δ	2			4	-		4
Ash Shuvukh	Hebron			4			4			4			4			4	Λ	Δ	2	Λ		2	Λ		2			2
Beit Kahil	Hebron		na	-		na	0		na	0		na	0		na	0		na	2		na	2		na	2		na	2
Halbul	Hebron	Δ	ina	2	Δ	nu	2	Δ	III	2	Δ	inu	2	Δ	III	2		Λ	2		Λ	2		Λ	2		Λ	2
Hebron (Al Khalil)	Hebron		-				0			0			0			0			0						0			
Hitta	Hebron	Δ		1	Δ		1	Δ	-	1	Δ		1	-	-	2		Δ	4		Λ	4	-	Δ	4	-		4
Idhna	Hohron		-	1			1			1			1	-		2						4			4			2
I'zoiz	Hohron		•	1		•	1		•	1		•	1	•	•	3	•	•	3	•	Δ	3		Δ	3			
I ZelZ	Hebion			2			2			2			2			4			2			2	-		4			4
Kiluisa S-lin	Hebion			4	Δ		4			4			4			4			3			3		•	3			3
Sair Shuadh all Annah	Hebron	•	Δ	4		Δ	4		Δ	4	•	Δ	4	•	Δ	4			2			2			2			2
	Hahara	Δ		2	Δ		2	Δ		2	Δ		2	Δ		2	Δ	Δ	2	Δ	Δ	2	Δ	Δ	4			2
Tallun Nati	Hebron			0			0	-		0			0			0		-	0			0	<u> </u>		0		<u> </u>	0
	Hebron			2			2			2			2			2			2			4	<u> </u>		4			4
Al Judeida (Jadida)	Jenin	na	-			Δ	4			4			3			3			3			1	<u> </u>		0		<u> </u>	0
	Jenin		-				3	-		0			0			1		-	0			0	<u> </u>		0	$\vdash$	<u> </u>	0
Arraba	Jenin						4			2			1		Δ	4		Δ	2		Δ	2			0		<u> </u>	1
Ash Shunada	Jenin		-				4			2			1	-		0			0			0	<u> </u>		0		<u> </u>	0
Jaba	Jenin					Δ	4	Δ	Δ	2	Δ		1			3			3			3			0		<u> </u>	0
Jenin	Jenin						0			0			0			0			0						0		<u> </u>	
Jenin Camp	Jenin						0			0			0			0			0			0			0		<u> </u>	0
	Jenin						4	Δ		2	Δ		1		Δ	4		Δ	4		Δ	4			0		<u> </u>	0
Meithalun	Jenin					Δ	4		Δ	4			3			3			3	Δ		1			0	-	<u> </u>	0
Ti'nnik	Jenin						3			0			0	Δ		1			0			0			0	<u> </u>	_	0
Ya'bad	Jenin					Δ	4	Δ	Δ	1	Δ	Δ	1	-	Δ	4		Δ	4		Δ	4		Δ	4			4
Zububa	Jenin						3			0			0	-		0			0			0			0		<u> </u>	0
Al 'Auja	Jericho	Δ		1	Δ		1	Δ		1	Δ		1			3			3			3			3	<u> </u>	<u> </u>	3
Al Jiftlik	Jericho	Δ	<u> </u>	1	Δ		1			1	Δ	<u> </u>	1	<u> </u>	Δ	4	<u> </u>	Δ	4	<u> </u>	Δ	4	<u> </u>		5	<u> </u>	<u> </u>	5
Aqbat Jaber Camp	Jericho		<u> </u>	0			0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>	<u> </u>	<u> </u>	<u> </u>		0	<u> </u>		0	<u> </u>	<u> </u>	0
Ein ad Duyuk al Fauqa	Jericho		<u> </u>	0			0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>		0	<u> </u>	<u> </u>	0
'Ein ad Duyuk at Tahta			<u> </u>	0			0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0			0	<u> </u>	<u> </u>	0
'Ein as Sultan Camp	Jericho		<u> </u>	0			0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0			0	<u> </u>	<u> </u>	0
Jericho (Ariha)							0			0			0			0			0						0	<u> </u>	<u> </u>	-
'Askar Camp	Nablus		<u> </u>	0			0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0	<u> </u>	<u> </u>	0	<u> </u>		0			0	<u> </u>	<u> </u>	0
Balata Camp	Nablus			0			0			0			0	-		0			0			0			0	_	<u> </u>	0
Beit Furik	Nablus		Δ	4		Δ	4		Δ	4		Δ	4			5			5			5			5	<u> </u>	<u> </u>	5
Burin	Nablus		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4			4			4		Δ	4	<u> </u>		4
Huwwara	Nablus		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4	<u> </u>		4
Ijnisinya	Nalbus		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4	<u> </u>		4
Kafr Qallil	Nablus			0			0			0			0			0			0			0			0	<u> </u>	L	0
Nablus							0			0			0			0			0						0	<u> </u>	L	
Qabalan	Nablus		$ \Delta$	4		$ \Delta$	4		$ \Delta$	4		$ \Delta$		1	$ \Delta$	4		$\Delta$	4		$ \Delta$	4		$ \Delta$	4		$ \Delta$	4

Village	Natural center	1	Dec0	3	Ja	n 20	04	М	arch	04	Ju	ly 20	004	No	vem 2004	ber 1	Ар	ril 2	005	Aug	gust 2	2005	Ja	anua 2006	ry	Ju	ne 20	106
		Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R	Μ	S	R
Qusin	Nablus			5			5			5						5			5		Δ	4		Δ	4		Δ	4
Sabastiya	Nablus		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4
Tell	Nablus		Δ	4		Δ	4		Δ	4		Δ	4		Δ	4			5			5			3			3
An Nabi Elyas	Qalqilya	na					5			5			5			5			5			5			5			5
'Azzun	Qalqilya						5			5			5			5			5			5			5			5
Hajja	Oalqilya						5			5			5			5			5			5			5			5
'Isla	Qalqilya						5			5			5			5			5			5			5			5
Kafr Thulth	Qalqilya						5			5			5			5			5			5			5			5
Qalqiliya	~ • • •						0			0			0			0			0						0			
Al Am'ari Camp	Ramallah			0			0	na					0			0						0			0			0
Al Bireh	Ramallah			0			0						0			0						0			0			0
Al Jalazun Camp	Ramallah	Δ	Δ	2	Δ	Δ	2				Δ	Δ	2			5			5			5			5			5
Al Mazra'a ash Sharqiya	Ramallah			3			3						3			5			5			5			5			5
Al Mughayyir	Ramallah			3			3						3			5						5			5			5
'Arura	Ramallah		Δ	4		Δ	4					Δ	4			5						5			5			5
'Atara	Ramallah		Δ	4		Δ	4					Δ	4			5						5			5			5
Beituniya	Ramallah			0			0						0			0						0			0			0
Beit Ligva	Ramallah			5			5			5			5			5			5			5			5	-		5
Deir Ibzi'	Ramallah	Λ	Λ	2	Λ	Λ	2				Λ	Λ	2	Λ		2	Δ		2			0			0	-		0
Kafr 'Ein	Ramallah		na	5		na	5					na	4		na	5		na			na	5		na	5	-	na	5
Oarawat Bani Zeid	Ramallah		na	5		na	5					na	4		na	5		na			na	5		na	5		na	5
Ramallah							0			0			0			0			0						0	-		
Silwad	Ramallah		Δ	4		Δ	4					Δ	4			5			-			5			5	-		5
Silwad Camp	Ramallah		Δ	4		Δ	4					Δ	4			5						5			5			5
Biddya	Salfit		Δ	4		Λ	4		Λ	4		Δ	4			5			5			5			5			5
Deir Istiva	Salfit		Δ	4		Δ	4		Δ	4		Δ	4			5		na	5		na	5		na	5		na	5
Farkha	Salfit			0			0			0			0			0			0			0			0			0
Kafr ad Dik	Salfit			0			0			0			0			0			0			0			0			0
Kifl Haris	Salfit		Δ	4		Δ	4		Δ	4		Δ	4			5		na	5		na	5		na	5		na	5
Mas-ha	Salfit		Δ	4		Δ	4		Δ	4		Δ	4			5			5			5			5	-		5
Oarawat Bani Hassan	Salfit		Δ	4		Δ	4		Δ	4		Δ	5			5		na	5		na	5		na	5		na	5
Salfit	Salift						0			0			0			0			0						0	-		
Yasuf	Salfit	Δ	na	2	Δ	na	2			0			0		na	5		na	5		na	5		na	5	-	na	5
'Aqqaba	Tubas			0			0			0			0			0			0			0			0			0
El Far'a Camp	Tubas			0			0			0			0			0			0			0			0			0
Ras al Far'a	Tubas			0			0			0			0			0			0			0			0			0
Tammun	Tubas			0			0			0			0			0			0			0			0			0
Tavasir	Tubas			0			0			0			0			0			0			0			0	-		0
Tubas	Jenin	Δ	Δ	2	Δ	Δ	2	Δ	Δ	2	Δ	Δ	2	Δ		1	Δ		1	Δ		1			0	-		0
An Nazla al Gharbiva	Tulkarem			0	Δ		0			0			0			0			0			0			0			0
'Anabta	Tulkarem	Δ		1	Δ		1	Δ		1			0			0	1		0			0			0			0
Dhinnaba	Tulkarem			0			0			0			0			0	1		0			0			0	-		0
Far'un	Tulkarem			0			0			0			0			0			0			0			0	-		
Nur Shams Camp	Tulkarem			0			0			0			0			0	1		0			0			0	-		0
Qaffin	Tulkarem		na	5	Δ	na	2			0			0	Δ	na	2	Δ	na	2			0			0			0
Tulkarm	Tulkarem						0			0			0			0			0						0	-		
Tulkarm Camp	Tulkarem						0			0			0			0			0						0			

Table 3: Village closure (continuation)

# **APPENDIX 3: CONFLICT STATISTICS**

# Coefficient of correlation between the conflict-produced shocks

			Land an	nexation				Violence	
			Governorate			Village	Governo	orate & village	Governorate
Violence	Settlement	Settlement	Settlement	Settlement	Wall confiscated	Wall proximity	Curfew hours	Palestinian killed	Palestinian injured
	Number	Population	Built-up area	Municipal area	land area				
Curfew hours (governorate/village)	0.01*	0.10*	0.04*	-0.23*	-0.27*	0.08	1		
Palestinians killed (governorate/village)	-0.35*	-0.37*	-0.22*	-0.30*	-0.06*	0.35		1	
Palestinians injured (governorate)	0.53*	0.37*	0.58*	0.25*	0.49*	Na			1
Movement restrictions									
No. Obstacles (governorate)	0.51*	0.06*	0.05*	0.29*	0.49*	na	0.48*	0.17*	0.50*
Village Closure Index	Na	Na	Na	Na	Na	-0.15	-0.19	-0.34*	na
Village Wall Enclosure	na	na	na	na	na	1*	0.09	0.35*	na

Note: The Pearson coefficient of correlation is used for interval or scale variables. Goodman and Kurskals's gamma is used for ordinal categorical variables. Note: \* = significant at the 0.05 percentage level using Pearson chi-square test Note: na = stands for not available and it is used for those cases when the two analysed variables are not available at the same level (governorate or village).

# Conflict descriptive statistics across governorates

	Jeni	in	Т	ubas	Tulkare	m	Nab	lus	Qal	qilya	Sal	fit	Ramallah		Je	richo	Beth	lehem	Hel	oron
Variables	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev.	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev.	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev.	Sum/ Mean	St.Dev	Sum/ Mean	St.Dev.
No. Injured by governorate 2000-04	2241		na		1209		3016		1315		294		5035		359		1220		2764	
No. Injured by governorate 2001	1555		1555		725		1050		978		63		3951		312		988		1856	
No. Injured by governorate 2002	381		381		304		878		171		9		590		5		135		422	
No. Injured by governorate 2003	181		181		138		610		107		2		103		6		34		222	
No. Injured by governorate 2004	124		124		42		478		59		220		391		36		63		264	
No. Killed by governorate 2000-04	262		37		173		371		55		25		129		2		97		162	
No. Killed by governorate 2001	61		10		42		81		20		14		43		2		40		60	
No. Killed by governorate 2002	124		21		69		162		20		6		65		0		43		62	
No. Killed by governorate 2003	37		5		34		59		8		2		10		0		10		27	
No. Killed by governorate 2004	40		2		28		69		7		3		11		0		4		13	
No. hours curfew by governorate 2002- 02	21775		3504		49935		55143		7123		4330		15182		2126		27699		15662	
No. hours curfew by governorate 2002	15461		3192		38492		41998		5059		3216		12297		24		20530		7786	
No. hours curfew by governorate 2003	5578		288		10974		11590		1672		708		2242		96		5891		7079	
No. hours curfew by governorate 2004	736		24		469		1555		392		406		643		6		1278		697	
Dummy village within 1 km of Wall 2000-04	0.166	0.577	0	0	0.75	1.03	0	0	1.33	1.03	0.444	0.88	0.466	0.83	0	0	1.111	1.05	0	0
Dummy village within 1 km of Wall 2003	0.083	0.28	0	0	0.375	0.517	0	0	0.666	0.51	0.222	0.44	0.2	0.41	0	0	0.55	.52	0	0
Dummy villages within 1 km of Wall 2004	0.083	0.28	0	0	0.375	0.517	0	0	0.666	0.51	0.222	0.44	0.26	0.45	0	0	0.55	.52	0	0
No. obstacles by governorate 2003- 2004	126.75		9		76		239		76		112.75		159.75		30.5		193.75	0	388.25	
No. obstacles by governorate 2003	60		4		40		119		36		70		65		13		95		179	
No. obstacles by governorate 3004	66.75		5		36		120		40		42.75		94.75		17.5		98.75		209.25	
Village Closure Index 2003-04	3.86	2.824	0.66	1.62	1.06	2.45	5.52	4.11	8.332	4.082	4.944	4.1	5.526	3.941	0.745	1.27	0.88	1.44	3.62	2.35
Village Closure Index 2003	1.93	1.41	0.33	0.81	0.75	1.75	2.75	2.05	4.166	2.041	2.444	1.943	2.733	1.944	0.285	0.48	0.44	0.72	1.75	1.18
Village Closure Index 2004	1.93	1.41	0.33	0.81	0.31	0.70	2.77	2.06	4.166	2.041	2.5	2.157	2.793	1.997	0.46	0.79	0.44	0.72	1.87	1.17
Village Wall Enclosure 2003-04	0.33	1.154	0	0	1.75	2.48	0	0	2.33	2.338	0.44	0.88	0.33	0.72	0	0	1.55	1.66	0	0
Village Wall Enclosure 2003	0.16	0.57	0	0	0.87	1.24	0	0	1.16	1.16	0.222	0.440	0.13	0.35	0	0	0.77	.83	0	0
Village Wall Enclosure 2004	0.16	0.57	0	0	0.87	1.24	0	0	1.16	1.16	0.222	0.440	.2	0.41	0	0	0.77	.83	0	0
Note : Means apply for non-categorical d	ata. Sums are	e calculate	d for cate	gorical data.	Standard	deviations	s are calcula	ted for the	conflict v	ariables at	the village l	evel								

# **APPENDIX 4: ASSOCIATION ANALYSIS FOR INCOME SMOOTHING**

#### I. Income smoothing strategies vs. Risk events

Conflict-produced shocks in 2004 at the village level		Adjusti	ng household labo	ur supply <sup>1</sup>		Fa	arming and breedi	ng	
2004 at the vil	lage level	Used	Not	Not applicable	Chi-square statistic &	Used	Not	Not applicable	Chi-square statistic &
Nature	Intensity <sup>2</sup>		used		(Crammer's V)		used		(Crammer's V)
	-			4.0					
Palestinians	Low Medium	25 25	57 63	18	28.354	37 39	51 55	12	829.618*
killed <sup>2</sup>	High	24	57	12	(V=0.03)	11	67	22	(V=0.17)
	Low	23	58	19		13	66	21	
Village closure	Medium	24	64	12	97.764*	48	41		1177.971*
Index	High	28	52	20	(v=0.03)	38	55	7	(v=0.21)
	0	25	57	18		30	56	14	
Village sides	1	34	54	12	183.527*	16	67	17	181.544*
Wall	2	16	69	15	(V=0.09)	48	40	12	(V=0.09)
wall	3	5	69	25		19	60	20	
Village within 1 km to the Wall	No	26	26 56 18	18	22.021	30	56	14	24.262
	Yes	21	62	17	(V=.06)	24	60	16	24.363 (V=0.08)

Table 1: Frequency distributions of income smoothing strategies across conflict-produced shocks (percentage)

1. The income smoothing strategy 'adjusting household labour supply' includes: sending non-student family members to work, sending student family members to work, and searching for another job. For a discussion on this see the section 4.3.2.

2. Low (the lowest 33% of the data), Medium (from 34% to the 66% of the data) & High (the highest 33% of the data)

Note: \* = significant at the 0.05 percentage level using the Pearson chi-square test

# II. Negative and significant conditional associations

## a) Farming & Violence across households

Table 2: Percentage of use<sup>1</sup> of farming across village violence intensities for different groups of households<sup>2</sup>

1 <sup>st</sup> order control variables		V	illage Violence intensity	3
1 <sup>th</sup> order control variables	Category	Low	Medium	High
Demonster Rene	Poor	44	40	15
Poverty line	Non-poor	35	38	10
Location of amployment of household head (bb)	Same locality	49	39	10
Location of employment of nousehold nead (nn)	Same governorate	25	31	5
Employment status (hh)	Unemployed	29	32	13
Employment status (m)	Full-time employed	49	39	10
Employment sector (bb)	State company	38	35	9
Employment sector (iiii)	Government employee	31	39	8
Household size <sup>3</sup>	Medium	31	29	10
Household Size	High	43	53	5
Education (bb)	Illiterate	42	63	12
Education (IIII)	High	39	40	12
Sex (hh)	Male	39	41	10
I and ownership	Yes	58	60	31
	No	14	19	6
Livestock ownership	Yes	69	75	42
Livestock ownership	No	19	11	6
Location type	Urban	22	46	9
Location type	Refugee camp	1	5	8
Village distance to the governorate capital <sup>3</sup>	Medium	44	26	29
	Jenin	48	54	19
Governorate	Tulkarem	44	40	15
	Nablus	35	25	7

Note 1: As a matter of simplification, this table does not include the three categories of the risk management strategy (used, not used, not applicable); instead it includes just the category of 'used'. Since the percentages have been calculated across the strategy variable (used, not used, not applicable) and not across the village conflict intensities the rows do not add un to 100%.

village conflict intensities, the rows do not add up to 100%. Note 2: The control groups and their respective categories here included are just those that are statistically significant at the 0.05 percentage level using the Pearson chi-square test

Note 3: Low (lowest 33% of the data), Medium (from 34% to 66% of the data), High (highest 33% of the data).

1 <sup>st</sup> order control variables Category Village sides enclosed by the Wall							
1 of der control variables	Category	0	v mage	2	3		
Poverty	Poor	36	30	50	31		
	Non-poor	28	12	46	20		
Maximum coping span	> 12 months	29	15	61	11		
	< 4 months	36	5	46	8		
Dependency ratio (no. working family	High	27	8	54	16		
members/household size) <sup>3</sup>	Low	39	12	44	11		
Employment status of household head (hh)	Unemployed	29	14	55	14		
Employment sector (hh)	State company	27	76	57	21		
Household size <sup>3</sup>	High	34	18	43	11		
Education (hh)	Illiterate	37	12	63	14		
Land ownership	Yes	55	39	74	34		
•	No	25	34	18	4		
Livestock ownership	No	14	3	3	8		
Location type	Urban	21	5	no observations	19		
	Refugee camps	6	0	0	no observations		
Village distance to the governorate capital	Low	7	2	0	19		
	High	41	16	76	no observations		
Governorate	Tulkarem	27	25	60	17		
	Qalqilya	52	62	20	21		
	Salfit	49	11	no observations	no observations		
	Bethlehem	37	16	0	no observations		

#### Table 3: Percentage of use<sup>1</sup> of farming across village closure intensities for different groups of households

Explanations of table provided in Table 2 above

# Adjusting household labour supply (AHLS) & Village wall closure across households

Table 4: Percentage of use of AHLS across village wall closure intensities for different groups of households

1 <sup>st</sup> order control variables	Category	ory Villages sides enclosed by the wall					
		0	1	2	3		
Poverty	Poor	29	60	18	12		
	Non-poor	24	27	14	4		
Maximum coping spam	>12 months	21	19	18	2		
	12 – 4 months	26	62	13	11		
	In danger	31	39	0	0		
Dependency ratio (no. working family	High	26	30	12	0		
members/household size) <sup>3</sup>	Medium	23	39	17	6		
Employment status of household head (hh)	Employed	25	35	16	5		
Employment sector (hh)	National company	27	30	19	5		
Employment location(hh)	Same locality	29	33	12	6		
Household size <sup>3</sup>	25 <sup>th</sup> quartile (small)	17	21	22	1		
	75th quartile	37	60	6	14		
Education (hh)	Illiterate	26	47	12	14		
Age <sup>3</sup> (hh)	High	34	40	4	12		
Land ownership	No	25	34	18	4		
Livestock ownership	No	24	31	14	2		
Location type	Urban	25	28	No observations	5		
	Rural	26	49	14	No observations		
Village distance to the governorate capital	Low	26	21	22	5		
	High	25	54	20	No observations		
Governorate	Jenin	33	No observations	18	No observations		
	Ramallah	15	30	No observations	No observations		
	Bethlehem	16	39	22	No observations		

Explanations of table provided in Table 2 above

# III. Type of behaviour of conditional associations between strategies and shocks

	Associations between income smoothing strategies and shocks <sup>1</sup>										
1 <sup>st</sup> order conditional or control variables <sup>2</sup>		Farming and breed	ing	Adjusting househ	old labour supply						
	Violence shock	Village closure shock	Wall enclosure shock	Village closure shock	Wall enclosure shock						
Poverty aggregates											
Poverty	WT	NO	NO	nesc	NO						
Monthly consumption	WT	NO		nesc							
Max. coping period		WT	NO	ОТ	WT						
Demographics											
Sex	nesc										
Age					nesc						
Household size	WT	WT	nesc		WT						
Education of the household head											
Education level	NO	NO	nesc		nesc						
Employment of the household head											
Employment status	NO	WT	nesc	nesc	nesc						
Job location	WT	NO			nesc						
Employment sector	WT	NO	nesc	nesc	nesc						
Dependency ratio		NO	NO	WT	NO						
Assets											
Land ownership	NO	NO	WT	nesc	nesc						
Livestock ownership	WT	NO	nesc	nesc	nesc						
Location											
Location type	OT	OT	nesc	OT	neo						
Governorate	WT	neo	WT	nesc	neo						
Distance to the city	naco	neo	<b>n</b> eo	OT	neo						

1. The conditional associations have been classified according to three type of behaviour, i.e. whether the relationship between income smoothing and shocks is alike across the categories of the conditional variable (NO-type), and if not, whether the difference lies in the direction (OT-type) or in the shape (WT-type) of the association. The type of behaviour is only written when the conditional associations are statistically significant at the 0.05 percentage using the Pearson chi-square test.

test. 2. Non-categorical variables have been converted into categorical variables and as for the intensity of the conflict-produced shocks, three categories have been established based on three cut off points: low (cut off lowest 33% of the data), medium (from 34% to 66% of the data), high (highest 33% of the data). Note 'nesc' stands for 'not enough categories significant' and denotes those cases where the conditional association is statistically significant in one of the categories of the group.

Note 'neo' stands for 'not enough observations' and denotes those cases where one of the categories of the group lacks observations in any of three possible scenarios, i.e. low-, medium- and high-shock intensity.

# **APPENDIX 5: ASSOCIATION ANALYSIS FOR RISK-SHARING**

# I. Risk-sharing strategies vs. Risk events across households

Conflict-produced shocks in 2004 at		Community	Risk-sharing	Obtaining assistance from family and friends				
the villa	age level	Used	Not used	Chi-square statistic &	Used	l Not	Chi-square statistic &	
Nature	Intensity <sup>1</sup>			(Craininer's V)		used	(Crammer's V)	
Palestinians killed <sup>2</sup>	Low Medium High	79 84 70	21 16 30	107.983* (V=0.05)	12 7 19	88 93 81	135.776* (V=0.10)	
Village closure index <sup>2</sup>	Low Medium High	68 87 81	32 13 19	338.534* (V=0.14)	16 10 3	84 90 97	68.9723** (V=0.07)	
Village sides enclosed by the Wall	0 1 2 3	79 69 80 56	21 31 20 44	175.667* (V=0.10)	14 8 20 13	86 92 80 87	42.7507 (V=0.05)	
Village within 1 km to the Wall	No Yes	79 69	21 31	87.308* (V=0.08)	14 11	86 89	14.1165 (V=0.02)	

Table 1: Frequency distributions of risk-sharing strategies across conflict-produced shocks (in percentage)

1. Low (the lowest 33% of the data), Medium (from 34% to the 66% of the data) & High (the highest 33% of the data) Note: \* = significant at the 0.05 percent level using the Pearson chi-square test

# **II.** Positive conditional associations

Community risk-sharing vs. Village closure intensity across households

Table 2: Percentage of use<sup>1</sup> of community risk-sharing across village closure intensity for different households groups

1 <sup>st</sup> order control variable	Category		Village closur	·e <sup>3</sup>
		Low	Medium	High
Poverty line	Poor	82	97	90
-	Non-poor	65	81	79
Maximum coping period	> 12 months	49	71	60
	4-12 months	78	88	92
	< 4 months	85	100	88
Employment status	Partial employed	69	87	82
Location of employment of household head (hh)	Same locality	69	83	86
	Different	55	94	79
	governorate			
Employment sector (hh)	State company	72	88	83
	Foreign company	75	96	89
	Government	60	73	82
Household size <sup>3</sup>	Low	63	81	82
	High	78	98	79
Education (hh)	Illiterate	70	82	84
	High	68	93	89
Sex (hh)	Male	69	88	82
Land ownership	Yes	67	82	79
	No	89	93	85
Livestock ownership	No	66	87	77
Location type	Urban	64	86	82
	Rural	74	87	81
Governorate	Ramallah	56	80	77
	Bethlehem	71	89	No observations
Village distance to the governorate capital <sup>3</sup>	Low	66	88	No observations
	High	71	92	81
Village population size <sup>3</sup>	Low	75	88	78
	High	65	91	83

For table description see Table 2 Appendix 4

# Obtaining assistance from family and friends vs. Village violence across households

1 <sup>st</sup> order control variable	Category		Violence	
		Low	Medium	High
Poverty line	Poor	91	96	82
	Non-poor	75	78	68
Location of employment of household head (hh)	Same locality	81	90	68
Employment sector (hh)	Foreign company	87	98	76
Household size <sup>3</sup>	Low	75	78	65
Dependency ratio (no. working family	High	83	92	76
members/household size) <sup>3</sup>	Low	76	89	59
Education (hh)	Illiterate	77	96	78
	High	88	68	67
Sex (hh)	Male	80	83	71
Land ownership	Yes	79	76	64
-	No	78	91	72
Livestock ownership	No	74	81	69
Location type	Urban	71	91	66
	Rural	82	64	90
Governorate	Hebron	89	94	77
Village distance to the governorate capital <sup>3</sup>	Low	56	86	50
	High	83	68	97
Village population size <sup>3</sup>	Low	82	70	No observations
	High	83	68	97

Table 3: Percentage of use of community risk sharing across village violence intensity for different groups of households

For table description see Table 2 Appendix 4

# III. Type of behaviour of conditional associations between strategies and shocks

1 <sup>st</sup> -order conditional or control variables <sup>2</sup>	Associations between risk-sharing strategies and shocks <sup>1</sup>					
	Community risk-sharing				Obtaining assistance from friends and family	
	Violence shock	Village closure shock	Wall enclosure shock	Wall proximity	Violence shock	Village closure shock
Descrites a second second						
Poverty aggregates						
Poverty May, coming noried	nesc	NO	nesc	nesc	NO	nesc
David a second	nesc	WT	OT	NO	OT	WT
Demographics						
Sex Uh-ld-i	nesc	nesc	nesc	nesc	nesc	nesc
Education of the household head	nesc	WT	nesc	nesc	NO	nesc
Education of the household head						
Education level	WT	WT	nesc	NO	nesc	
Employment of the nousehold head						
Employment status		nesc	OT	NO	nesc	
Job location	nesc	WT	NO	NO	nesc	
Employment sector	nesc	WT	nesc	nesc	nesc	
Dependency ratio	NO		nesc	nesc	nesc	nesc
Assets						
Land ownership	WT	NO	nesc	nesc	nesc	
Livestock ownership	nesc	nesc	nesc	nesc	nesc	
Location						
Community population size	neo	neo	nesc	nesc	NO	nesc
Location type	OT	NO	neo	NO	NO	nesc
Governorate	nesc	neo	neo	OT	OT	WT
Distance to the city	OT	neo	nesc	nesc	NO	

For table description see similar table in Appendix 4 Part III.