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Symposium: Palestine — an economy in conflict

Articles

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Aamer S. Abu-Qarn. "Six decades of the Israeli-Arab conflict: an assessment of the economic aspects." The article critically evaluates the literature that deals with the economic aspects of the Israeli-Arab conflict. The survey covers: (1) data issues and lack of trustworthy time series; (2) the existence and causal direction of an arms race between Israel and its Arab neighbors; (3) the defense-growth nexus and possible spillovers from the defense industry to civilian sectors; (4) the effects of foreign aid; and (5) the dividends of a possible peace agreement. The survey concludes with recommendations for future research.

Atif Kubursi and **Fadle Naqib**. "The Palestinian economy under occupation: economicide." The article presents an analysis of the nature, structure, and dynamics of the relation between the Israeli and Palestinian economies as they have evolved during the occupation period and the few short years of limited Palestinian self-rule. It reveals the various asymmetries and anomalies in the relation, the way they have affected the course of the Palestinian economy, the costs that have been incurred by Palestinians, and the benefits that have accrued to Israelis from their continuation. It is argued that the removal of these anomalies and asymmetries are a prerequisite for any serious and genuine peace that would permit the economic infrastructure to promote and support a stable and durable peace. Divided into four sections, the article provides the theoretical framework within which the relationship between the two economies is analyzed; documents and examines specific practices and policies of successive Israeli governments with regard to the Palestinian economy; summarizes the cumulative effects of these specific restrictive practices; and closes with the presentation of some conclusions.

Osama Hamed. "The continued de-development of the Palestinian economy in the post-Oslo period." The de-development of the Palestinian economy began in 1967, following Israel's occupation of the West Bank and Gaza Strip (WBGS). Following the Oslo Accords of 1993, this de-development has continued. The WBGS remained dependent on the Israeli labor market for jobs until 2000, when Israel curtailed the flow of Palestinian labor to Israel following the 2000 intifada. This curtailment has resulted in sharp increases in unemployment and poverty rates in the WBGS. Closures and other actions taken by the Israeli government since 2000 have led to further de-development of the Palestinian economy. Although the WBGS has received substantial foreign aid in the post-Oslo period, the positive economic impact of such aid has been more than offset by the punitive measures taken by Israel in this period. It is highly unlikely that the Israeli government will allow the number of WBGS workers in Israel to return to its pre-2000 level. Hence, the revitalization of the Palestinian economy will require huge private investment. Such investment cannot be expected without a permanent settlement of the Palestinian-Israeli conflict that includes a Palestinian state with control over its borders and a strong link with diaspora Palestinians.

Jennifer C. Olmsted. "Post-Oslo Palestinian (un)employment: a gender, class, and age-cohort analysis." A strong Palestinian economy in the aftermath of the 1993 Oslo agreement has not materialized. This has had serious implications for employment outcomes in the West Bank and Gaza Strip. A number of authors have analyzed Palestinian labor markets during this period, but have focused almost exclusively on men's employment. This article examines changes in both women's and men's employment patterns in the post-Oslo period. It finds considerable shifts in the types of work that are available, with more educated, older men in particular gaining at the expense of youth, women, and less educated men. This, it is argued, is a function of Israeli, Palestinian, and U.S. policies. Economic ties between Israel and the Palestinian territories have been severed, to the detriment of less educated Palestinian men and women in search of employment. U.S. policies no doubt exacerbated this result, granting Jordan more favored trade status as part of the peace plan, thus contributing to the decline in the Palestinian textiles and apparel industries. The creation of a Palestinian public sector has led to some job creation, but primarily for more educated individuals, not those who were most likely to have lost their jobs in recent years.

Numan Kanafani and **Samia Al-Botmeh**. "The political economy of food aid to Palestine." The article discusses the growing food insecurity and malnutrition in the West Bank and Gaza Strip, addressing both economic and physical factors such as unemployment and destruction of land and property, and closures, checkpoints, and the separation barrier. It also discusses the scope and nature of food aid provided by Palestinian and international organizations, and argues that lest substantial sections of the Palestinian population become permanently dependent on food aid, relief efforts be focused on the underlying causes of food insecurity.

Basel Saleh. "The fragility of the Palestinian Authority: economic causes." The article examines the evolution of the Palestinian Authority as a paradigmatic case of state evolution from stable political regime to fragile and failing entity. By focusing on the performance of the Palestinian economy following the 1993/94 peace agreements, the study analyzes the forces that caused the fragility of the Palestinian Authority. These are: (1) Israel's chaotic closure policy; (2) the structural weaknesses in the Palestinian fiscal budget; and (3) the economic and trade sanctions imposed in 2000 and 2006. The article identifies some of the major obstacles that need to be overcome in any future peace agreement in order for the Palestinian Authority to be an effective entity that can promote economic progress, democracy, and ultimately be capable of enforcing peaceful coexistence with its neighbors.

Siddharta Mitra. "Poverty and terrorism." On the basis of analytical reasoning and buttressed by case studies from Latin America and Northeastern India one can conclude that poverty can and does generate terrorist activity. But poverty alone is not a sufficient factor to generate terrorism. Other necessary and facilitating factors are needed, and terrorist activity will last only if perpetuating factors are present. If terrorism that owes its genesis to poverty has to be eliminated, it is necessary to alleviate poverty itself as its favorable companion factors, being cultural, geographical, or accidental in nature, are not suitable for policy manipulation.

Raul Caruso and **Andrea Locatelli**. "Deadly contests: An economic note on al Qaeda's reward system." The article applies insights of contest theory to al Qaeda's recruitment process. Al Qaeda can be considered as a contest organizer rewarding an indivisible prize, namely, official membership and economic rewards, to candidate extremist groups. Would-be terrorists must then compete with each other to prove their commitment and ability. Candidate terrorist groups compete by maximizing their efforts to win the prize, i.e., maximizing the number of casualties. Eventually, al Qaeda reaps the benefits of the most successful attacks in the form of a huge return in terms of image, while paying a limited price. If correct, this model carries at least two important implications for counterterrorist policy. First, inasmuch as al Qaeda's main incentive to prompt competition is through spreading common knowledge about the existence of the prize, action should be undertaken to falsify and confuse the kind of information that aspirant terrorists receive. Second, because al Qaeda's reward is as much ideological as economic, efforts should be dedicated to track down and halt financial flows before they are used to reward the applicants.

Pavel A. Yakovlev. "Saving lives in armed conflicts: what factors matter?" Despite the trend toward fewer armed conflicts and war deaths, dramatic variations in conflict casualties exist across countries. This article examines what factors affect casualties in civil as well as interstate wars and finds that conflict casualties are directly influenced by geography and military expenditure per soldier. The latter proxies for military capital intensity and is of concern to policymakers because it affects the level of conflict casualties. Specifically, the article finds that military expenditure per soldier lowers conflict casualties and is significantly influenced by conscription, education, per capita GDP, geography, and political and economic freedoms.

Nadège Sheehan. "United Nations peacekeeping: limitations and prospects." While the demand for U.N. peacekeeping operations increases, the production of these operations remains problematic. The inherent characteristics of peacekeeping make it difficult to efficiently produce U.N. peace missions. Importantly, a country's participation in a U.N. peacekeeping operation is based on its national interests for that mission. The system of discretionary contributions of national armies currently used by the United Nations, as well as the structure of the U.N. peacekeeping scale of assessment, may be favorable to developing countries. However, they do not help increase contributions. Under such systems, a nation's participation in a mission depends largely on cost/benefit calculations. This article explains that instead of fighting the free-riding problem, one might seek to more deliberately pursue and implement a system whereby nations concentrate their contributing efforts to missions in which they do have national interests. To that effect, the article presents and briefly assesses relevant suggestions made by various scholars on potential structures that would best produce U.N. peacekeeping.

Symposium: Palestine — an economy in conflict

Sam Perlo-Freeman

This year marks the 60th anniversary of the creation of the state of Israel — and of the Palestinian *nakba*, whereby over 700,000 Palestinians were forcibly expelled or fled from their homes in the course of the fighting, initiating one of the longest-running conflicts in the world today. Of the many aspects of the conflict that are debated worldwide, the economic one perhaps attracts less detailed attention. This symposium addresses this gap, focusing specifically on the impact of conflict on the Palestinian territories of the West Bank and Gaza Strip (WBGS), which have now been under Israeli occupation for over 40 years.

That the Palestinian economic situation in the WBGS is grim is beyond dispute, especially in the Gaza Strip which is subject to a virtual siege that keeps out all but the barest humanitarian supplies. The articles in this symposium probe this situation in some detail, looking at the roots of the territories' economic problems in terms of the nature of their one-sided relationship with Israel, as well as their relations with the outside world and their own internal economic structures.

Aamer Abu-Qarn's article, "Six decades of the Israeli-Arab conflict," provides a broad overview of the conflict. It summarizes the conflict's chronology, then surveys the arms race literature as applied to Israel and the Arab states, on the military spending-growth nexus in the region, and on the effect of international military aid and arms transfers on the conflict. These subject matters are among the meat and drink of defense economists, but their application to the Middle East is surprisingly rare, perhaps due to the severe data problems highlighted by Abu-Qarn.

The remaining five articles focus more specifically on the WBGS economy since the beginning of the Israeli occupation following the Six Day War in 1967. Atif Kubursi's and Fadle Naqib's "Economicide" and Osama Hamed's "Economic De-development" both focus on the nature of the economic relationship between Israel and the WBGS — the underlying structures and asymmetries that lie behind the specific developments. The first focuses primarily on the conditions that have applied or that have been developing since the beginning of the occupation; the second on the way these conditions have evolved since the Oslo Accords and the formation of the Palestinian Authority (PA) in 1993. Both highlight a range of Israeli policies that have adversely affected Palestinian economic development, including natural resource transfers, closures, labor market dependency, and asymmetric trade and fiscal relationships. They argue that while bringing improvements in some areas, the Oslo peace process has deepened and accelerated the problems in many more.

Jennifer Olmsted's article focuses on a theme addressed by many of the authors, namely the Palestinian labor market, and in particular how women's labor market participation has been affected by the changes to the Palestinian economy in the post-Oslo period. She finds that women's labor market participation has stagnated or fallen as tightening competition for jobs and adverse trade conditions have pushed women out of traditional areas of paid employment such as garment manufacture. Although the expansion of the public sector under the PA is criticized by some authors, Olmsted finds that only this sector has provided enhanced opportunities for women's employment, even though that is restricted to more highly educated women.

Numan Kanafani and Samia al-Botmeh discuss the growing food insecurity and malnutrition in the WBGS, addressing both economic and physical factors such as unemployment and destruction of land and property, and closures, checkpoints, and the separation barrier. They also discuss the scope and nature of food aid provided by Palestinian and international organizations, while arguing that efforts should be focused on the underlying causes of food insecurity, lest substantial sections of the Palestinian population become permanently dependent on food aid.

Finally, Basel Saleh's article looks at the Palestinian Authority from the viewpoint of the "fragile state" paradigm, examining the economic roots of this fragility, that culminated in the brief Palestinian civil war in Gaza in 2007, which, in turn, resulted in Hamas' military takeover of the region. While some of these economic causes lie with internal Palestinian factors, such as corruption, for the most part Saleh sees the PA's fragility as the result of Israeli and international policy choices that have made the WBGS to an increasing extent an "economy under siege" for most of the post-Oslo period.

A number of common veins run through these articles: perhaps the strongest is the almost complete lack of control by Palestinians over their own economic destiny. This is due to Israeli control of borders, of movement, of land and water resources, of trade, of currency and taxation, and to a lesser extent of dependence on the international community. These factors have both stunted Palestinian economic development, and made their economy and — as Saleh shows — ultimately their political stability highly vulnerable to Israeli and international policy choices that have used the Palestinian economy as a political weapon.

In some areas, however, different perspectives emerge, for example on the role of the Palestinian public sector. Saleh sees its excessive size as representing a structural weakness in the economy, creating fiscal weakness, engendering corruption, and restricting private sector development. Olmsted, however, while recognizing the long-term unsustainable nature of this situation, points to a more positive aspect: the role of the PA in offering job opportunities in times when external factors have decimated private sector alternatives, and in particular acting as one of the few sources of paid employment for women.

While the Annapolis peace negotiations continue, efforts are also being made by the international community to attract investment to the West Bank and to promote Palestinian economic development, with $1.4 billion of investment promised at a recent conference in Bethlehem.[1] While such moves are welcome, this symposium would seem to offer a gloomy prognosis for their success so long as the occupation continues. Real Palestinian control over key aspects of their economy would seem to be a sine qua non for the viability of any future Palestinian state, and therefore of any eventual stable and durable peace agreement.

Note

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1. "$1.4bn pledged for Palestinians." *BBC News*. 23 May 2008. http://news.bbc.co.uk/2/hi/middle_east/7417345.stm [accessed 1 June 2008].

Six decades of the Israeli-Arab conflict: an assessment of the economic aspects

Aamer S. Abu-Qarn

Six decades have elapsed since the establishment of the state of Israel and, with it, the inauguration of the Israeli-Arab conflict in 1948. Several fierce wars have been fought (in 1948, 1956, 1967, and 1973) with Israel facing three major Arab neighbors, Egypt, Jordan, and Syria. The warring parties allocated a sizeable fraction, unparalleled in international standards, of their scarce resources to maintain their military capabilities and prepare for the next confrontation. With Egypt and Jordan signing peace treaties (in 1979 and 1994, respectively), Syria remained the lone member of the front line that is, at least officially, in a state of war with Israel. In spite of this, Syria as well as the other countries drastically cut their military expenditure to channel resources from the military to the civilian sectors.

Although the Israeli-Arab conflict is one of the longest-running and most influential conflicts in the world, it has received only modest attention by economists, mainly due to lack of reliable data. Interest in nonmilitary aspects of the region's economies is low as well even though it plays a significant role in the world economy. This article provides a critical survey of the literature that addresses the economic aspects of the conflict.

The next section sketches the chronology of the conflict. The sections thereafter cover the following topics: first, data sources and the lack of trustworthy, detailed time series that would enable researchers to address a wider and richer array of issues; second, the determinants of military expenditure and the existence of arms race between Israel and its Arab neighbors; third, the relationship between military outlays and economic growth and whether military spending has an adverse impact on the economies; fourth, the effects of foreign military and civilian aid on the Israeli-Arab conflict; and, finally, analysis of the benefits (and costs) of a just and sustained peace in the region. Although the issues are interrelated and often hard to detach, dividing the survey into several topics facilitates rigorous comparative analysis with other regions and economies. The concluding sections offers some guidelines for future research.

A conflict chronology

Following World War I and the collapse of the Ottoman Empire, Great Britain was granted a mandate over Palestine by the League of Nations with the stated objective of putting into effect the 1917 promise of a national home for Jews in Palestine. The Arab people of Palestine opposed the terms of the mandate, especially the lack of reference to their own political and national rights. In 1947 the United Nations proposed a Partition Plan that called for the establishment of two independent states in Palestine, one for Arabs and one for Jews. Arabs rejected this and shortly after the withdrawal of British forces and the independence declaration of Israel they declared a war on Israel. The 1948 war resulted in hundreds of thousands of Palestinians fleeing or being expelled into neighboring Arab countries.

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The next war took place after the nationalization of the Suez Canal by Egyptian President Abdel Nasser and the blockade of the Tiran Straits to Israeli ships in 1956. Israel, supported by Britain and France, invaded and occupied the Sinai peninsula and Gaza Strip. Soviet and American pressure forced the three parties to withdraw from the occupied lands by early 1957. Ten years later, in June 1967, Israel launched a quick and massive attack that lasted for only six days and took the Sinai peninsula and Gaza Strip from Egypt, the West Bank, including Eastern Jerusalem, from Jordan, and the Golan Heights from Syria. The decisive defeat of Arabs changed the Israeli-Arab conflict and the region's political structures radically.

On 6 October 1973, the holy Jewish Yom Kippur, Egypt and Syria coordinated a joint attack, advanced beyond the cease-fire lines into Sinai and the Golan, and inflicted heavy casualties on the Israeli army. Israel counter-attacked and succeeded to drive the Egyptian and Syrian armies back and advanced well into their respective territories. The war ended with a ceasefire that paved the way for peace negotiations between Egypt and Israel which culminated in a peace treaty in 1979. The agreement ended the state of war between the two countries, Israel pulled out its armed forces and civilians from Sinai, and normal diplomatic relations were established. However, this dramatic Egyptian move was opposed by a unified Arab front that objected to a unilateral peace treaty which neglected the Palestinian issue.

On June 1982, Israel attacked Palestinian targets in southern Lebanon with the stated objective of pushing Palestine Liberation Organization (PLO) forces, that were attacking northern Israel, farther to the north. Israel extended its operations deep into Lebanon beyond the initial plan and many Lebanese cities, including Beirut, and Syrian military targets in Lebanon were bombed and suffered heavy destruction and casualties. After a long siege of Beirut, PLO forces were forced out of Lebanon and Israel withdrew from most of the Lebanese territories. However, Israel maintained a security zone of approximately 10 miles north of the border that was eventually evacuated in 2000.

Two decades of Israeli occupation with no sign of progress toward a permanent solution to the Palestinian nationalistic claims have led to the eruption of an *intifada* (Arabic for popular uprising). The uprising began in Gaza and spread all over the occupied territories. It involved hundreds of thousands of people and included not only stone throwing, burning tires, Molotov cocktails, and the erection of barricades but also massive demonstrations, general strikes, refusal to pay taxes, and boycott of Israeli products. The Palestinian uprising continued, although at a lower intensity, until the signing of the Oslo Accords in 1993. In the midst of this period Israel suffered a missile attack by Iraq when the United States, backed by an international coalition, drove Iraq out of Kuwait in 1991. In the aftermath of the Gulf War, direct negotiations between Israel and Arab countries were initiated in Madrid under the supervision of the United States and the then-Soviet Union.

Several rounds of negotiations and the subsequent recognition of Israel by the PLO brought Israel and the PLO together for intensive rounds of confidential talks that led to the signing of the Oslo Accords on 20 August 1993. The Accords called for the withdrawal of Israel from parts of Gaza Strip and the West Bank and for the establishment of a Palestinian Authority and negotiating for a permanent agreement that would begin no later than August 1996. The progress in the Palestinian channel led to a peace treaty between Israel and Jordan in 1994 under which all the territorial and water disputes were resolved, and relations were normalized.

The outbreak of the Al-Aqsa intifada in 2000 marked the escalation of hostile actions by Palestinians and Israelis when the negotiations on a permanent agreement ended in a deadlock. In August 2005, Israel unilaterally withdrew from the Gaza Strip and some settlements in the West Bank. Following the kidnapping of two Israeli soldiers in southern Lebanon by Hezbollah in July 2006, Israel raided Lebanon in what later was called the Second Lebanon War.

In June 2007, Hamas violently routed Fatah forces in Gaza and established another Palestinian government beside the one that resides in Ramallah; however, it received neither Arab nor international recognition.

Data issues

Data on the Israeli-Arab conflict is scarce and what little is available is often treated with skepticism. Governments in the region do not reveal accurate measures of the strength of their military forces and, worse, they might intentionally provide erroneous reports. Researchers have no choice but to rely on official reports or data sets compiled by international organizations. Thus, data issues are always raised as possible explanations for some of the findings and anomalies in the conflict literature.

By far the most comprehensive and reliable source of data on military expenditure and arms is the Stockholm International Peace Research Institute (SIPRI). Currently, consistent data is provided only for the period 1988-2006. Most researchers resort to splicing data from earlier editions even though SIPRI explicitly warns that due to continuous revisions of military figures, data are not necessarily comparable. This practice among researchers challenges the reliability of their conclusions.

While SIPRI does its best to assure consistency, it relies greatly on official data that in the case of Middle Eastern countries is highly questionable. SIPRI strives to include all military-related activities and purchases even if they are classified under civilian budgets. But the ability to do so is confined by the usually highly aggregated data the governments release in order to conceal certain military expenses.

Another major source of data is World Military Expenditures and Arms Transfers (WMEAT), compiled by the U.S. Department of State's Bureau of Verification, Compliance, and Implementation. Although no longer updated, the reports have raised serious concerns with regard to the reliability of the data of many developing countries, including some in the Middle East. Specifically, there are reasons to believe that the military expenditure of these countries consist mainly or entirely of recurrent or operating expenses and omit most of the capital expenditure and arms purchases. Additionally, governments may use double bookkeeping, extra budgetary accounts, highly aggregated budget categories, military aid, and exchange rate manipulations to obscure large portions of military expenditure. Thus, to provide better estimates, the Bureau suggests adding the value of arms imports to the reported expenditure. It acknowledges, however, that this may then overstate actual expenditure.

Other data issues include off-balance sheet defense costs that are excluded from official defense spending accounts, such as conscripts' and reservists' imputed wages (the difference between the official and the opportunity costs), actuarial cost of medical care and disability resulting from military activities, costs of holding strategic stockpiles, and costs of air-raid shelters. These items are crucial in the case of Israel that has a long mandatory military service term (three years for males and two years for females) as well as a reserve service requirement of up to 36 days per year until the age of 51.[1]

To better examine defense-related issues, researchers need disaggregated data on many civilian-type activities that might be classified as military-type expenditure as well as on civilian-type expenditure that are included in the military budgets in order to compile reliable and comprehensive series on military outlays. Additionally, time series on the number of army personnel, arms arsenals, and procurements would significantly enhance our understanding of the evolution of the Israeli-Arab conflict and its dynamics.

The Israeli-Arab arms race

An arms race refers to a state of enduring rivalry between two or more parties under which the rivals build up their military capabilities in an action-reaction framework (Richardson, 1960). Many econometric methodologies have been applied to examine the existence of arms races among potential rivals. An excellent survey of these methods is provided by Smith, *et al.* (2000). Here, the literature that deals with the existence and direction of the Israeli-Arab arms race is surveyed. Analysis is usually conducted in the context of the determinants of military expenditure or using traditional causality tests.

To analyze determinants of Israeli military expenditure over the period 1960-1979, McGuire (1982; 1987) estimates a multiequation model using the Full Information Maximum Likelihood (FIML) method. The analysis reveals that the responsiveness of Israel to its Arab adversaries is very modest whereas Arab's responsiveness to changes in Israeli military spending is relatively high. The author takes into account the effect of American aid to Israel and finds that military aid is used to offset the effect of rising Arab spending. Both studies suffer from the short time span for which the analysis was conducted. Furthermore, the detection of first order autocorrelation coefficients that are close to unity is problematic and renders the results dubious.

Mintz and Ward (1989) show that Israel's spending is driven, among other factors, by Arab military expenditure. However, they estimate a system of equations in which the latter is exogenous. Despite the impressive fit of their regressions, the results indicate severe autocorrelation.[2]

While these studies focused on determinants of military spending, several studies adopt causality tests to assess the existence of an arms race between Israel and its rivals. In an early study, Linden (1991) applies Granger causality for Israel and Arab countries. He finds that there is a causal almost one-to-one equilibrium relationship that runs from Israel's to the Arab bloc's level of military expenditure. However, he finds that disequilibrium behavior dominates Israeli spending as it reacts only to current changes in the Arab bloc's level of military expenditure. He thus concludes that the arms race system between the two adversaries is rather unstable.

Chen, *et al*. (1996) use cointegration methods to investigate the existence of collective action among the Arab countries neighboring Israel. They show that up to the late 1970s, Egypt was the only Arab country involved in a fierce arms race with Israel and that the long-run equilibrium relationship disappeared after the signing of the 1979 peace treaty. The authors find that a long-run equilibrium with a weak Arab response was established between the defense spending of Israel and the minor front line countries (Jordan, Lebanon, and Syria), indicating that these countries did not take the opportunity for complete free-riding. Furthermore, they conclude that collective action among the four Arab countries constituting the front line with Israel may be valid.

A vector error correction, or VEC, model is used by Beenstock (1998) to uncover causality between Israel's military expenditure and a host of endogenous variables, including military spending by the Arab confrontation states and U.S. military aid over the period 1960-1994. He detects causality from Arab military spending to Israel's when using the Engle-Granger VEC but fails to do so when using the Johansen-based VEC. The author does not report tests of causality running in the other direction. When examining the effect of U.S. aid, the author postulates that American aid does not play a major role in Israel's long-run decisions on military spending.

In an attempt to examine the existence of arms races among several likely adversaries, including Israel and its Arab neighbors, Seiglie and Liu (2002) apply VEC Granger causality for bivariate, trivariate, and quadvariate VARs over the period 1948-1991 for various combinations of Arab countries (Egypt, Iraq, Jordan, and Syria) and Iran with Israel. They find that for most cases causality runs from Israel's to individual and combinations of two or three Arab countries' military spending. Furthermore, the evidence of causality running from Arab to Israel's military expenditure is weak or nonexistent.

Deviating from traditional analysis, Sprecher and DeRouen (2002) use data on military actions, rather than on military expenditure, to conduct VAR-based causality tests over the 1948-1998 period. They find that Israeli military actions are driven by both Arab military actions and by domestic political protests, while Arab military actions are driven by Israeli military actions and seem to decrease in response to Israeli actions. Thus, they uncover a two-way causality between the military actions of the rivals.

All of the studies that employ traditional Granger causality use the Wald test for exact linear restrictions that has been shown to have nonstandard asymptotic properties if the variables in the VAR are integrated or cointegrated.[3] Moreover, the need for pretests for unit roots and cointegration, and the inapplicability when the variables have different orders of integration, further add to the distortions associated with Granger causality from within VAR or VEC settings. A recent causality procedure by Toda and Yamamoto (1995) requires the estimation of an augmented VAR that guarantees the asymptotic distribution of the Wald statistic. Also, the procedure does not require pretesting for integration or cointegration properties of the VAR system. The procedure has been applied by Abu-Qarn and Abu-Bader (2008). They find that causality runs, in general, from Israel's military spending to Arab's and that Israel and Syria are engaged in a two-way arms race.

Overall, the bulk of studies surveyed in this section point to a one-way arms race from Israeli to Arab spending. A possible explanation, suggested by McGuire (1982; 1987), is the generous American military and civilian aid to Israel, and the unconditional, instantaneous assistance that Israel received in emergencies such as in 1973. This aid is used to offset the expansion in Arab's military spending.

The defense-growth nexus

Economists have long debated how military spending affects economic growth and whether causality runs from defense to growth or vice versa. On the one hand, military spending, as is the case with other government expenditure, may impede economic growth by crowding-out private investment. Higher military expenditure may also result in distorted resource allocations, and the diversion of resources from productive activities to the accumulation of armaments and the maintenance of military forces. However, only a small portion, if any at all, of the decrease in military expenditure of the least developed countries (LDCs) may be channeled to productive investment. Therefore, reducing military spending per se may not necessarily enhance economic growth. Moreover, military spending could have a positive effect on growth by contributing to the civilian economy indirectly via enhanced accumulation of human capital and through spillovers of military R&D. In principle, military spending can also affect economic growth positively through the expansion of aggregate demand (the Keynesian multiplier effect). The resulting increased demand leads to increased utilization of otherwise idle capital, higher employment and profits, and therefore higher investment.

Causality may also run the other way around, from economic growth to defense. Joerding (1986), for instance, claimed that a growing country may want to strengthen itself against foreign or domestic threats by increasing its military spending. Also, a growing economy may choose to pour some of the resources generated by growth to enhance its military capabilities.

For the major rivals in the Israeli-Arab conflict, only a few studies have addressed the relationship between defense and economic growth. Often the analyses are conducted in the context of assessing the dividends of cutting military spending. Most studies carry the implicit assumption of causality running from military expenditure to economic growth even as the opposite direction of causality is theoretically plausible as well. The findings are inconclusive and vary depending on the countries, samples, and econometric methods.[4]

Lebovic and Ishaq (1987) use a three-equation model employing panel data techniques for 20 Middle Eastern economies over the period 1973-1982. They find that military spending impedes economic growth for various groups of countries and for different alternative measures of military burden (military spending as a percentage of GDP). These conclusions are shared by Linden (1992) who used an augmented two-sector growth model to study the effect of military burden on growth for a panel of 13 Middle East countries from 1973 to 1985 applying generalized least squares regression. But opposite findings are reported by Cohen and Ward (1996) who estimate a single equation model that relates growth to investments, military and nonmilitary government spending, and population growth. They find that the benefits from military spending are large and affect growth positively, irrespective of the time period. Thus, they confirm the existence of a Keynesian multiplier effect that is roughly equivalent for both military and nonmilitary government expenditure.

Mixed results were reported by DeRouen (1995) who examined military expenditure of Israel, Egypt, Jordan, and Syria for the period 1953-88. He suggests that Egypt and Syria would realize dividends from slashing their military spending only if they increased allocations to nonmilitary government spending. As to Israel, he asserts that defense cuts alone may deter growth in the short-run. Furthermore, he finds that military spending has had a negative effect on growth after 1967 coupled with positive military spillover effects on civilian output. Surprisingly, DeRouen (1995) finds that the defense sector in Jordan is very productive and therefore military expenditure cuts would not lead to higher growth there.[5]

These studies did not explicitly take into account that causality could run from growth to defense. Abu-Bader and Abu-Qarn (2003) accommodate that possibility by applying causality tests and variance decomposition techniques to uncover the direction of causality between defense and growth for Egypt, Israel, and Syria. They find that in a trivariate setting (government civilian expenditure, military spending, and growth) there is evidence for bidirectional causality (from growth to military expenditure and vice versa) and that a higher military burden negatively affects economic growth for all countries, whereas civilian government expenditure positively affects growth in Egypt and Israel.

Another recent study, by Yildirim, *et al*. (2005) that covers 13 Middle Eastern countries and applies dynamic panel data methods, corrects for biases caused by using traditional panel data methods. It finds that military expenditure enhances economic growth in the Middle East.

Several studies have focused on the defense-growth nexus in Israel itself. Cohen, *et al*. (1996) tackled the relationship by emphasizing indirect linkages via investment and labor. They estimate a dynamic three-equation (investment, labor, and growth) model for the period 1960-1992 and conclude that benefits for Israel from cutting military spending are small (but positive), normally delayed for several years, and operating indirectly through positive effects on investment levels. The indirect positive impact through investments was captured as well by Looney and Winterford (1995) for the period 1955-1987. They found no support for negative effects of high military burden on the Israeli economy, and attribute this mainly to American assistance to Israel. Most studies use models that assume a linear relation between military expenditure and growth (and other variables). But evidence of nonlinearity in the defense-growth relationship is reported by Bichler and Nitzan (1996). They claim that throughout the 1950s and most of the 1960s military expenditure had a positive effect on growth through accumulation of human capital and smoother assimilation of new immigrants. However, since the late 1960, large defense budgets led to higher national debt and slower growth. DeRouen (2000) further analyzed the effect of military and nonmilitary government spending on Israel's economic growth in a three-sector production function model for the years 1953-1992. His nonlinear least squares regression estimates suggest that when controlling for technological growth, short-term increases in military expenditure hinder economic growth whereas nonmilitary spending has the opposite effect. Based on his findings, he recommends using saved resources from peace for infrastructure and private investments.

The mixed evidence may be due to the different methods, samples, and time periods used in these studies. Israel's advanced military industries seem to have some spillover effects to the civilian sectors that reduce or offset the likely negative impact of military expenditure on the economy. But no such evidence is found for Israel's rivals, with the exception of DeRouen (1995) who asserts that the Jordanian military sector is very productive. More detailed studies that decompose military expenditure into its constituent parts (wages, equipment, etc.) and link them to different economic activities might yield some value added that would enhance our understanding of the potential gains in an era of Middle Eastern peace.

Foreign aid

Due to the strategic significance of the region, the Israeli-Arab conflict involved not only Israel and its neighbors but also other Arab countries as well as the superpowers that acted to maintain and strengthen their interests in the region by supporting one or more of the rivals. The United States and the former Soviet Union actively intervened in the region in the form of military and economic aid, in addition to providing top-of-the-line arms and training services. The region served as a battle ground in which American and Soviet arms and expertise competed against each other. Several studies have analyzed the role that foreign aid, in general, and of the superpowers, in particular, have played in the conflict. Most studies have addressed the effects of American military and economic aid to Israel (totalling around $3 billion per annum). The support of the oil-rich Gulf states to the frontline countries did not receive due emphasis mainly because of lack of accurate estimates of its magnitude.

When assessing the determinants of Israeli military spending in a multi-equation setting that includes Arab demand for military expenditure and the determinants of U.S. assistance, McGuire (1982) finds that civilian aid is used by Israel as another source of fungible revenue, whereas military aid is strictly allocated for military use to offset the rise in Arab military expenditure. He concludes that American aid is unlikely to fuel the arms race in the region since the United States' propensity to spend additional resources in reaction to Arab military expenditure stands only at $0.1 for every $1 of Arab outlay. Similar conclusions are presented in McGuire (1987). In this extension of the earlier paper, McGuire asserts that American aid creates a modest indirect stimulus to investment through the complementarity between investment and defense but that it provides significant resources to the private sector through tax relief. Thus, American aid contributes to capital formation and growth via diversion of resources.

David Kinsella (1994a; 1994b) addresses the differences between the impact of American and Soviet arms transfers on a weighted index of conflict behavior in the region where events are classified into several categories ranging from verbal hostility to wars. Utilizing cross-correlation analysis, Granger-causality tests, and variance decompositions, he argues that Soviet, more than American, arms transfers have intensified the conflict. Moreover, Soviet arms transfers to Arab states have encouraged compensatory arming of Israel by the United States. Kinsella and Tillema (1995) conduct a similar analysis based on Poisson regression analysis of time series for the period 1948-1991, with data obtained from the Overt Military Interventions database that documents combat-ready military operations undertaken by the military forces of one country within foreign territory. The database includes operations by conventional ground combat units, commando raids, aerial attacks, artillery and rocket attacks, and naval attacks. The authors confirm the findings of Kinsella (1994a; 1994b) by using different indicators, operational definitions, and data sources. They attribute their findings to the inability and unwillingness of the Soviet Union to use arms transfers to moderate Arab behavior rather than to its active promotion of the conflict.

In a follow-up article to Kinsella and Tillema (1995), Mayer and Rotte (1999) use multiplicative Poisson model that allows for variation in the impact that the superpowers may have had on interventions in the region, depending on the intensity of arms transfers. The authors validate Kinsella and Tillema's conclusions that American arms transfers decreased the likelihood of military intervention in the region whereas Soviet arms transfers did not. However, they find that the stabilizing effect of arms transfers clearly decreased with total arms transfers delivered to the region.

A different angle on the role that foreign aid may play in the conflict is portrayed by Beenstock (1998). Using an error correction model and causality tests to characterize Israeli military expenditure, he argues that American military assistance did not constitute a significant factor in the long-run and that Israeli military spending was not conditional on American assistance.

Summing up, the evidence in the literature hints at a positive role of American aid both on Israel's economy as well as on the likelihood of military intervention in the region, whereas Soviet arms transfers to Arab countries did not play such a role. The massive Arab aid to the frontline countries needs to be addressed in future research.

Peace dividends

Bringing the conflict to a halt, and ceasing hostile operations and bloodshed, would by itself constitute a huge peace dividend. The region has suffered dearly from many wars and military activities and incurred considerable human losses. Furthermore, the conflict has entailed enormous economic costs for the countries in the region. These include, but not limited to, the opportunity cost of devoting scarce resources to defense, disincentives for foreign direct and portfolio investment inflows, the failure to fully exploit the potential of production and services such as tourism, the high risk premium that limits the ability to borrow from external sources, inappropriate factor specialization and restrictions on mobility, welfare losses in terms of inefficient regional trade and financial arrangements, and slow development of joint infrastructure projects (El-Naggar and El-Erian, 1993).

The literature on peace dividends in the region can be divided into two main branches: first, the benefits that the rivals would gain if they cut military expenditure and divert the released resources into more productive activities. Examples include Yildirim, *et al.* (2005) and DeRouen (2000). This has been reviewed in an earlier section of this survey. Second is the way the region would be transformed in a peace era. Economists and politicians often cite one or more of the following potential dividends of a long-lasting and just peace in the region: (1) creating a stable political and economic environment conducive to private and foreign investments, regional tourism, and megaregional projects such as in infrastructure, energy, and water and coastal management; (2) peace would increase the plausibility of regional economic integration and increased trade volumes among the former adversaries; (3) increased regional factor flow and enhanced specialization; (4) governments would be able to implement economic and structural reforms such as strengthening the private sector and reduce the size of the inefficient public sector; and (5) increased foreign aid, although some doubt that the volume of aid would exceed its confrontation-time levels.

Along with the potentially hefty gains from peace are several costs, especially in the short-run. These include transitional bottlenecks caused by shifting resources from military to civilian production, higher transitory unemployment, increased social tensions that result from economic reforms, and the loss of technology spillovers from military to civilian industries.

These benefits and costs are described and analyzed in detail on both the national and regional level in a special volume edited by Fischer, *et al*. (1993). In particular, there is an elaborate discussion of the specific economic implications of peace for Egypt, Israel, Jordan, Lebanon, Syria, and the Occupied Territories. Emphasis is placed on the gains from reduced military expenditure and channeling of the released resources to more productive sectors, increased private investment and foreign capital inflows, and increased regional integration and trade. A wider regional perspective is nicely drawn by El-Naggar and El-Erian (1993). Another volume that examines peace dividends in general is by Gleditsch, *et al*. (1996).

In addition to the gains from reductions in military spending, some studies focus on specific potential benefits of peace. For example, Sorensen and Yosha (2003) assess the gains from regional capital and credit market integration in the Middle East. According to them, such integration leads to smoother income and consumption as a result of international diversification of investments. The authors estimate potential gains from sharing risk among the countries in the region to be considerably greater than the potential gain from sharing risk among OECD countries. They find that most of the smoothing of country-specific output shocks are achieved through saving and international transfers.

As for the potential for trade in a peace era, Momani (2007) addresses the Middle East Free Trade Area (MEFTA) that has been proposed by American administrations. She raises doubts on the likelihood of achieving peace and stability through intra-regional economic cooperation. Since Middle Eastern states do not complement one another well — their socio-political systems are relatively traditional and inward-oriented and they have little comparative advantage to increase economic cooperation — the proposed MEFTA would be a hub-and-spoke relationship in which the United States would export manufactured goods to the region and the region's countries would export unprocessed primary goods. According to Momani, such a relationship would be disastrous for the region. Moreover, she argues, peace and stability would not be created because of economic interdependence among Middle Eastern states, as might be desirable, but rather because of their submission to American hegemony in the region.

Another study that casts doubts on realizing peace dividends is that of Ekholm, *et al*. (1996). They estimate a gravity equation using a sample of countries with mainly outward-oriented market economies to predict post-normalized trade volumes among Middle Eastern countries, and between these countries and Europe. The authors conclude that a successful peace process may not in itself have large direct effects on either trade or growth but rather may lead to sizeable indirect effects. Their results indicate that the potential for trade within the region or with Europe is insignificant, at least in the short-run, and may be greater in the long-run. A gravity equation setup is also used by Arnon, *et al*. (1996). They predict that while a substantial level of commodity trade might prevail between Israel and the Palestinian economy, a relatively low level of trade is expected with Jordan. Based on their detailed analysis of commodities and services, they identify tourism, health, education, and computer programming as having the highest odds of generating reasonable volumes of trade once peace is achieved.

A more optimistic view is presented by Kilchevsky, *et al*. (2007). Using events data of dyadic interactions reported in newspapers and wire-services as a measure of conflict, the authors find that economic interdependence among countries in the region helps deter conflict and stabilize the political situation. Despite this, they outline the need for liberal regimes that adhere to the will and welfare of their people before regional interdependence and peace can be realized.

Summary and future research

This survey reviewed economic aspects of the Israeli-Arab conflict as captured in the extant literature. The goal was not to provide a complete survey of the literature but rather to present a concise and critical assessment of the major studies that address the main economic aspects of the conflict.

The literature leaves a lot to be desired. There is a dire need to compile detailed time series to examine wider and richer issues. Examples include the following: first, to examine the dynamics of the arms race while taking into account "true" measures of military burden, military strength, and weapons arsenals; second, studying the channels through which military spending affects growth, identifying the civilian activities that are affected by military spending, and the magnitude of spillovers from military to civilian activities; third, analyzing the impact of foreign military and civilian aid on the region and whether they stabilize or fuel conflict; fourth, studying the relationship between military outlays and both domestic and external debt, and whether governments tend to borrow to finance military expenditure; and, finally, to provide accurate estimates of the gains from the cessation of hostile activities hoping that these would serve as incentives to reach a long-lasting peace. Detailed studies of sectors, activities, and projects that would benefit from peace are very much needed.

Notes

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1. See Beenstock (1998) for estimates for Israel.

2. Beenstock (1998).

3. Sims, *et al*. (1990).

4. See Dunne, *et al*. (2005) for a critical review of the models used to examine the defense-growth relationship

5. This is surprising because, unlike Israel, Jordan has no military industry to speak of that could generate spillover effects.

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The Palestinian economy under occupation: economicide

Atif Kubursi and *Fadle Naqib*

The main purpose of the article is to analyze the nature, structure, and dynamics of the relation between the Israeli and Palestinian economies as they have evolved during the occupation period. The aim is to reveal various asymmetries and anomalies in the relation, the way they have affected the course of the Palestinian economy, the costs that have been incurred by Palestinians, and the benefits that have accrued to Israelis from their continuation. The removal of these anomalies and asymmetries are a prerequisite for any serious and genuine peace that would permit the economic infrastructure to promote and support a stable and durable peace.

Both theoretical analysis and empirical studies suggest that the dynamic between a large, advanced, and rich economy and a small, underdeveloped, and poor economy always generates two opposing forces whose net effect disproportionately affects the smaller economy and adversely shapes its development.

The article is divided into four sections. The first provides the theoretical framework within which the relationship between the two economies is analyzed. It focuses on the connections between a large, advanced, and well-connected economy and a small, poor, and disarticulated economy, as formulated by Myrdal, Thirlwall, Krugman, and others. It identifies both positive and negative consequences of the links between the two economies. Positive consequences, which are presumed to help the small economy expand, develop, and grow, are called the spread effects. Negative repercussions, that tend to work in the opposite direction and thus retard the evolution of the small economy and reinforce its underdevelopment, are called the backwash effects.

In the second section, specific practices and the policies of successive Israeli governments — restrictions over the use of natural resources, inhibition of business activities by an imposed regulatory regime, fiscal compression and diversion, severance of the Palestinian economy from its natural environment and markets, tying the fortunes of Palestinian labor to the Israeli economy, fragmentation of the Palestinian market, and raising transaction costs — are all identified as responsible for incapacitating the normal operation of market forces in the Palestinian economy. The emasculation of natural market forces is blocking the spread effects and bolstering the backwash effects as the dominant and exclusive forces in the existing relation between the Israeli and the Palestinian economies.

The third section summarizes the cumulative effects of the specific restrictive practices discussed in the prior section, and section four presents some conclusions relating to the present situation of the Palestinian economy and prospects for future development.

Israeli economic interactions with the occupied Palestinian economy: structure and dynamics

In 1967, Israel occupied the West Bank and Gaza Strip (WBGS) and integrated their markets into its own. The size of the Israeli economy at that time was around ten times that of the Palestinian economy, its sectoral diversification was much greater, and the manufacturing sector's share in GDP was more than four times larger. These differences in size and structure made the relation between the two economies as one between a large, advanced, and rich economy and a small, underdeveloped, and poor economy. Both theoretical analysis and empirical studies suggest that the dynamics of such a relation always generate two opposing forces that disproportionately affect the smaller economy and shape its development. Favorable repercussions may include an increased demand for the products of the small economy, possible diffusion of technology and knowledge, as well as other spread effects, that could result from the geographical proximity of the small economy to a large market. These effects typically lead to subcontracting, joint ventures, and coordination in tourism and other services. Unfavorable repercussions arise from the disappearance of many industries in the small economy, its confinement to producing labor intensive and low-skilled goods, and the emigration of a sizable segment of its labor force to the neighboring economy, as well as to other countries. These effects are known in the literature as backwash or polarization effects. They arise from the capability of efficient, large-scale industries in the advanced economy to out-compete inefficient, small-scale industries in the less advanced economy, and to attract both their labor and capital.[1]

From the perspective of the small economy, therefore, the crucial question is the net balance between the two opposing dynamic impacts: to what extent did they help promote development, and to what extent did they reinforce underdevelopment? Among the factors that determine the relative strength of these two forces is the degree of integration between the two sides, which can be easily appreciated by considering trade. A removal of tariff and other barriers to trade between the two countries is presumed to increase the exports of the small economy to its neighbor, as trade between them takes on a pattern based on comparative advantage. This level of exports, however, will not be sustained if free trade between the two countries is accompanied by a common external tariff (as in a customs union) and where the tariff is substantial and is set, as it were, with the objective of protecting the advanced economy's industries. Such protection increases the price of intermediate and capital goods imported by the small economy, and thus raise its cost of production in a way that would compromise its comparative advantage. Further measures of integration between the two economies, such as allowing free movement of labor and capital, would significantly reduce the export of goods from the small to the large economy as the export of labor services would be substituted for the export of goods. In other words, free trade and free mobility of factors would gradually wipe out trade based on comparative advantage and confine it to trade based on absolute advantage, resulting in the small economy exporting low-skilled goods and importing high-skilled goods, thus "locking in" its poverty.[2] The small economy would be relegated to the status of a backward region in an otherwise advanced country, as is the case of the south in Italy and central Appalachia in the United States.

The advantages Israel derived from this asymmetric relation with the Palestinian economy under occupation and free trade are numerous and profound. A synopsis includes the following. First, Israel possesses the majority of the modern sectors operating under increasing returns to scale, characteristic of manufacturing activities. Second, Israel has been able to offer a wage premium to Palestinian workers in the traditional sector and has assured itself of an wage-responsive (elastic) supply of labor to its modern industries through releasing Israeli labor from traditional activities that Palestinian labor has substituted for. This wage premium was a small one given the low wages in Palestinian agriculture and given the geographical proximity of the pools of migrating workers to their work in Israel. Third, the influx of Palestinian labor into Israel at a fraction of the Israeli labor cost has reduced the wage premium in the Israeli modern sector and made it more profitable, competitive, and sustainable. Fourth, the shekels earned by Palestinian migrant workers in Israel are typically spent in the consumption of Israeli products. The Israelis not only captured an elastic supply of labor at low relative wages, but also a sufficiently large effective demand for the increased products of their modern sectors. Fifth, Israel imposed on the Palestinian economy a tariff regime that effectively wiped out any comparative advantage they have had or could have had with neighboring Arab markets. Sixth, the geographical proximity reduced transaction costs (transportation and time taken to move between the two economies), and the destruction of the traditional sector economic base through usurpation of land and water denied the Palestinian economy of any protection it may have had against the flow of Palestinian resources toward the Israeli economy at relatively cheap wages. Palestine lost even its absolute advantage in many agricultural products, the traditional sector in Palestine was devastated, and could not even act as a buffer sector for local employment.

The economic consequences of the occupation

Immediately after occupation in 1967, Israel imposed on the West Bank and Gaza Strip a customs union trade arrangement that increased tariffs approximately fourfold.[3] Naturally, this drastic increase, along with the many nontariff barriers applied by Israel, resulted in a huge trade diversion away from neighboring Arab countries and the rest of the world toward the Israeli market, raising the cost of capital and intermediary goods to Palestinian producers that effectively eliminated their competitive edge in foreign markets. Several studies have shown, for instance, that the cost of garment production in the West Bank is larger than that of Jordan by a factor of 2.17. An important component of that difference is due to the fact that Palestinian producers pay double the price for their imported Turkish textiles, compared to the superior-quality East Asian materials imported by Jordanian producers. The Palestinians cannot import the Asian textiles because of the prohibitive tariff imposed by Israel to protect its own industry. Similarly, the cost of agricultural products, pharmaceuticals, and shoes in Jordan is lower than in Palestine partly because of the differences in imported input prices.[4]

> **The advantages Israel derived from the asymmetric relation with the Palestinian economy under occupation and free trade are numerous and profound. Under Palestinian limited self-rule, the situation has not improved.**

Another reason for the high cost of Palestinian production in both agriculture and industry is the relatively high wage rate. It is estimated that wages of Palestinian workers are larger than those in Jordan by a factor of 2 to 3 in agriculture, a factor of 2 in the garment industry, and a factor of 2.3 in the shoe industry.[5] These high wages are the result of distortions in the labor market created by the hiring of Palestinian commuters to work by the day in Israel as noted above, a practice that started with the occupation and steadily increased to account for almost a third of the Palestinian labor force in the 1990s.[6] Naturally, this trade arrangement has increased the cost of Palestinian production, causing Palestinian exporters to loose their comparative advantage in traditional neighboring markets and facilitated their migration to Israel. More importantly, economies of scale realized by advanced Israeli manufacturers enabled them to undercut small Palestinian firms producing for the domestic market, disrupting and replacing Palestinian artisan and small industry production. The migration of Palestinian labor to Israel destroyed the fledgling indigenous industrial sector and eliminated any comparative advantage it may have had while bestowing simultaneously comparative and absolute advantages on Israeli manufacturing. A United Nations study of the mid-1980s showed that 50 percent of Palestinian imports from Israel had been produced domestically prior to the occupation.[7]

While these adverse backwash effects were at work, positive spread effects were also introduced by the occupation. These included the emergence of a limited number of new opportunities for employment in and trade with Israel and for some minor transfer of technology. The income earned by Palestinians working in Israel contributed to rapidly rising money income and, in turn, to increased demand and domestic economic activities. Palestinian agriculture benefitted from a transfer of technology from the more advanced Israeli agricultural sector and this contributed to increased exports of some agriculture products to Israel. The cumulative impact of this expansion in economic activities helped increase income, saving, and investment, especially investment in residential construction.

The role of Israeli measures in creating an adverse path dependence

The higher cost of living in Israel and the external diseconomies produced by congestion in Israel suggest that backwash effects have ultimately outweighed the benefits of greater efficiency and economies of scale in Israel. This differential in costs should have given rise (according to neoclassical economics) to increased investments in the Palestinian economy. Increased economic activities in the Palestinian territories would then have gradually corrected the distortion in the labor market by reducing the number of Palestinians seeking daily work in Israel. The spread effects would have asserted themselves and generated a process whereby Palestinian income was created endogenously in the internal productive sectors, rather than from outside. This did not happen as the continuous influx of labor from Palestine allowed the Israeli economy to thrive at the expense of the Palestinian economy. Instead, the relation between the two economies has followed quite a different path. As shown in Table 1, the Palestinian economy benefitted significantly from its relation with Israel in just the first decade, whereafter the relation became harmful. In the first decade, Palestinian GDP per capita grew from 11 percent of that of Israel to 16 percent, but then the ratio declined continuously and at the start of limited Palestinian self-rule was about the level of a quarter of century before. Thus, in the first decade of occupation the relation between the two economies went through a process of convergence; the poor economy grew at a rate faster than the rich economy. Afterwards, the process was reversed and became one of divergence; the rich economy growing at a faster rate. The reason for this reversal is that the economic relations between the two economies were not confined to the working of the polarization and spread effects operating through the market. The policies practiced by Israel since the start of occupation, which increased in intensity and aggressiveness in the mid-1970s, have circumvented the forces in the market, bolstering the effects of polarization and diminishing the spread effects. These policies include restrictions on the use of Palestinian natural resources, emasculation of agriculture, undermining industry and other productive sectors, massive resource transfers from the poor Palestinian economy to the rich Israeli economy, and the weakening of the Palestinian public sector.

These policies, measures, and practices took many forms but particularly the following.

Restriction on the use of natural resources

Since the start of the occupation, the Palestinians in the West Bank and Gaza Strip have increasingly lost control over their land and their supply of water. Israeli authorities used many different and complex measures and policies, all of which were designed to place under Israeli control the largest possible area of fertile land and the maximum amount of water. It is widely believed that by the time of establishing Palestinian limited self-rule Israel had confiscated 68 percent of the total land of the West Bank, and 40 percent of that of Gaza Strip.[8] In contrast, estimates indicate that Palestinians in the West Bank use only about 15 to 20 percent of the annually available water originating in the area. The rest is used by Israeli settlers and within Israel.[9] New Jewish settlements were built on part of the land taken from Palestinian use and control. The rest of the confiscated land was turned into closed military areas. By the end of 1991, the number of these settlements had reached at least 156 in the West Bank and 18 in Gaza Strip, with a population of 250,000.[10] These Israeli policies toward land, water, and settlements had a profoundly negative impact on all economic activities but particularly on agriculture. Most importantly they facilitated the migration of labor whose ranks swelled from the proletarization of farmers who lost their land and water. The adverse effect in agriculture manifested themselves in a sharp decline in the area of irrigated land, and sharp increases in the prices of land and water.[11] This distortion of prices, combined with the refusal of Israeli authorities to allow for the normal expansion of municipal boundaries has also resulted in high building costs for new industrial plants and thus acted as a strong barrier to industrial expansion.

Table 1: Comparison of GDP per capita in Israel and the Palestinian territories (US$ at 1986 prices)

Year	*Israel (1)*	*WBGS (2)*	*Ratio of (2)/(1)*
1968	4,373	484	0.11
1975	6,220	799	0.13
1980	6,430	1,033	0.16
1985	6,793	1,002	0.14
1990	7,424	887	0.12
1995*	15,611	1,690	0.10
1997*	16,579	1,512	0.09

*GDP per capita for 1995 and 1997 are in current prices. *Sources*: Calculated from Statistical Abstract of Israel (1993); World Bank (1993). *Developing the Occupied Territories*. Vol. 2, Table 1, p. 135; Arron, *et al*. (1997, Table 2.7, p. 41); Palestinian Central Bureau of Statistics (1998). Palestinian GDP per capita for 1997 is based on estimates by the IMF and the Palestinian Ministry of Finance. Memo (October 1998).

The special case of agriculture

The agricultural sector is a very important constituent component of the Palestinian economy that employed around one quarter of the labor force and contributed approximately one third of GDP and exports.[12] In contrast, Israeli agriculture is a very advanced, capital-intensive sector, but contributes no more than 2 percent to GDP and even less (1.7 percent) to exports. The loss of large stretches of agricultural land, after 1967, due to land confiscation and closures, and limitations on water supply and product markets, has led to a substantial decline in the production and importance of this sector.

In 1967, Palestinian agricultural production was almost identical to Israel's: tomatoes, cucumbers, and melons were roughly half of Israel's crop; plums and grape production were equal to Israel's; and Palestinian production of olives, dates, and almonds was higher. At that time, the West Bank exported 80 percent of the entire vegetable crop it produced, and 45 percent of total fruit production.[13]

The agricultural sector was hit hard after Israel occupied the West Bank and Gaza Strip. Thereafter the sector's contribution to GDP in the Palestinian Occupied Territories declined. Between 1968/1970 and 1983/1985 the percentage of agricultural contribution to the overall GDP in the West Bank fell from 37.4 to 53.5 percent to 18.5 to 25.4 percent. The labor force employed in this sector also declined. Between 1969 and 1985, the agricultural labor force, as a percentage of the total labor force, fell from 46 to 27.4 percent.[14]

There has been a continuous decline in the Palestinian cultivated areas in the West Bank since 1967. In 1965, before the Israeli occupation, the actual cultivated area was estimated at 2,435 km^2. The total area fell to 1,951 km^2 in 1980. In 1985, the cultivated area reached 1,735 km^2, and in 1989, it was 1,706 km^2. The average of actual cultivated land in the West Bank, between 1980 and 1994, was 1,707 km^2, a reduction by 30 percent of the area cultivated in 1965.[15]

Marketing of farm products and their distribution to local and external markets is one of the major obstacles facing Palestinian farmers. Throughout the occupation years, selling Palestinian agricultural products within Israel required special permits to be issued by the Israeli authorities. Transporting products from north to south in the West Bank has become difficult as well, especially after Israel enforced a closure on East Jerusalem, the main road connecting northern with southern parts of the West Bank. Movement of agricultural products between the West Bank and Gaza Strip is also subject to Israeli control.

The Gulf War in 1991 also severely affected Palestinian agriculture, since the bulk of exports were previously sent to Arab Gulf countries. Palestinian exports to the Gulf States had previously accounted for approximately $25.4 million per year. As a result of the war, Palestinian exports fell by 14 percent.

Israel has restricted Palestinian water usage and exploited Palestinian water resources after occupation. Presently, more than 85 percent of the Palestinian water from the West Bank aquifers is taken by Israel, accounting for 25.3 percent of Israel's water needs. Palestinians are also denied their right to utilize water resources from the Jordan and Yarmouk rivers, to which both Israel and Palestine are riparians. West Bank farmers historically used the waters of the Jordan river to irrigate their fields, but this source has become quite polluted as Israel is diverting saline water flows from around Lake Tiberias into the lower Jordan. Moreover, Israeli diversions from Lake Tiberias into the National Water Carrier have reduced the flow considerably, leaving Palestinians downstream with little water, and of low quality.

In Gaza, the coastal aquifer serves as its main water resource. Other Gazan water sources, such as runoff from the Hebron hills, have been diverted for Israeli purposes. The Gaza Strip, which housed only 50,000 people before 1948 is now one of the most densely populated regions in the world. This is the result of the high levels of forced immigration following the 1948 and 1967 conflicts, and the high rate of natural population increase. Gaza's coastal aquifer is now suffering from severe saltwater intrusion.

With regard to total water consumption, an Israeli uses 1959 cubic meters per year (CM/year), compared to an average Palestinian use of 238 CM/year.

Israeli restrictions have drastically limited the irrigation of Palestinian land so that today only 6 percent of the West Bank land cultivated by Palestinians is under irrigation, the same proportion as in 1967. By contrast, about 70 percent of the area cultivated by Jewish settlers is irrigated.

Restrictions on the economic activities of other productive sectors

In addition to the removal of land and water from Palestinian control, Israeli authorities have followed a general practice aimed at changing the structure and performance of the Palestinian economy. All economic activities were placed under the scrutiny of the Israeli military administration in the territories. Every economic undertaking required its approval. Plans by Palestinian businessmen to start a new venture, or to expand an old one, were often frustrated by delays in granting the appropriate permit, or in outright denial. Permits were required for all activities related to the acquisition of land, the construction of buildings, the transformation of goods, and export and import activities.

The taxation of Palestinian business activity was equally detrimental. Palestinian firms have had to pay value- added tax (VAT) on all their imports of raw materials through Israel. The long delay in receiving the refunds of this tax caused these firms severe problems of cash flow and shortage of capital. This has resulted in an annual loss estimated to be 8 to 12 percent of the value of their finished products.[16]

While these measures distorted incentives, and increased the risk to business activities, investment was further discouraged by the underdevelopment of effective financial intermediation in the Palestinian economy. This reflected the fact that all Arab banks were closed at the beginning of the occupation and only reopened on a very small scale in the mid-1980s.

Another important restriction is related to technological change and modernization. Israeli authorities did not permit Palestinian firms to import machines and tools incorporating the latest technology. Instead, they were compelled to buy second-hand machines from Israel.

It should also be noted that the customs union arrangements Israel imposed on the territories, was, in effect, an asymmetric trade scheme which allowed Israel's own heavily subsidized products free entry into Palestinian markets but prevented the entry of Palestinian products into the Israeli market, except on a selective and limited bases. This asymmetric trade relation, combined with complex administrative procedures aimed at discouraging Palestinian exports to the rest of the world, has made Palestinian trade completely dependent on Israel. That 90 percent of all Palestinian imports comes from Israel presents one side of this forced dependency. The other side is shown in that Palestinians pay for these imports partly by exporting labor services to Israel, and partly by exporting goods manufactured under subcontracting arrangement with Israeli firms.

Resource transfer to Israel, and the neglect of the public sector

The forced integration of the Palestinian economy into that of Israel was associated with a transfer of resources from the former to the latter. Three channels were involved. First, Palestinians paid VAT and custom duties on products imported from Israel. It is estimated that half of the taxes paid by Palestinians in the Occupied Territories accrued to the Israeli treasury in this way.[17] The second source is the income tax and social security contributions paid by Palestinians working in Israel. The third was the seigniorage revenue Israel received because its currency was been made legal tender in the Occupied Territories. The total of these resource transfers is large, and according to some estimates has reached, in any given year, from fifteen percent to a quarter of the Palestinian GNP.[18] Dubbed the "occupation tax" by an Israeli observer,[19] it would be more appropriate to call it the "Zionist exaction." Given that Israel was not prepared to undertake public expenditure in the Occupied Territories beyond the tax revenues actually raised there (as opposed to those paid by Palestinian consumers and workers but collected in Israel), all public infrastructure in the West Bank and Gaza Strip is in a very poor state, and the level and quality of public services and utilities are far below those of neighboring countries.[20] The poor condition of the basic infrastructure and public services causes market fragmentation, and this inhibits specialization and the realization of economies of scale which are essential for a small economy to be competitive.

Cumulate effects

The cumulative impact of the restrictions placed on resource use, business activities, and domestic and international trade, has substantially weakened the traditional productive sectors of the Palestinian economy. This has caused a general reallocation of factors of production combined with the reorientation of trade flows to the benefit of Israel. As a consequence a major structural transformation of the Palestinian economy has taken place. It has become an economy characterized by two growing gaps: a resource gap and labor market imbalance, and a great and unhealthy dependence on external sources of income. It also features a sectoral disarticulation and an infrastructure gap.

The resource gap

The Palestinian economy suffers from a chronic incapacity to generate more than two-thirds of its national income. Usually, the yearly total domestic absorption (domestic consumption and investment and government expenditures) is more than one and a half times the economy's total production, GDP. Imports fill this gap, and assume a very important role in the economy. In the years preceding the establishment of limited self-rule, the import surplus (imports minus exports) measured as a percentage of GDP, had reached 59 percent and had never been less than 43 percent (see Table 2). The financing of these huge imports was generated mainly from the income of Palestinians working in Israel, and the remittances of those working in the Gulf states. These factor incomes account for the wide disparity between GNP and GDP, and are shown in the same table.

Table 2: The resource gap (in %)

	*Import surplus**	*Investment surplus***	*GDP/ GNP*
1968	34	43	107
1975	59	24	78
1980	45	16	80
1985	56	15	77
1990	39	5	75
1995	37	28	93
1998	42	28	86

Note: * defined as (imports-exports) / GDP; ** defined as (investment-saving) / GNP. *Sources*: Calculated from Table 1 in *Developing the Occupied Territories*, Vol. 2 (1993) and a memo issued by the Palestinian National Authority, Ministry of Finance, October 1998.

Another manifestation of the resource gap and the central role played by factor incomes is the investment-saving imbalance. Domestic savings in every year of the occupation were negative. Thanks to factor income, however, national saving was positive, and generated part of the funds needed for investment; the rest has been acquired from foreign savings.

The labor market imbalance

The mirror-image of the resource gap is the imbalance in the labor market between the growing supply of labor, reflecting both a high natural rate of growth and the age structure of the population, and the limited capacity for employment due to hostile economic environment of the occupation. Between 1972 and 1987 the labor force increased by around 50 percent, while domestic employment increased by 27 percent

Table 3: The labor force imbalance

	Labor force ('000)	*Number employed ('000)*	*Employed in Israel (in %)*	*Unemployment rate (in %)*
1968	146.6	128.0	0.0	13.1
1975	206.6	264.7	32.4	0.9
1980	218.5	215.7	34.8	1.3
1985	251.5	242.1	36.8	2.6
1990	307.8	297.0	36.4	3.7
1995	497.2	402.9	16.1	18.2
1997	572.	444.9	16.1	22.1

Source: Farsakh (1998, Tables 2, 5).

Table 4: Sectoral disarticulation. Sectoral shares in GDP (%)

	Palestine	Jordan	Egypt	Israel
Agriculture	25	6	18	2
Industry	10	17	30	22
Construction	14	7	n/a	10
Services	48	37	52	65

Source: The figures for Palestine are calculated as an average of two years to smooth the olive cycle. They are taken from estimates of the UNCTAD Secretariat for the years 1992-1993. The rest of the figures are calculated for 1991 at current prices. World Bank (1994). *Peace and the Jordanian Economy* (Table 1.2, p. 10).

in the West Bank, and 18 percent in Gaza Strip. The difference was mainly absorbed by the Israeli market, in which employment of Palestinians from the West Bank increased by 80 percent, and from Gaza strip by 163 percent, in the same period. Table 3 shows the main features of the labor market.

The sectoral distortion

While the resource gap and the labor market imbalance portray weaknesses of the Palestinian economy at the macro level, the sectoral distortion pertains to the underlying causes of this weakness at a micro level. Table 4 presents the Palestinian sectoral shares in GDP, along with those of neighboring countries. The harmful structural transformation noted previously is revealed by the fact that the share of agriculture in Palestine is the highest, and its share of industry the lowest. It is striking that the Palestinian agricultural share is more than four times that of Jordan, while its share of industry is little more than half that of Jordan.

Table 5: The infrastructure gap, 1992-1994

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Egypt	55.0	650	21.0	14.0	50	4.3	39
Jordan	3.9	1,120	25.0	19.0	100	7.0	170
WBGS	2.4	1,450	13.0	30.0	25	3.1	80
Lebanon	4.0	2,500	32.0	n/a	n/a	9.3	n/a
Syria	13.0	2,800	30.0	n/a	63	4.1	180
Israel	5.1	13,500	82.0	4.0	100	37.1	266
LMICs*	1,152.6	1,620	21.5	12.4	-	7.9	-

Notes: (1) population (million); per capita income (US$); (3) electric supply (kw per 100 people); (4) electric power system loss (percent); (5) households with sanitation (percent); (6) number of phones (per 100 people); (7) meters of paved roads (per 100 people). * Lower Middle Income countries. *Source*: Diwan and Shaban (1999).

The infrastructure gap

Fiscal compression and under-investment as well as neglect in the public sector have made the Palestinian economy seriously deficient in most infrastructures and public services. Table 5 shows that the Palestinian economy is lagging behind in all infrastructure provision as compared to its neighbors. Transportation and sanitation are in dire straits. Almost all the major roads in the West Bank and Gaza Strip were constructed before 1967, and have received minimal maintenance during the years of occupation. Sanitation is in health-threatening conditions, as only 25 percent of households in the West Bank and Gaza Strip are connected to sewerage networks. Garbage collection is deficient and poses a major health hazard. One feature of Table 5 is especially noteworthy: at the regional level, Israel is ranked first, and the Palestinian territories last in infrastructure provision.

Conclusion

The asymmetrical division of power between Israel and the Palestinians, which lies at the very root of the Palestinians' economic and political problems, has enabled Israel to deny Palestinians access to their own natural resources and to sustain the exploitive structures Israel was able to impose on the Palestinians during occupation. Zionist colonial policies over more than a quarter of a century of occupation have engendered debilitating path dependence in the Palestinian economy. Six years of limited self-rule have not been able to overcome that path and to replace it by a qualitatively new growth-augmenting style of development. The Palestinian economy today is almost as dependent on Israel as it was during the occupation years.

Notwithstanding some improvements in the economic environment brought about by the establishment of limited self-rule, the essence of the relation between the Israeli and the Palestinian economies is still as it was during the occupation. A relation between two dissimilar and unequal economies, whereby the large economy practices policies that keeps the small economy weak and dependent. The working of the labor market best epitomizes the dynamic of this relation. The dynamics of this export of labor to Israel, instead of being a vehicle to stimulate domestic economic activities, became a means of paying for imports from Israel. The Palestinian imports bill, of which 90 percent goes to Israel, amounts on average to around 60 percent of Palestinian GDP and more than 50 percent of private consumption.[21] Put it another way, the Palestinian economy became doubly dependent on the Israeli economy for income and imports. The former amounts to almost 30 percent of GNP and the later to around 40 percent.[22] The vulnerability of the economy to such one-sided dependency has been exposed in the 1990s after Israel implemented its permits and closure policies.[23] Estimates of economic losses from the resulting interruption to labor and trade flows vary, but most indicate very big losses, reaching in 1996 about 18.2 and 39.6 percent of GNP of the West Bank and Gaza Strip, respectively.[24]

Obviously, a relation between two neighboring countries in which measures taken by one can cause the other to lose overnight the income of one-third of its labor force, and interrupt 90 percent of its imports and 80 percent of its exports, is simply untenable. This disproportionality in what might be called the costs of dissociation renders the Palestinian-Israeli relation unstable and must be both corrected and seen to be corrected if more rapid economic growth is to develop. From the Palestinian side, this requires a complete eradication of all activities that skew the relation in favor of Israel and its polarization effects. It also requires a new arrangement where there is a clear matching between responsibility and authority. For example, those who have the power to license business should also have the authority over crossing of borders and movements of goods, labor, and capital.

The total independence of the Palestinians and their full sovereignty and control over their resources are necessary conditions for a growth-augmenting path and for anchoring peace on firm and durable foundations. Re-establishing their natural links to the Arab world should be a Palestinian dominant strategy that can help them in redeveloping their natural and historical markets and for developing competitive norms and experiences under symmetrical conditions for a smooth re-entry into the world economy. Nothing else will work.

Notes

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1. For a good analysis of these effects see Krugman and Obstfeld (1994), Krugman (1998), and Thirlwall (1994).

2. The advanced economy is generally more productive in the majority of sectors. The small economy will be able to export to the large economy goods that have no absolute advantage in production provided it has smaller productivity disadvantages and its labor accepts wages lower than those prevailing in the large economy. Free mobility of labor would induce labor to move from the low-wage small economy's industries to the high-wage large economy's industries, gradually wiping out the former and expanding the latter. In the long-run, no industry will survive in the small economy unless it enjoys an absolute advantage over its counterpart in the large economy, and that means a predominance of low-skilled industries.

3. See German-Arab Chamber of Commerce (1995).

4. For analysis of the cost of agricultural products, see Awartani (1994), and for similar analysis related to garments, pharmaceuticals, and shoes see Makhool (1996).

5. Awartani (1994); Makhool (1996).

6. UNCTAD (1996).

7. UNCTAD (1984).

8. UNCTAD (1993).

9. World Bank (1993, vol. 4, p. 54).

10. World Bank (1993, vol. 4, p. 20).

11. World Bank (1993, vol. 4, p. 20).

12. The very low contribution of agriculture to GDP and exports reflects the rapid transformation of the Israeli economy towards high-tech activities, as well as a considerable reduction in government subsidies to agriculture in recent years.

13. Hazboun (1986).

14. UNCTAD (1990); Kahan (1987).

15. Al-'Aloul (1987); UNCTAD (1990).

16. World Bank (1993, vol. 3, p. 16).

17. Fischer, *et al*. (1994, p. 120).

18. Hamed and Shaban (1993); Luski and Weinblatt (1996).

19. M. Benevenisti, ex-deputy of the Mayor of Jerusalem. See Roy (1995, p. 195).

20. This Israeli behavior is quite consistent with past British and French colonial behavior in the Middle East. One of their major underlying economic principles was that "colonies should pay for themselves without recourse to special financial assistance from the metropolis." Owen and Pamuk (1999, p. 52).

21. UNCTAD (1998, Table 7, p. 108).

22. UNCTAD (1998, Table 7, p. 108).

23. Since March 1993, Israel has closed intermittently various borders — between the West Bank and Gaza Strip, between the West Bank or Gaza Strip and Israel or the rest of the world, and between various cities and communities of the West Bank — for varying lengths of time.

24. Diwan and Shaban (1999, p. 52).

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The continued de-development of the Palestinian economy in the post-Oslo period

Osama Hamed

The Oslo Accords, reached in 1993 and supposed to govern Palestinian-Israeli relations as from 1994, allowed Israel to have direct control over large areas of the West Bank and Gaza Strip (WBGS). They also gave Israel control over WBGS borders with the rest of the world, WBGS underground water resources, and administration of the collection of most WBGS tax revenues. Such control has severely constrained WBGS economic development in the post-Oslo period, resulting in continued dependence of the Palestinian economy on Israel.

The Oslo Accords kept 70 percent of the West Bank and (until 2006) 40 percent of the Gaza Strip under direct Israeli military control. The remaining areas of the WBGS, where the Palestinian Authority (PA) was given control over civil affairs, are not contiguous.[1] Areas controlled directly by Israel include East Jerusalem and the West Bank shores of the Dead Sea, which are essential for the development of the Palestinian tourism sector. They also include the Jordan valley, which has some of the most fertile land in the WBGS. Under the Oslo Accords, any investment project in areas controlled directly by Israel require Israeli approval — rarely granted — limiting investment in infrastructure in the post-Oslo period despite the availability of foreign-aid funds for such investment. Israel's control over large areas of the West Bank has allowed it to continue confiscating Palestinian land to build and expand Israeli settlements, leading to a significant decrease in the area of Palestinian cultivated land and in agricultural value-added. To facilitate land confiscation, Israeli military authorities have maintained the land registration freeze that was put in place soon after Israeli occupation of the WBGS in 1967.[2]

Continued Israeli control over WBGS borders and air space has prevented the PA from building a seaport in the Gaza Strip and expanding the small airport built in the Gaza Strip to allow cargo transport.[3] This, in turn, has forced the WBGS to continue to rely upon Israeli ports for its exports and imports, where goods destined for the WBGS are subject to excessive inspections and delays. The resulting extra costs have forced Palestinian businesses to buy Israeli-made products or products imported by Israeli firms rather than directly importing from other countries. This has continued WBGS trade dependence on Israel.

In the post-Oslo period, Israel has maintained its control over West Bank aquifers, which account for most of WBGS water resources. The 1967 ban on drilling new wells by Palestinians remains in place,[4] as does the policy of diverting most of the water pumped from the aquifers to Israeli users. The lack of an adequate supply of water has had a devastating effect on the Palestinian agricultural sector, effectively wiping out the citrus industry which before 1967 accounted for a large share of the WBGS agricultural value-added. It has limited household water consumption to 65 liters per capita per day, compared with 280 for Israel.[5]

The Oslo Accords, reached in 1993, allowed Israel to have direct control over large areas of the West Bank and Gaza Strip, and gave it control over Palestinian borders, underground water resources, and administration of most tax revenues. Such control has resulted in the continued dependence of the Palestinian economy on Israel.

Israel has continued to control the collection of most WBGS revenues despite handing the responsibility of delivering public services in the WBGS to the PA. The Oslo Accords allow Israel to collect tariffs and value-added taxes on Palestinian imports without providing an effective mechanism to transfer the tax revenues to the PA. The tax transfer mechanism called for by the Oslo Accords covers tariffs on direct Palestinian imports from outside Israel, and value-added taxes on Palestinian imports from Israel. To reclaim these revenues, the Accords require the PA to obtain individual receipts from those who paid the taxes. This has resulted in a significant tax leakage to Israel because some Palestinian merchants forget to submit their receipts and others do not do so to reduce their income tax liability. It has also provided the Israeli government with enormous leverage in its relation with the PA. This became apparent after the 2000 intifada, when the Israeli government suspended the release of Palestinian tax revenues and began demanding political concessions as a condition for their release. Additionally, the Oslo Accords did not provide a mechanism for reimbursing the PA for tariffs generated by Palestinian indirect imports, which have been retained by the Israeli Treasury since 1967.[6] The value of tariff revenues generated by WBGS indirect imports was estimated at 12 to 21 percent of WBGS GDP for the period 1967-1987.[7] It is highly unlikely that indirect imports as a share of WBGS GDP have declined in view of the increase in the intensity of inspections and delays experienced by direct Palestinian imports in the post-Oslo period.

Israeli currency was required by the Oslo Accords to be legal tender in the WBGS, and it continued to be the main medium of exchange there in the post-Oslo period. Nevertheless, no mechanism was put in place to reimburse Palestinians for the seigniorage revenues generated as a result of using Israeli currency. This had also been the case in the period 1967-1993, when the Israeli-administered WBGS budget did not include seigniorage revenues generated as a result of the circulation of Israeli currency in the WBGS, estimated at 1.6 to 4.2 percent of WBGS GDP.[8] The status of the Israeli currency as the main medium of exchange in the WBGS also gives Israel control over liquidity in the WBGS, providing the Israeli government with another tool to squeeze the Palestinian economy if such a squeeze serves its political goals.[9]

These topics are explored in the following sections.

Continued dependence on Israel in the period 1994-1999

Internal and external closures

Israeli internal and external closures were first imposed on the WBGS during the 1990/1 Gulf War but were rarely used before 1994. Between 1994 and 1999, closures became common. An external closure effectively cuts the WBGS off from the rest of the world. It bans the movement of Palestinian goods and people between the WBGS and Israel, between the Gaza Strip and the West Bank because it involves some travel through Israel, and between East Jerusalem and the rest of the WBGS. Some external closures also prohibit the movement of Palestinian goods and people over the Jordan river bridges that link the West Bank to Jordan and the Rafah crossing point between the Gaza Strip and Egypt, the only links between the WBGS and the rest of the world that do not require crossing Israeli territory. An internal closure bans travel within the WBGS, confining Palestinians to the cities and villages they live in. Some internal closures in the period 1994-1999 covered the entire WBGS. Others were limited to particular regions, cities, or villages.

External closures between 1994-1999 prevented Palestinian workers from reaching their job sites in Israel. The decrease in spending resulting from the income loss suffered by these workers, who accounted for a large share of the WBGS labor force in the period 1994-2000, caused serious disruptions to economic activity in the WBGS. The ban on the movement of goods between the WBGS and the rest of the world prevented Palestinian exporters from delivering their products to customers in a timely fashion, putting future orders at risk and damaging perishable goods destined for export markets. It also disrupted the delivery of imported raw materials, upsetting production plans, and lowering capacity utilization rates of WBGS firms.

Internal closures that covered the whole WBGS effectively brought economic activity in the WBGS to a halt. Internal closures that were limited to particular regions damaged the economies of the regions and increased the cost of commerce between different parts of the WBGS by requiring some firms to make additional investments in storage facilities and forcing others to restrict their sales to their own regions.

Continued dependence on the Israeli labor market

Some of the constraints that limited investment in the period 1967-1993 were relaxed in the post-Oslo period. Administrative restrictions, such as bans on crops and manufacturing projects that competed with Israeli firms, ended following the 1994 establishment of the PA. Severe restrictions on the operation of non-Israeli banks in the WBGS, which had effectively left the Palestinians of the WBGS without banking services for much of the period 1967-1993, were also lifted after 1994.[10] Despite the relaxation of these constraints, private investment in the post-Oslo period remained limited, even before the 2000 intifada. New investment in this period was limited mainly to the construction sector and manufacturing industries linked to Israel through sub-contracting arrangements, such as the apparel and the shoe industries. The lack of significant increase in private investment in the period 1994-1999 can be explained by continued political uncertainty, unbalanced economic relationships with Israel, and disruptions caused by closures.

In view of limited investment, the private sector job creation capacity in the post-Oslo period has not kept pace with the growth of the labor force, driven by a rapidly growing population and the return of tens of thousands of Palestinians to the WBGS following the establishment of the PA. Consequently, WBGS dependence on the Israeli labor market has continued. In addition, the limited job creation capacity of the private sector has put enormous pressure on PA leaders to expand the public sector far beyond the level needed to provide public services. In 1999, the number of WBGS workers in Israel reached 134,000, accounting for 20 percent of the labor force. In the same year, public sector employment — excluding municipalities and the United Nations Relief and Works Agency for Palestinian Refugees (UNRWA) — reached 108,000, which represented 16 percent of total employment (Table 1). In contrast, the Israeli occupation administration of the WBGS had only 18,000 employees in 1992, accounting for 4.5 percent of the WBGS labor force.[11] While some of the increase in public sector employment since 1994 can be justified by the need for public services that were either provided at inadequate levels or not provided at all by the occupation authorities, the expansion of public sector employment in this period has undoubtedly been excessive, resulting in overstaffing in most PA

Table 1: Key labor statistics for selected years

Year	*Labor force* (‘000s)	*Workers in Israel* (‘000s)	*Palestinian Authority employment* (‘000s)	*Unemploy-ment rate* (%)
1995	513	65	54	19.2
1996	561	76	76	23.8
1997	602	79	78	20.3
1998	640	114	89	14.4
1999	667	134	108	11.8
2000	695	106	118	14.1
2001	675	69	117	25.2
2002	690	48	114	31.3
2003	758	54	122	25.6
2004	790	50	133	26.9
2005	826	63	137	23.4

Sources: Unemployment: PCBS-C for 1995-2000; World Bank (2006) for 2001-2005; workers in Israel and public employment: MAS (2004) for 1995-1999; World Bank (2006) for 2000-2005.

institutions.

Trade dependence

Limited private investment, along with the lack of direct access to international markets, allowed Israel to continue its dominance of Palestinian foreign trade. The Israeli shares of WBGS exports (about 85 percent) and imports (about 90 percent) in the period 1994-1999 were not significantly different from their levels in the period 1967-1993. The WBGS had a persistently large trade deficit in the period 1994-1999, as had been the case in the 1967-1993 period. Trade deficits before 1994 were financed mainly by the earnings of WBGS workers in Israel. In 1992, these earnings financed $930 million of the $933 million trade deficit. Foreign aid played an important role in financing the trade deficit in the period 1994-1999. In 1999, foreign aid financed 21.3 percent of the WBGS current account deficit while earnings of workers in Israel financed 32 percent (see Table 2).

Economic collapse after 2000

Disruptions caused by closures and other Israeli measures

Following the 2000 intifada, the Israeli government curtailed the flow of Palestinian workers to the Israeli labor market. By 2002, the number of Palestinian workers in Israel was down to 50,000, and has remained at about this level since then (Table 1). The WBGS economy, which was suffering other adverse economic shocks caused by other Israeli punitive measures, was in no position to absorb the Palestinian workers who lost their jobs in Israel.

In 2001, the Israeli government suspended the regular transfer of tax revenues collected by its treasury from Palestinians on the PA's behalf. The suspension decreased PA revenues drastically; taxes collected by Israel accounted for about 50 percent of total PA revenues before the intifada (Table 3). While foreign aid has provided substantial support to the PA budget since 2001, this support has not been sufficient to maintain services provided by the PA at the pre-intifada level.[12]

Israel has conducted frequent heavy-handed military raids into WBGS cities and villages since the 2000 intifada, damaging infrastructure, business establishments, and private homes. External closures have been tightened in the post-intifada period. Restrictions on the movement of Palestinian people and goods between the WBGS and the outside world have become stricter, the border crossings between the WBGS and Jordan and Egypt have been closed more frequently, and Palestinian exports and imports have been subject to more restrictions as well. Internal closures have also become more severe. In the Gaza Strip, Israel erected barricades and roadblocks that had effectively divided the region into three areas before withdrawing from there in 2006. In the West Bank, entrances to cities and most villages were blocked with earthen mounds. This effectively ended the movement of vehicles between Palestinian population centers. Palestinians traveling outside their cities and villages have to pass through gates controlled by Israeli soldiers (usually a slow process), or try bypassing Israeli gates and risk being shot by Israeli soldiers. Trucks traveling to a city must unload their cargo at Israeli-manned roadblocks at the outskirts of the city, and the cargo must be loaded onto other trucks on the other sides of the roadblocks. In 2002, Israel began building a wall east of the 1967 borders between the West Bank and Israel (referred to hereafter as the wall) causing further disruptions to the WBGS economy.

Stricter external closures have had a devastating impact on sectors of the economy that depend heavily on exports, such as the leather and apparel industries, where employment and output have declined sharply since 2000. The increased frequency of internal closures since 2000 has segmented the WBGS economy.[13] Trade

Table 2: Trade deficit, earnings of WBGS workers in Israel, and foreign transfers for selected years

Year	*Trade deficit (US$ mn)*	*Earnings of WBGS workers in Israel (US$ mn)*	*Foreign transfers (US$ mn)*
1992	933	930	11
1998	1,981	661	434
1999	2,148	687	459
2000	1,960	601	728
2001	1,304	179	1,000
2002	1,221	106	1,115
2003	1,627	168	877
2004	1,965	162	858

Sources: Diwan and Shaban (1999) for 1992; PCBS-E for1993-2004.

Table 3: Key public finance statistics, 1999-2005

Year	*PA budget expenditures (US$ mn)*	*Israeli tax transfers (US$ mn)*	*Foreign aid to PA budget (US$ mn)*
1999	937	580	0
2000	1,212	587	54
2001	1,120	0	532
2002	984	72	447
2003	1,129	471	219
2004	1,355	617	353
2005	1,638	757	349

Sources: World Bank (2004-A) for 1999-2003; World Bank (2006) for 2004-2005.

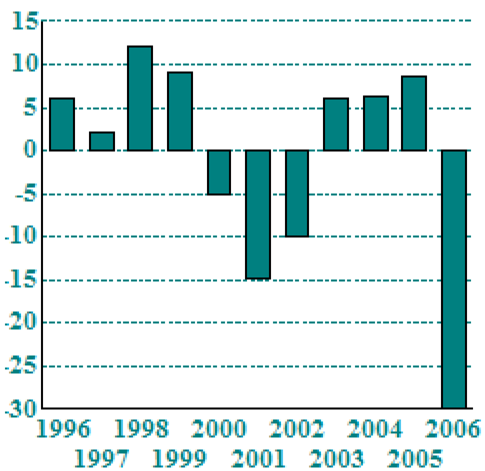

Figure 1: WBGS GDP growth rates, 1996-2006
Sources: PCBS-A for 1996-1999; World Bank (2006) for 2000-2006.

between the West Bank and the Gaza Strip has almost disappeared. Economic transactions between the northern, southern, and middle governorates of the West Bank have decreased substantially. Even transactions within the same governorate declined. Closure-related increases in transaction costs, along with delays at Israeli checkpoints, have made it difficult for Palestinians to work at locations outside their hometowns, resulting in an undue segmentation of the labor market. The same factors have discouraged residents of small towns from shopping in nearby cities, leading to the proliferation of businesses in small towns that are not likely to survive once closures are lifted.

The construction of the wall has disrupted the lives of more than 200,000 Palestinians and adversely affected the WBGS agricultural sector. While Israel justifies the construction of the wall on the need to separate Israel from the West Bank for security reasons, the wall is being built deep inside the West Bank, creating large restricted zones between the wall and the 1967 Israel-West Bank borders. Once the wall is completed, the restricted zones will account for almost 15 percent of the West Bank. The restricted zones include large irrigated areas, which account for a disproportionate share of WBGS agricultural output. Palestinian access to the restricted zones is being limited to those with special Israeli permits and only through gates that are open for a limited number of hours, making it extremely difficult for Palestinian landowners who live outside a restricted zone to farm their land located in the zones.

Deteriorating economic conditions

The curtailment of access by WBGS workers to the Israeli labor market, the increase in the severity of internal and external closures, Israeli military raids, and other adverse shocks experienced by the Palestinian economy since 2000 have led to a sharp decline in WBGS GDP. In 2006, WBGS GDP and GDP per capita were 21.9 and 30 percent, respectively, below their 1999 levels.[14] However, GDP has fluctuated widely since 2000, depending on foreign aid and the severity of closures and other Israeli punitive measures (see Figure 1).

With the loss of job opportunities in Israel and the decline of domestic real GDP, the WBGS unemployment rate has increased enormously since 2001. For the period 2001-2005, the average unemployment rate was 26.5 percent. The WBGS poverty rate increased dramatically during the same period. Based on an expenditure survey conducted by the PCBS, the average poverty rate in the period 2000-2005 was 47.6 percent.[15] In contrast, 20.3 percent of WBGS Palestinians lived below the poverty line in 1998, the last pre-intifada year for which comparable data is available.[16]

Foreign aid

Foreign aid to the WBGS before 1994 was limited to UNRWA, which provided assistance since 1948 to Palestinian refugees displaced when Israel was created, and a few nongovernmental organizations that provided low interest loans. With the signing of the Oslo Accords and subsequent establishment of the PA, the amount and scope of foreign aid increased quickly. Between 1994 and 1999, foreign aid averaged around $0.5 billion a year. Most foreign aid in the period 1994-1999 was provided by Western countries. Following the 2000 intifada, there was another sharp increase in foreign aid. The average amount of annual foreign aid since 2001 is about one billion dollars. Arab countries have provided a large share of foreign aid since 2001.[17]

Foreign aid in the period 1994-1999 was used mainly for institution building and infrastructure projects. A large share of funds allocated to institution building in this period was used to finance technical assistance provided by foreign experts.[18] The effectiveness of such assistance was contingent upon the availability of competent personnel at the PA institution receiving the technical assistance, which was not always the case. Israeli control over WBGS borders and the inability to obtain Israeli approval for infrastructure projects in areas controlled directly by Israel prevented donors from investing in many high priority infrastructure projects, forcing them to settle for projects that had lower social and economic returns. One of the projects that received financial pledges from donors was the construction of a seaport in the Gaza Strip. Such a project has a great potential for alleviating the unemployment problem in the Gaza Strip because of the large number of construction jobs it would create and its importance in promoting investment in export-oriented industries. The Gaza seaport has yet to get off the ground because of Israeli opposition. Other high-priority infrastructure projects include sewage treatment plants and inter-city roads.[19] A number of donor-financed sewage networks built since 1994 in some West Bank cities still lack treatment plants due to the lack of Israeli approval. This has created serious health hazards. Little investment was made in the inter-city road network (which is in poor condition due to neglect by the Israeli occupation authorities in the period 1967-1993) because of the failure to obtain Israeli permits.[20] Hence, donor-financed investment in the transport sector in the post-Oslo period has been limited mainly to local roads. The lack of investment in inter-city roads is most obvious at city entrances, such as that of Nablus, where local roads are wider and much better maintained than the inter-city roads they feed into.

The Israeli freeze on PA tax revenue transfers and the dramatic increase in poverty after the 2000 intifada caused donors to redirect foreign aid funds away from infrastructure projects, and toward financing the PA budget and poverty alleviation programs.[21] Unlike the period 1994-1999, when PA budgets were financed almost exclusively by tax revenues, decreased economic activity and the Israeli freeze on tax revenue transfers have forced the PA to depend heavily on foreign aid after 2001. For the period 2001-2005, foreign aid financed 32 percent of the PA budget (Table 3). Poverty alleviation programs financed by foreign aid have expanded substantially since 2001. In 2002, almost 1.7 million people in the WBGS received food baskets paid for by foreign aid,[22] and some households received additional assistance in the form of jobs created by employment generation schemes, micro credit, or cash assistance. Since then, poverty alleviation programs financed by foreign aid have focused mainly on subsistence poverty.[23] In 2005, 27.2 percent of WBGS households received assistance form anti-poverty programs[24] and most of the assistance was financed by foreign aid.

Foreign aid received by the WBGS in the post-Oslo period has been more than offset by the cost of closures and other punitive measures taken by Israel. The enormous cost of closures, even before the 2000 intifada, was documented in a 1999 study by Radwan Shaban. The study estimated the cost of closures in the period 1993-1996 at $2.8 billion, which was more than twice the foreign aid disbursed in this period.[25] Comparable estimates of the cost of closures and other Israeli punitive actions are not available. However, these cost are obviously larger in value and in relation to foreign aid than the cost of closures during the period 1993-1996.

Additionally, foreign aid may have made it more likely for Israel to take some of the punitive measures it has taken since 2000, such as the curtailment of the flow of Palestinian labor to Israel and frequent closures, allowing Israel to continue its effective occupation of the WBGS without having to meet some of its obligations as an occupying country under international law. In fact, before 1994, closures were infrequent and the flow of Palestinian labor to Israel was rarely disrupted by the Israeli authorities.

Policy implications

The de-development of the Palestinian economy, which began in 1967 following Israeli occupation of the WBGS, continued in the post-Oslo period. Private investment remained very limited in the period 1994-2000 due to continued political uncertainty, unbalanced trade relation with Israel, and Israeli imposed closures. This kept the WBGS highly dependent on Israel for jobs. With such dependence, the curtailment of the access of Palestinian workers to the Israeli labor market following the 2000 intifada resulted in sharp decreases in unemployment and poverty rates. Punitive actions taken by Israel following the 2000 intifada led to further de-development of the Palestinian economy.

The political environment that has prevailed since the 2000 intifada makes it unlikely that the number of WBGS workers in Israel will return to its 1999 level, even if a permanent settlement of the Palestinian-Israeli conflict is reached. Hence, achieving significant decreases in current WBGS unemployment and poverty rates, and reducing dependence on foreign aid will require a huge private investment. But based on the post-Oslo experience, it is unrealistic to expect substantial private capital flows into the WBGS under a temporary political settlement, such as the one that has been floated by the Israeli government in recent months that calls for creating a temporary Palestinian state in the Gaza Strip and parts of the West Bank located behind the wall. First, a temporary settlement would extend political uncertainty, and it is not realistic to expect massive private investment in an uncertain political environment. Second, under a temporary settlement Israel will likely maintain control of WBGS borders, denying the WBGS direct access to international markets. This would make it extremely difficult to attract investment to export-oriented industries, which represent an important source of economic growth for a small open economy such as the WBGS's. Continued Israeli control over WBGS borders would also limit the ability of the WBGS economy to utilize the resources of diaspora Palestinians, which could play a key role in reviving the Palestinian economy because they account for a disproportionate share of financial and human capital accumulated by Palestinians over the last six decades. Third, if the territories covered by the temporary state are not contiguous, which is likely to be the case based on the planned path of the wall, the WBGS economy will continue to be vulnerable to Israeli-imposed closures. Such vulnerability will be a major obstacle to private investment, as the post-Oslo experience has shown.

The massive flow of capital needed to revitalize the Palestinian economy and significantly reduce the extremely high unemployment and poverty rates experienced since 2001 cannot be expected without a permanent settlement of the Palestinian-Israeli conflict that includes a Palestinian state. To attract the investment needed, the Palestinian state needs to have control over its borders in order to take advantage of the resources of diaspora Palestinians and stimulate growth in export-oriented industries. It also has to have control over East Jerusalem, the West Bank shores of the Dead Sea, the Jordan valley, and WBGS water resources. Palestinian control over WBGS water resources and the Jordan valley is essential to reviving the Palestinian agricultural sector. Palestinian control over East Jerusalem and the West Bank shores of the Dead Sea is important for attracting private investment to the tourism sector, which could be a major source of economic growth. The West Bank shores of the Dead Sea will enable the Palestinian tourism sector to compete in the thriving health tourism. Sovereignty over East Jerusalem will help revitalize the Palestinian tourism sector by ending Israeli restrictions that since 1967 have reduced the number of Palestinian tour operators, inhibited investment in East Jerusalem hotels, and weakened the link between East Jerusalem tourism facilities and tourist sites in the rest of the WBGS.

In view of the post-Oslo experience, a future Palestinian state can be expected to discontinue the unbalanced customs union currently in place between the WBGS and Israel. The economic benefits of a customs union are derived from the free movement of goods between members. Israel has used security as a justification for maintaining restrictions on Palestinian exports to Israel that were supposed to be lifted under the Oslo Accords. It is unrealistic to expect this behavior to change once a Palestinian state is established, making a customs union an unattractive trade policy option for the Palestinian state. If the Palestinian state is to have a special trade relationship with Israel, which may not necessarily be the case given the traumatic experience of the post-Oslo period, a free trade area presents a more realistic option. Unlike a customs union, a free trade area would allow the Palestinian state to have its own tariff structure that reflects its development needs, and would enable it to have special trade arrangements with Arab countries that may not desire similar arrangements with Israel. A free trade area would also allow the Palestinian state to collect its own import taxes, provided the state has control over its borders, thereby ending the transfer of Palestinian import tax revenues to Israel.

The Palestinian state also cannot be expected to maintain the current currency arrangement between the WBGS and Israel that requires the Israeli currency to be used as legal tender in the WBGS without providing a mechanism to compensate the PA for the seigniorage revenues generated as a result of this requirement. However, Palestinian policymakers will need to be careful in designing an alternative currency arrangement. In view of current economic conditions in the WBGS, there is a need to insulate the monetary authorities from expected political pressure to increase money supply to finance government programs aimed at reducing unemployment and poverty rates, which would create an inflationary environment that would be detrimental to private investment and economic growth. This could be done by issuing a currency under a currency board arrangement that would limit domestic money supply to the availability of reserves denominated in the reserve currency to which the domestic currency is linked.

Conclusion

It is highly unlikely that the Israeli government will allow the number of WBGS workers in Israel to return to its pre-2000 level. Hence, the revitalization of the Palestinian economy will require huge private investments. But such investment cannot be expected without a permanent settlement of the Palestinian-Israeli conflict that includes a Palestinian state with control over its borders and a strong link with diaspora Palestinians.

Notes

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1. In some of these areas, the PA also had security control until 2000.

2. Before the freeze, there had been in place a registration process — initiated by the Jordanian authorities in the West Bank and the Egyptian authorities in the Gaza Strip — aimed at giving landowners who lacked official titles to their land (because of ineffective registrations systems in the past) the opportunity to obtain titles. By the time of the Israeli occupation of the WBGS, 70 percent of the West Bank and 10 percent of the Gaza Strip was still not registered. See Hamed (1995).

3. Israeli bulldozers demolished most of the facilities of this airport soon after the beginning of the 2000 *intifada*.

4. The ban does not even allow replacing dried-up shallow wells with deeper wells, reducing the number of wells in the WBGS over the years, particularly in the West Bank, where most WBGS underground water resources are located.

5. World Bank (2004b).

6. These revenues were not included in the 1967-1993 WBGS budgets administered by the Israeli military.

7. Hamed and Shaban (1993).

8. This estimate was based on a study that covered the period 1970-1987. See Hamed and Shaban (1993).

9. Israel began in 2006 to restrict the flow of currency notes and coins to Gaza Strip banks.

10. All banks operating in the WBGS in 1967 were shut down following Israeli occupation. Until the early 1980s, only Israeli banks were allowed to operate in the WBGS and the services of these banks were limited mainly to Israeli settlers and other Israeli clients with commercial interests in the WBGS. In the 1980s, a Gaza Strip-based bank (the Bank of Palestine) was allowed to reopen one of its pre-1967 branches after winning an Israeli court case, and a Jordanian bank (the Cairo Amman Bank) was allowed to re-open one of its West Bank branches. No more non-Israeli bank branches were allowed to open in the WBGS until the early 1999s (Hamed,

1995).

11. Khadr (1999).

12. The lack of sufficient funds created shortages of some essential supplies at PA institutions, forcing them to cut services. That has been particularly the case for Ministry of Health hospitals and clinics.

13. For more information about the economic and social impact of internal closures, see World Bank (2003) and World Bank (2004a).

14. Calculated from PCBS-A and PCBS-B.

15. Calculated from World Bank (2006).

16. World Bank (2004a).

17. Arab countries contributed $104 million of foreign aid disbursements during the period 1994-1996, accounting for 10.4 percent of the total (Diwan and Shaban, 1999). In contrast, the share of Arab countries in total foreign aid disbursement in 2002 was 34.5 percent (World Bank, 2004a).

18. Technical assistance accounted for $244 million of foreign aid disbursements in the period 1994-1996, or 16.6 percent of the total (Diwan and Shaban, 1999).

19. For more information about WBGS infrastructure investment needs, see World Bank (2004b).

20. Except for roads that serve Israeli settlements, no new inter-city roads were built in the WBGS during the period 1967-1993. In addition, little investment was made to maintain the existing inter-city road network in this period (see Mody, 1996).

21. In 1999, almost all foreign aid commitments were allocated to infrastructure and institution building. In 2002, infrastructure and institution building accounted for only 17 percent of total foreign aid commitments (World Bank, 2003).

22. See World Bank (2004a).

23. The subsistence poverty line assumes a daily per capita consumption of $1.6, compared with $2.3 for the poverty line (World Bank, 2004a).

24. See PCBS-D.

25. Shaban (1999).

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Post-Oslo Palestinian (un)employment: a gender, class, and age-cohort analysis

Jennifer C. Olmsted

The Palestinian economy has been devastated since 2000, in large part as a result of the decision by the Israeli government to sever economic ties with the West Bank and Gaza Strip. Unemployment has skyrocketed, poverty has doubled, and if it were not for the influx of foreign aid, the situation would have been even more dire.[1] Much of the focus in the literature has been on examining the causes and consequences of the loss of employment opportunities for Palestinian men. This article explores how changes in Israeli, Palestinian, and U.S. policy have affected women's, as well as men's, employment patterns; it also discusses class and age differences in employment.

Pre-Oslo economic dependency

Prior to the 1993 Oslo Accords, Palestinian men were quite dependent on work in Israel. Most worked in the construction, service, and agricultural sectors. In 1973, just seven years after the Israeli occupation, over 30 percent of Palestinian workers were working in Israel. That figure continued to rise, averaging between 35 and 40 percent for most of the 1980s and into 1991. Gaza in particular was highly dependent on work in Israel, with close to half of all Gazans working in Israel in the mid-1980s. Most likely to "commute" to Israel were young and relatively uneducated men from rural communities or the Gaza Strip. Although detailed and systemic statistics separated by sex, class, and community are not available for the entire time period, data for 1975, 1977, and 1981 suggest that during this period 97 percent or more of the workers were male. Data collected in 1991 in the Bethlehem area suggested that about 2 percent of Bethlehem area women were commuting to Israel, while a survey conducted by the Norwegian organization FAFO the following year, which covered the entire West Bank and Gaza, found similar results, with about 98 percent of the commuters to Israel being male.[2]

As I have argued elsewhere, while men were far more visibly linked to the Israeli economy, a small, but substantial number of women also depended on Israeli capital for their livelihoods. But women's dependency on Israeli capital was less obvious because their labor force participation rates were far lower (12 versus 60 percent) and because many of these workers were engaged in home-based or small factory manufacturing employment such as apparel production. A study of the Bethlehem area for 1991 suggests that 25 percent of both male and female workers were dependent on Israeli capital, although much higher for men in terms of raw numbers given their far higher labor force participation rate.[3]

Much of the literature has examined the causes and consequences of the loss of employment opportunities of Palestinian men. This article explores women's, as well as men's, employment patterns. It also discusses class and age differences in employment.

Post-Oslo economic and employment crisis

Unfortunately for the Palestinians, two employment "release valves," that had previously helped ease unemployment pressures in the West Bank and Gaza, were turned off at around the same time. Following the 1991 Gulf War, which itself was quickly followed by the Oslo Accords, when optimism about the economic and political future of the Palestinians was at its peak, Israel began reducing Palestinian access to Israel. At the same time the Gulf states reduced considerably the number of Palestinians allowed to enter. Initially this did not seem like a huge problem, because at the same time the Palestinians were beginning to form a state apparatus so that for the first time employment was being generated internally by a public sector (although there had in earlier periods been a quasi-public sector, in the form of employment in the United Nations and Israeli-run schools and other publicly provided services.) Policymakers were also enthusiastic about the idea of setting up Free Trade Zones (FTZs) to entice foreign capital. Instead, economic conditions worsened considerably following the Oslo Accords as investors were unwilling to invest in such a volatile region and as mobility restrictions placed on Palestinians by the Israeli military reduced their ability not only to participate in the Israeli economy, but also for the local economy to function effectively.[4]

Labor force participation rates of both men and women began to drop in the post-Oslo period and unemployment increased. This was a result of a shift in the quantity and types of employment available. Changes in the composition of the labor force also occurred. The participation rate of younger men dropped, while older men became more likely to work. Participation rates among women also changed, with highly educated women being increasingly likely to work. Among the less educated, labor force participation either stagnated or declined, and participation in wage labor in particular went down. These trends can be explained by a combination of Israeli, Palestinian, and U.S. policies.

Israeli policy was one of the largest contributors to this shift. The closing off of jobs inside Israel, while it began in the early 1990s, continued throughout the decade so that by the year 2003 only 12 percent of workers were obtaining employment in either Israel or the settlements.[5] Gazans in particular were barred, as well as most young, single men. By 2000, Gazan employment in Israel had dropped from 40 to 15 percent, while the West Bank decline was far less precipitous, falling from a high of 30 to about 20 percent. Palestinian Central Bureau of Statistics (PCBS) data from

1995 suggest that women represented just over 3 percent of all commuters in 1995. Most were concentrated in agriculture, while men relied more on the construction and retail sectors. The biggest losses for men were in the construction sector. Whereas in 1995 26 percent of men relied on this sector for work, by 2003 that figure had dropped to 19 percent.[6]

At the same time, gender and age-cohort access to these jobs changed. Israel began to restrict access by younger men, particularly unmarried ones, who wanted to work in Israel. As a result a shift in the age cohort working for Israeli capital occurred. Between 1995 and 2003 the number of workers over the age of 35 working in Israel rose. In 1995 only 19 percent of those working in Israel were in the 35-45 category, while by 2003 28 percent were. Men aged 15 to 34, meanwhile, saw drops of about 6 percentage points during this period. Although not completely curtailed, the ease with which young men were able to obtain positions working for Israeli capital was clearly diminished and as a result there was a substantial increase in unemployment among men between the ages 15 and 25 during this period. In 2003 young men had an unemployment rate of 36.9 percent, compared to a rate for all men that, although at 27.1 percent still shockingly high, was considerably lower.[7] In 1995 the unemployment rate for young men was more than ten percentage points lower — 23.7 percent — which, although higher than the overall male unemployment rate of 18.5 percent, was not as far out of line with the overall rate as it was in 2003. And as pointed out by the ILO, these estimates do not include discouraged workers, that is, the many young people, both men and women, who are neither working, seeking work, or studying.

Women's employment

Women's labor force participation is often of concern to policymakers who argue that women's access to employment can increase their power within the household. While such an assumption is somewhat oversimplified, it is nonetheless important to look at women's access to employment as one measure of empowerment. The available numbers suggest that while Palestinian women's participation has fluctuated slightly, in recent years it has remained fairly stagnant, counter to trends in other parts of the world. However, examination of the data also suggest that women's access to *paid* employment may be declining despite a small rise in overall participation.

In 1992 FAFO estimated that women's participation was about 14 percent. It was considerably higher in the West Bank, where it was 19 percent, than in Gaza, where it was only 6 percent. In contrast, the first PCBS estimates of female labor force participation, for 1995-1997, were in the range of only 11 to 12 percent. This does not necessarily mean that women's labor force participation declined between 1992 and 1997. Instead, the higher FAFO numbers may have resulted from including more types of informal and easily missed income-generating labor performed in the home by women. Still, some change did perhaps take place between these years as the rate estimated by PCBS for Gaza is somewhat higher (8 percent) and the West Bank rate somewhat lower (17 percent) than in the FAFO study.[8]

Except for agriculture, women's work participation in almost all other sectors declined. While overall labor force participation by women has held steady, this suggests a return to subsistence agriculture and a decline in women's paid employment.

Since the PCBS began conducting regular standardized labor force surveys in 1995, it has become easier to compare figures. The overall labor force participation rate for women age 16 or older was 11 percent in both 1995 and 2003. During this time, the participation rate of West Bank women declined from 12.6 to 12 percent while that of women in the Gaza Strip rose from 7.3 to 8.5 percent. Thus women's overall labor force participation rate has remained basically unchanged, despite, or perhaps, because the region went through a period of extreme economic hardship during the period between 2000 and 2003.[9]

Economic theory is ambiguous on how economic hardship is likely to affect women's employment. On the one hand, increased poverty may push women into the labor market. On the other hand, increased competition for the few available jobs may lead to women being pushed out of paid employment. In the Palestinian case, it seems pretty clear that economic hardship has reduced women's access to paid employment. This can be seen both by examining Palestinian data and by comparing it to data from neighboring countries. In Jordan, for example, a country with a similar population in terms of education and cultural norms, women's labor force participation began at a higher level, about 19 percent in 1990, and rose to 23 percent by 2000. Palestinian women's labor force participation is in fact one of the lowest in the Middle East, which, given that participation rates are low in the region, also suggests that it may be one of the lowest globally.[10]

A closer examination of women's participation in various sectors also suggests that the types of employment women were engaged in changed considerably between 1995 and 2003. Except for agriculture, women's participation in almost all other sectors declined. This suggests that while overall participation rates have held steady, in recent years there has been a return to working in subsistence agriculture and thus a decline in paid employment. The change in women's representation in the agricultural sector is striking, as are their relative losses in other sectors. In 1995 only 27 percent of women's employment was agricultural, but by 2003 fully half of all female employment was in agriculture.[11] These numbers are even starker for Gaza, where in 1995 only 18 percent of women are recorded as being in agriculture, but by 2003 that number had risen to 53 percent.

Noteworthy also is that in 1995 90 percent of women in agriculture are either categorized as self-employed or unpaid family members; by 2003 that number had risen to almost 100 percent. The rise in the relative importance of agricultural work and, within this sector, the disappearance of paid positions for women, suggests that women's direct access to wage employment has declined precipitously in recent years and that the relatively stable female labor force participation rate masks a decline in the percentage of women in paid work, both inside and outside the agricultural sector. This is certainly in evidence in Gaza, where, in 1995, 62 percent of women workers were recorded as being wage workers and 15 percent as self-employed, but by 2003 only 41 percent were listed as wage workers and 5 percent as self-employed. Instead, the majority of women were now categorized as unpaid family labor (rising from 24 to 55 percent). In the West Bank, the ratio of unpaid to paid work stayed fairly stable during the period (40 and 60 percent, respectively), but which women were working, and where they worked, changed.

It is difficult to determine how much control women in agriculture — and in other sectors where they are primarily listed as unpaid workers, such as in the retail trade sector — have over the income that flows into the family. What may be assumed is that the working class in particular, in Gaza and in the West Bank, appear to have experienced reductions in access to direct income. Women's labor force participation patterns also changed by different amounts in different areas. For example, in examining recent female labor participation trends in the Bethlehem area, one sees that while up until 1999 this area had one of the highest labor force participation rates among women, at 22.7 percent, this plummeted to 15.5 percent in 2003. As a result, Bethlehem went from having the highest participation rate to having one of the lowest.[12]

Sectoral changes in women's employment patterns

Why has women's labor force participation stagnated and, in particular, who has found it more difficult to find paid employment in recent years? First, changes in labor demand have occurred and, second, given that men are facing very high unemployment rates, this has put pressure on labor supply and no doubt made it more difficult for women to compete. Declines in women's position have been seen in two areas that are often categorized as traditional employment areas for women, manufacturing and the health sector. Losses in the manufacturing sector occurred primarily in textiles and apparel, with the importance of that sector for women's employment being cut almost in half, from 14 to 8 percent. Again, differences between the West Bank and Gaza are noteworthy. In the West Bank about 14 percent of working women were employed in textiles and apparel, but that number had dropped to 7 percent by 2003. In Gaza the drop is much more stark. The size of the textiles/apparel industry there was slightly more important for women's employment in 1995, making up about 17 percent of women's employment, but by 2003 almost all these jobs had disappeared and less than 2 percent of women were working in textiles and apparel. This meant that less skilled, working-class women in Gaza in particular had fewer opportunities for participating in wage employment.

One contributor to this change was that when Israel negotiated the Oslo Accords with the Palestinians, it also negotiated with Jordan and Egypt. U.S. trade negotiators decided to reward Egypt and Jordan for their participation in the peace process by allowing them to export goods to the United States duty free if a certain portion of the product was produced in Israel. As a result, Jordan, which was the first to be awarded this trade status, saw an increase in exports to the United States from $2 million in 1999 to $567 million in 2003. Much of that trade was in the textiles and apparel sectors and employed migrant workers from Bangladesh and China.[13] Thus, the peace agreement that the United States brokered likely played a direct role in reducing employment opportunities for West Bank and Gaza Palestinians, a problematic result given the crisis of high unemployment in the territories. In particular, poor, less educated Palestinian women and men lost out to workers in Jordan, with the added irony being that many of these were not Jordanians (or Palestinians living in Jordan) but instead were migrant workers coming from elsewhere.

The reduction in the health care sector was not quite as severe, dropping from 10 to 5 percent of women's total employment. While men have not replaced women in the textiles and apparel industry — those jobs have disappeared — they do appear to be increasingly entering the field of health care and social work: this sector made up 7 percent of all male employment in 2003, up from 2 percent in 1995. More striking, about 50 percent of employees in this category were women in 1995, but now only 14 percent are. Thus another result of the economic hardship currently being experienced is that work that is often seen as "women's work" appears to be attracting men, and a defeminization of the health sector has been occurring.

The only two sectors that have experienced employment growth between 1995 and 2003 are the public sector and the transportation sector. The latter is male dominated and has not led to increased employment for women. In contrast, the public sector has been one area where opportunities have been created for women. With the establishment of the Palestinian National Authority (PNA), the creation of a number of government offices has led to a substantial expansion of the public sector. In 1995/96, 17 percent of working women and 8 percent of working men were identified as government employees, and by 2003 those percentages had risen to 23 and 14 percent, respectively. In Gaza, male reliance on the government sector was 19 percent in 2003, almost has high as for women.

While the public sector is thus one area where women have seen opportunities expanding, only highly educated women are generally eligible for employment in this sector. Almost all of the workers in the public sector were identified as being in one of three subsectors — administration and security, education, and health and social work — all of which require fairly high levels of education. As a result, the average number of years of education among female public sector employees was 13.9 in 1995 and 14.5 in 2003. Among men, the average years of education was also fairly high, beginning at 11.8 and rising to 12.6, for the same years. The mean level of education among those surveyed did not change between 1995 and 2003 and stayed at just below nine years of education.

Put another way, over 90 percent of all women working in the public sector have the equivalent of a high school degree or higher. And, for 2003, 87 percent of female PNA employees possessed the equivalent of a post-high school degree education (14+ years), and of those the majority had a BA-equivalent or higher. While still biased in favor of educated Palestinians, in 2003 only 49.3 percent of men had a post-high school degree and about one-third had less than a high school degree. The stimulation of government spending has no doubt helped the entire economy, but the actual employment options have not necessarily gone to less skilled Palestinians, who lost jobs inside Israel, but instead to those with more education. Thus while the jobs that the government has created for women are mostly going to educated women, those who had lost jobs were often less skilled women in the manufacturing sector. And while the Palestinian security forces have expanded considerably and have provided employment for some less educated men, no similar outlet is available for women.

Conclusion

Recent data collected by the PCBS suggest a number important changes in the structure of the Palestinian labor market. First, there has been a small decline in male labor force participation and very little change in the labor force participation rate among women. This alone is cause for concern because it indicates a high level of discouragement among Palestinian workers. But these numbers mask a more complex picture: employment options have changed for individuals, depending on their class, sex, and age. Less educated women experienced a decline in their access to paid employment; participation rates among more educated women have risen. And especially in Gaza a large increase in the number of women working in the unpaid agricultural sector can be seen that parallels a drop in women's access to wage labor. This indicates that the economy is regressing. Among men shifts have occurred as well, with younger men experiencing a very large increase in unemployment.

These trends can be explained by a combination of Israeli, Palestinian, and U.S. policies that have shifted labor demand and put increasing pressure on labor supply, causing less educated women (as well as some less educated men) in particular to lose out. The Israeli government has increasingly isolated the Palestinian economy, reducing employment options for workers. U.S. policies that have encouraged joint ventures between Jordanian (and more recently Egyptian) firms, have done so at the expense of Palestinian workers who had in the earlier period provided a cheap manufacturing labor force for Israeli capital. This is particularly the case for less educated women, many of whom depended on the textile and apparel industry, working as subcontracted workers for Israeli firms. While this work was certainly exploitative, at least it provided less educated women with their own income source. Palestinian policies, while they have stimulated the economy by enlarging the size of the public sector, have mostly created jobs for more educated Palestinians, particularly for women. It is also clear that this type of public sector employment is not sustainable in the long run.

The patterns being observed suggest cause for serious concern. They indicate that in the post-Oslo period, the most economically disadvantaged are less educated men and women who are also likely to have been poor and economically vulnerable even before these policy changes went into effect. In fact, the World Bank estimates that poverty rates in the Palestinian territories rose from 25 to 60 period during this period. Thus these patterns can be seen as a basic human rights issue, a gender rights issue, and probably also as a large contributing factor to the political instability in the Palestinian territories. A short-term policy solution to this problem is more targeted employment creation, but a parallel requirement is to address the way Israeli policies in particular continue to cripple the Palestinian economy and the need to find a way of guaranteeing Palestinian economic sovereignty.

Notes

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1. See World Bank (2001; 2002; 2003; 2004), UN (2002), and ILO (2005) for discussions of rising poverty and aid dependency. Data suggest that the Palestinians have had one of the highest per capita dependencies on foreign aid globally in recent years.

2. FAFO has carried out numerous surveys in the Arab world and elsewhere. See http://www.fafo.no/english/hist/abo-Fafo.html for more information. For discussions of Palestinian employment in Israel, see, e.g., Semyonov and Lewin-Epstein (1987), Heiberg and Ovensen (1993), Olmsted (1994), Freeman, Abu-Shoker, El-Ahmad, and Klinov (1995), Roy (2001), Sayre (2001), and Farsakh (2002; 2005).

3. See Olmsted (2001) and Hammami (2001) for discussions of how Palestinian employment patterns were gendered in the pre-Oslo period.

4. For a critical discussion of the economic protocol of the Oslo Accords, see Olmsted (1996), Farsakh (2001). Numerous reports and articles have documented how Israeli closure policies have crippled the Palestinian economy, e.g., World Bank (2002; 2003; 2004), UN (2002), Ruppert Bulmer (2003), ILO (2005).

5. Although 1992 was the peak year for Palestinian migration, it was already clear in 1991 that Israel was beginning to reduce access to Israeli employment by tightening the work permit system and setting up road blocks to monitor and control Palestinian

movements.

6. See Farsakh (2002; 2005) for a discussion of trends in Gaza and the West Bank. PCBS began collecting data in 1995. This section relies heavily on the 1995/6 and 2003 labor force surveys collected by the PCBS.

7. Author's estimates using PCBS data. Online ILO estimates for 2003 suggest a marginally lower rate of 26.7 percent (http://laborsta.ilo.org/). Unemployment data for 1995 were unavailable at the ILO web site. Note that the unemployment rate suffered by Palestinians men in 2002 was even higher at 33.5 percent. ILO estimates are notoriously low because they define anyone who has worked during the reference period as employed. Underemployment is a serious problem among Palestinians; many work as day laborers and do not know from one day to the next whether they will be employed.

8. For a summary of the FAFO findings, see Heiberg and Ovensen (1993). Subsequently, PCBS (1998) released a report with various statistics on men and women.

9. ILO data suggest that female labor force participation may have risen somewhat between 2001 and 2004 (data for 1995 and 2003 were not available) from 10.4 to 13.5 percent. See http://laborsta.ilo.org/. Published PCBS data differ somewhat from the numbers calculated here, suggesting a small rise in women's labor force participation between 1995 and 2000, from 11 to 12.7 percent, and a leveling off in 2003 at 12.8 percent. See http://pcbs.gov.ps/.

10. Statistics on Jordanian women's employment patterns are in World Bank (n/d). For a critical discussion of women's employment throughout the region, see Olmsted (2005).

11. Although considerably less pronounced, there is also evidence that men's participation in unpaid agricultural work has increased as well.

12. For more discussion of some of the unique challenges facing Bethlehem, see UN (2004).

13. See Wahash (2004); Greenhouse and Barbaro (2006). The Egyptian agreement did not come into effect until 2004, but the Jordanian agreement has been in effect since the late 1990s.

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The political economy of food aid to Palestine

Numan Kanafani and *Samia Al-Botmeh*

The aim of this article is twofold. First, it provides an assessment of the extraordinary deterioration in food security in the West Bank and Gaza Strip (WBGS) since the outbreak of the second *intifada* (popular uprising) in 2000. Second, it argues that food insecurity in the WBGS is mainly a result of lack of access to food, both physical and economic. Lack of physical access refers to the severe restrictions on the movement of people and goods imposed by the Israeli army, and which take the form of closures, curfews, construction of a separation wall, and land confiscation. Lack of economic access refers to the income deterioration due to high unemployment and loss of business, which have been among the immediate consequences of the restrictions on movements.

Food insecurity in Palestine is primarily the outcome of a political dysfunction addressed by the international community as if it were a technical and/or natural problem. But rather than food aid, what is needed is the restoration of Palestinians right to unrestricted movement and work.

A World Bank report notes that the Palestinian recession is one of the worst in recent history, with average personal incomes having declined by more than a third between 2000 and 2004 and about half of the population living below the poverty line.[1] Consequently, the state of food security has deteriorated to such an extent that the World Food Program (WFP) designated over one-half of the WBGS's population as being food insecure in 2006.[2]

Trends in the Palestinian economy reveal strong relationships among movement restrictions, economic growth, and food (in)security. Progress toward food security has been made when, on the demand side, people and goods could move freely, hence when earnings and incomes rise. On the supply side, movement restrictions increase the transaction costs of food shipments and result in higher prices, hence making food less accessible.

The article shows how food aid is used to mitigate some of the worst effects of food insecurity but stresses that the poverty alleviation effects of food aid programs are rather limited. Food aid, especially in the case of WBGS, treats only the symptoms rather than the roots of the food insecurity crisis. Prolonged physical restriction on movements, with all that this entails for market fragmentation, severe price distortion, the shortage of imported inputs, and loss of export markets threatens to irreversibly destroy Palestinians' domestic productive capacities. This will make the WBGS's dependency on food aid permanent and turn a whole nation, otherwise capable to a great extent of fending for itself, into isolated communities permanently dependent on the charity of others.

Food insecurity in Palestine is primarily an outcome of a regional political dysfunction, but the international community addresses this as being an outcome of technical and/or natural dysfunctions: the international community responded to a food crisis by pouring in food aid rather than by doing what is needed to allow people to move about and work. Undoubtedly, humanitarian aid has saved lives, yet food aid can never be a sustainable solution to alleviate poverty and foster people's dignity.

In spite of political turbulence, the WBGS was moving steadily toward a better state of food security during the second half of the 1990s. Domestic food supplies as well as access to food were improving. This positive trend was violently disrupted toward the end of 2000 and culminated two years later when the Israeli army reoccupied the whole WBGS. A man-made catastrophe then cast a heavy shadow over the lives of Palestinians, with grave repercussions for food security. To illustrate these developments, the article starts with some background on the main features of the WBGS economy. We then shed light on the peculiar phenomenon of closure — the caging of a population by imposing severe physical restrictions on its movements — so that the reader may gain an idea of the dimension of the socio-economic and political catastrophe witnessed in the WBGS since 2000. In the second section, we assess policy issues with regard to food insecurity in Palestine by tracing trends in food supply and food consumption. Section three identifies the main stakeholders in the food aid business. In section four, the scope of and limits to food aid policy in Palestine are addressed.

Background

The economy

In spite of considerable fluctuations, the WBGS economy witnessed strong growth trends during the 1995 to 1999 period. These came about as a result of a general sense of optimism about a future peace settlement as well as the relative ease of access to external markets, including the Israeli labor market. Fixed investment was over 33 percent of GDP in every year during 1994-1999, and reached 45 percent in 1999.[3] Most of this was undertaken by the private sector, although with a large proportion in residential buildings. During the same period, the employment rate increased gradually from 61 to 83 percent of the labor force (see Table A1 appended to this article). Palestinian employment in Israel reached an average of 134,000 workers in 1999, accounting for about 23 percent of total Palestinian employment.[4] These favorable trends resulted in improved standards of living and were reflected in modest poverty rates (20 percent of the WBGS population in 1999). Food insecurity was a concern for a relatively limited segment of the Palestinian population, mostly those incapacitated by severe poverty.

Toward the end of the 1990s, relations between Israel and the Palestinian

Authority (PA) started to deteriorate. To force the PA into political compromises, Israel began to economically squeeze the WBGS. The PA, in turn, felt that Israel was not serious in meeting its obligations for the establishment of an independent, sovereign Palestinian state. As hope faded, a vicious cycle of violence and counter-violence dominated the scene. Many of the potentially positive aspects of the Oslo Accords on the Palestinian economy, such as free access to the rich Israeli market and outside world, safe-passage between the West Bank and Gaza, and the relatively free flow of Palestinian labor to Israel became irregular, unpredictable, and subject to the total unchallengeable discretion of Israel's policymakers.

A man-made catastrophe

The overall climate for progress toward achieving increased access to food for all was abruptly cut off with the second intifada in September 2000.[5] The main feature of this new state of affairs has been the intensification and institutionalization of restrictions placed on the free movement of Palestinian people and goods. These restrictions take various forms, including closures, flying checkpoints, road blocks, curfews, and the separation barrier (which in some sections reaches 12 meter high and goes through the midst of urban, rural, and refugee Palestinian centers).[6]

Closures in the WBGS have taken three forms: (1) internal closure prohibiting movement within the WBGS, reinforced by curfews; (2) external closure of the border between Israel and the WBGS (and thus also between the West Bank and Gaza); and (3) external closing of international crossings between the West Bank and Jordan, and between Gaza and Egypt. During 1993 and 1999, the WBGS were subject to a total of 311.5 days of complete external closure.[7] Days of (complete and partial) closure increased sharply after the intifada. For instance, 2002 saw more than 250 days of closure, which means that Palestinians had not even 4 months of unrestricted movement during the whole year (Figure 1).

Movement restrictions have adversely affected the entire food chain in the WBGS, that is, domestic production, food imports, the ability to reach and provide food to the needy, food prices, and most importantly people's economic access to food. Israeli imposed closures, curfews, incursions, land confiscation, and destruction of productive properties combined to bring the Palestinian economy to its knees, resulting in unprecedented levels of unemployment and poverty. At the same time, clearance revenues collected by Israel on behalf of the PA were being withheld and domestic public revenues started to decline as a result of rising unemployment and reduced demand. The drastic decline in revenues came just when a much stronger social welfare net was needed.[8] By 2002, real per capita income had fallen to 54 percent of the 2000 level and over one-half of the population was living below the poverty line (Table A1).

A World Bank report estimated that as a result of Israeli policies the physical damage within the WBGS from September 2000 to December 2001 was $305 million,

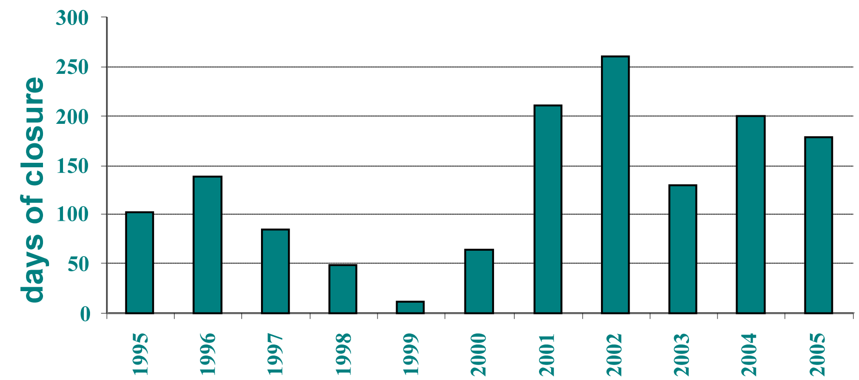

Figure 1: Closure days in the WBGS, 1995-2005
Source: U.N. Special Coordinator for Middle East Peace Process (UNSCO) and Palestinian Ministry of Labor (1995-2005).

much of which was in the agricultural sector. By the end of 2002, after Israel's major military operation that led to the reoccupation of the WBGS, this figure rose to $930 million.[9] Damage included losses associated with the demolition or destruction of greenhouses, poultry and livestock farms, wells, farm houses, irrigation systems and ponds, fences and walls, main water pipelines, packaging and experiment station, nurseries, crop, tree, and vegetable-planted land, as well as killed cattle, sheep, goats, poultry, and damaged beehives.[10]

Another immediate impact was the loss of about 109,000 jobs between the third and fourth quarters of 2000, a decline of 18 percent.[11] Employment in Israel and the settlements suffered the most, decreasing by about 90,000 at the end of 2000, and a further 47,000 and 20,000 in 2001 and 2002, respectively.[12] This loss of employment had a huge impact on the Palestinian economy: real per capita GDP fell by 9.6 percent in 2000, despite robust growth during the first three quarters. By 2005, real per capita GDP was lower than its level in 1996 (Table A1). According to the World Bank, the loss amounted to around 100,000 jobs in 2005 and directly affected the welfare of about 700,000 people, or 20 percent of the WBGS population,[13] and resulted in lower standards of living. The World Bank further estimates that before the start of the intifada, 20 percent of the population was living below the poverty line of $2.1/day. That number increased to 27 percent by December 2000, 37 percent by December 2001, and 51 percent by December 2002. While in 1997, about 200,000 Palestinians (8.5 percent of the population) received assistance from relief organizations, including food aid, this rose to nearly 1.7 million by 2001, some 51 percent of the WBGS population.[14]

Policy issues

Food security: definition

One pair of scholars claims that by 1992 there were already about 200 definitions of food security in the literature. But a careful definition adopted in 1996 by the World Food Summit has been gaining widespread recognition. It notes that food security exists "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."[15]

The definition emphasizes that food security has four essential components, all of which need to be present before an individual (or household, or country) is considered food secure. These are *availability* (that sufficient quantities of quality food are present, whether produced domestically or imported), *access* (that individuals have access to appropriate, nutritious diet), *stability* (that access to food is secured over time without risk of losing access due to economic or climatic shocks), and *use* (that food consumption is conjoint with clean water, adequate sanitation, and health care). This definition emphasizes the demand side, consumption. Unlike earlier definitions which concentrated almost exclusively on the supply side, this definition stresses the dimension of access — entitlement to food — particularly by vulnerable people.[16]

Food supply

Food production in the WBGS fluctuates significantly from year to year, mainly due to changes in weather conditions and the strong biannual cycle in olive production. The total average value of food production during 1998/2000 stood at $835 million, with the main items distributed as follows (in percent): vegetables (27), meat (26), fruits (15), olives (14), milk (9), and eggs (4). Instability in agricultural production is a major problem for producers, but not necessarily for consumers because commercial food imports make up a large share of the diet. The value of annual net food imports averaged $100 per person over the 1998-2000 period, with a total annual value of $290 million. About 40 percent of the food import bill went to cereals, with smaller percentage for fruits, dairy, and meat imports (11, 10, and 5 percent, respectively). Over 87 percent of agricultural imports came from Israel. The WBGS's deficit in its agricultural trade balance with Israel was $335 million in 2000, or 24 percent of that year's total trade deficit.[17]

As for exports, vegetables are the largest earner of foreign exchange in the WBGS, followed by fruits. In 1999-2000, these two foods accounted for 65 percent of the agricultural export value. Vegetables are the only food sector showing net exports in good weather years, implying that without the production of perishables such as fruits and vegetables, the trade deficit would be considerably higher.

When the data on the value of production and net imports are combined, the average value of the food supply in the WBGS turns out to be $385/person/year for the 1996-1998 period. The share of domestic production in total food availability is around 70 percent. When measured in quantity or in value terms, most of the food consumed is domestically produced, but when measured in terms of food energy, most of the calories come from external sources.[18] This implies that access to food markets, either in Israel or internationally, is essential to maintain a sufficient food supply in the WBGS.

Table 1: Agriculture in WBGS* (millions of US$ in constant 1997 prices)

	Value of output	*Costs of inputs*	*Value added*
1994	611.3	212.9	398.4
1995	674.1	260.0	414.1
1996	760.6	278.6	482.0
1997	712.1	282.9	429.2
1998	834.0	351.1	482.9
1999	784.5	313.8	470.7
2000	742.6	354.6	388.0
2001	703.1	358.0	345.1
2002	779.0	399.0	380.0
2003	834.0	413.0	421.7**
2004	n/a	n/a	470.7

Source: PCBS, Agricultural Statistics.
Notes: * Excluding East Jerusalem; **469.7 in some PCBS publications (quarterly).

Because they have limited growers' ability to reach their fields and consumers' access to import food markets, Israeli movement restrictions have been detrimental to food supply in the WBGS. Table 1 makes clear that while the value of domestic agricultural production did not decline drastically, agriculture value-added since 2000 was either lower than, or only marginally above, the cost of inputs.

Movement restrictions have affected access through their impact on food prices. These arise out of higher transport fees, longer delivery times, and other costs associated with the unpredictability of movement restrictions. For example, importers and exporters from the Gaza Strip experienced a tenfold increase in the cost of transport from the port of Ashdod to Gaza ($2,300 per truck in 2006 as compared to $250 before the intifada). As a result, food prices have been on the rise, particularly in the Gaza Strip, where the food CPI increased by 12 percent in December 2006 as compared to December 2005.[19]

Food consumption

For those engaged in light physical activity, the thresholds of food energy and protein consumption considered sufficient to meet daily energy requirement is set by nutrition experts at 2,100 kcal and 53 grams, respectively. The PCBS's household surveys indicate that food energy and protein consumption by the Palestinian population averaged 2,114 kcal and 56.3 grams in 1996-1998 per person per day. These are barely higher than the recommended thresholds.[20]

The data on food availability and levels of food energy and protein consumption during 1996-1998, as reflected in aggregate data and household surveys, indicate that Palestinians were relatively food secure then. However, this situation has changed drastically since the beginning of the intifada in 2000. The deterioration in economic conditions and the decline in standards of living as well as the increase in food prices all have led to a rise in food insecurity. As such, economic access to food in terms of purchasing power rather than the lack of food per se is the main constraint to securing a healthy, nutritious diet. According to U.N.'s Food and Agricultural Organization (FAO), to cope with this situation, members of vulnerable households have been consuming minimal amounts of expensive protein, with many meals consisting solely of bread and tea.[21] Thus, one of the gravest consequences of high poverty rates is malnutrition. The World Bank estimates that per capita real food consumption has declined by 25 percent between 1998 and the end of 2002. As a result, malnutrition rates have increased. A PCBS nutrition survey finds a significant increase in both acute and chronic malnutrition between 2000 and 2002.[22]

The stakeholders

Since food availability became a serious problem in the WBGS after 2000, following the devastating repercussions of the Israeli measures, the FAO, in cooperation with World Food Program (WFP), carried out the first detailed vulnerability assessment in 2003. The purpose was to identify the food insecure population and the factors and causes of their insecurity and vulnerability.[23] The study confirmed that closures, constraints, and the separation barrier had and were continuing to have a damaging impact on the livelihoods of the Palestinian people. At the same time, prolonging these restrictions risks permanently damaging households' recovery and undermining their ability to attain food security in the long-term. More specifically, the assessment concluded that food insecurity in 2003 was a real and constant threat for 1.4 million people, or some four out of ten people in the WBGS. Furthermore, food insecurity was found to be a near constant threat for an additional 1.1 million people (another 30 percent of the population).

In the West Bank, food insecurity is fairly widespread: 842,000 persons out of a total population of 2.2 million, including East Jerusalem, were considered food insecure. Great concentrations of the food insecure were found in pockets near the Green Line and areas affected by the construction of the Israeli separation barrier, and also near settlements and military zones where internal closure prevents access to land and markets. For Gaza, it was estimated that an astonishing 41 percent of the population (552,000 people) were food insecure.

In 2004, the WFP updated the FAO's baseline survey. The new assessment revealed a slight improvement in the overall conditions due to an easing of curfews and the partial resumption of payments of clearance money from Israel to the PA. The WFP put the total number of food insecure people in 2004 at 1.3 million (1.4 million in 2003). The population at risk of being food insecure was estimated to amount to a further 27 percent (30 percent in 2003). In-depth studies revealed that food insecurity varies greatly at subgovernorate levels, being higher in areas close to settlements and the wall where restrictions on physical movements and destruction of productive assets are particularly high.[24]

The most relevant conclusion of this second vulnerability assessment was, yet again, that food in the WBGS is generally available but access is limited due to physical (curfews, closures) and economic reasons (high unemployment, depletion of resources, exhaustion of coping strategies, and strained social support networks). Households have been able to manage in these difficult circumstances, albeit with dwindling resources and increased vulnerability to shocks and an increase in food assistance.

The chronic poor and the new poor

Households most vulnerable to food insecurity are identified either as chronic poor or new poor. The former are households with chronically sick or disabled members, female headed households, widows, and the elderly without income. This category includes refugees who are classified by the United Nations Relief and Works Agency (UNRWA) as Special Hardship Cases (SHC); nonrefugees are classified as Hardship Social Cases (HSC).[25] Most of the chronic poor were poor even before the intifada. Their livelihoods have not drastically changed but they have experienced a gradual deterioration in their situation. The most vulnerable among the chronic poor are those who do not receive assistance or food aid from any of the national welfare institutions or humanitarian organizations. This group is the least well equipped to cope.

The new poor are those who, as a result of post-2000 turbulence and restrictions, have lost their main source of livelihood. They include unemployed former wage workers, those whose land has been confiscated or whose businesses have been destroyed, people whose homes have been demolished, and farmers — including Bedouin — fisher folk, and traders who have lost access to land, sea, or markets. The productive assets and savings of this group are depleting fast, making it unlikely that they would become food secure rapidly, even if conditions improved. The new poor in the WBGS were estimated at 1.1 million people in 2003.

Food aid — although it would mitigate some of the worst effects of the economic consequences of movement restrictions — is ineffective in tackling the root cause of food insecurity of the new poor. Their vulnerability came about as a result of the political upheavals. Accordingly, the only way to tackle the deterioration of food security for this group would be to lift movement restrictions so that normality can be restored and life returns to its regular mode.

Food aid providers

To fulfill the needs of the large group of people which has become food insecure since 2000, a number of agencies and actors have been providing humanitarian assistance, including food aid. These can be categorized in three types of institutions: (1) Palestinian Authority (PA) institutions; (2) Palestinian NGOs and civil society organizations; and (3) international organizations. The most important relief-type programs offered by the Palestinian Ministry of Social Affairs are the program for Social Hardship Cases (ca. 47,000 households) belonging to vulnerable groups like female headed households, widows, orphans, and the elderly.[26] This program provides monthly cash payments and in-kind assistance. Another program is the social safety net program which consists of 9 subprograms of which only the social protection program is operational due to, among other reasons, the dramatic fall in the PA's revenues. The social protection program targets the poorest of the poor, some 10 to 15 percent of WBGS households.

The number of local and international NGOs providing charitable services in the WBGS is large. Most, but certainly not all, of the food aid distributed by NGOs is delivered to them originally from major international donor agencies such as the WFP and the International Committee of the Red Cross (ICRC). Three major international agencies provide regular food aid: (1) UNRWA provides assistance exclusively to refugees in the WBGS (about 1.7 million); while all refugees in the WBGS are entitled to UNRWA schooling and health care services, food and cash assistance are confined to Special Hardship Cases; (2) the ICRC provides cash and food aid to impoverished (nonrefugee) Palestinians; and (3) the WFP, the main provider of food aid to nonrefugees. The WFP extends aid to food insecure families through a range of relief and rehabilitation programs, usually via a third party, with population group-specific food rations.

Food aid: scope and limits

Food assistance

As a result of the dramatic deterioration of the economic conditions and well being in the WBGS since 2000, food assistance programs have expanded rapidly from a small program focused on the chronic poor before the intifada to become a major component of the social welfare system. Emergency food aid increased from 23,000 to 168,000 tons between 1999 and 2001 (Table A2), when about 1.7 million persons in the WBGS were the target for food aid.

Out of the total number of 265,000 chronic poor in 2003, 115,000 received an assistance package from UNRWA that provided a little over 1,700 kcal (75 percent of which comes from flour and rice). This is only about 80 percent of the recommended minimum energy requirements of 2,100 kcal. The rest of the chronic poor, the 150,000 who meet WFP's criteria, received a food basket containing 2,100 kcal of food. The new poor, some 1.4 million people, received a smaller food basket than the chronic poor, being provided with about 1,020 kcal rations for refugees and 1,406 kcal for nonrefugees. Clearly, those who received food packages with these amounts of food energy have to have access to substantial alternative sources of income or assistance to be food secure.

Food aid is dependent on the capacity of the international community to provide aid, rather than on the humanitarian requirements of food insecure Palestinians. Food aid may not be a reliable source to remedy food insecurity.

A glance at the overall amounts of food aid delivered to the WBGS during the past years reveals a trend increase, yet with sharp and unexplainable fluctuations: 184,000 tons in 2001; 81,000 in 2002; and 202,000 tons in 2004 (see Table A2). Given that the number of the food insecure in the WBGS was either increasing or about stationary (as during 2003-05), the sharp shifts in the delivered food aid cannot be explained by parallel shifts in needs. Apparently, the volume of food aid is supply rather than demand driven. Food aid is dependent on the capacity of the international community to provide aid, rather than the humanitarian requirements of food insecure Palestinians. Food aid may not be a reliable source to remedy food insecurity.

The effort of the international community would be more rewarding and sustainable if targeted at resolving the root cause of food insecurity in the WBGS, that is, Israel's occupation of the Palestinian Territory and movement restrictions. With normality, when the Palestinian population is allowed to move about freely, run its businesses, engage in import and export activities, utilize the available natural and human resources, it would become food secure again. The shadow of hunger would become a passing phenomenon associated with a temporary man-made catastrophe. If the current state of affairs persists, food insecurity will become an integral part of life in the WBGS whereby people become incapacitated and totally dependent on charity, a situation totally avoidable if efforts are targeted in the right direction.

Estimates of food aid needs, 2004 and 2005-07

The FAO's 2004 study argued that in order to meet the target of supporting the chronic poor and the new poor, by providing them with the recommended 2,100 kcal per day, total food aid to the WBGS should amount to about 350,000 tons in 2004, at a cost of about $150 million. The cost of food assistance programs is low because the proposed food baskets contain low-cost, high-energy foods, mainly cereals, sugar, cooking oil, and pulses.[27] But being aware that this quantity of food aid may not be attainable, the study argued that when the chronic and new poor are supported with the equivalent of about 1,020 kcal and 1,400 kcal, respectively, of food energy per

Table 2: Food basket and daily ration (in gram)

	All activities
Wheat flour	462
Oil	25
Pulses	40
Sugar	18
Iodized salt	5
Kcal/day/ person	2,046

Source: WFP (2005).

person per day, a total of 208,000 tons of food aid would be sufficient in 2004 (at $92.5 million). This is far below the recommended food security minimum of 2,100 kcal per day. The estimate assumes that some of the poor have access to sufficient resources from other sources to bring their diet to an adequate level and cover their other necessities. But obviously, with 1.4 million insecure persons, many do not have access to any food.

The WFP study adopted this flawed estimation approach when it estimated its own food aid requirements for the WBGS for the 2005-07 period. As noted earlier, WFP estimated the number of the food insecure at 1.3 million. It starts by excluding about 42 percent of those, saying that as refugees they are UNRWA's responsibility. Of the remaining 752,000 food insecure persons, the WFP then proposes to assist only 480,000 of them, arguing that the other 272,000 people "are believed to have a wider range of income opportunities and coping mechanisms."[28]

The WFP plans to provide a food basket that provides the fortunate 480,000 with about 2,000 kcal per day per person. Table 2 shows the content of the basket. The selected food insecure persons will be approached via three channels: (1) direct free food rations covering 365 days/year for 188,300 persons; (2) a daily meal for 10,600 persons in institutions (hospitals, orphanages, and elderly homes); and (3) food-for-work (FFW) and food-for-training (FFT) programs. These programs are designed to assist 281,100 of the new poor annually, with a focus on the creation or rehabilitation of community assets and enhancement of skills, particularly for women. Able-bodied members of targeted households will be requested to work 20-25 hours per month to qualify for assistance (the programs offer a maximum of 8 months employment per person per year). The WFP planned cover two years (September 2005 to August 2007). As can be seen from Table 3, WFP estimates that it needs 154,069 tones of food aid to fulfill its declared tasks. The total cost of the operation is put at $80.9 million, of which only $49.1 million (or about 60 percent) is allocated to the direct procurement of food.

The FFW and FFT programs insert a development dimension into humanitarian food aid. When properly implemented, these programs can assist the new poor to protect and promote their livelihoods. Local cooperating partners will help the WFP to implement the FFW and FFT programs and to identify developmental needs. Proposed areas of intervention include: (1) agricultural land reclamation, leveling and terracing, tree planting, and road rehabilitation; (2) rehabilitating water cisterns and sanitation systems; and (3) food-processing and literacy courses. Gender considerations will play important role, and at least 70 percent of FFT participants will be women. Yet even after recognizing some of the potentially bright aspects in the food aid approach, our central point remains valid, and critical: food aid can never be a viable, permanent solution to the WBGS's food insecurity. Although food aid initiatives have alleviated some of the hardship endured by Palestinians, the effort would not be needed if WBGS normality were reestablished. A man-made catastrophe has been at the heart of this devastating destruction and has turned an otherwise dynamic people who, for decades, managed to maintain reasonable standards of living, relatively high educational rates, and a functioning economy, into a group of hungry dwellers waiting to be saved by meager food rations. The international community would better resolve the food insecurity problem in Palestine by doing what is needed to break down the cage that incarcerates the entire Palestinian population.

Table 3: World Food Program's food aid project for the WBGS 2005/07 — cost breakdown

	Quantity (metric ton)	*Average cost ($/ton)*	*Value (US$)*
Commodity	154,069	319.25	49,187,200
- Wheat flour	129,418	250.00	32,354,500
- Oil	6,003	950.00	5,702,850
- Olive oil	1,000	3,300.00	3,300,000
- Pulses	11,206	550.00	6,163,300
- Sugar	5,042	275.00	1,386,550
- Iodized salt	1,400	200.00	280,000
External transport	154,069	67.01	10,324,164
Landside transport, storage & handling	154,069	52.34	8,064,100
Other direct operational costs	154,069	8.96	1,380,000
Total direct support costs	154,069	43.00	6,625,200
Indirect support costs (7%)	154,069		5,290,646
Total WFP costs			80,871,310

Source: WFP (2005).

Notes

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1. World Bank (2004, p. 1).

2. WFP (2006).

3. PCBS (yearly reports).

4. PCBS (2000).

5. The first intifada took place during 1987-1993.

6. The barrier's total length is 703 km, more than twice the length of the border line which existed between Israel and the West Bank until 1967. The total area located between the barrier and the 1967 border line is 10.2 percent of the West Bank (57,518 ha). When completed, 60,500 Palestinians living in 42 villages will reside in areas between the barrier and the old border line (excluding East Jerusalem Palestinians). An additional 124,300 Palestinians living in 28 villages will be located on the east side but surrounded by the wall on three sides and controlled on the fourth with an associated physical structure. See the U.N. Office for the Coordination of Humanitarian Affairs in OPT, July 2006, at http://www.ochaopt.org/.

7. Kanafani (2004, p. 276).

8. World Bank (2004).

9. World Bank (2003).

10. FAO (2004).

11. PCBS. Labor Force Surveys (2001, 2002, 2003).

12. PCBS (2005).

13. World Bank (2006, vol. 1).

14. The number of Palestinians receiving aid in 1997 is taken from Hilal and Malki (1997). The estimate of the number of people receiving food aid in 2002 is taken from FAO (2004). Population data are from the PCBS (2006).

15. Maxwell and Smith (1992); FAO (2002, p. 25).

16. The attention to the demand side is closely identified with the seminal works of Amartya Sen, e.g., Sen (1981). Hunger, according to Sen, results from entitlement failure: a collapse in one's ability to have command over sufficient amounts of food due to loss of endowments or a sharp fall in the amount of food the endowments can be exchanged with given the legal, political, economic, and social arrangements of the community in which one lives.

17. PCBS, Agricultural Statistics (1999, 2000, 2001); PCBS (2002).

18. PCBS, Agricultural Statistics (1996, 1997, 1998). The WBGS's dependency on imports with respect to meat, dairy products, and fish consumption is almost total.

19. World Bank (2006). The price index data is taken from PCBS, Consumer Price Index (2005, 2006).

20. FAO (2004); the food consumption data are obtained through PCBS household expenditure and consumption surveys undertaken during 1996-1998.

21. FAO (2004).

22. World Bank (2003, paragraph 2.4).

23. FAO (2004).

24. WFP (2005).

25. UNRWA: United Nations Relief and Works Agency for Palestine Refugees in the Near East.

26. The UNRWA's programs are not connected with the PA's programs. Unlike the latter, the latter exclusively support the refugees.

27. WFP (2005).

28. WFP (2005, p. 7).

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Table A1: West Bank and Gaza Strip estimated macroeconomic trends

	1995	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Per capita GNI (constant 1997$)*	1,601.2	1,526.5	1,638.5	1,815.2	1,888.9	1,684.6	1,411.1	1,267.8	1,291.6	n/a	n/a
Per capita GDP (constant 1997$)*	1,388.2	1,347.8	1,437.7	1,546.2	1,612.3	1,458.3	1,301.8	1,191.3	1,184.8	1,217.8	1,268.2
Per capita GNI (real annual growth, %)	1.6	-4.7	7.3	10.8	4.1	-10.8	-16.2	-10.2	1.9	n/a	n/a
Per capita GDP (real annual growth, %)	-1.0	-2.9	6.7	7.5	4.3	- 9.6	-10.7	- 8.5	-0.5	2.8	4.1
Investment ($mn)	1,019.5	1,129.1	1,267.0	1,501.3	2,010.4	1,467.4	1,186.2	727.2	1,126.3	n/a	n/a
Exports ($mn)	667.1	729.3	767.5	919.8	953.8	889.1	605.2	565.0	442.8	449.0	n/a
Imports ($mn)	2,568.1	2,827.4	3,028.4	3,448.5	4,094.2	3,505.2	3,155.5	2,615.1	2,929.9	2,292.0	n/a
Employment ('000)	309.0	432.0	467.2	533.6	591.6	595.2	508.1	487.1	590.7	604.4	633.0
- of which in Israel (%)	16.2	14.1	17.1	21.7	23.0	19.6	13.8	10.3	9.7	8.7	9.9
Labor participation ratio (%)	39.0	40.0	40.5	41.4	41.6	41.5	38.7	38.1	40.4	n/a	n/a
Unemployment rate (%)	39.3	37.5	29.6	20.9	17.2	19.1	29.5	35.6	31.8	n/a	n/a
- open unemployment (%)	18.2	23.8	20.3	14.4	11.8	14.1	25.5	31.3	25.6	n/a	n/a
- underemployment (%)	21.1	11.9	9.3	6.5	5.4	5.0	4.0	4.3	6.2	n/a	n/a
Poverty rate (% of pop. with < $2.1/day)	n/a	n/a	n/a	n/a	20.0	27.0	37.0	51.0	47.0	n/a	51.0
Food price index (1996=100)	n/a	100.0	106.2	113.9	119.3	121.2	120.7	123.8	129.5	132.3	137.6

Sources: Palestinian Central Bureau of Statistics (PCBS), national accounts (various issues), labor force survey (various issues), consumer price index (various issues). Poverty data from World Bank (2004; 2006).
* Excluding East Jerusalem.

Table A2: Global food aid deliveries to the Palestinian Territories, 1990-2005 (in tons; cereals grain equivalent)

	CEREALS						*NON-CEREALS*						*ALL FOOD*			
	-------Emergency-------			*Program*	*--Project--*		*------Emergency------*			*--------Project--------*			*Emerg.*	*Program*	*Project*	*Total*
	DT	*LP*	*TP*	*DT*	*DT*	*LP*	*DT*	*LP*	*TP*	*DT*	*LP*	*TP*				
1990	7,192	718	2,396		7,986		7,491		19	1,157			17,817		9,144	26,961
1991	46,182		7,535		1,233		12,285	200		262			66,203		1,495	67,699
1992	6,276		4,906		1,626	1,113	6,203		48	360	43		17,434		3,142	20,577
1993	8,339		6,554		4,889	1,000	4,428		933	638			20,254		6,527	26,782
1994	16,549		21,659		2,864	4,544	5,051		292	168		168	43,551		7,745	51,297
1995	15,613		22,876		1,442	230	7,117		387	295	332		45,995		2,300	48,295
1996	1,898		5,605				888		3,182			150	11,573		150	11,724
1997		274	165		6,759	2,483	2,850	20		2,185		215	3,309		11,644	14,953
1998	7,500	219			8,936	3,856	3,044		15,659	738		721	26,422		14,253	40,676
1999	18,915	912		3,569	14,144	1,800	3,775						23,603	3,569	15,944	43,118
2000	4,244	890	6,795		10,771		3,544		30,284				45,757		10,771	56,529
2001	98,992	5,177	52,350	12,193	3,273	419	9,825		2,057			219	168,402	12,193	3,911	184,507
2002	30,800	11,020	19,960	4,223	4,175	764	6,782	178	3,986				72,728	4,223	4,940	81,891
2003	21,732	5,418	28,246				4,436	809	5,803				66,447			66,447
2004	89,697	30,075	65,031		3,924		3,747	1,374	8,297	421			198,223		4,346	202,569
2005	16,076	39,599	12,287				1,412	2,947	7,492				79,815			79,815

Source: Data provided by Interfais (International Food Aid Information System); World Food Program (WFP).
Notes: Food aid categories: (1) emergency food aid: aid destined to victims of natural or man-made disasters. It is freely distributed to targeted beneficiary groups, and is usually provided on a grant basis and usually channeled via multilateral organizations; (2) project food aid: aid that aims at supporting specific poverty-reduction and disaster-prevention activities. It is usually freely distributed to targeted beneficiary groups, but may also be sold on the open market and is then referred to as "monetized" food aid. (3) program food aid: aid which is usually supplied as a resource transfer for balance of payments or budgetary support activities. Delivery mode: DT (direct transfers): Food aid originating from a donor country; LP (local purchases): food aid procured in a country and used as food aid in the same country. For example, the WFP was planning to purchase 1,000 tones of olive oil from poor Palestinian farmers who owe 3 ha or less of land during 2005/07; TP (triangular transaction): food aid purchases or exchanges in one country for use as food aid in another developing country.

The fragility of the Palestinian Authority: economic causes

Basel Saleh

This article examines the evolution of the Palestinian Authority (PA) as a paradigmatic case of state evolution, from stable political regime to fragile, indeed failing, entity. The analysis of the Palestinian political metamorphosis shows how endogenous and exogenous economic shocks led to the current brittle economy and polity in the West Bank and Gaza Strip (WBGS). The article also dispels some myths regarding the collapse of the Palestinian Authority. That collapse was facilitated by multiple exogenous pressures that weakened the core authority of the PA. Notwithstanding self-inflicted problems such as disunity, corruption, and weak governance, the powerful interference by the American-Israeli-Arab coalition has intensified these problems and at times set the stage for their emergence. The issue of state fragility should not be viewed as a native problem but rather as an outcome of powerful historical and contemporary forces that continue to shape the destinies of many nations, including the Palestinian nation, around the world.

The fragile state is losing its ability to provide necessary pubic services such as the enforcement of law and order, enforcing border control, proper management of the economy, and responding to disasters. Also, such a state has limited powers to exert its central authority across its territories. In 2006, the World Bank listed the WBGS as a fragile state for the first time. Among the most visible signs of PA fragility are political fragmentation, corruption, and widespread lawlessness. Fragmentation and lack of cohesion in the WBGS have pitted Palestinians against each other, and this has led, most recently, to Hamas' military takeover of the Gaza strip.[1] Another indicator of political fragmentation is the splintering of militant groups that now function independent of the official PA security forces. These groups have brought serious problems to the PA, notably through escalating violence that has exacerbated the security situation.[2]

Palestinian corruption has been facilitated by billions of dollars of foreign aid that has gone directly to the PA.[3] After the signing of the Oslo Accords in 1993, it is estimated that in the period to 2001, donors provided over $4 billion in aid to the Palestinians through the PA.[4] Corruption within the PA was often tolerated, and sometimes even encouraged, as a means to increase its support base and thus sustain a system of cronyism that characterized the Palestine Liberation Organization, the PA's predecessor. Corruption and financial mismanagement was at times used as a source to finance paramilitary forces that received direct funding from the PA but were never part of any formal law enforcement apparatus in the WBGS. Many of these groups are now posing problems to the recent attempts by the PA to restore law and order and make it difficult to sustain peace efforts with their impromptu attacks on Israelis.

Israeli policies toward the Occupied Territories were shaped and driven by three principles: first, the Palestinian economy should complement, not compete, with the Israeli economy; second, political and military considerations should take precedence over economic considerations; and third, the economy of the territories should not add a cost, or otherwise be a burden, to the Israeli economy.

Another aspect of corruption in the PA is the creation of monopolies by leading figures within the PA and the security forces. These have resulted in exorbitant prices on basic goods and low-quality goods and have been used to accumulate personal wealth rather than to provide relief and assistance to Palestinians.[5] However, since the arrival in 2002 of Salam Fayyad as prime and finance minister, the PA's financial transparency has improved dramatically.

Since the 1993 Oslo Accords, three economic shocks have impaired the performance of the Palestinian economy and have corroded the legitimacy of the PA and contributed to its fragility. They are, first, Israel's chaotic closure policy; second, the structural weaknesses in the Palestinian fiscal budget; and third, certain economic and trade sanctions imposed in 2000 and 2006. However, a central argument of this article is that pre-existing structural weaknesses of the Palestinian economy helped set the stage for the present state of collapse, fragility, and anarchy in the Palestinian territories and for the difficulties any government such as the Palestinian Authority must face. Furthermore, if these underlying issues are not corrected, they will almost inevitably undermine any future peace agreement that Palestinians and Israelis might reach.

Economy under siege

It is often forgotten that the Palestinian economy first came under the direct control of Israeli authorities after the June 1967 war. From that time on until 1994, Israeli policies toward the Occupied Territories were shaped and driven by three principles: first, the Palestinian economy should complement, not compete, with the Israeli economy; second, political and military considerations should take precedence over economic considerations; and third, the economy of the territories should not add a cost, or otherwise be a burden, to the Israeli economy.[6] Consequently, the economies of the WBGS remained underdeveloped with investment in machinery and equipment extremely curtailed and access to resources severely limited or even altogether prevented by Israeli authorities. Prior to the Oslo Accords, the Palestinian economy was kept afloat through labor absorption in the Israeli economy (on average 30 percent of Palestinians were working in Israel during 1968-1993), Palestinian labor remittances from abroad, and by foreign aid from various countries and international organizations.

The economic development of Palestinians was never an objective under Israeli government control. Even road construction was based on military rather than civilian population needs. Factory permits for Palestinians were often delayed for several years and, when approved, came with strict conditions such as caps on production and other restrictions in the interest of protecting the Israeli economy.[7] During 27 years of direct Israeli occupation and administration of the Palestinian economy, there was therefore very little investment in infrastructure and other needed components of a healthy economy. From 1967 to 1993, Israel kept a firm grip on Palestinian political and economic affairs. Ironically, while Israeli policy might have served its need for security during the years of occupation, the structural weaknesses it created in Palestinian economic and political life would become a major impediment to peace and stability in the post-Oslo years.

Toward the latter part of the pre-Oslo years, two major political events caused a serious deterioration of Palestinian living conditions in the WBGS and further withered the Palestinian economy: the first Palestinian intifada (1987-1993), and the first Gulf War (1991). The first intifada resulted in reduced work hours, employment opportunities in Israel, and investment activities.[8] In addition, by the end of the first Gulf War Palestinian annual remittances had fallen from $340 million to $120 million, a 67 percent decline, and unemployment had reached 40 percent. These two events caused Palestinian Gross National Income to fall by 14 percent, a substantial decline.[9] But these shocks would be but the prelude to more severe shocks that would come during the interim Palestinian self-rule. The difference is that the economic shocks to the Palestinian economy post-Oslo play a large part in the instability of the peace process that ensued.

Prelude to the current crisis

Given the arrangements that are in place since 1993, any Palestinian government faces a set of unique challenges. The PA is expected to help grow the WBGS economy even as the territory is becoming increasingly fragmented and as the PA lacks needed political, fiscal, and monetary powers. The PA was established in 1994 after Israel and the Palestine Liberation Organization signed a Declaration of Principles (DoP) in Washington, D.C., on 13 September 1993. The DoP resulted from the Oslo peace negotiations that were held in secret between representatives of the PLO and Israel between 1991 and 1992. Essentially an understanding to continue the peace talks until the year 2000, the parties involved were expected to sign a comprehensive peace treaty to establish an independent Palestinian state in the WBGS and officially end the Palestinian-Israeli conflict. But by September 2000, instead of the long-awaited peace agreement coming to fruition, all-out conflict returned with what the media dubbed the al Aqsa or second intifada. That new era of violence erupted soon after the failed Camp David peace summit in July 2000, sponsored by U.S. President Bill Clinton during his final six months in office.

On 25 January 2006, Palestinian elections were held, for the second time in ten years.[10] Unlike the first elections which the Palestinian Islamic Resistance Movement (Hamas) boycotted, Hamas decided to take part in the second election. It mobilized and campaigned on a platform of economic and political reforms and managed to win 74 of the 132 seats (56 percent) in the Palestinian Legislative Council.[11] No landslide victory, it nonetheless astonished the world with its unpredicted outcome. The international community refused to recognize the results of the democratic elections, and the PA's president, Mahmoud Abbas, was pressured into declaring a state of emergency and annulling the election's results, which he refused to do.[12] But with the backing of the United States, Israel, and some Arab countries, he started a campaign to marginalize the Hamas-led government. Eventually, this led to a brief military confrontation in June 2007 when Hamas fighters took control of the entire Gaza Strip, flushed out PA security forces, and established de facto Islamic rule over the entire Gaza Strip.[13]

Israeli closure policy: distortions to the labor market

Before 1991, Palestinians, under Israel's general entry permit system, were allowed freedom of movement and travel within the WBGS and into Israel. After 1991, Israel reversed that policy and enforced a permit system whereby Palestinians would have to apply for advance permission to leave the WBGS to enter Israel for any reason.[14] Naturally, such a system would not be effective without a parallel enforcement strategy. Israel therefore started a system of enforcement measures composed of hundreds of road blocks and checkpoints spread throughout the territories.[15] Currently, there is one roadblock or checkpoint for every 5 miles of road in the West Bank, each requiring minutes to hours to pass on the days they are open. Such measures would be expected to carry severe consequences for the Palestinian economy and society. These include Palestinian labor flows that were adversely affected in three directions — from Gaza to Israel; from the West Bank to Israel; and between the West Bank and Gaza — and became erratic, unpredictable, and declined over the years, and in some cases were not permitted at all; the instability of employment in Israel that caused a reduction in consumer incomes and surges in the unemployment rate in the WBGS; and increased transaction costs because of the additional arrangements needed to circumvent the checkpoints.[16] Figure 1 shows the opposing movements of the percentage of Palestinians working in Israel and the unemployment rate in the Occupied Territories.[17] Palestinian employment in Israel averaged 14 percent from 1995-2006, while before 1992 the Israeli economy absorbed over 30 percent of the Palestinian labor force, a drop of 114 percent. Naturally, those who were unable to continue to work in Israel had to find local employment in the underdeveloped Palestinian economy that is still subject to Israeli restrictions on trade and investment.

Figure 1: Palestinian unemployment rate vs percentage of Palestinians working in Israel, 1995-2006.
Source: Author's compilation from Palestinian Labor Surveys.

Figure 2: Payroll of a percentage of the PA budget, 1998-2006.
Source: Palestinian Ministry of Finance.

Therefore, the arrival of the PA included an attempt to rapidly relieve unemployment in the Palestinian economy (on which more later on).

Table 1: Percentage of Palestinians employed in the public sector

Year	*Total public sector*	*West Bank*	*Gaza Strip*
2000	19.4	14.5	31.3
2001	23.0	16.6	41.5
2002	23.6	18.4	36.8
2003	20.7	16.5	30.5
2004	22.5	16.9	37.1
2005	23.0	16.9	38.1
2006	23.7	17.3	41.6

Source: Palestinian Labor Force Survey (2006, p. 104).

Fiscal weaknesses: The PA as an alternative to the private economy

Expected to be in charge of the Palestinian economy, the PA's founding structures (the Oslo I and II agreements) endowed it with meager fiscal and monetary powers to be an efficacious public institution. This became evident as the PA started to face fiscal challenges after taking control of Palestinian cities across the WBGS following Israeli military redeployment that started in 1994. These weaknesses contributed to the debility of the PA and eroded its political legitimacy in the eyes of Palestinians, Israeli, and the international community.

Two major issues are unique to the PA fiscal budget. First, public revenues are dependent upon two sources: Israeli transfer of tax collections, and foreign aid. Palestinian budget data show that more than 50 percent of public spending was financed through foreign support in the form of aid and grants since the inception of the PA.[18] The other major issue in the PA fiscal budget is the ballooning public expenditure that went primarily for salaries and other recurrent expenses. Between 1998 and 2006, PA payroll spending averaged 42 percent of total expenditure (see Figure 2), over twice the world average.[19] Salaries and wages increased from Israeli Shekel (IS) 1,746 million ($480 million) to IS 5,695 million ($1,265 million), a 226 percent jump that cannot be explained by inflation alone and might be indicative of utilizing various PA institutions to absorb labor surplus or for the PA to act as an employer of last resort. Between 1994 (the year the PA was established) and 1999, PA employment expanded from 40,000 to 100,000, and by 2007 this number had reached 167,000.[20] Since 1994, even as the Palestinian economy stagnated, PA employment continued to expand. The employment increase can be justified on the grounds that, to function as a government, the new PA needed to staff various ministries throughout the WBGS. But the PA has been facing adverse economic conditions from its inception. Israeli closure policy and the sanctions of late 2000 and 2006 have exacerbated the unemployment situation in the territories. As the private sector (especially agriculture and construction) stagnated and employment inside Israel or in Israeli settlements has become tenuous and unreliable, more people reverted to employment in the PA. For example, in the Gaza Strip almost 40 percent of the employed are working directly for the PA. Some sources place the number as high as 70 percent. Palestinian Labor Surveys indicate that employment in the public sector expanded from 19.4 percent in 2000 to 23.7 percent in 2006, a 22 percent increase, whereas employment in the private sector for the same period increased only by 9 percent (see Table 1).

Table 2 shows the Palestinian budget from 1998 to 2006. The PA has consistently used deficit financing to run its various operations. That is not unusual when an economy is reeling from extended and negligent occupation and other shocks discussed earlier. But there are some issues of concern for using deficit financing in the case of the PA. The PA does not have authority to issue currency and has virtually no control over taxes (the PA does have the power to charge various user fees). Therefore, a dependence on deficit financing can be destabilizing when external sources of funding dry up or are threatened. Almost 50 percent of the PA spending was in the form of wages and salaries in 2006. When accounting for other operational and income transfers that percentage increases to more than 80 percent of total public expenditure. The PA used its budget to finance a bureaucracy that has been used as a lucrative source of employment for hundreds of thousands of Palestinians. This could have an adverse impact on private sector growth and development as wages for those employed by the PA are substantially higher than for those employed in the private sector. Between 2000 and 2006 the average daily wage in the Palestinian public sector increased by 35 percent while the average wage in the private sector increased by only 3 percent.

Using the PA as a source of employment can be problematic. It can create dependence on the public sector and enforces a sense of entitlement by the population. It can facilitate corruption and spread nepotism and other forms of public office abuse which has become increasingly evident in the WBGS. Above all, it creates a structure of vested interests where reforms of the public sector can be resisted or could trigger political instability. Finally, inflated wages in the public sector can increase wages in the private sector during periods of recovery that, in turn, can discourage employment and growth in that sector.

Thus there are two major fiscal weaknesses in the PA that need to be addressed. First, dependence on foreign aid must be diminished and tax transfers from Israel increased and, second, the use of the PA as an employer of last resort must be stopped. These two elements can be destabilizing if and when the political climate changes, as happened in 2000 and 2006 when public revenues were held hostage for political reasons by Israel and foreign donors. Any future peace arrangement with the PA should include steps toward weaning the PA off foreign aid and endowing it with more fiscal powers to collect and impose its own taxes. Such steps, if taken, could enhance the legitimacy of the PA among the population and increase its financial independence from capricious international relations. Furthermore, employment in the Palestinian public sector should be based on real economic needs, not on political considerations such as soaking up the labor surplus and buying loyalties. Although absorbing labor surplus in times of economic crises is practiced by many countries, it remains unsustainable in the long run and might inhibit growth in the private sector and endanger political cohesion and reduce efficiency if jobs are based on political loyalty rather than skills and abilities.

Table 2: Palestinian Authority fiscal budgets, 1998-2006 (millions of Israeli Shekels and millions of US$)

	Total revenues	*Total public expenditure*	*Annual deficit*
1998	IS 3,221	IS 6,574	IS 3,353
	$884.9	$1,806.0	$921.1
1999	IS 3,615	IS 6,918	IS 3,303
	$903.8	$1729.5	$825.8
2000	IS 4,068	IS 5,848	IS 1,780
	$959.4	$1379.2	$419.8
2001	IS 2,452	IS 7,085	IS 4,633
	$581.0	$1678.9	$1,097.8
2002	IS 923	IS 6,641	IS 5,718
	$205.0	$1475.7	$1,270.6
2003	IS 2,657	IS 6,392	IS 3,735
	$531.4	$1278.4	$747
2004	IS 3,789	IS 7,962	IS 4,174
	$806.1	$1694.0	$888
2005	IS 4,602	IS 9,654	IS 5,052
	$1,057.9	$2219.3	$1,161.3
2006	IS 6,035	IS11,209	IS 5,174
	$1,341.1	$2490.8	$1,149.7

Source: Palestinian Finance Ministry. US$ conversion employs the exchange rate used by the Palestinian Ministry of Finance for that year. The IS/$ rate was (3.63, 4.00, 4.24, 4.22, 4.50, 5.00, 4.70, 4.35, 4.50) for 1998-2006, respectively. The Palestinian budget is prepared in Israeli Shekels.

Trade and financial sanctions

After the Oslo Accords, the Palestinian economy under the PA was subjected to several waves of debilitating financial, trade, and other economic sanctions. Since 1997, successive Israeli governments have used the taxes collected on behalf of the Palestinians in punitive ways during periods of heightened hostilities.[21] These sanctions were imposed on-and-off depending on the state of the political tensions between Palestinians and Israelis. But comprehensive financial sanctions were not imposed until after Hamas won the elections in January 2006. Following that, in March 2006 Western powers and Israel banned direct aid to the PA, causing it to be unable to meet its payroll, let alone tending to other public expenditures.[22]

According to the Palestinian-Israeli agreements, Israel collects various taxes on behalf of the Palestinians, such as import and export duties, value-added taxes, labor taxes, and other excise taxes such as cigarette and gasoline taxes. Israel then transfers the tax monies to the Palestinian Treasury monthly. The amount constitutes a considerable portion of Palestinian public receipts. In 2006, for example, the tax fund was estimated to account for approximately 60 percent of Palestinian revenues.[23] Foreign aid is another vital item and essential to Palestinian fiscal well-being. Foreign donors supply approximately 40 to 50 percent of Palestinian revenues (the United States, the European Union, Japan, and Arab countries are the major donors).[24] The sanctions regime has been disastrous to Palestinians and only intensified poverty and political instability. The PA has not been able to meet its payroll obligations for almost two years now and PA workers were only able to receive partial back payments.

The impact of these financial sanctions goes beyond interruption of income flows. Under threat of sanctions by the United States and Israel, local banks in Gaza were not permitted to conduct any financial transactions with the Hamas-led government.[25] This action has reduced the supply of Israeli Shekels in the territories and affected the ability of overseas Palestinians to send in remittances.[26] This resulted in the Palestinian government resorting to smuggling cash in suitcases from abroad. Disgruntled workers and military personnel have repeatedly staged violent protests on the streets of the WBGS demanding back-pay.[27] On several occasions, Palestinian security forces disrupted the meetings of the Palestinian Legislative Council to protest lack of payment. Because more than 40 percent of the Gazan workforce is employed by the PA, financial sanctions directly threaten half of the population in Gaza and their families who are dependent on those working for the PA.

The financial sanctions are compounded by trade sanctions. Israel has suspended trade and closed its boarder crossing with Gaza. Supplies are reduced to a bare minimum and are permitted on humanitarian grounds only. The economic sanctions are so severe that the health situation has reached a humanitarian crisis in Gaza.[28]

On 20 September 2007, the Israeli government declared Gaza a "hostile entity" and severed all trade relations with it.[29] Trade restrictions with Gaza and the West Bank have been in place since Israel imposed its closure policy in 1993 and even before, since 1967. All agricultural and other exports from WBGS have to pass through Israel, and the restrictions on trade with Gaza have meant millions of dollars in losses to Palestinian farmers and businesses. Since the beginning of the Oslo peace process, the European Union encouraged Gaza farmers to produce cash or export crops like flowers and strawberries for sale in Israel and the European markets. According to the Palestinian Bureau of Central Statistics, around 16 percent of Gaza's workforce (40,000 farmers) is employed in agriculture. The trade sanctions with Gaza have been devastating to the agricultural sector that already reeled from lack of access to sufficient water supplies and regular markets.[30]

The trade sanctions are punitive to the entire Palestinian population and economy. An examination of WBGS trade patterns helps to exemplify the damage Israel trade sanctions cause. According to the United Nation Conference on Trade and Development (UNCTAD), Palestinian exports to Israel and the rest of the world declined to about 5 percent of GDP by 2006, as compared to 12 percent in 1972. Moreover, Palestinians have become increasingly dependent on Israel to meet domestic demand for goods and services. PA trade with Israel constitutes approximately 66 percent of PA total trade, while Israel's trade with the PA is only 3 percent of total Israeli trade.[31] As of 2006, imports as a percentage of Palestinian GDP reached 86 percent, while 43 percent of Palestinian private consumption comes from one source: Israel. Therefore, any interruption of trade between Israel and WBGS can have a disproportionately large impact on Palestinians. This asymmetric trade pattern provides Israel with incentives and leverage to maintain sanctions because any losses to the Israeli economy would be minimal.

Trade with Israel has implications for the level of Palestinian economic development and standard of living as sanctions distort work and investment incentives. It is unclear how long it would take the economy to recover to pre-sanctions levels if the sanctions were removed. It is ironic that the sanctions create misery, poverty, and unnecessary hardship while their implementation has not achieved the objectives Israel intended.

Conclusion

A fragile Palestinian entity is costly, imperils regional peace, and forms an obstacle to finding a viable, stable solution to the Palestinian-Israeli conflict. A fragile peace likely means continued costly interventions by the United States and European nations. The peace process did not bear fruits in the battered Palestinian territories that have been experiencing socio-economic decline since the Oslo Accords. The lack of economic progress and the failed peace process are intertwined. Various political decisions led to a process of de-development in the WBGS which, in turn, led to a fragile PA that was to be the guardian and enforcer of the peace process. The impact of economic sanctions and closures would have been less severe had the PA been less dependent on trade with Israel and public revenues primarily accumulated from donor assistance. The lessons learned from the past 15 years of an ineffective peace process should be incorporated in any future peace arrangements. That includes overhauling trade and fiscal structures in the Palestinian government and granting Palestinians proper political and economic powers to manage their own affairs. Without such powers, any future PA will remain fragile and risks eventually collapse.

Notes

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1. Hamas is the Arabic acronym for the Islamic Resistance Movement, Haraket al-Moquawamah al-Islamiah.

2. See Pearlman (2007).

3. For information on Palestinian corruption see, e.g., PHRMG (2004).

4. Brynen (2000, p. 3). A similar figure is cited in Ehrenfeld (2002, p. 5). EUFunding.org.uk (2004, p. 3) put the total amount received directly and indirectly by the PA at over $10 billion from 1993-2006. During the same time period, Israel received $28 billion dollars from the United States in military and economic aid.

5. See "60 Minutes." *CBS News*. The transcript of this report is available at http://www.cbsnews.com/stories/2003/11/07/60minutes/main582487.shtml [accessed 1 June 2008].

6. Gazit (1995, pp. 213-235).

7. Gazit (1995, p. 2, pp. 230-231).

8. The reduction in work hours was the direct result of local strikes that the Palestinian Unified Leadership enforced, Israeli curfews, mourning days for Palestinians killed by Israel, and protest days.

9. UNESCO (1993). Also see, United Nations Report of the Economic and Social Council, 14 May 1993 (p. 10). General Assembly, Economic and Social Council Substantive Session of 1993. Available on the website of the United Nations Information System on the Question of Palestine (UNISPAL) http://domino.un.org/unispal.nsf.

10. The first Palestinian elections were held 20 January 1996. For details and discussion of the first elections, see Shikaki (1996) and Lamis (1996). Also see the website of the Central Elections Commission - Palestine at http://www.elections.ps where one may find detailed statistics on the first and second elections and the political program for each party that participated in the elections.

11. Hamas' official candidates list is called the Movement for Change and Reform. Four other candidates also won but are Hamas-supported, raising the number of seats that Hamas controls to 78 (59 percent). See Saad (2006).

12. This resembles the events in Algeria after the 1992 elections when the army intervened and a civil war ensued. Algeria is still trying to overcome that civil war in which over 100,000 Algerians died. For example, in September 2007, two suicide bombers killed over 50 people. See http://news.bbc.co.uk/2/hi/africa/6985672.stm [accessed 7 November 2007]. Also see Martinez (2000).

13. The Palestinian Center for Human Rights in Gaza reported that 190 Palestinian were killed and at least 700 injured between 7 and 14 June 2007. See "Black Pages in the Absence of Justice: A Report on the Bloody Fighting in the Gaza Strip from 7 to 14 June 2007." http://www.pchrgaza.org/files/Reports/English/pdf_spec/Gaza%20Conflict%20-%20Eng%209%20october..pdf [accessed 1 June 2008].

14. See Roy (2002) and Hass (2002) for a review of the historical background of the closure and its impact on Palestinians.

15. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) publishes annual figures on the number of Israeli manned and unmanned roadblocks in the West Bank and other statistics on movement restrictions. As of October 2007, there were 563 such roadblocks in the West Bank. See Report No. 50, http://www.ochaopt.org/documents/OCHA_AccessAndMovement_No50.pdf [accessed 1 June 2008].

16. See, e.g., Simpson (2007).

17. The sample correlation coefficient between the two variables is -0.90.

18. The data for this section was made available by the Palestinian Ministry of Finance. I am thankful for its assistance.

19. World Bank (1999, p. 4).

20. World Bank (1999, p. 88); *BBC News* http://news.bbc.co.uk/2/hi/middle_east/4969212.stm [accessed 20 November 2007].

21. The first to use this method was Israeli prime minister Benjamin Netanyahu in 1997. Also, prime minister Ariel Sharon withheld taxes for two years after the al Alqsa intifada. Today, Israel still withholds over $700 million of tax money owed to the Palestinians.

22. *Haaretz*. "Officials: Israel Ready to Transfer withheld Tax Revenues to PA." 3 June 2007. http://www.haaretz.com/hasen/spages/865554.html [accessed 20 November 2007].

23. This figure is based on data obtained from the Palestinian Ministry of Finance. In 2006, Israeli tax collections on behalf of the Palestinians were about $803 million, or an average of $66 million a month.

24. According to the USAID "Greenbook" (USAID, n/a), the United States has given the Palestinian economy $348 million in 2005.

25. Israel indirectly controls the banking system in the Palestinian territories. All banks in the WBGS have ties with Israeli counterparts to move money in and out of the WBGS.

26. *Haaretz*. "Gaza Banks May Shut Down by January Over Financial Clamp Down." 4 October 2007. http://www.haaretz.com/hasen/spages/909518.html [accessed 1 June 2008].

27. *The New York Times*. "Palestinians Mount Violent Protest over Lack of Paychecks." 15 June 2006.

28. On 2 May 2008, the Israeli paper *Haaretz* revealed that Gaza sewage is being pumped directly to the Mediterranean Sea without proper treatment because of lack of fuel supplies and chemicals needed for the treatment process. This might have disastrous environmental consequences for Palestinians, Israelis, and other. See "Gaza Sewage Pumped into the Sea Over Past Three Months." 4 May 2008. http://www.haaretz.com/hasen/spages/980091.html [accessed 1 June 2008].

29. *Haaretz*. "Cabinet Declares Gaza a 'Hostile Entity'." 20 September 2007. http://www.haaretz.com/hasen/spages/905561.html [accessed 1 June 2008].

30. For an article on the impact of trade sanctions on Gaza farmers, see *Haaretz,* "Israel Okays Renewal of Flower, Strawberry Exports from Gaza." 22 November 2007. http://www.haaretz.com/hasen/spages/926607.html [accessed 1 June 2008].

31. UNCTAD (2007).

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Poverty and terrorism

Siddharta Mitra

Following the terror attacks in the United States on 11 September 2001, prominent world leaders called for an eradication of poverty so that terrorism could be brought to an end — so did, for example, U.N. Secretary General Kofi Annan, WTO head Michael Moore, and U.S. President George W. Bush at a development summit in Mexico in March 2002. This presumed link between poverty and terrorism (or lack of education and terrorism) was questioned by social scientists such as Alan Krueger, James Piazza, Alberto Abadie, and Claude Berrebi who concluded that it did not stand up to empirical scrutiny.[1] In contrast, this article argues that it is the academics who may have been wrong and that, therefore, the jury should still be out on this issue. Through case studies it is argued that when poverty is accompanied by certain enabling factors, terrorism might indeed arise and flourish.

After the 9/11 attacks on the United States, world leaders identified poverty as a cause of terrorism. A number of academics have questioned the presumed link between poverty and terrorism. This article argues that it is the academics who may be wrong.

The article is structured as follows. First, a critique of the approach taken by social scientists to the study of the link between poverty and terrorism is offered. Second, an alternative framework to study the potential link is provided. Third, a case study of Northeastern India demonstrates that in the regions of Mizoram, Tripura, and Assam poverty and perceived economic exploitation are among the causes of terrorism there. Fourth, terrorism in Latin America shows that in these cases, too, poverty, hardships, and persisting inequalities are among the motivating forces.

Critique

A complex phenomenon, terrorism is determined by the interaction of a milieu of social, economic, and political factors. They consist of necessary factors (such as the presence of a powerful leader and adequate finances), facilitating factors (such as unemployment among youth), precipitating factors (such as communal differences, economic exploitation, intensification of poverty, or unemployment), and perpetuating factors (e.g., suitable geographical terrain, policies of appeasement). Terrorism can arise in many ways and there is hardly any one single factor that serves as a sufficient condition. For instance, if a country is poor but there is an absence of suitable leadership to lead potential terrorists and give vent to discontentment then terrorism will not happen. Only when sufficient factors are present and included in the data set would a typical method of empirical study, regression analysis, be appropriate.

For example, a widely cited article by A. Krueger and J. Maleckova argues that poverty being a major reason for terrorism is inconsistent with the fact that Palestinian suicide bombers and other Middle Eastern terrorists mostly do not stem from poor families. But surely one has to acknowledge that poverty is more appropriately conceived as a cause of terrorism in the macro sense than in the micro sense: if a well-off person sees his race or people being exploited or rendered impoverished then he or she, too, might join the ranks of terrorists. (Or, as economists put it, terrorism can owe its genesis to the interdependence of utility functions.) But this is not formally recognized in Krueger's and Maleckova's study. Similarly, the selection mechanism used to choose people for suicide bombing mission is biased toward the selection of educated and relatively affluent people. In an earlier piece, Krueger and Maleckova themselves point out that education and affluence can signal that a person is interested in becoming a suicide bomber because of reasons other than narrow individual or household gain. A higher level of education and greater affluence is treated as a signal of greater commitment and ability. The final selection of suicide bombers, on which the empirical studies are based, does not tell us about the characteristics of the pool of *willing* people from which the selection is made. It follows that the statistical conclusions drawn from such studies may be incorrect.

One scholar, James Piazza, gives examples of rich countries that served as apparent breeding grounds for terrorism, and of poor countries that did not.[2] For example, Saudi Arabia is associated with terrorism even though in terms of average income levels it is in fact a rich country. Yet, although not poor in an absolute sense, its riches are of fairly recent origin, and even these were subject to considerable volatility and uncertainty as in the two decades before the post-9/11 oil-price boom, Saudi Arabia experienced a significant negative average growth rate of GDP per capita. Still, the pinch of poverty some may have experienced in Saudi Arabia is of a different quality than that experienced in a country that has been poor continuously. Absolute and relative poverty, or perceptions thereof, thus might differently contribute to the wish to lash out by means of terror. People in some country or region within a country might compare their continuing poverty with the rising affluence of neighbors and/or consider themselves to be victims of exploitation as, for example, as in the case of the Northeast Indian state of Assam discussed later on.

The role of education itself is misunderstood. Contrary to Krueger and Maleckova, it is not especially surprising to find that educated people play a disproportionately prominent role as terrorists in the Middle East — perhaps due, in part, to the greater relative decline of their income as compared to that of their less educated counterparts — nor does this phenomenon imply that ignorance, illiteracy, or discontentment are not significant factors in terrorism: after all, lack of literacy and other forms of deprivation might raise the hackles of educated and uneducated people alike. (Indeed, the case studies presented later on argue that poverty and economic discontent have been partly responsible for the rise of terrorism in Northeastern India and Latin

America.) But as pointed out earlier, more educated people possess greater ability at organization and at undertaking complex tasks which therefore makes them more likely to successfully engage in terrorism. Of course, this does not imply that a more literate country will take recourse to terrorism more readily.

An alternative framework

It is difficult to treat terrorism in the same way as most economic phenomena that are amenable to statistical (econometric) analysis. For example, an increase in a country's investment rate will in most cases increase its rate of economic growth. This can be traced in that the presence of relevant influences on growth other than the investment rate can be controlled for mathematically. In contrast, the presence of a sufficiently high level of poverty may not stimulate terrorism if intermediary, facilitating factors needed to "convert" poverty into terror are absent. Correlating poverty and terror without explicitly accounting for, measuring, and entering these facilitating factors into the data analysis will lead to misleading statistical results when the linkage between the two main variables of interest — poverty and terror — hinge crucially on these factors. But such independence has been assumed in virtually all studies on this subject to date so that it is not possible to tease out the relationship between poverty and terrorism effectively. In fact, scholars have not yet developed a complete list of facilitating and precipitating factors, nor have they been able to either pinpoint or develop a consensus on their interaction in generating terrorism. These factors might be so numerous that controlling for the incidence of all of them might reduce the so-called degrees of freedom in statistical estimation to such an extent that credibility of the results is jeopardized. Moreover, some of these factors are qualitative and subjective so as to render objective measurement more difficult.

For an act of terror to occur, certain necessary conditions must all be fulfilled such as the presence of a powerful leader and adequate finances to purchase weaponry and inputs such as bombs, guns, and remote controls. If necessary conditions are fulfilled then, in addition, at least one precipitating factor is needed for terrorism to occur (see Figure 1). This could be poverty, ignorance, acute unemployment, lack of political freedom, perceived racial, linguistic, or religious discrimination, colonial exploitation, a "war" of cultures caused by globalization, etc. Given the satisfaction of all necessary conditions and the attainment of a critical magnitude of at least one of the precipitating variables, the chances of terrorism occurring are enhanced by the presence of certain catalytic or facilitating factors. Totalism, which refers to the capacity to see oneself as "completely good" and another side as "completely evil," is a powerful facilitating phenomenon.[3] Totalistic ideas are generally propagated by a terrorist leader. Unemployment among youth, an age group characterized by immense energy and unformed and malleable ideals, might serve to facilitate recruitment for a terrorist movement. Mystical manipulation, which refers to the distortion of religious teachings to support a terrorist cause, may be another medium through which terrorism can operate, and the powerful personality of a leader may enhance the effect of mystical manipulation. Linguistic or physical barriers between two groups of people can be used by the leader of one group to spread misinformation about the other group. Poverty, ignorance, and unemployment can also act as catalysts for terrorism because of the hopelessness that they tend to generate. These serve as examples of facilitating and precipitating factors. Some scholars emphasize the role of globalizing technologies as facilitators of terrorism. Thus, information technology has reduced the cost of coordinating terrorism and increased the cost of tracing the source of such coordination and organization.[4] High inequality in education (highly educated leaders followed by uneducated or illiterate followers) helps leaders to manipulate followers and command blind obedience. The generally poor educational status of women in developing countries might also be a facilitator as the presence of educated women generally has a sobering and soothing effect, reduces violence, strengthens civil society, and reduces birth rates.[5]

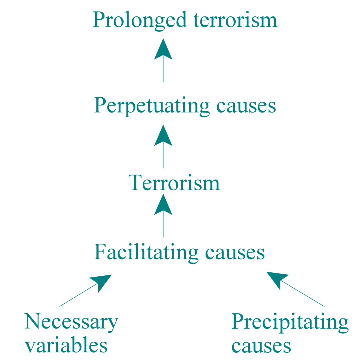

Figure 1: A framework for analyzing terrorism

Although the presence of necessary, precipitating, and facilitating factors might lead to terrorist incidents, there must also exist perpetuating factors if terror is to be sustained or prolonged. For example, unless active measures are used to promote dissension and facilitate exit, leaving a terrorist group can be difficult. Another source of perpetuation is that totalism may beget totalism, and when two groups view each other totalistically, a vicious cycle of mutual terror may result. Outright repression of one group by another might also perpetuate terrorism.

Given these causes, mechanism that can generate terrorism are quite obvious. The general framework is presented in Figure 1. If all necessary factors are present (e.g., leadership, finance) then any one of the precipitating causes (e.g., poverty) acting in conjunction with one or more of the facilitating causes (e.g., totalistic views) might lead to acts of terror. If perpetuating causes are absent then terrorism will die down after an initial burst. However, when perpetuating factors persist, a location or region or nation might be caught in a vicious cycle of terrorist activity.[6]

Northeastern India: backwardness as a stepping stone to terrorism

This section briefly examines the cases of three provinces in Northeastern India, Mizoram, Assam (or Asom), and Tripura, with information about terrorist activities and their causes drawn from the work of Sanjoy Hazarika.[7] Northeastern India has been characterized by slow economic growth and poor development of infrastructure. Consequently, the gap between the these regions and the rest of India has been increasing. The first case is that of Mizoram, a hilly region that was only lightly administered by the British. Every fifty years its bamboo forests are covered in flowers. This, however, marks the arrival of a sad period, known as the *mautam*, as the flowers attract millions of rats that destroy crops. The *mautam* of 1959, for example, caused an enormous incidence of hunger and starvation. Appealing for help to the state government of Assam, in which the Mizo-inhabited region lay, and receiving no adequate response, Mizos formed famine fighting squads under the leadership of Laldenga, a young bank clerk who did not himself feel the pinch of the famine as much as did the general population.

Dreaming of a strong and vibrant nation for his people, Laldenga reorganized the famine fighting squads into the Mizo Famine Front. He developed a network of workers and supporters who traveled to the remotest villages with food and a message criticizing the negligence displayed by the Assam state government and the Mizo District Council (the official Mizo political forum). The message said that the Mizos deserved a nation of their own, separate from India. Eventually the Mizo Famine Front was renamed as the Mizo National Front (MNF), with independence as its goal. Executing acts of terrorism from 1966 onward, MNF overran many government establishments such as police stations and the state Treasury in Aizawl, the Mizo district headquarters. The state retaliated through the Indian army until peace was finally brokered in 1987, with Laldenga becoming the Chief Minister of Mizoram. The case shows that deprivation can provide the fuel required for terrorist action. The scarcity generated during the *mautam* spurred the formation of the famine fighting squads which evolved into a terrorist organization.

The second northeast Indian case is that of the United Liberation Front of Asom (ULFA). This organization took shape in 1979. Some of its key figures were Motoks, members of communities with links to the Ahom rulers of Assam. During colonial times, and virtually without compensation, the British dispossessed the Motoks of the land they owned in the Dibrugarh-Tinsukia sector of Assam and converted it into sprawling tea estates. Deprived of large tracts of land, and denied their previous relatively affluent way of life, Motoks felt exploited, and this sense of exploitation continued for a hundred years climaxing in the formation of the ULFA. Without going into details here, suffice it to say that ULFA held sway in the late 1980s and early 1990s through extortion and murder, particularly of noted businessmen. The rise of the ULFA illustrates how poverty and relative deprivation can push members of a community into terrorist activity.

Terrorism in Tripura, the third northeast Indian case, was the outcome of deprivation on an even larger scale. In 1947, 93 percent of Tripura's population was made up of indigenous people. Attacks on Hindus in East Pakistan (now Bangladesh) led many refugees to settle in Tripura. By 1981 the total population of the state was 2.06 million, but now only 28.5 percent were indigenous. Immigrants seized economic and political influence. The sense of deprivation among the indigenous people of Tripura led to the formation of the Tripura Volunteer Force (TVF) in 1980, led by Bijoy Hrangkhawl. Pent-up anger and frustration saw expression in many bloody incidents. The most infamous of these was the massacre at Mandai Bazaar where hundreds of Tripuris and members of other tribal communities descended on unsuspecting Bengalis and slaughtered them. After much violence, the TVF signed a peace accord with the Indian government in 1988. As for ULFA, the case of TVF was born out of deprivation and dispossession of the indigenous people.

It is fairly easy to identify and classify the factors leading to terrorism in Northeastern India according to the framework discussed earlier. In all cases, an important role (a "necessary factor") was played by the leaders — Laldenga in the case of MNF, Bijoy Hrangkhawl in the case of TVF, and Arabinda Rajkhowa, Anup Chetia, and Pradip Gogoi, the founders of ULFA. Another necessary factor, adequate finances, was unproblematic as the states in which these terrorist groups operated were flanked by neighboring countries with which India's relationships were not always cordial. In fact, Hazarika explicitly recounts how ULFA and other terrorist organizations were helped by ISI, the Pakistani secret service agency. In terms of precipitating factors, all three cases revolve around deprivation reaching a saturation point. While in the case of Mizoram it was absolute deprivation, with people going hungry, and the lack of response from the government that led to the terrorist movement, in Assam and Tripura natives took to terrorism after being increasingly deprived of what they considered to be rightfully theirs. Facilitating factors also were similar across the cases: all are adjoining states that had (and have) much in common in terms of culture and history. All were aided by the mountainous, forested geographic terrain, coupled with poor infrastructure. Strong tribal loyalties, a high literacy rate, and climbing unemployment rates were also strong facilitating factors. As to perpetuating factors, the mechanism of "totalism begets totalism" certainly played a role in prolonging terrorist activity: natives paid back allegedly cruel activities of the Indian army in the same coin.

Latin America: terrorism from poverty, inequality, and empathy

The link between poverty and terrorism is not peculiar to Southeast Asia (or Northeast India). Instead a generalization may well be made: given the fulfillment of certain conditions, poverty can lead to terrorism. For illustration, examine a few Latin America cases. Instead of looking at specific regions, this section examines the role and influence of poverty and inequity in terrorist ideologies of groups that operate(d) in Latin America.[8]

Considering their average per capita income, the countries studied here are characterized by extreme inequality and poverty. In 1994, as many as 60 percent of Colombia's population lived at below a dollar a day, the international poverty line defined by the World Bank, even as by 2005, Colombia's per capita income (measured in PPP$) rose to $7,304.[9] For comparison, India's 2005 income was $3,452, with poverty rates, for the same year, around 35 to 40 percent. And Colombia's Gini coefficient, a measure of inequality, was a very high 0.586 (out of a maximum of 1.0) in 2003 as compared to 0.325 for India in 1999/2000.[10] Brazil had a per capita income (PPP$) of $8,402 in 2005, a relatively low poverty rate of 17 percent in 1998 but a Gini coefficient of 0.58 in 2003, reflecting socially unacceptable inequality levels. Mexico's per capita income (PPP$) was $10,751 in 2005, but the poverty rate was 37.3 percent in 1997, and the Gini coefficient stood at 0.473 in 2005, again reflecting very high inequality. Bolivia's per capita income (PPP$) of $2,819 in 2005 was much lower than that of even India. The poverty rate did not seem very high at 22 percent in 2003, but its Gini coefficient was very high at 0.601— the picture of a country where a sizeable minority is poor, the majority is fractionally above the poverty line, and a small minority controls most of the wealth. Ecuador, likewise, is characterized by high inequality and high poverty.

Now consider terror activities in Colombia, Brazil, Mexico, Bolivia, and Ecuador. Colombia's National Liberal Army (ELN in its Spanish acronym) was influenced by Fidel Castro's and Che Guevera's early theories and actions. It consisted of urban left-wing intellectuals who claimed to represent the interests of the poor, demonstrating that poverty can motivate the nonpoor to engage in terrorist acts. With its violent terrorism campaign, another Colombian terrorist group, Movimiento 19 (M19), also professed support for the poor. It was established when former dictator-cum-populist Rojas Pinilla, who enjoyed wide support from the urban poor, lost the Colombian presidential election of 1970. The group dissolved in 1990 under the pressure of Colombian government security forces.

In Brazil, the Popular Revolutionary Vanguard (VPR) developed when a left-leaning head of state was removed by the military and replaced by a right-wing regime. VPR consisted of radical students and ex-soldiers. Driven by communist ideology, it considered capitalists, multinationals, and oligarchs as its main enemies. With the recovery of the Brazilian economy in the 1970s, the popular base for the VPR eroded and it gradually folded up. Bolivia's National Liberation Army was formed by Che Guevera in late 1966 as an offshoot of the Cuban revolution. Reacting to the country's inequities, the aim of this group was to overthrow the regime and form a communist state. Another Bolivian terrorist group, the Zarate Willka Armed Forces of Liberation, was a reaction against the Christian, Mormon, and American influence that had allegedly marginalized Bolivian Indians socially and economically. Their two basic goals were to "fight for the rights of the poor" and "fight against U.S. intervention in Bolivia." The Zarate Willka Armed Forces of Liberation have been inactive since 1989.

Mexico's Revolutionary Worker Clandestine Union of the People Party (RWCUP) formed in the late 1960s or early 1970s. The (self-stated) goal of this terror group, which followed a Marxist Leninist ideology, was the "liberation of Mexico from the bourgeoisie and North American imperialism." It engaged in robberies, assassinations, kidnappings, and small-scale bombings and targeted multinationals and capitalist establishments. In 1994 it merged with the Popular Revolutionary Army of Mexico. Finally, in Ecuador the Group of Popular Combatants is an active terrorist group with a communist foundation. Their protests are directed against imperialist government policies and against Ecuadorian oligarchs, again showing the proclaimed goal of fighting for the interests of the deprived or poor.

These cases suggest that poverty and inequality were and are among the driving forces behind terrorist activity in Latin America. And the data show that people in the case study countries indeed suffer from high levels of poverty and inequality. Thus, poverty, deprivation, and inequality emerge as determinants of terrorist activity.

Conclusion

The Northeast Indian and Latin America cases discussed in this article demonstrate that terrorist activity can be motivated by the interests of the poor. That poverty per se does not emerge as a statistically significant determinant of terrorism in econometric analyses merely says that counterexamples exist: not all cases of poverty need lead to terrorism. But this does not refute that causation can flow from poverty to terror. Rather, it just points to the possibility that necessary conditions and facilitating factors to "translate" motive to action may have not been present in a particular case.

The argument made here must not be misconstrued as offering a simple option for the eradication of terror: either end poverty or prevent terror's preconditions from being satisfied. After all, terror can be motivated for reasons unrelated to poverty. But even if related to poverty, favorable companion factors, be they cultural, geographical, or accidental in nature, can take on a life of their own and are not always suitable for policy manipulation anyway. Still, buttressed by the case studies drawn from Latin America and Northeastern India and contrary to the academic opinions referred to at the outset of this article, poverty alleviation does remain an important tool for undermining at least some terrorist activity.

Notes

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1. Krueger (2002; 2003), Kueger and Maleckova (2003); Piazza (2006), Abadie (2004), Berrebi (2007).

2. Piazza (2006).

3. See Barrie-Anthony (n/d) for a discussion of totalism.

4. Crenshaw (2005); Krug and Reinmoller (2003).

5. Scully (n/d).

6. Also see Mitra (2005).

7. Hazarika (1994).

8. This information is available from MIPT's Terrorism Knowledge Base, now merged into the Global Terrorism Database (see http://www.start.umd.edu/data/gtd/) [accessed 6 May 2008].

9. PPP$, or international dollars, adjust average incomes for purchasing power or cost of living differences across countries.

10. Data on poverty ratios and per capita incomes from World Bank (various years). Figures for Gini coefficients are based on U.N. estimates.

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Deadly contests: an economic note on al Qaeda's reward system

Raul Caruso and *Andrea Locatelli*

The aim of this article is to analyze al Qaeda's *modus operandi* in light of the economic theory of contests. Al Qaeda can be viewed as a contest organizer rewarding an indivisible prize that, we assume, consists of official membership and economic rewards. The contest is then joined by candidate terrorist groups that compete by maximizing efforts to win the prize, that is, maximizing the number of casualties. As will be seen, this logic has various pros — and some cons. In order to devise an effective counterstrategy, governments should target two key elements of this contest: al Qaeda's communication strategy and the setting of the prize.

Al Qaeda can be viewed as a contest organizer rewarding an indivisible prize — membership and economic rewards.

The article is divided into three sections, the first of which describes al Qaeda's main features. To account for al Qaeda's relationship with its cells, section two presents insights drawn from the economic theory of contests. Section three briefly discusses tentative strategies for counterterrorism.

How is al Qaeda different from other terrorist organizations?

When compared to traditional terrorist groups, al Qaeda displays several novel elements. Among its defining features, Audrey Kurth Cronin suggests four main characteristics: (1) fluid organization; (2) methods of recruitment; (3) financing instruments; and (4) the use of communications media.[1] While all of them are relevant when it comes to framing a sound counterstrategy, for our purposes it is critical to focus attention exclusively on the way al Qaeda cells are related to, and interact with, each other, that is, its organizational dimension broadly conceived.

It is this organizational feature that makes terrorists so difficult to hunt down. Indeed, thanks to the flexibility embedded in its structure, al Qaeda is continuously evolving. Indeed, rather than being an organization, al Qaeda comes closer to the original meaning of its name: a concept, an idea, or a mission. To describe its specificity, analysts have coined a plethora of terms such as network, group, movement, and clique, in other words, anything denoting a flexible structure with fuzzy boundaries. Considering al Qaeda as a network is not only in line with recent empirical findings but is also helpful in understanding the principles and the logic underlying its functioning.[2]

For the whole network, the lack of a clear hierarchical line of command that is inherent in such a structure results in flexibility and autonomy as well as in resilience to penetration and compromise.[3] In particular, this flexibility allows for a novel recruitment system that is clearly crucial when considering al Qaeda's survival and spread on a worldwide scale. In fact, recent work suggests that the recruiting process may now resemble a kind of voluntary application to join the organization. In this view, new groups are involved in the organization as the result of a selection process among different volunteers.[4] The rise of the so-called self starters[5] is taken as evidence of this, that is, groups with little or no initial affiliation with the network perpetrating terrorist attacks on their own initiative. This allows al Qaeda to extend its membership almost infinitely, simply because new groups can be affiliated at any time without an institutionalized recruitment procedure. Although a conjecture, it may be assumed that the number of potential applicants is much higher than the promised membership. This situation is especially beneficial for al Qaeda for at least three reasons. First, there is no need for bin Laden and his followers to invest resources in recruitment drives. Second, and most importantly, an abundance of applications would allow al Qaeda to be selective in granting membership. The only weakness of the self-starters system is that, by virtue of the spontaneous origins of would-be terrorists, the command and control capabilities are quite limited. As a side effect, therefore, al Qaeda could be cited and get stuck in actions far from its leaders' main interests. Also, and partially related to the second point, the potential of ideology as a common denominator should not be exaggerated as the ideological appeal is a necessary but hardly sufficient condition.

In the next section we turn to the contribution of the economic theory of contests as this could be a useful theoretical framework to understand how candidate groups volunteer to exert effort in order to get affiliated with the al Qaeda network. Before proceeding in this direction, it is worth noting that recently a different interpretation has been proposed. Specifically, it has been argued that terrorist cells behave according to an open-source mechanism.[6] This interpretation mainly focuses on the structure of the network: terrorists would be akin to developers of free, Linux-style software. Some factors could make this a fitting interpretation: (1) the lack of a rigid hierarchical structure; (2) the decentralized organization of the network; (3) the initiative of developers; and (4) the spontaneous elitist evolution of contributors. However, in our view other factors make such an interpretation incorrect. For example, in an open-source mechanism, codevelopers produce a public good. They can consume this public good and such consumption positively enters the utility function of both developers and users. By contrast, terrorist cells produce a public bad. They cannot consume the good itself and it cannot enter positively any utility function.[7] As to the organization of the structure, here too are some characteristics that limit the usefulness of this kind of interpretation. In the open-source mechanism, a developer faces a publicly available opportunity cost to her or his time. While developing an open-source project, he or she must give up the development of other projects. This is possible because programming skills are pervasive and simply signaled. Therefore, developers clearly face an opportunity cost which is public information. This seems not to be the case with terrorists. Since terrorism is a secret activity by definition, terrorists would not be engaged in other activities. Terrorist skills are not pervasive and, in most cases, they cannot be disclosed. The opportunity cost faced by candidate terrorists is private information. Last but not least, in an open-source structure, developers can communicate and interact with each other. This does not seem to be the case, or not nearly as much, with terrorist networks. It has been shown that, unlike conventional social networks, terrorist networks do not need to experience frequent and dense communication. Rather, in most cases ties and connections are activated only when they are assumed to be necessary.[8]

Potentially fruitful insights that could still be drawn from the open-source interpretation relate to the motivations of developers. Open-source is characterized by two distinct incentives leading to delayed payoffs: first, a career concern incentive, namely the "bid" on future well-paid job offers and, second, the peer-recognition incentive (something akin to academic research). Both fall under the heading of signaling incentive, which according to Lerner and Tirole strongly relies on (1) the highest possible visibility of performance to the relevant audience; (2) the highest possible impact of effort on performance; and (3) the highest perceived causality between performance and talent. However, these elements also fit with contest theory, to which we now turn.

Some insights from contest theory

We now elucidate some conditions and the logic that may underlie al Qaeda's peculiar recruiting process. There is a growing awareness among economists and other social scientists that many phenomena can be modeled as contests. A contest is commonly defined as a game in which rational agents (players) compete for a prize by making irreversible outlays. This constitutes the main difference to auctions, in which agents do not bear the cost of the bids entirely by themselves. This is also the rationale for labeling contests as all-pay auctions.[9]

The role of contest effort

Literature on contests commonly involves the concept of Nash equilibrium. A strategy is assumed to be a Nash equilibrium when no player involved has any incentive to deviate from it. The emergence of a Nash noncooperative equilibrium commonly occurs when agents have no opportunity for coordination. This is the classic case of a prisoner's dilemma in which each actor chooses its favorite strategy even though this may lead to a suboptimal joint outcome because they are unable to coordinate. The lack of coordination leads to a noncooperative (or non-coordinated) equilibrium. As rational agents, the players maximize only their own individual expected payoff. Although it seems trivial, the concept of maximizing agents becomes fundamental when analyzing agents' behavior in contests. Consider two simple examples. In a race athletes cannot coordinate their actions. In the presence of an indivisible prize (a winner-take-all contest) they will put in their maximum effort to win the prize. In such a case, coordination is clearly not feasible. Only one player can win. There is no alternative strategy. Agents play à la Nash and maximize their efforts in order to maximize their own payoffs. In a similar fashion, scholars competing for research grants cannot coordinate with each other. When grants are assigned on a personal basis and there is no opportunity to agree on a predetermined sharing of the "cake," the only feasible strategy is to write the best possible research proposal.

Hereafter we mention some common findings of contest literature that might be useful for our analysis. In particular, we are interested in accounting for agents' behavior and efforts. To start, the level of the effort made by every agent is strictly correlated to the value of the prize, that is, the higher the valuation of the prize, the higher the commitment to put maximum effort into the contest. Second, each agent knows that the probability of winning the contest is increasing in its own effort and decreasing in other players' efforts. That is, in the simplest case of two agents, A and B, the probability of agent A of winning the contest is higher when it makes a bigger effort than does agent B — and vice versa. Therefore, the only feasible strategy for both A and B will be exerting the maximum possible effort. This way, each player can attain maximum payoff. Contest theory thus predicts that maximizing behavior is the strategy used by each agent. This can be generalized to the presence of a larger number of contestants. In a multi-agent scenario, however, the theory also predicts that total effort decreases with the number of contestants. That is, when agents are aware that the contest is joined by more agents, individual effort will decrease. By the same token, the sum of all individual efforts increases.

Of course, these general predictions about agents' behavior are derived under ceteris paribus conditions. Still, in general, the predictions hold even when other factors affect the effectiveness of effort. For expository reasons, we indicate two candidate subsets of interacting factors: individual characteristics and exogenous characteristics. Regarding the first, consider the existence of individuals' or groups' different talents and abilities. If one views a contest somewhat abstractly as a production function where monetary reward is the "output" obtained, then effort constitutes the "input." Innate talent and acquired ability constitute a "technology" translating a certain level of effort into a probability of successfully producing the desired output. The impact of different abilities is clearer in the presence of a winner-take-all contest. Take again the example of a race. Since athletes are expected to put their maximum effort into the race, and given that their level of effort depends upon the value of the prize, they would make the same effort. In such a case, the outcome of the contest will be determined — everything else being equal — by abilities. Of course, abilities can be exogenously given and refer to personal talents given by nature, but they can also be related to specific positive investments made by agents. Still, this is not what really matters when analyzing a contest. What matters is that if agents are not able to update their own abilities at different stages of the game, their efforts will be fruitless.

The role of contest design

As regards exogenous conditions, consider the design of the contest. In order to influence the total amount of effort exerted, the agent providing the contest prize can modify the architecture of the contest. The simplest case is that of providing different prizes. This is commonly the case with sport contests where prizes are offered for the winner, but also for the runner-up. Moldovanu and Sela offer a brilliant theoretical contribution in this respect, showing that in the presence of concave cost functions, a single prize constitutes the optimal design to maximize effort.[10] In contrast, in the presence of convex cost functions — that is, when effort is increasingly costly, or when cost increases as the contest goes on — a multiplicity of prizes constitute the optimal design choice. In fact, when rational agents know that several prizes are provided, and given available information about other contestants' abilities, they will put maximum effort into the contest. Even if they are aware that they cannot win the contest, they still expend maximum effort to get one of the other prizes. This is the case in sports such as cycling, where different prizes are provided by organizers, and the total effort of participants is maximized. But when the cost function is not convex — does not increase with the effort — a single prize is the best contest design. Here, too, the designer's objective is maintained in that the level of total effort is maximized. Offering only one prize guarantees that no player will give up. This is true in particular when players do not have information about other contestants' abilities.

The role of prize valuation

The storyline thus far relies on the assumption that agents involved in a contest are symmetric apart from their own abilities. The notion of differences in abilities is commonly recognized among students of political science. But asymmetry can take other forms. In the realm of strategic interactions, what is also affecting agents' behavior is asymmetry in terms of available information.

The simplest case refers to asymmetry in the valuation of the prize.[11] That is, when its value is not publicly disclosed but privately inferred, then agents likely will value the contest prize differently. And because the level of effort is positively correlated to the value of the prize, different valuations lead to different levels of effort made by agents. Scholars find that agents that value the stake more highly undertake a bigger contest effort than low-valuation participants. In particular, Hillman and Riley show that asymmetric valuation deters participation by low-valuation agents. Consider a contest with only two players, A and B, with identical abilities. If A has a higher valuation of the prize, it will exert itself more. As a consequence it will be the favorite to win. Agent B, the "underdog," will exert itself less. Therefore, increasing the favorite's valuation increases its effort but decreases the effort of the underdog. This result may hold even if agent B (the low-valuation agent) has superior abilities. In fact, it would be possible to demonstrate that even if agent A is less skilled in terms of abilities, it will always be the favorite regardless of its inferiority so long as its prize valuation is sufficiently high relative to the other player: asymmetry in the prize valuation can be a driving force.

An implication of contest theory is that terror groups do not conduct attacks as ends in themselves but use these to signal to al Qaeda participation in a "contest" to compete for its recognition and rewards.

To sum up: (1) all players maximize their own effort; (2) in the presence of asymmetry in the valuation of the prize, low-valuation players will give up; (3) low-ability players will also give up; and, although not explored here, (4) the probability of collusion among players found has been to be low.[12]

Al Qaeda fits into the theory by portraying it as a contest organizer providing an indivisible prize to the best terrorist group. From time to time, bin Laden and his followers may start a competition among groups loosely related to the network. The prize may be viewed as some sort of ideological blessing (being accepted as a full and "honorable" member of the organization) as well as an economic reward.[13] More important, for our purpose, are the insights that contest theory offers about the way candidate cells compete with each other.

The role of information

The key feature relates to information. All the participants are privately informed about their own abilities — each group knows how much it can achieve — but they are unaware of each others' potential. This, in turn, creates a favorable condition for the contest designer, because all groups are forced to give their best and maximize their respective efforts. But information can also be seen as the process used by groups to signal their commitment and ability (and, conversely, as the way bin Laden monitors their actions). When it comes to terrorist attacks, monitoring and information costs are close to zero: when a terrorist group bombs an embassy or a trade center with dozens of casualties anywhere in the world, the event is extensively broadcast by international mass media. As a result, the link between effort and reward is quite direct: the greatest effort is supposed to guarantee the prize. Put differently, each group knows that in order to win the prize it will have to maximize the number of casualties. Moreover, because groups can value the prize to be awarded differently, a spontaneous partitioning between high-ability and low-ability groups is to be expected.

The implication of this logic is twofold. On the one hand, contrary to common wisdom, mass killing and the resulting psychological effect is not an end in itself, but rather a means for aspiring groups to win al Qaeda's prize. In this view, target selection — train stations, malls, and hotels — is not just the consequence of ideological consideration, but is a matter of tactical calculation: these sites host hundreds of appealing targets, are easy to strike, and highly visible in terms of media coverage. A second implication is that according to the model a terrorist action per se is not enough to automatically grant membership. Eventually, as a sort of ex-post franchising, al Qaeda reaps the reputation or image benefits of the most successful attacks while paying, all things considered, a limited price.[14]

Conclusion

The previous paragraphs apply insights drawn from contest theory to explain some of al Qaeda's more puzzling features. As witnessed first by the attacks in Madrid (2004) and London (2005), and more recently by the plots unveiled in London and Glasgow in July 2007, terrorist actions can look more like the result of self-starters' initiatives than elaborate, centralized, top-down plans. This practice represents a truly problematic departure from the past. From a counterterrorism perspective, the rise of autonomous violence-prone groups found Western intelligence services basically unprepared. In the words of the British Intelligence and Security Committee's report: "We remain concerned that across the whole of the counter-terrorism community the development of the home-grown threat and the radicalization of British citizens were not fully understood or applied to strategic thinking."[15]

When explaining al Qaeda's recruitment process, contest theory also sheds some light on the role of information and communication in connecting the various nodes that constitute the structure of its network. Conceived broadly, communication merely refers to the use of mass media or the Internet by bin Laden and his followers. Mastering advanced technologies proved critical in al Qaeda's ability to talk to multiple audiences, like potential new members, hostile governments, and public opinion worldwide. However, this blurs the line between internal and external communication. The model provided by contest theory unveils the relevance of the internal front of communication, that is, the way in which information circulates among various bodies of the organization. As mentioned, for bin Laden most of the advantages of starting contests derive from asymmetrical information: indeed, collusion among competing groups is hindered by a lack of knowledge of each others' abilities and motivations; likewise, scarce information on the criteria used to allocate the prize forces competing groups to maximize their effort. But there are also some potential weaknesses with this theory. For example, the logic of group competition inherent in contests is limited to apply only under certain conditions such as private and asymmetric information. As a result, counterterrorism should first aim at tackling these conditions.

Two broad policy prescriptions emerge from our analysis. The first is to discredit bin Laden's promise, or, to put it in more sophisticated terms, to falsify and confuse the kind of information that terrorist candidates receive. The implicit assumption of any contest is that the organizer will certainly reward the winner. Thus, the success of a contest rests to a large extent upon trust. Undermining the trust extremist candidates feel would presumably weaken the process of recruitment. Perhaps it is up to the intelligence community to perform this task and adopt instruments to interfere with al Qaeda's communication. However, this is a sensitive issue as evidently the risk involved in some intelligence practices for democratic countries is to disregard individual freedoms in favor of public security.[16] Following this lead, terrorist violence would certainly not be eradicated, but it would be much harder for bin Laden to sustain contest credibility among potential applicant groups.

The second prescription concerns funding. Insofar as bin Laden's reward to self-starters is monetary, hindering al Qaeda's capacity to distribute funds becomes a critical issue. This can be done by breaking down the flow of money at the lowest level of the chain, that is, before it gets into local groups' hands. If counterterrorism can deny them their economic reward, bin Laden's credibility as a contest organizer will be challenged. Counterterrorism would have to track financial flows in order to prevent local groups from enjoying rewards for their actions.

The insights suggested by our analysis are empirically limited by the lack of reliable information on the network. Because no public confession or statement has been made by al Qaeda operatives on bin Laden's reward strategy, we have to focus exclusively on the output of the process — al Qaeda's attacks. As a consequence of this limit, several paths for future research are open. In particular, future analyses should investigate in depth the terms of the contest. How does bin Laden initiate a contest? How does he reward successful applicants, that is, what weight do ideological blessing and monetary remuneration carry?[17] Is the contest entered into by several participants simultaneously, or do applicants play sequentially until bin Laden's goal is achieved? Finally, how does one jam or deter this strategy? These questions are beyond the limits of this article. Addressing them will require refining, and perhaps amending, the interpretations offered here.

Notes

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1. Kurth Cronin (2006, pp. 32-39).

2. Meaning: As noted by many commentators, the original meaning of al Qaeda is essentially “the base,” “the foundation,” or even “the method,” which underlines the organization’s catalytic role among different groups. Terms: Coll and Glasser (2005). Findings: Sageman (2004).

3. Structure: Jackson (2006, pp. 247-248). Networks: For an in-depth discussion of networks, see Arquilla, Ronfeldt (2001).

4. Cozzens (2005); Sageman (2004, p. 110).

5. Kirby (2007); Sageman (2008).

6. The open-source interpretation of al Qaeda is in Robb (2007). We are grateful to Jurgen Brauer for bringing the issue to our attention.

7. Public good: see Lerner and Tirole (2002). A public bad is a diffused negative externality recalling the idea of “atmosphere” externality as developed by Meade (1952).

8. See Krebs (2002); Brams, Mutlu, and Ramirez (2006).

9. Traditional contest models are formally grounded on Tullock (1980) and found seminal explanations in O’Keeffe, Viscusi, and Zeckhauser (1984, pp. 27-56); Rosen (1986); Dixit (1987). The first and seminal application was developed by Tullock (1980) for rent-seeking phenomena.

10. Moldovanu and Sela (2001).

11. For details on the ideas in this paragraph, see Hillman and Riley (1989); Nti (1999; 2004).

12. The possibility of collusion between heterogeneous agents in a contest has been analyzed in Caruso (2008).

13. Al Qaeda has given grants to local groups that devised promising plans for attacks. See Hoffman (2003).

14. See Farah and Finn (2003); Benjamin (2003).

15. Government Response to the Intelligence and Security Committee’s Report into the London Terrorist Attacks on 7 July 2005 (May 2006).

16. Wilkinson (2000).

17. Whenever agents are partitioned into status categories according to their performance (top-class, low-class, and so on), a reasonable hypothesis is that the terrorist groups involved in this kind of contest care more about their relative status than about the potential monetary reward. Social and cultural considerations connected to a concern for relative position do constitute important determinants affecting the performance of agents. This kind of behavior can be strengthened in the presence of a deep ideological and religious motivation. See Moldovanu, Sela, and Shi (2007).

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Saving lives in armed conflicts: what factors matter?

Pavel A. Yakovlev

Contrary to popular opinion, the number of armed conflicts has been in decline in recent years: about 30 ongoing conflicts per year nowadays compared to about 50 conflicts per year during the Cold War era. The probability of being killed in war is also at its lowest since World War II.[1] However, these trends hide the dramatic variations of war-related deaths across countries and conflict types. This article seeks to explain cross-country variations in conflict casualties by examining how battlefield deaths are related to military expenditure per soldier, political regime type, conscription, economic freedom, human capital, per capita GDP, and various geographic variables. The empirical estimates presented here provide an intuitive insight into how democracy, conscription, economic freedom, and other factors affect battlefield deaths and the value of life in military conflicts. The article departs from previous studies on this topic by proposing a more rigorous specification of the endogenous channel through which political regimes, conscription, and other factors may affect conflict casualties. This channel is military capital intensity (measured as military expenditure per soldier), and it can be used to estimate the value of a statistical life that can be saved by providing soldiers with more military capital. The findings indicate that more politically and economically free societies place a higher value on life, manifested in better equipped military forces. As a result, such societies suffer fewer casualties in military conflicts. In addition, it is found that societies with higher levels of education, per capita GDP, and volunteer armies suffer fewer casualties. The estimates are consistent with some of the previous findings in the literature and emphasize the importance of controlling for endogeneity bias in the empirical models of conflict.

On the determinants of conflict casualties

There exists a fascinating and growing empirical literature on conflict casualties and their determinants. Some of the most interesting recent papers explore the effects of political, institutional, economic, and geographic factors on conflict casualties. The influence of these variables on conflict casualties is the focus of this article.

Political and economic forces have long been considered intertwined, but a consensus on whether democracies and dictatorships choose identical policies has not yet emerged. This debate could have significant ramifications for understanding cross-country variations in conflict casualties. The new and growing body of literature indicates that political regimes diverge only in certain kinds of policies. Some researchers argue that democracies and nondemocracies should have identical policies except for cases when these policies influence the threat of entry from political challengers.[2] Not surprisingly, it is found that democracies and dictatorships differ significantly in policies pertaining to military spending, torture, death penalty, censorship, religious regulation, and perhaps even in fiscal policy, welfare, and corruption.[3]

This article seeks to explain variations in conflict casualties in relation to military expenditure, regime type, conscription, income levels, and other factors. It finds that more politically and economically free societies place a higher value on soldiers' lives and, as a consequence, suffer fewer casualties.

As for military expenditure in particular, several scholars find that democracies spend less on defense as a percentage of GDP than do nondemocracies, holding everything else constant.[4] But lower defense burdens as a share of GDP in more democratic nations do not necessarily make democracies weaker military opponents. Factors like superior human capital, harmonious civil-military relations, and Western cultural background seem to be responsible for democracy's apparent military effectiveness.[5] Others attribute the striking military success of democracies to superior leadership and initiative on the battlefield, supposedly arising from the political culture of democracies and the social value systems that encourage individualism and decentralized decisionmaking.[6] Compared to dictatorships, democracies also appear to have higher military expenditure per soldier, which allows them to protect their soldiers with more capital. This military capital view holds that countries that value their soldiers more should equip their troops with more or better capital.[7] For instance, one study that looked at World War II battlefield data for the Western front finds that each additional $1.3 million spent on military capital could have saved one American life.[8] These findings suggest that democracies suffer fewer conflict casualties because they shield or protect their troops with more military capital.

Another hypothesis as to why democracies suffer fewer casualties holds that democratic institutions are better designed to constrain military aggression. According to this audience cost view, democracies are more sensitive to wartime casualties than dictatorships because democratic leaders require popular consent in order to remain in office, which forces them to use troops sparingly so as to avoid high casualties. The audience cost view suggests that democratic leaders choose wars and conflict strategies with low casualties in order to minimize the loss of public support.[9] In other words, casualty aversion entices democratic regimes to accept negotiated settlements over wars and choose to fight only low cost and short wars that they can win. Another study arrives at a similar conclusion by showing that political party competition associated with electoral uncertainty can reduce military expenditure and the severity of conflict between nations.[10] However, other scholars argue that public support for war in democracies may depend less on casualties and more on clear movement toward victory.[11] They contend that democratically elected leaders and their constituents will accept higher casualties if they are victorious. Conversely, politicians may lose office if their wars go poorly despite low casualties. The popular notion that democracies tend to engage in fewer wars does not go unchallenged, however. One pair of scholars show in two studies how a president's desire for reelection can instigate an otherwise avoidable war in order to show off the president's competence in military leadership.[12] There is also some evidence that income inequality and pervasive rent-seeking by ruling elites may lead to war and state violence.[13] These findings indicate that democracies might be just as eager to fight wars as their autocratic counterparts, but perhaps with fewer casualties.

A different debate persists regarding the relationship between conscription and conflict casualties. A literature review indicates that the implication of military recruitment strategies for conflict casualties is an under-researched area because many economists regard recruitment policies as the phenomenon to be explained, instead of recognizing that the policies might serve as an explanatory factor for wartime casualties.[14] In other words, economists typically examine whether a military draft is the most efficient means for recruiting appropriate numbers of military forces.[15] It is often argued that democracies attempt to shelter their citizens and soldiers with more military capital compared to dictatorships, but capital-for-labor substitution is likely to be reversed by conscription, which lowers the relative price of military recruits. A nonmarket method of recruiting military forces such as conscription is a form of enslavement or servitude that causes less regard for the lives of soldiers and results in greater casualties. In a comprehensive analysis of military draft policies around the world, Poutvaara ad Wagener dispel many if not all economic, civic, and moral benefits commonly attributed to conscription by its proponents.[16] Unless subject to politically unpopular tax increases, volunteer armies are perfectly capable of maintaining a sufficient quantity of qualified soldiers by compensating individuals with risk-adjusted market wages and adopting technologies that could save more lives.[17]

The importance of property rights and the institutions that enforce them is beginning to be widely recognized by economists. Combined, the two can create incentives for investment by preventing arbitrary confiscation of property by the state. With property rights guaranteed over a long-time frame, individuals can be assured of profiting from their investments, which encourages more economic activity or wealth creation. Conversely, an economic system that allows for arbitrary seizures not only reduces time-horizons but also creates markets characterized by inefficient or wasteful use of resources that thwart economic growth. Douglass North and other institutional economists argue that state property seizures lead to a wasteful use of property, but in the case of conscription the stakes might be higher because people pay for these policies with their lives.[18] In other words, when conscripts come cheap and plenty, they are likely to become cannon fodder. An empirical analysis of interstate disputes by Choi and James reveals that countries with military draft systems engage in more militarized disputes than countries with volunteer armies.[19] Thus, one might expect volunteer armies (or free market policies in general) to be consistent with a higher value of life and lower casualties in military conflicts. Several scholars find that democratic countries with volunteer armies tend to have substantially lower casualty rates as compared to other combinations of recruitment methods and regime types.[20] Their findings suggest that all forms of governments tend to use conscription armies inefficiently and suffer higher battlefield casualties. However, democratic institutions can mitigate some if not all of the conscription-induced casualties and are able to sustain high levels of casualties when targeted by authoritarian states.

The "audience cost" view suggests that democracies direct lower battlefield casualties because they avoid fighting relatively bloody wars in the first place; in contrast, the "military capital" view holds that democratic governments and volunteer armies reduce combat casualties indirectly by shielding soldiers with more military capital.

Not everyone agrees with the view that volunteer armies are superior to conscription armies in terms of minimizing war costs and casualties. Some scholars claim that countries with a broader constituency face different resource mobilization challenges than do countries with narrower constituencies when conflict payoffs or costs have public-good like characteristics.[21] In the case of nonrival conflict costs, the war burden would be diluted by the large size of the electorate or conscripts in a democracy, making conscription armies more likely to minimize conflict costs to the public. A study by Vasquez finds that democracies with conscription armies experience fewer combat casualties compared to democracies with volunteer armies because, supposedly, conscript casualties place high political costs on policymakers.[22]

These findings show a lack of consensus on the true effect of democracy and conscription on conflict casualties. In an attempt to reconcile these findings, this article studies both direct and indirect effects of economic, geographic, political, and institutional arrangements on conflict casualties, using an endogenous specification of military capital intensity.[23] Military capital intensity can be viewed as the channel through which various factors may exhort their influence on conflict casualties. Using individual conflict data and aggregate country data, it is found that democracy, volunteer recruitment system, economic freedom, human capital (that is, schooling), per capita GDP, and the percentage of the total population living in urban areas all have a significant positive effect on military capital intensity, which in turn has a significant effect on lowering battlefield deaths. Additionally, it appears that conflict duration and civil war increase battlefield deaths directly, bypassing the military capital intensity channel.

To account for geographic determinants of battlefield deaths that do not vary over time, my latest paper uses cross-country averages instead of individual conflict data.[24]

Because many institutional, political, and especially geographical variables do not change significantly over time, cross-country regressions might be better suited for illuminating the underlying long-run relationships. The findings reveal that democracy and volunteer armies have significant casualties-reducing effects via the military capital intensity channel, but their magnitudes are substantially below those for economic freedom, human capital, and per capita GDP. In fact, economic freedom is five times stronger than democracy in terms of its effect on military capital intensity. Also, it is found that a country's land area increases and elevation decreases military capital intensity, while tropical area increases battlefield deaths. Perhaps defending a larger geographic area entails a higher number of military bases and other fixed costs that increase military capital intensity. A higher elevation can be thought of as a natural military obstacle and a substitute for military capital. Tropics, in contrast, can contribute to conflict casualties directly due to the presence of infectious diseases, heat, and humidity.

Military capital intensity and democracy

Despite a plethora of studies on the determinants of military expenditure, the nexus between political regime and military capital intensity remains largely unexplored. Although some studies argue that democratic and volunteer armed forces shield their soldiers with more military capital, they do not model this indirect or endogenous specification thoroughly. Many empirical studies on the regime-casualty relationship utilize ad hoc, single-equation regressions that produce inaccurate estimates due to the endogeneity bias. This endogeneity bias is central to understanding the difference between the audience cost and the military capital views discussed previously. The audience cost view suggests that democracies have a direct effect on battlefield casualties because democracies avoid fighting relatively bloody wars. In contrast, the military capital view holds that democratic governments and volunteer armies reduce combat casualties indirectly by shielding soldiers with more military capital. The direct audience cost effect has been typically estimated via single-equation regressions that are likely to produce biased estimates if democracy enters the regression equation alongside military expenditure, which has been found to be dependent on political regime type. However, the views are not mutually exclusive and would ultimately need to be tested empirically.

This section reports on an attempt to statistically separate the direct audience cost effect from the indirect democratic effect, which affects casualties via the military capital intensity channel. An equation is estimated where democracy is allowed to have the direct effect on battlefield deaths (second-stage regression) as well as the indirect effect on battlefield deaths through military capital intensity (first-stage regression). If the audience cost view is correct, then democracy should have a statistically significant effect on lowering battlefield casualties in the second-stage regression, even after controlling for its effect on military capital intensity in the first-stage regression. In estimating this two-stage least squares (2SLS) regression equation, average country battlefield deaths and their determinants are used.[25] The results are summarized in Table 1.

Table 1: Selected determinants of battlefield deaths

First-stage regression (dep. var.: military capital intensity)		*Second-stage regression (dep. var.: battlefield deaths)*	
Democracy	0.49***	Military capital intensity	-0.89**
Conscription	-0.25***	Coalition member	-3.70***
Economic freedom	2.23***	Coastal country	1.07*
Human capital (educ.)	0.65***	Democracy	-0.36
GDP per capita	0.88***		
Coalition member	0.53**		
Land area	0.13**		
Elevation	-0.15*		
Observations	64	Observations	64
F-statistic	36.26***	F-statistic	30.99***
R-squared	0.84	R-squared	0.72
Hansen J test for instruments (p-value)	=>		0.83
Ramsey omitted variable test (p-value)	=>		0.35

Notes: Statistical significance levels: *** at 1%, ** at 5%, and * at 10%. Variables are in logarithms and coefficients serve as elasticities. Instrumental variables are: conscription, economic freedom, human capital, per capita GDP. Residuals are used in place of human capital and per capita GDP to factor out their correlations with democracy and economic freedom. The model satisfies both Hansen J and Ramsey tests. Military capital intensity (stock variable) is proxied with military expenditure divided by military personnel (flow variable), which reflects annual investment in military capital per soldier. Variable sources and descriptions are provided in endnote 25.

The table shows that although democracy appears to have a negative (lowering) effect on battlefield deaths in the second-stage regression, the estimated effect is not significantly different from zero. Nevertheless, democracy has a significant positive effect on military capital intensity in the first-stage regression, which confirms the indirect effect argument and my earlier findings.[26] Other variables with significant effects on military capital intensity are shown in Table 1 and include conscription, economic freedom, human capital, per capita GDP, military campaign or coalition membership, land area, and elevation. Variables with significant direct effects on

The evidence presented here does not support the audience cost view that democracies choose t fight low-casualty conflicts.

average country battlefield deaths are shown on the right hand-side of Table 1 and include military capital intensity, coalition membership, and seacoast.[27] This evidence suggests that the audience cost view found in other studies might be capturing the indirect casualty-reducing effect of democracy working its way through the military capital intensity channel.

Military capital intensity and the value of a statistical life

In addition to providing more accurate regression estimates, the endogenous treatment of military capital intensity allows estimating the value of a statistical life by calculating how much one would have to increase military expenditure per soldier in order to save one more life in a military conflict. Economist Chris Rohlfs uses a similar approach, which relies on capital-for-labor substitution, in order to show how more spending on capital equipment can save lives.[28] He examines how many American lives would have been saved if relatively more capital inputs like tanks or airplanes had been used in World War II battles in Western Europe. Using detailed battlefield data, he estimates the value of a statistical life for an American soldier in World War II to be about 1.3 million (present day) dollars. In contrast to Chris Rohlfs, my study uses international or country level data and finds that the average value of a statistical life (VSL) in military conflicts ranges between 4.5 and 7.3 million inflation-adjusted dollars, depending on the econometric techniques and variables used. My value of life estimates fall within the typical range of $4 to $9 million per life found in other VSL studies.[29] These numbers place additional confidence in the endogenous empirical specification, which treats military capital intensity as the endogenous channel through which many factors may influence conflict casualties.

Conclusion

This study identifies a number of political, economic, institutional, and geographic factors that have a significant direct or indirect effect on conflict casualties. Various findings in the literature are surveyed and a different empirical model is proposed that treats military capital intensity as the channel through which various factors may affect conflict casualties. The findings suggest that policies or institutions that promote democratic and economic freedoms, volunteer armies, education, and higher incomes per capita are likely to save more lives in interstate or civil wars. The proposed modeling approach also allows estimating how much military expenditure per soldier it would take, on average, to save one life in military conflicts. The estimates suggest that it may take between 4.5 and 7.3 million dollars of additional military spending per soldier in order to save one more life.

Notes

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1. For both assertions, see Harbom, *et al*. (2005, 2006).

2. Mulligan and Tsui (2006).

3. See Mulligan, *et al*. (2004) for specific policy differences, and Persson (2002) for regime differences in fiscal policy, welfare, and corruption.

4. Goldsmith (2003); Yakovlev (2007).

5. Biddle and Long (2004).

6. Reiter and Stam (2002).

7. Horowitz, *et al*. (2006); Yakovlev (2006).

8. Rohlfs (2006).

9. Siverson (1995); Mueller (1973; 2005).

10. Garfinkel (1994).

11. Feaver and Gelpi (2004); Chiozza and Goemans (2003; 2004); Bueno de Mesquita, *et al*. (1992).

12. Hess and Orphanides (1995; 2001).

13. Nafziger and Auvinen (2002).

14. Horowitz, *et al*. (2006).

15. For an analysis of costs and benefits of conscription see, e.g., Altman and Fechter (1967); Hansen and Weisbrod (1967); Lee and McKenzie (1992); Fisher (1969); Warner and Asch (1995); Poutvaara and Wagener (2007).

16. Poutvaara and Wagener (2007).

17. See Miles (2006) for a report on recent army recruitment programs.

18. See, e.g., North (1990).

19. Choi and James (2003).

20. See, e.g., Horowitz, *et al*. (2006).

21. See, e.g., Bueno de Mesquita, *et al*. (1992).

22. Vasquez (2005).

23. Also see Yakovlev (2006).

24. See Yakovlev (2008).

25. See Yakovlev (2008). The military capital intensity variable is proxied by using military expenditure (real dollars) divided by military personnel. Although this proxy is a flow rather than a stock variable, it captures the effect of investment in military capital per worker allowing the regression coefficient to be interpreted as the effect of a change in the stock variable. Military spending and military personnel come from the Correlates of War data set (Singer, *et al*., 1972). Battlefield casualties come from Gleditsch, *et al*. (2002). The democracy index is computed from democracy and autocracy measures taken from the Polity IV Project (2000). Conscription and economic freedom indices (interval or continuous measures) come from Gwartney and Lawson (2004). Conscription is factored out from the economic freedom index (courtesy of Bob Lawson). Human capital figures in the form of average years of schooling are from Barro and Lee (2000). The cross-country data set amounts to a maximum of 84 country averages over the 1950-2002 period.

26. Yakovlev (2006; 2008). Furthermore, the Wu-Hausman and Durbin-Wu-Hausman endogeneity tests support the model with only the indirect effect of democracy on battlefield deaths.

27. The regression model in Table 1 also satisfies Hansen's instrumental variable test and Ramsey's omitted variable (specification) test.

28. Rohlfs (2005; 2006).

29. Viscusi and Aldy (2003).

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United Nations peacekeeping: limitations and prospects

Nadège Sheehan

On 29 May 2008, the United Nations celebrated the 60th anniversary of U.N. peacekeeping operations. Between 1948 and 2008, sixty-three peacekeeping operations have been deployed. As of the end of April 2008, 107,670 personnel were serving in 17 peacekeeping operations. The current peacekeeping budget is estimated at $6.8 billion, representing only about half of one percent of global defense spending.[1] U.N. peacekeeping is definitely a cost-effective solution to deal with war-torn societies,[2] so why is the provision of U.N. peacekeeping operations so problematic? Why can nations not give their full financial support to U.N. peacekeeping? The answer is that peacekeeping is a regional or even global public good and, like all public goods, it entails the underlying problems of free-riding and disproportionate burden-sharing. It is always more desirable to let others pay for a good that one can enjoy at no cost or with minimal investment.

It is difficult to find solutions that would make nations eager to give their contributions to create peace, regardless of their own benefits. As the problem of free-riding is less severe when peacekeeping provides contributor-specific benefits,[3] why not implement a system that would motivate the production of peace by those nations with particular interests in a conflict? If nations can be given the opportunity to focus their efforts in areas that are more cost-beneficial for them, U.N. peacekeeping could likely be more efficiently produced. Conflicts resolution could be more effective because the funds and staffing would be more readily available.

This essay discusses some reasons why it is so difficult to efficiently produce U.N. peacekeeping and presents potential production systems that could better produce peace.

United Nations peacekeeping is a public good that not all nations may benefit from

A public good is nonexcludable and nonrivalrous. There is no exclusion from consumption by price. Once the good is made available to one, it becomes available to all and one cannot decide whether to consume the good. Because they produce peace, U.N. peacekeeping operations are considered public goods. Inasmuch as they reestablish trade and international relations, they also generate private and semi-private goods (for the nation). And although the international community benefits from this, the foremost beneficiary is the country where the deployment takes place. But the production of peace may not reach all groups equally in a nation. Situations of displaced persons generate instability in a nation and can prevent others from enjoying peace. Despite free and democratic elections in the Central African Republic in 2005, for example, the country cannot reap the benefits of peace because of the insecurity caused by the large number of displaced persons. As of April 2008, the Internal Displacement Monitoring Center counts 101,000 displaced persons on the borders with the Sudan and Chad. Some South Africans cannot enjoy peace because of the large number of displaced Mozambicans in South Africa. South Africans blame Mozambicans for crime and unemployment.[4] Some groups may not be able to enjoy peace because there are too many firearms left after an incomplete disarmament process. These groups may have to invest in measures to ensure their own safety; those who cannot afford to pay for additional security will continue to feel unsafe. Consumption of peace can therefore be excludable by price.

In May 2008, the United Nations celebrated the sixtieth anniversary of U.N. peacekeeping operations Despite successes, why is it generally so difficult for the United Nations to provide peacekeeping services?

If all U.N. members accepted to participate in the financing of a particular operation, this still would not guarantee that a mission can be deployed. A nation in conflict can refuse deployment of U.N. peacekeepers on sovereignty grounds, for example because it does not value peace or because the country considers that the potential deployment is unduly influenced by a big power with whose objectives the target country disagrees. Fearing that the United States was aiming at regime change, the Sudanese government long resisted the deployment of non-African forces to help manage the crisis in Darfur.[5] Only in cases of genocide and mass killings can the United Nations compel deployment, using the Responsibility to Protect principle.[6] Otherwise, the conflict death toll continues to increase, while diplomatic efforts are carried out. We thus face a situation where a public good (peacekeeping) cannot be produced because the main beneficiary (the nation in conflict) refuses to consume the good.

U.N. peacekeeping can be costly if its products, including peace, are to be enjoyed. It is also expensive to force someone or a nation to consume its benefits. It is the type of good that cannot be well produced by the market, even though there are contributor-specific benefits.

The production of peacekeeping by a single nation, whatever its wealth, is unrealistic. Besides, no government would accept to support the entire cost of a mission that would be more cost-beneficial to other nations; and it would be difficult to implement a national peacekeeping financing system that would solely depend on voluntary contributions, except in the case of hegemony where the hegemonic country would find indirect ways to get the missions paid for. As compared to the United Nations budgeted amount of $428 million, a study prepared by the U.S. Government

Accountability Office estimated that it would cost the United States approximately $876 million to conduct a peacekeeping operation similar to the United Nations Stabilization Mission in Haïti (MINUSTAH) for the first 14 months of the mission.[7] There is also a limit to the volume of resources that can be mobilized, and in the activities that can be carried out by any one nation. The government/producer will then have to demand financial participation from other nations in order to finance peacekeeping expenditures. However, suppose that the participation level required from each nation seems equitable, what authority would be able to enforce payment? Unless forced (by some kind of tax), governments are not disposed to contribute to the production of a good, or unless motivated to do so by some prospect of direct gains.

The United Nations' scale of assessment does not facilitate efficiency in the production of peacekeeping operations

With some adjustments, U.N. peacekeeping is based on the scale of assessment for the regular U.N. budget. Expenses are apportioned according to capacity to pay. Two criteria considered most relevant by the U.N. Committee on Contributions are used to define this capacity: first, average per capita gross national income (GNI) and, second, conversation rates based on market exchange rates in U.S. dollars, except in cases where that would cause excessive fluctuations and distortions in the income of some countries. To bring equity to the scale, a system of discounts representing debt-burden adjustment, is added. Broadly speaking, annual GNI figures in national currency are converted to U.S. dollars using the annual conversion rate. The average of these figures is calculated for a base period of three or six years. The average GNI figures are then summed up and used to calculate shares of GNI. A debt-burden adjustment is then applied. It represents an average of 12.5 percent of total external debt for each year of the period. The amount of the debt-burden adjustment is then deducted from the GNI of countries with a per capita income of up to $10,725.[8]

The peacekeeping scale of assessments is subject to a complex calculation that still does not guarantee equity and does not reach the objective of maximizing contributions to peacekeeping operations. The U.N. peacekeeping scale of assessments represents a tax, based on the ability to pay principle. But, unlike taxes controlled by a national government, there is no authority and no international law to punish nations that do not pay their assessment to peacekeeping. The only punishment that the United Nations can use is not to allow members to exercise their right to vote in the U.N. General Assembly (Article 19). Countries that want to protect that right can present economic reasons as to why they cannot fulfill their payment obligation and can propose a multi-year payment plan. However, if the United Nations approves the plan, payments owed to U.N. peacekeeping are converted into debt, deepening developing countries' financial burden. Nevertheless, a nation's debt to peacekeeping may become part of the nation's public debts and then taken into account in the debt-burden calculations for the assessments. As it is likely that the needs for peacekeeping operations and the costs involved will continue to go up, the debt that a few developing nations have in U.N. peacekeeping will increase, making them less likely to fulfill their future financial obligations. For instance, average assessments to be paid by Liberia between 2000 and 2007 were $22,278. In December 2004, the country had an outstanding debt of $1,169,567. In 2005, Liberia had its regular assessment of $24,264 added to its debt. However, Liberia only paid $202. This means that Liberia did not pay its assessment and increased its outstanding balance to $1,193,629. Under the burden of past debts and new assessments due, some countries, like Sao Tome and Principe, just stop making payments.[9] Although the United Nations finds that payment plans have had a consistently positive impact in reducing arrears, financing of U.N. peacekeeping remains problematic. As the budget for the upcoming year is established for actual peacekeeping needs, when nations cannot or do not pay their share of assessment, there is a shortage of funds for financing the missions.

As currently structured, the peacekeeping scale of assessment leads countries to play games with the classification system. Nations can request to move to a higher or lower assessment category (if they meet the requirements). Just like people, nations generally will not propose to pay more unless there are some economic or political interests that motivate them to do so, such as their world image. A country that chooses to move up the scale may well be concerned that it will suffer a relative loss of wealth, political weight, and influence on global security if it is placed at a lower per capita level of assessment. However, the fact that a country can voluntarily choose to move up in the assessment scale shows that the United Nations most likely miscalculated its capacity to pay to begin with. As calculation periods for future assessments are made based on economic data for an average of the past 5 years (e.g., effective rates of assessment for the January 2007 to December 2009 peacekeeping budget were based on GNI calculated for the period 1999 to 2004), a country's economic situation can change significantly, especially in the presence of exchange rates fluctuations.

The discount system, adjusted for equity, could have psychological effects on the contribution behavior of the five permanent members of the U.N. Security Council, making it more difficult for the United Nations to reach the level of financing needed to produce planned peacekeeping operations. Even though the surcharge imposed on these countries may be relatively insignificant, these members could feel that they are heavily taxed and their motivation to contribute may be reduced. The largest financial contributors today are the European Union, Japan, and the United States.[10]

Production of United Nations peacekeeping by national armies: a costly system

In the absence of a permanent force, the United Nations must rely on the quantities and qualities of military personnel, equipment, and supplies that countries desire to contribute to each mission. Undoubtedly, this is inadequate for producing effective peacekeeping operations. The production of peacekeeping by a patchwork of national armies raises issues of heterogeneity in troops, and subsequent negative externality costs. Each contributing nation has its own training system, its own culture, language, and customs. The training level and communication skills of the soldiers are often significantly different. These differences create costs of coordination and efficiency; they can create negative externalities, generating internalization costs.

As contributions of military personnel and equipment are left to the discretion of nations, more developing countries send personnel military to U.N. peacekeeping operations. To participate in a mission, the gains nations plan on obtaining have to be higher than the costs. Deployments of U.S. troops to Haïti, both in 1994 and in 2004, were based on national interests. Severe instability in Haïti led to increasing numbers of Haïtians to take refuge in the United States. Perito notes that 1994 was the first time that the United States provided a contingent for both a coalition and a U.N. police force.[11] In 2004, the United States led a U.S. Multinational Interim Force to create stability in Haïti. Among other costs, rich countries consider injury and death risks for their soldiers and the likely reduction of their national security caused by thinning of national forces. The danger involved in peacekeeping operations, particularly as peacekeepers from developed nations have to fight alongside those of developing nations, has led rich countries to favor contributions of equipment and supplies over human contributions. The value of life of peacekeepers enters into the participation decisionmaking process. Seiglie notes that, ceteris paribus, a person with greater earnings or life expectancy has a higher value of life.[12] The presence of large populations, and particularly of potential economic gains, are also important factors in the participation decisionmaking process.

Developing countries have large numbers of soldiers already serving in local armies. They also have substantial numbers of unemployed young men. By contributing troops, not only can poor nations potentially reduce crime and unemployment rates, but can find occupations for excess soldiers. Developing countries are also eager to supply troops to U.N. peacekeeping because of the benefits they gain from reimbursements, ordinarily far higher than their expenditure in training soldiers. The United Nations reimburses troop-contributing nations at a monthly rate of about $1,000 per soldier, on top of direct payments to military personnel of $1.28 per day per contingent member and a leave allowance of $10.50 per day for up to seven days. Using Haïti as a case study, Solomon finds that 70 percent of U.N. expenditures of $134 million were reimbursement costs to troop-contributing countries.[13] Estimated data for 2003 of troop costs of five top contributors versus U.N. reimbursements made to them show the kind of profit developing nations can make. After taking into account assessments paid by these nations, data show that Bangladesh, Ghana, India, Jordan, and Pakistan made profits that amounted, respectively, to $31.3, $10.5, $15.5, $0.03, and $3.4 million. Taking Canada as an example, Solomon notes that, in 2003, its assessment amounted to $78 million, a sum higher than the combined estimated troop costs for the five countries ($72.9 million). The estimated U.N. reimbursement to Canada was about $2.4 million, for an estimated number of 200 personnel.[14]

In 2003, Jordan, Ghana, Bangladesh, Pakistan, and India reaped over $60 million in profits from U.N. peacekeeping cost "reimbursements." That year, Canada's assessed contribution to U.N. peacekeeping was $78 million.

Developing nations also benefit from the training given to their military personnel engaged in U.N. missions. The armies return to their country better trained and can contribute, presumable, more efficiently to national security. Furthermore, the training provided by the United Nations reduces the training costs that these developing nations otherwise would have had to take up (in countries where training is taken seriously). In participating in U.N. peacekeeping activities, there are, then, substantial benefits to be gained by soldiers from poor countries and by their government as well.

Unpaid assessments lead to debt: fewer funds are available to produce peacekeeping operations

When nations do not pay their assessments, it becomes difficult for the United Nations to reimburse contributing nations and suppliers of goods and services, and to finance peacekeeping support staff. The United Nations estimated that, as of 30 April 2008, outstanding contributions to peacekeeping amounted to $2.3 billion. When the United Nations cannot reimburse countries for their participation in U.N. missions, these nations are less eager to contribute to future missions. Developing countries are those that generally contribute the largest number of military personnel; however, they also have the lowest assessment rates. The financial contributions made by rich nations are those that allow the United Nations to reimburse developing countries. But as contributions depend on the levels of national interests, the timing of payments, and their amounts, will fluctuate.

The lack of financial resources also prevents the United Nations from paying its bills to suppliers of goods and services. Subsequently, the organization must reduce its purchases and cannot benefit from economies of scale. Furthermore, the materials purchased can be inadequate and of poor quality. This affects the efficiency of peacekeeping operations. For example, during the U.N. Transitional Authority Mission in Cambodia (UNTAC), the locks on election ballot boxes were not strong and broke. This situation led the Cambodian departing government to qualify the election as fraudulent and to threaten the secession of eastern provinces.[15]

The inability to finance adequate support staff can also affect the missions and create costs. In 1994, the United Nations was not able to hire an adequate number of translators to help form a police force in Haïti, and it had to limit travel frequencies, staff overtime, and meeting sessions. Slow deployments make the missions less credible, as happened with UNTAC. The Khmers Rouges did not to release their weapons because they had noticed that the United Nations was not in control of the situation.[16]

The efficiency of United Nations peacebuilding efforts is questioned

Some scholars believe that some U.N. peacekeeping operations undertake tasks beyond their abilities.[17] They feel that the United Nations does not have the resources to answer the high demands faced in civil war. Soldiers are not sufficiently armed to face situations of anarchy in Angola, Bosnia, Croatia, Haïti, Liberia, Rwanda, or Sierra Leone. The peace reached in Cambodia was not sustainable. As soon as U.N. peacekeepers left, local conflict and despotism erupted. Fleitz indicates that the problems of despotism and kleptomania in Angolia, Cambodia, Haïti, and Liberia were due to corrupt elections supervised by the United Nations. He believes that the civil war in the Democratic Republic of Congo was the consequence of a bad peace agreement and that, for Angola, Liberia, Rwanda, and Sierra Leone, bad peace agreements worsened the refugee problems. He adds that in his view the genocides in Bosnia and Rwanda also are due to the failures of peacekeeping operations and the flawed implementation of democratic institutions in nations at war.

For others, peacebuilding efforts generate corruption, criminality, poverty, and inequality.[18] Peacekeeping often introduces economic policies that do not improve the situation of the people that are most vulnerable. The neoliberal model of political economy cannot be applied to nations at war while seeking to carry out peacebuilding efforts, because these kinds of societies suffer from multiple governmental, political, social, and economic pressures and failures. According to Tardy, diseconomies generated by U.N. peacebuilding efforts can be attributed to the tendency that these activities have to benefit certain social groups. In Mozambique, for instance, the rebuilding of the economy mainly benefitted urban companies and people who had access to the comparatively modern sector of the South.[19] Pugh and Cooper believe that the fight against corruption destroys an important revenue source for poor people. Subsequently, new forms of criminality appear. Only 10 percent of Angola's GNP is said to come from legal commerce. About 80 percent of the Afghan economy is financed by illegal activities, and between 30 and 50 percent of the population have been involved in drug trafficking. For Johnstone and Corbin, peacekeeping cannot succeed unless it is accompanied by a viable political process.[20] The main parties in the conflict must remain politically engaged. Furthermore, it is important that this political process be inclusive and that it encompasses community leaders, civil society representatives, and other important actors. When the North-South war in Sudan ended, there was concern that war could re-erupt before the planned referendum on southern independence in 2011, because the parties had ceased to be engaged politically.

Getting around the free-riding problem to produce peacekeeping operations

As problematic as the production of U.N. peacekeeping is, and although some authors may have doubt about the efficiency of the missions, peace has to be produced. It is unreasonable to envisage dealing with the full magnitude of conflicts without U.N. peacekeeping. The public good characteristics of U.N. peacekeeping make it impossible to compel nations to contribute fairly to peacekeeping. There are even fewer chances that those nations that do contribute will feel the same urge to participate in every mission. We should therefore explore potential alternatives that enhance the efficient production of peacekeeping, regardless of free-riding issues.

Seiglie proposes a system of marketable or tradable obligations.[21] All member nations would be required to provide a given number of troops to an operation based on its population, or the size of their economy, or some other criteria. He explains that if the United States is obligated to contribute 26 percent of troops to a mission, it can do so either by supplying its own force to the mission or by purchasing the tradable obligations of other nations. The United Nations would provide the institutional structure for the market, establish the rules, and regulate the behavior of the participants. Seiglie indicates that this system can only work if there is no conscription; otherwise, there is a situation of potential exploitation of conscripts. Although Seiglie's proposal is a form of privatization of peacekeeping, with a force not unlike mercenaries, it shows a potential for producing peacekeeping. Countries would have to be careful not to purchase the tradable obligations from nations that do not have sufficiently trained soldiers. Seiglie's proposal would have to be packaged with peacekeeping training programs for developing nations. For instance, the United States implemented programs to develop the capacity of coalition institutions, such as African Union and the Economic Community of West African States, to carry out peacebuilding efforts.[22]

Solomon considers the possibility of contracting-out U.N. missions to a single country, one at a time.[23] He believes that this would reduce the set-up costs of a multinational force. Countries could be motivated to propose to carry out a mission if their middle-power status is enhanced by the operation. He notes that the contracted nation would need to be well-experienced in carrying out a peacekeeping operation. It may seize the opportunity to dictate the postconflict environment in the region. But it may not be accepted in the country in conflict. For example, a country may not trust an African Union-led mission if it contains soldiers of the same ethnic group than of the adversarial fighting group. Solomon's proposal suffers from at least one limitation: it suggests that one nation, alone, could produce a peace operation. As stated earlier, this is not plausible because a single nation cannot, by itself, carry out all of the tasks needed to produce peacekeeping efficiently. Solomon's proposal could work if the role of the contracted nation is to be the leader in drawing up the various tasks to be carried out (the nation would, in effect, be a prime contractor), in generating cooperation among the various actors involved in the mission, and in implementing institutions that would intervene to produce peace. It would have to work in concert with international organizations. For this, the contracted nation would need to have powerful multinational status already. This proposal could potentially work well if we see the contracted nation as the leading country in a region, such as South Africa in Africa. The United States would certainly be a candidate nation to contract, as it has the capacity to bolster the capacity of established operations and to reinforce the contribution of other nations to peacekeeping.[24] It has been a key partner in many peacekeeping arrangements already, such as the hybrid Africa Union/United Nations mission. But the United States would probably not accept a contract, as this would mean that it is working for others. Furthermore, its geographical regions of interests are limited.

Fetterly sees the answer to the suboptimality problem in the use of demand-based funding for peacekeeping operations.[25] Countries with specific national interests could put money into a U.N. Trust Fund to be used for particular missions in a region, and thereby alleviate other nations from the burden. He indicates that as Europeans and North American nations would concentrate their efforts and allocate their financial resources to provide peace in their own regions, this would allow the United Nations to use the peacekeeping budget to deploy missions elsewhere (especially in Africa, Asia, and the Middle East). These nations do not have the resources to help finance a Trust Fund. In 2007, the U.N. Secretary General established a Trust Fund to back diplomatic efforts to end the conflict in Darfur.[26] Among its other donations to help Darfur, Japan, for instance, provided the United Nations with amounts totaling $0.78 million between January 2005 and July 2007 for a Trust Fund for assistance in anti-mine action.[27] In this regard, the U.N. Secretary General recently suggested exploring the implementation of a possible common start-up fund to finance peacekeeping operations.[28]

Regional coalitions are also a possible solution for producing peace, getting around free-riding behavior. A study by Brauer and Roux shows that an alliance can be based on free-riding and yet work.[29] In the Southern African Development Community (SADC), South Africa is the most powerful member because of its significant economic size within the region. There is no doubt that South Africa's economic gains are higher than its contribution to the group. Without South Africa's membership, SADC would not have the resources to be successful in bringing peace to the region. Thus, the free-rider issue may not prevent the production of a public good if all members, including the one supporting the financial burden, benefit from their membership.

Conclusion

After six decades of peacekeeping, it is evident that it is difficult to equitably produce peacekeeping. None of the 192 U.N. member states can be forced to participate in the production of a peace mission. Using contributor-specific benefits, we must implement other proposals for producing peace, regardless of free-riding behavior. Among these proposals are ideas of marketable or tradable obligations, a U.N. Trust Fund for peacekeeping, regional coalitions, a start-up fund, and to a lesser extent, contracting a single nation to produce peacekeeping. Whichever system is used, it is unlikely to work without the full involvement of the United Nations. The United States is militarily powerful, indeed, but its success rate measured by its ability to produce lasting peace is lower than that of the United Nations.[30] Since Iraq, the United States understands that its efforts of nation-building are best achieved when they take place through a truly multilateral framework.[31] To effectively carry out peacebuilding activities, it is crucial that the United Nations work closely with local governments to establish the institutions that will be necessary to maintain peace. According to Dobbins, efficient peacekeeping today calls for a more professional approach to peacebuilding. Nation-building encompasses efforts of security, humanitarian relief, governance, economic stabilization, democratization, and development. Using this approach, countries like Canada, Germany, the United Kingdom, and the United States have set up offices to manage their countries' participation in postconflict stabilization and reconstruction.[32] A Peacebuilding Commission was implemented by the United Nations to coordinate the efforts of the various actors involved in peacebuilding efforts. The United Nations is a credible and experienced body, and the magnitude of nation-building activities that postconflict situations call for cannot be done without the United Nations.

Notes

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1. See GP [(n/d (b)]. Also see *SIPRI Yearbook 2008* for world military spending.

2. See, e.g., "The Canadian Contribution to United Nations Peacekeeping." United Nations Association in Canada. www.unac.org/peacekeeping/e/pdf/CdnUNPkpg Booklet_e.pdf; B.D. Shaeffer. 2007. "Time for a New United Nations Peacekeeping Organization." Background # 2006, The Heritage Foundation – Leadership for America, February 13, 2007: www.heritage.org/Research/InterntionalOrganizations/ bg2006.cfm.

3. See Shimizu (2005).

4. IDCM (2007); NYT (2008).

5. Johnstone and Corbin (2008).

6. See R2P (n/d).

7. See UN (2008a).

8. UN (2007a).

9. UN (2007a).

10. UN (2008c).

11. Perito (2008).

12. Seiglie (2005); also see Yakovlev (this issue).

13. Solomon (1999).

14. Solomon (2007).

15. Ledgerwood (1994).

16. Haïti: (Holt, 1996); Cambodia: Ledgerwood (1994).

17. Debiel (2000); Fleitz (2002).

18. For instance, David (1998), and Pugh and Cooper (2004).

19. Tardy (2000).

20. Johnstone and Corbin (2008).

21. Seiglie (2005).

22. Bah and Aning (2008).

23. Solomon (1998, 1999).

24. Johnstone and Corbin (2008).

25. Fetterly (2006).

26. UN (2007b).

27. EJS (2008).

28. UN (2008c).

29. Brauer and Roux (2000).

30. Dobbins (2008).

31. Johnstone and Corbin (2008).

32. Dobbins (2008).

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