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BILLIONS OF DOLLARS LOST ALONG THE CHECKPOINTS?

AN ECONOMETRIC ANALYSIS OF LABOR MOBILITY, ECONOMIC DEVELOPMENT, AND VIOLENCE IN THE ISRAELI-PALESTINIAN CONFLICT

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A THESIS APPROVED FOR THE
COLLEGE OF INTERNATIONAL STUDIES

BY

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This thesis is dedicated to my family and the village that helped raise me, most of all my grandparents Jimmie and Nevada Moses and my great-grandmother Alyce Brewer. I don’t have the words to adequately express my respect, gratitude, and admiration for you.

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Abstract

The Israeli-Palestinian conflict has now persisted for nearly 70 years with little progress towards a solution, and the conflict continues to exact high costs on both societies year after year. Unfortunately, the failure of the Middle East peace process—in particular the Oslo Peace Process—has left little hope for a peaceful resolution to the conflict and has resulted in capricious violence within Israel and the Palestinian Territories since the 1990s. This study argues that economic development can reduce the magnitude of violence in the short term, but politically motivated violence will persist in the absence of a resolution. A historical analysis of Israeli-Palestinian economic dynamics reveals that Israel's stringent control of the Palestinian Territories has exacted high costs on the Israeli economy since the 1967 Six-Day War. This leads to the conclusion that increasing the number of West Bank Palestinians working in Israel is the best path towards peace given the current state of affairs in the conflict. However, increasing the number of Palestinians working in Israel might result in an increase in the rate of violence. Using an agent-based dynamic equilibrium model and the best available research on the relationship between economic development, politics, and violence, this study finds that Israel should not impose border closures on Palestinians with work permits unless the rate of violence reaches 4.2 fatalities per day over a given period of time. Israeli economic production will not be reduced by violence even if Israel doubles the number of West Bank Palestinians working in Israel to more than 200,000 people.

Introduction

It may seem strange to invoke a work of fiction from Ryunosuke Akutagawa to explain the Israeli-Palestinian conflict, but his fictional tale "Rashomon" is surprisingly relevant. Akutagawa was a Japanese writer whose works enjoyed limited popularity in the early 20th century. His fictional tale "Rashomon" showed that the same story could be reinterpreted and recreated from different angles according to who is identified as the protagonist, which thereby produces different parcels of an evasive truth.[1] This phenomenon has come to be known as the Rashomon effect. You need not look any further than the opinion pieces written on the Israeli-Palestinian conflict to see the multiplicity and divergence of interpretations at play in this context. The Rashomon effect has played a very important role in shaping the conflict, from its genesis roughly one hundred years ago until now.[2] Israelis and Palestinians have reflected and deflected a sort of mirror image upon each other as individual actors interpret the trauma and obfuscation of violent, tragic events that have periodically punctuated this protracted conflict.[3]

The feelings of confusion and alienation that are produced by tragic events have led to logical fallacies and a lack of empathy on both sides, which has kept peace at an impasse as self-fulfilling prophecies of ill-will perpetuate violence of varying magnitudes.[4] Writing towards the beginning of the Second Intifada (a period of intense violence in the early 2000's), Robert Malley argued pointedly that "the way the two

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[1] Steve Odin, "Derrida And The Decentered Universe Of Chan/Zen Buddhism," *Journal Of Chinese Philosophy*, Vol.17, (1990): 61-86.
[2] Arie Kacowicz, "Rashomon In The Middle East: Clashing Narratives Of The Israeli-Palestinian Conflict," *Cooperation And Conflict*, Vol. 40, No.3, (2005): 343-360.
[3] Ibid.
[4] Ibid, 346

sides choose to view yesterday largely will determine how they behave tomorrow," and, if unchallenged, "their respective interpretations will gradually harden into divergent realities" that make peace seem impossible.[5] Indeed, fifteen years later many experts have pointed out that a two-state solution to the conflict now seems more delusional than pragmatic, while also pointing out that a one-state solution threatens to undermine the democratic nature of Israel.[6] Meanwhile, the Obama administration and Israeli Prime Minister Benjamin Netanyahu have—at least in public statements—expressed commitment to a two-state solution despite the repeated failures of the Middle East peace process thus far.[7]

While it is natural to view this conflict through Realist lenses, Israelis and Palestinians tend to forget or ignore their mutual interactions and interdependence as they interpret the world through the lens of their social reconstructions of reality. This has built figurative— and literal—barriers to peace that have made it seem as if the Israeli-Palestinian conflict is bound to continue indefinitely, but strategies that focus on economic development may offer a more hopeful alternative in a region that has rarely had hopeful outcomes. Economic development policies will not lead to a political solution on their own, but they will help to reduce the amount of political violence that arises from poor economic conditions in the Palestinian Territories. While this study makes no definite predictions about the timeline or nature of a final solution to the conflict—or the lack thereof— it does contribute to the literature on the economic

[5] Robert Malley, "Fictions About The Failure At Camp David," *The New York Times*, 8 Jul 2001, Web, Retrieved 4 Feb 2016, Http://Www.Nytimes.Com/2001/07/08/Opinion/Fictions-About-The-Failure-At-Camp-David.Html.
[6] Padraig O'malley, *The Two-State Delusion: Israel And Palestine- A Tale Of Two Narratives*, Penguin Group, New York, NY, (2015).
[7] See: Jeffrey Heller And Matt Spetalnick, "Obama, Netanyahu At White House Seek To Mend U.S.-Israel Ties," *Reuters*, 9 Nov 2015, Web, Retrieved 4 Feb 2016, Http://Www.Reuters.Com/Article/Us-Israel-Usa-Meeting-Iduskcn0sy1wj20151110.

relationship between Israel and the Palestinian Territories, which began in earnest after Israel took control of the West Bank and the Gaza Strip during the 1967 Six Day War. The analysis found in this study focuses on the nexus between economics, politics, and violence that has developed post-1967. Economic development has been seen as a vehicle towards pacification throughout the Israeli-Palestinian conflict, but thus far has not proven successful. The assumption underlying this study is that the status quo is not likely to change in the near future due to the current political climate, but the status quo is not indefinitely sustainable. Current Israeli President Reuven Rivlin summarized this fundamental dilemma, saying, "we will not forever live by the sword, but we will forever have to live with the sword, and we must be ready and willing to protect the Zionist enterprise and the land of Israel," despite the hostile attacks carried out by Palestinians in recent months.[8] The core argument of this work—that integrating more West Bank Palestinians into the Israeli labor force will promote economic development and reduce the magnitude of violence—relates to capitalist peace theory.

Both Israeli and Palestinian politicians have committed to capitalist peace policies over the past decade, though the goals of the economic development programs implemented by both sides have been quite different.[9] Israeli governments have pursued strategies to develop the West Bank economically since the aftermath of the 1967 Six-Day War when Moshe Dayan advocated for Israeli-Palestinian economic integration. Prime Minister Netanyahu renewed focus on Palestinian economic development after the 2009 election when he "created an administrative body whose mandate is to endorse

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[8] "Rivlin: Peace With Palestinians Seems Impossible Right Now," *The Times Of Israel*, 8 Feb 2016, Web, Retrieved 8 Feb 2016, Http://Www.Timesofisrael.Com/Rivlin-Peace-With-Palestinians-Seems-Impossible-Right-Now/?Utm_Source=Dlvr.It&Utm_Medium=Twitter.

[9] Alaa Tartier "Securitized Development And Palestinian Authoritarianism Under Fayyadism," *Conflict, Security, And Development*, Vol.15, No.5, (2015): 479-502.

economic peace in the West Bank through advancing around 25 economic initiatives" in coordination with the PA.[10] This directly followed the creation of economic development initiatives by the Palestinian Authority (PA). In 2007 then-PA Prime Minister Salam Fayyad implemented various neo-liberal approaches to economic development and state building.[11] The stated goal of Fayyad's economic development policies were "self-reliance and self-empowerment," which were to be achieved by focusing on providing "good governance, economic opportunity, and the rule of law."[12] These goals were meant, "to build strong state institutions capable of providing for the needs of [the Palestinians]" while under and/or despite Israeli authority.[13] The unstated goal of PA economic development programs might be to strengthen Palestinian initiatives at the UN, which has become an avenue through which Palestinians have sought to bypass the traditional peace process.[14] Both Israelis and Palestinians have prioritized economic development, but Israel has championed economic development as a method of containing violence in the absence of a political solution to the conflict, while the PA has championed economic development as a path towards increased autonomy in the hopes that this will increase Palestinian legitimacy in their bids to the UN.[15]

Despite the differences in the goals of Israeli and Palestinian economic development initiatives, the commitment to economic development in general makes integrating more West Bank Palestinians into the Israeli labor force politically

[10] Tariq Dana, "The Symbiosis Between Palestinian 'Fayyadism' And Israeli 'Economic Peace': The Political Economy Of Capitalist Peace In The Context Of Colonisation," *Conflict, Security & Development*, Vol.15, No.5, (2015): 455-477.
[11] Ibid, 466.
[12] Tartier, "Securitized Development," 480
[13] Ibid.
[14] Ibid.
[15] Ibid.

pragmatic. In January 2016, the Israeli security cabinet approved the military's request that 30,000 more Palestinians be allowed to work in Israel.[16] The logic behind this move is simple: a partial reduction of the closure regime in the West Bank should improve economic standards of living, and economic growth should "weaken the tendency towards violence and ensure Palestinian acceptance of the political status quo."[17] In this way Netanyahu's economic peace initiatives diverge from traditional capitalist peace perspectives: economic development is not perceived as a path to a peaceful political solution but is rather seen as "a convenient substitute for the political process."[18] The cyclical violence that has emerged in the twenty years after the Oslo Accords suggests that the influence of Palestinian political ideologies and Palestinian nationalistic aspirations are too strong to be subdued by economic development alone. Keeping this in mind, this work diverges from traditional capitalist peace perspectives; economic development is not considered a replacement for a political process as Netanyahu might hope, but economic development is seen as a way to reduce the level of violence in the conflict in the short term in the hopes that a more trusting political climate for negotiations may be formed when and if negotiations renew.

This work is organized topically rather than chronologically, but efforts are made to execute analysis as chronologically as possible. Following this introduction is a general literature review that focuses on the various studies that have analyzed the Israeli-Palestinian conflict with particular emphasis on the Middle East Peace Process

[16] Amos Harel, "Military Wants 30,000 More Palestinians Working In Israel," *Haaretz*, 8 Feb 2016, Web, Retrieved 8 Feb 2016, Http://Www.Haaretz.Com/Israel-News/.Premium-1.702003
[17] Dana, "The Symbiosis," 466
[18] Ibid.

and Capitalist Peace theory. At various points throughout the study more literature is examined when particular subjects need clarification.

Chapter 1 is a historical analysis of the political and ideological influences that shaped Israeli-Palestinian economics. Analysis begins after the 1967 Six-Day War, where the question of a one-state or two-state solution became prominent and the Middle East Peace Process truly took shape. The focus of this section will be the economic relationship between Israel and the Palestinian territories, specifically the movement of goods and people. This section should make it clear that Israeli economic policies have contributed to stagnant economic growth in the Palestinian Territories post-1967 and have thereby contributed to the precipitation of Palestinian political violence. The following section will focus on Israel's unique security challenges, which have necessitated high Israeli defense spending and have contributed to creating a number of unique socio-economic challenges.

Chapter 2 argues that peace is an undeniably preferential outcome for Israelis and Palestinians, but the failure of the Oslo Accords and the erratic labor flows that followed has contributed to Palestinian violence. This chapter explains how the economic relationship between Israel and the Palestinian Territories changed as a result of the Oslo peace process. The enforcement of a strict Israeli permit system for Palestinian workers and the imposition of border closures during times of violence are the defining features that have contributed to erratic Palestinian labor flows since 1993. The end of this chapter examines the impact of border closures on Palestinian violence and serves as a transition into the econometric analysis found in Chapter 3.

Chapter 3 features an agent-based dynamic equilibrium model that evaluates the impacts of integrating more West Bank Palestinians into the Israeli economy. This chapter argues that allowing more West Bank Palestinians to work in Israel would benefit both Israelis and Palestinians in the short term by bolstering Palestinian economic development, thereby reducing the short-term likelihood of widespread political violence. This argument— and the counterargument that allowing more Palestinians to work in Israel would result in more violence— is tested using an agent-based economic model. Such a policy would not constitute a sizable shift from current practices, but would in fact better embody the official approaches adopted by the Israeli government and the Palestinian Authority. The model shows that Israel should not impose border closures on Palestinians with work permits unless the rate of violence reaches 4.2 fatalities per day over a given period of time, and Israeli economic production will not be reduced by violence even if Israel doubles the number of West Bank Palestinians working in Israel to above 200,000.

Chapter 1: Establishing a Cycle of Violence: Israel's Economic and Political Relations with the Palestinian Territories (1967-1993)

1.1 Literature Review

The approach utilized to study international issues is often deeply reflective of the elements present in that particular issue, so it should come as no surprise that most studies on the Middle East Peace Process fit within the Realist school of international relations (IR) theory. Realism was developed primarily during the Cold War period and consequently reflects the fundamental set of assumptions that characterized foreign policy during that conflictual time: states operating in an environment of anarchy must proliferate security capabilities in order to minimize the security dilemma facing their country.[19] The perpetual implementation of various modes of warfare in this conflict lends credence to a Realist interpretation, but this approach is incomplete. To echo IR scholar Robert Keohane, Realist explanations are "better at telling us why we are in such trouble than how to get out of it," or in this context, Realist explanations help to establish why Israelis and Palestinians have continued to fight but do little in terms of offering potential solutions.[20]

Many scholars who seek potential solutions choose to focus on the actual negotiations that have occurred in this conflict, but these studies fail to create complete understandings of the impediments to peace. Studies that explain the intricacies of the negotiation processes in this conflict are part of a subset of Realist IR scholarship that

[19] Kenneth Waltz, *Theory Of International Politics*, Mcgraw Hill, New York, NY, (1979). Michael, Barnett And Raymond Duvall, "Power In International Politics," *International Organization*, Vol.59, No.1, (2005): 39-75. Stephen M. Walt, "Alliance Formation And The Balance Of World Power," *International Security*, Vol.9, No.4, (1985): 3-43. Robert Gilpin, *War And Change In International Politics*, Cambridge University Press, New York, (1981).
[20] Robert O. Keohane, Ed., *Neorealism And Its Critics*, Columbia University Press, New York, NY, (1988): 198.

tends to focus on game theory and other types of bargaining rationale.[21] These studies tend to rely on Realist assumptions, which are useful because it allows observers of the Israeli-Palestinian conflict to interpret particular events according to established frameworks. While this can be useful, this approach does not focus exclusively on the unique set of factors that have characterized this particular conflict and therefore creates generalized analysis that lacks contextual nuance. In an attempt to create more nuanced and more focused studies of Israeli-Palestinian peace negotiations, many scholars have chosen to evaluate the influence that particular agents have had on the Peace Process.[22] These studies usually include evaluations of the Israeli and Palestinian leaders engaged in negotiation, though some focus more on the efficacy of the United States (and U.S. leaders) as a mediator.[23] These evaluations do not sufficiently explain why particular issues are so contentious, but they do offer a clear look at the intricacies of the bargaining process.

All of the previously mentioned studies add to the understanding of the Arab-Israeli conflict, but they do not aptly evaluate the nexus between politics, economics, and violence and therefore offer little in terms of potential solutions. This has prompted some scholars to focus on Capitalist Peace theories, which is a subset of Liberal IR

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[21] Fred C. Ikle, *How Nations Negotiate*, Harper And Row, New York, NY, (1964). Harold Muller, "Arguing, Bargaining, And All That: Communicative Action, Rationalist Theory, And The Logic Of Appropriateness In International Relations," *European Journal Of International Relations*, Vol.10, No.3, (2004): 395-435. Dan Reiter, "Exploring The Bargaining Model Of War," *Perspectives On Politics*, Vol.1, No.1, (2003): 27-43. James Morrow, "Capabilities, Uncertainty, And Resolve: A Limited Information Model Of Crisis Bargaining," *American Journal Of Political Science*, Vol.33, No.4, (1989): 931-972. Roger Fisher And William Ury, "Getting To Yes", In David P. Barash, Ed., *Approaches To Peace*, Oxford University Press, New York, NY, (2000): 70-76.

[22] Kenneth W. Stein And Samuel W. Lewis, *Making Peace Among Arabs And Israelis: Lessons From Fifty Years Of Negotiating Experience*, USIP, Washington, DC, (1991). William Zartman, "Negotiations As A Mechanism For Resolution In The Arab-Israeli Conflict," *Davis Occasional Papers*, No.72, August (1999).

[23] Saadia Touval, "Mediation In The Arab-Israeli Conflict During And After The Cold War," *Davis Occasional Papers*, No.74, October (1999). Daniel C. Kurtzer And Scott B. Lasensky, *Negotiating Arab-Israeli Peace: American Leadership In The Middle East*, USIP, Washington, Dc, (2008).

scholarship that is closely related to Democratic Peace theories. Early theorists like Montesquieu, Bastiat, and Mill propounded ideas similar to the Capitalist Peace theory, but these ideas lost traction in the wake of two World Wars and throughout the Realist-dominated Cold War era.[24] Capitalist Peace remained alive through U.S. foreign policy strategies such as foreign aid and trade liberalization, but Capitalist Peace theories were not popularized until the post-Cold War era through the work of Erik Gartzke and others.[25] This study features a more simplistic conception of the Capitalist Peace theory, namely the assumption that economic development reduces the likelihood of violent conflict, but the Realist tendencies of this conflict are too pervasive to hope that economic development is enough to bring about peace independently. This prompts a closer look at the economic relationship between Israel and the Palestinian Territories, which reveals that labor economics among West Bank Palestinians is the most relevant for an evaluation influenced by Capitalist Peace theories. The politics and economics of the West Bank and the Gaza Strip are distinctly separate; the West Bank is much more integrated with Israel and is generally perceived as less radical politically, so West Bank Palestinians are the only laborers relevant to the analysis found in Chapter 3.

Studies on the Israeli and Palestinian economies relate to a larger field of work that evaluates the economic costs of political conflict, which has been a subject of interest to economists for quite some time. Scholars have established that conflict negatively impacts economic development,[26] but the strand of literature concerning the

[24] Erik Gartzke, "The Capitalist Peace," *American Journal Of Political Science,* Vol.51, No.1, (January 2007):166-191. Erik Gartzke and Alex Weisiger, "Under Construction: Development, Democracy, And Difference As Determinants Of Systemic Liberal Peace," *International Studies Quarterly,* Vol.58, Iss.1, (March 2014): 130-145.
[25] Gartzke And Weisiger, "Under Construction"
[26] Alberto Abadie, And Javier Gardeazabal, "The Economic Costs Of Conflict," *American Economic Review,* Vol.93, No.1, (2003): 113–132.

relationship between economic conditions and violence has not been as conclusive. These studies hypothesize that poor economic conditions lower the opportunity cost of involvement in political violence, which thereby makes it easier to motivate participation in political violence among frustrated citizens who see no alternative path towards change.[27] Empirical studies have found that better economic conditions are associated with less violence,[28] the same level of violence,[29] and even more violence[30] than is observed in poorly developed areas. As a result, many scholars still debate whether violence is the creator or product of political ineptitude and economic stagnation. This debate has not been settled and for good reason: conflict is perpetuated by the nexus between violence, political ineptitude, and economic stagnation, with each part exerting different degrees of influence in different contexts. In the Palestinian context, economic development exacerbates violence by agitating hostile political attitudes.

Studies have shown that violence in the Palestinian context is epiphenomenal, which has important implications for peaceful conflict resolution. Several previous studies have linked poor economic conditions in the Palestinian territories to increased

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[27] For an example of a study that starts with this assumption, see: Andreas Freytag, Jens J. Kruger, Daniel Meierrieks, And Friedrich Schneider, "The Origins Of Terrorism: Cross-Country Estimates Of Socio-Economic Determinants Of Terrorism," *European Journal Of Political Economy*, Vol. 27, Sec.5–16, (2011).

[28] S. Brock Blomberg, Gregory D. Hess, And Akila Weerapana, "Economic Conditions And Terrorism," *European Journal Of Political Economy*, Vol. 20, No. 2, (2004): 463-478. Jose Tavares, "The Open Society Assesses Its Enemies: Shocks, Disasters And Terrorist Attacks," *Journal Of Monetary Economics* Vol.51, No.5, (2004): 1039–1070.

[29] Alberto Abadie, "Poverty, Political Freedom, And The Roots Of Terrorism. *American Economic Review* Vol.96, No.2, (2006): 50–56. Alan Krueger And David Laitin, "Kto Kogo? A Cross-Country Study Of The Origins And Targets Of Terrorism," In: Philip Keefer And Norman Loayza (Eds.), *Terrorism, Economic Development, And Political Openness*, Cambridge University Press, New York, (2008), 148–173.

[30] "Aid Under Fire: Development Projects And Civil Conflict," *Belfer Center Discussion Paper*, No. 2010-18, Harvard Kennedy School, (November 2010). Eli Berman, Michael Callen, Joseph H. Felter And Jacob N. Shapiro, "Do Working Men Rebel? Insurgency and Unemployment In Afghanistan, Iraq, And The Philippines," *Journal Of Conflict Resolution,* Vol.55, No.4, (2011): 496–528.

Palestinian involvement in the conflict with Israel.[31] It has been clearly established that Israel's labor restrictive policies harm economic conditions in the Palestinian territories, but the narrow focus that is required to convincingly prove that these policies have a causal effect has resulted in scholars neglecting the implications this has for the conflict more broadly. This study will be unique in the way that it relates the observed effects of Israel's labor restrictive policies to the prospects for peaceful conflict resolution moving forward. This is particularly important given the prevalence of policies that focus on Palestinian economic development in recent years. The beginning point for this analysis is the 1967 Six-Day War and the economic policies that followed Israeli control of the West Bank and the Gaza Strip.

[31] Edward Sayre, "Labor Market Conditions, Political Events, And Palestinian Suicide Bombings," *Peace Economics, Peace Science And Public Policy*, Vol. 15, No. 1, (2009): 1–26. Basel A. Saleh, "An Econometric Analysis Of Palestinian Attacks: An Examination Of Deprivation Theory And Choice Of Attacks," *European Journal Of Social Sciences*, Vol.7, No.4, (2009): 17–29. Basel A. Saleh, "Economic Conditions And Resistance To Occupation In The West Bank And Gaza Strip: There Is A Causal Connection." *Topics In Middle Eastern And North African Economies*, Vol.6, (2004).

1.2 Israel's Economic Management of the Palestinian Territories: 1967-1993

The economic dynamics between Israel and the Palestinian Territories were established by the same event that complicated the pre-existing one-state versus two-state dilemma: the 1967 Six-Day War. While there were doubts about Israel's ability to maintain control of the Palestinian territories, Israeli policymakers were more concerned with the implications of doing so.[32] Fully erasing the pre-1967 borders meant forming one geopolitical unit, thereby creating a new reality in which Palestinians were firmly within Israel's political and economic sphere of responsibility. Conversely, allowing the pre-1967 borders to persist may have led to the establishment of two distinctly separate economic and political units within the narrow strip of land between the Jordan River and the Mediterranean Coast.[33] Both integration and separation threatened to undermine the strategic interests of Israel. This dilemma exposed the fundamental tensions between Israel's Jewish religious influences and its democratic governance model.[34] The unusual economic relationship that emerged between Israel and the Palestinian Territories post-1967 has reflected the one-state or two-state dilemma that has persisted henceforth, and the economic policies that were implemented in the Palestinian Territories after 1967 were designed to serve Israeli political, military, and economic interests.[35] Unfortunately, Israel's economic policies towards the Palestinians have more or less determined economic development within the West Bank and Gaza, and consequentially, the lack of economic development in the

[32] Arie Arnon, "Israeli Policy Towards The Occupied Palestinian Territories: The Economic Dimension 1967-2007," *The Middle East Journal*, Vol. 67, (2007): 573-595, 573.
[33] Ibid, 574
[34] Michael Langer, "Democracy, Religion, And The Zionist Future Of Israel," *Judaism: A Quarterly Journal Of Jewish Life And Thought*, Vol. 36, No. 4, (1987): 400-415.
[35] Arie Arnon, Israel Luski, Avia Spivak, And Jimmy Weinblatt, *The Palestinian Economy: Between Imposed Integration And Voluntary Separation*, Brill, Leiden, The Netherlands, (1997). *Developing The Occupied Territories: An Investment In Peace*, The World Bank Group, Washington D.C. (1993).

Territories has exacerbated political violence by compounding the feelings of relative deprivation that stoke the flames of sociopolitical unrest.

Even though the literature concerning the relationship between economics and violence is not conclusive, economists have consistently linked economic conditions to political violence in empirical studies. As far back as 1973, Manoucher Parvin noted the importance of economic factors as the "main explanatory variable of political violence."[36] The results of his study indicated that income inequality, gross national product, and the growth rate of the economy could explain a significant percentage of variations in the level of political unrest in the 26 countries he analyzed. Other cross-country studies have found similar evidence. Nafziger and Auvinen found that their measures of conflict were inversely related to real GDP growth, GNP per capita, food output growth, and IMF funding.[37] In 2001, Fearon and Laitin sought to include the influences of ethnic nationalism in their analysis of the determinants of civil wars. They found that the factors that explain which countries have been prone to experience civil war "were not their ethnic or religious characteristics" but rather "the conditions that favor insurgency." The conditions they identified as favoring insurgency included "poverty and slow growth," which in their findings "favor rebel recruitment and mark financially and bureaucratically weak states."[38] These conditions have certainly characterized the Palestinian economies, which lend credence to the assertion that poor economic conditions can exacerbate political violence in some instances. The

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[36] Manoucher Parvin, "Economic Determinants Of Political Unrest: An Econometric Approach," *Journal Of Conflict Resolution*, Vol.17, No. 2, (1973): 271-296

[37] E.Wayne Nafziger And Juha Auvinen, "The Economic Causes Of Humanitarian Emergencies," In E. Wayne Nafziger , Frances Stewart, Raimo Väyrynen, Eds., *War, Hunger, And Displacement: The Origins Of Humanitarian Emergencies,* Vol.1, (2001): 91-146.

[38] James D. Fearon And David D. Laitin, "Ethnicity, Insurgency, And Civil War," *American Political Science Review,* Vol.97, No.1, (2003): 75-90.

connection between violence and poor economic conditions is robust across a number of different empirical methods of analysis, but economics should not be seen as the only explanatory factor contributing to violent conflict. There are certainly countries that exhibit "the conditions that favor insurgency" but experience less violence than would be expected.[39] However important economic determinants may be, both political and economic factors must be included in any analysis of the determinants of violence lest exceptions or extraordinary adherents to the rule become inexplicable.

Poor economic conditions have contributed to violence by exacerbating political tensions between Palestinians and between Palestinians and Israelis. In the period following the First and Second Intifada numerous studies have found that poor economic conditions explain periods of intense violence with a high degree of statistical significance, but these studies also note that economic conditions are not the sole determinants of political violence in the West Bank and the Gaza Strip.[40] Some of these studies note that perpetrators of violence do not always have poor backgrounds, and in some cases, relatively wealthy individuals have engaged in violent activities. These cases can be explained by political factors, such as the influence of Palestinian nationalism. The 1967 Six-Day War dealt a blow to the support for secular nationalist and Arab socialist regimes throughout the Middle East, and as a result, the influence of Islamist ideology transformed the Palestinian political landscape by wedding

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[39] Ibid.

[40] Hani Mansour, "The Effects Of Labor Supply Shocks On Labor Market Outcomes: Evidence From The Israeli-Palestinian Conflict," *Labour Economics*, Vol.17, (2010): 930-939. Sami H. Miaari And Robert Sauer, "The Labor Market Costs Of Conflict: Closures, Foreign Workers, and Palestinian Employment And Earnings," *IZA Discussion Paper No. 2282.* Basel A. Saleh, "Economic Conditions And Resistance." Basel A. Saleh, "An Econometric Analysis Of Palestinian Attacks." Sami H. Miaari, Asaf Zussman, And Noam Zussman, "Employment Restrictions And Political Conflict In The Israeli-Palestinian Conflict," *Journal Of Economic Behavior And Organization*, Vol. 101, (2014): 24-44, Edward A. Sayre, "Labor Market Conditions, Political Events."

Palestinian patriotism and Islamic revolutionary ideology.[41] This process resulted in the strengthening of support for the PLO, Islamic Jihad, and eventually the foundation of Hamas. These Islamist nationalist movements have attracted varying degrees of support from a wide range of economic backgrounds, but this does not undermine the connection between economics and violence.

In his 1990 study that compared the First Intifada with the Arab Revolt of 1936, Stein found that there was growing political frustration among Palestinian citizens in the period prior to both of these violent revolts. Crucially, Stein noted that in both cases this political frustration was fueled by "economic hardship" that was "borne of unemployment and underemployment, the drying up of traditional sources of capital import, and dramatic price drops, particularly in agriculture."[42] Stein notes that the poor economic conditions in both of these periods exposed intra-Palestinian disputes over the best path towards sovereignty and prevented the widespread coordination that may have made non-violent or violent revolt more effective in achieving their purposes. His comparison shows that Palestinian revolt has been cyclical and has always been influenced by economic factors to some extent. Stein's analysis also shows that economic determinants are important, but the connection between economics and violence should not be interpreted erroneously. Improving economic conditions will not eliminate violence in the Israeli-Palestinian conflict altogether, but it will reduce it.[43] In order to understand how economic development may quell political violence, it is important to understand how the economic relationship between Israel and the

[41] Roxanne L. Euben And Muhammad Qasim Zaman, Eds. *Princeton Readings In Islamist Thought: Texts And Contexts From Al-Banna To Bin Laden,* Princeton University Press, (2009): 357
[42] Kenneth Stein, "The Intifada And The 1936-39 Uprising: A Comparison," *Journal Of Palestine Studies*, Vol.19, No.4, (1990): 64-85.
[43] Saleh, "An Econometric Analysis Of Palestinian Attacks"

Palestinian Territories developed after the 1967 Six-Day War.

Labor flows and bilateral trade were at the core of Israeli economic decision-making directly following the Six-Day War, primarily because Israeli leaders recognized that these two elements would determine the welfare of the Palestinian people.[44] Prior to 1967, Egypt and Jordan administrated Gaza and the West Bank; Israeli leaders recognized that separating the Palestinian Territories from Egypt, Jordan, and Israel after 1967 would have led to a rapid deterioration of living standards, which was unacceptable to both the Israeli government and military.[45] This understanding—that movement of either labor or goods had to be allowed between Israel and the Palestinian Territories —formed the foundations for the economic structure that emerged from Israeli debates following the Six-Day War.

Directly after the Six-Day War, disagreements over the ideal level of integration slowed the development of a stable economic relationship between Israel and the Palestinian Territories. The unofficial leader of the integration camp was Israeli Defense Minister Moshe Dayan. Dayan's policy was "to award the Palestinians individual subsistence without national dignity," according to a former colleague.[46] Dayan argued that integrating Israel and the Palestinian Territories would produce a higher standard of living for Palestinians, which would bolster Israel's security as economic development stymied Palestinian discontent and political aspirations.[47] Dayan's view-that economic development will stem discontent-has been the dominant view by Israeli policymakers

[44] Arie Arnon And Jimmy Weinblatt, "Sovereignty And Economic Development: The Case Of Israel and Palestine," *The Economic Journal,* Vol.111, Iss.472, (June 2001): 291-308, 292.
[45] Ibid, 292.
[46] As'ad Abu Khalil, "Book Review: The Carrot And The Stick: Israel's Policy In Judea And Samaria 1967-1968," *The Middle East Journal,* (1996): 267-268.
[47] Arnon, "Israeli Policy Towards," 574.

ever since, but Israeli policy has failed to consider the complexity of Palestinian politics and has therefore wrongly assumed that development would quell nationalistic aspirations altogether. The level of integration that Dayan propagated never materialized due to the influences of the anti-integration camp. Opponents of integration had two primary concerns: first, they worried that competition from Palestinian industries might be a threat to the Israeli economy, and second, they worried that integration of Palestinian labor would result in Israelis losing jobs. However, these concerns stemmed from the condition of the Israeli economy directly preceding the 1967 war (during a sharp recession in 1966 Israeli unemployment reached a record-high 10%).[48] By 1969, Israeli economic conditions and the labor market were such that erasing labor borders was not met with much opposition from professional economists or government policy-makers.[49] The movement of goods, however, was not looked upon as favorably. After about 5 years a system developed in which labor flowed relatively freely between the Palestinian Territories and Israel, but the trade borders were delineated so that only a limited number of Palestinian goods could be sold in Israel with limitations designed to protect Israeli producers, especially in the agricultural sector.[50]

The trade regime that was established to manage both Israel and the Palestinian Territories was a quasi-customs union, but this customs union was a unilaterally shaped trade agreement in which Israel dictated terms according to Israeli needs.[51] Prior to

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[48] Ibid.
[49] Ibid, Meron Rapaport, "Was 1967 A Victory Too Far For Israel?" *Le Monde Diplomatique*, June 2007, Web, Retrieved 8 Dec 2015, Https://Mondediplo.Com/2007/06/11victory.
[50] Arnon, "Israeli Policy Towards," 579.
[51] Ibid, 575, "The Customs Union And Israel's No-State Solution," *The Jerusalem Fund*, 7 January 2015, Web, Retrieved 9 Dec 2015, Http://Www.Thejerusalemfund.Org/Ht/D/Contentdetails/I/50055.

1967, the West Bank supplied neighboring Arab markets with a limited number of commodities and manufactured goods, and the Gaza Strip's exports were well established in a number of European markets.[52] Unfortunately, existing institutions for external trade in the Palestinian Territories were slowly amended, replaced, or totally suspended between 1967 and 1989 in order to meet Israeli economic needs.[53] This resulted in a major trade deficit for the Palestinian Territories, as Israeli goods flowed into the Territories with no restrictions while Palestinian productive capacity and external trade relations stagnated.[54]

Israeli politics are to blame for the lack of development in the Palestinian manufacturing sector, which normally should have grown to meet the deficit in the balance of payments that was created by excessive Israeli imports.[55] The movement of both agricultural and manufactured goods between Israel and the Territories was controlled early on, but over time the Israeli government used other methods to protect Israeli producers. For example, Palestinian entrepreneurs had to apply for licenses from the Israeli authorities for many of the economic activities they sought to initiate, which slowed and sometimes limited productive capacity.[56] The desire to protect Israeli producers was so great that Israel actively "attempted to prevent the establishment or reactivation of Arab-owned factories if there was any danger that their products might compete with Israeli products."[57] Nevertheless, the lack of an industrial sector in the Palestinian Territories and the major trade deficit did not altogether prevent increases in

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[52] *Palestinian External Trade Under Israeli Occupation,* United Nations Conference On Trade and Development (UNCTAD), Geneva, Switzerland, (1989).
[53] Arnon And Weinblatt, "Sovereignty And Economic Development," 293, Ibid, Viii.
[54] *Palestinian External Trade,* UNCTAD, Viii.
[55] Arnon And Weinblatt, "Sovereignty And Economic Development," 293.
[56] Ibid.
[57] Shlomo Gazit: Israeli Major General, *The Carrot And The Stick: Israel's Policy In Judea And Samaria, 1967-1968,* B'nai B'rith Books, Washington, D.C., (1995): 220-221.

the standard of living for many Palestinians during this period. For example, the GDP of the West Bank grew from 459 million NIS in 1968 to 1,726 million NIS by 1987 (1986 prices).[58] The movement of Palestinian labor explains much of this growth.

This unique system of economic relations between Israel and the Territories persisted until the Oslo Accords: excessive imports flowing from Israel into the Palestinian Territories created a large deficit in the balance of payments, which was covered by the increase in Palestinian commuter/migrants working in Israel, unilateral transfers, and inflows of capital from abroad.[59] Income from Palestinian commuter/migrants working in Israel covered a large part of the deficit in the balance of payments and also contributed to a gradual growth in standards of living in both the West Bank and Gaza. As noted in Table 1, GNP growth per person in the West Bank averaged 4% annually from 1973 to 1979 and 6% in Gaza during the same time period. GNP growth per person averaged 2% annually for both Territories from 1980-1987.[60] Palestinians who worked in Israel earned wages much higher than Palestinians working in the Territories even though their pay was lower than that of Israelis.[61] In 1968 the ratio between Palestinian wages in the Israeli labor market and their "home" labor market was approximately 2:1. However, by 1972 this wage gap shrank considerably to 1.2:1 and it remained near to this level until the outbreak of the First Intifada in 1987.[62] Even though employment in Israel helped soften the blow of Israel's economic policies by establishing Palestinian labor as an export, this did not replace the creation of a

[58] Arie Arnon And David Gottlieb, "An Econometric Analysis Of The Palestinian Economy: The West Bank And Gaza, 1968-1991," *The Bank Of Israel: Discussion Paper 93.07,* (October 1993).
[59] Arnon, "Israeli Policy Towards," 581.
[60] Ibid, 576.
[61] Ibid.
[62] Arnon And Weinblatt, "Sovereignty And Economic Development," 293.

conventional economic system for the Palestinian territories.

Palestinian employment in Israel helped to develop the Israeli economy by providing a massive reservoir of cheap labor to produce value-added goods, but Israel— in addition to preventing the development of a Palestinian industrial sector— also neglected to develop the institutional capacity of the Palestinian economies. Israel never created a macroeconomic policy designed to serve the needs of the Palestinian economy, and a Palestinian currency was never created, so neither was any monetary policy for the Palestinians.[63] The Palestinian banking system, which was really Jordanian to begin with, was closed by military order after 1967 and did not reopen until the 1980's (and even then in a limited manner). Financial institutions barely existed and would have been altogether nonexistent if not for a network of moneychangers working with the Jordanian banking system that carried out minimal financial transactions.[64]

The Israeli economic policies implemented after 1967 resulted in a modern Palestinian economy that is industrially weak, underdeveloped, and heavily dependent on Israeli imports. Israeli economic policies towards the Territories, at least until the 1990s, were designed to slow down Palestinian economic development, and the result was the transformation of the Palestinian economy into a captive market for Israeli producers and a reservoir of cheap labor.[65] In the words of Israeli Major General Schlomo Gazit— the first Coordinator of Activities in the Territories under Moshe Dayan— "Israeli policies in the administered territories led to a strange combination of relative economic prosperity" that was achieved " by the simple expedient of importing

[63] Arnon, "Israeli Policy Towards," 576.
[64] Ibid.
[65] Arnon And Weinblatt, "Sovereignty And Economic Development," 293.

labor services from the territories into the Israeli economy." While this improved standards of living for many Palestinians, "the Israeli authorities and military government did little to develop the economic infrastructure" in the Palestinian Territories.[66] Israel's economic management of the Palestinian Territories has made work in Israel the most lucrative option for many Palestinians, which is a reflection of the limited self-determination that Palestinians have had under Israeli control, and the ongoing conflict has also damaged Israeli society by necessitating unusually high defense spending as threats have evolved from within the Palestinian Territories and abroad.

[66] Gazit, *The Carrot And The Stick*, 235.

Table 1: The Palestinian Economies After the 1967 Six-Day War and Before the Oslo Accords (Selected Characteristics)

	GDP (Annual average in 1994 prices-million $)		**GDP Growth Rate** (Average annual % change)		**GNP Per Capita Growth Rates** (Average annual % change)		**Employed in Israel** (% of total employment)		**Palestinian Income from Abroad** (% of GDP)		**Imports** (% of GDP)		**Exports** (% of GDP)		**GDP as % of Israel's GDP**	
Territory	WB	GS	WB	GS	WB	GS	WB	GS	WB	GS	WB	GS	WB	GS	WB	GS
1968-1972	522	199	15	11	20	18	21	17	20	9	67	64	22	21	2.6	1
1973-1979	904	306	6	7	4	6	30	37	32	28	73	109	25	36	3.1	1.1
1980-1987	1344	379	5	3	2	2	32	45	28	57	63	123	24	43	3.5	1
1989-1993	1951	574	8	7	5	5	31	34	30	46	-	79	-	14	2.9	1.1

Sources: *National Accounts Of Judea, Samaria And The Gaza Area 1968-1993,* Israel Central Bureau Of Statistics: Special Report #1012, Jerusalem, 1996, *Judea, Samaria, And Gaza Area Statistics*, Israel Central Bureau Of Statistics, Jerusalem, Various Years, *Statistical Abstract Of Israel*, Israel Central Bureau Of Statistics, Jerusalem, Various Years, Arnon, "Israeli Policy Towards," 577, Personal Calculations

Notes: WB =West Bank, GS= Gaza Strip

Table 2: Industrial Origin of Gross Domestic Product at Factor Cost: The West Bank and Gaza Strip 1968-1986 (Millions USD at 1989 Prices and Percentages of GDP)

	Agriculture		Industry		Construction		Public Service		Trade and Transport		GDP Total		GNP	GDP as % of GNP
	USD	%	USD	%	USD	%	USD	%	USD	%	USD	%	USD	
1968	46	34	9	7	3	1	26	19	48	36	131	100	134	98
1975	161	29	46	9	88	16	85	16	164	30	543	100	748	73
1980	346	33	80	7	166	16	135	13	323	31	1050	100	1,425	74
1981	279	30	69	7	172	18	153	16	275	29	948	100	1,361	70
1982	264	26	70	7	186	19	158	16	318	32	1,001	100	1,504	67
1983	249	24	81	8	189	18	183	17	345	33	1,047	100	1,596	66
1984	184	19	77	8	175	18	205	21	347	35	989	100	1,419	70
1985	188	20	76	8	161	17	165	17	356	38	945	100	1,307	72
1986	455	30	130	9	235	16	177	12	496	33	1,494	100	1,982	75

Source: *Palestinian External Trade Under Israeli Occupation*, United Nations Conference on Trade and Development (UNCTAD), Geneva, Switzerland, 1989

1.3 A Necessary Evil: The Determinants and Consequences of Extraordinary Defense Spending in Israel

Unfortunately, the vast majority of Israelis and Palestinians have only known what it is like to live in the midst of the conflict. As of December 2013, 95% of the population in the West Bank and the Gaza Strip, and around 90% of the population of Israel, were born after the establishment of the State of Israel in 1948. Roughly 85% of Palestinians, and 70% of Israelis, were born after Israel took control of the West Bank and the Gaza Strip in 1967.[67] Moreover, Israel has been forced to devote massive amounts of resources to defense over the years due to the evolving security threats that have emerged since 1967. In financial terms, hundreds of billions of dollars have been spent to support, oppose, or resolve the Israeli-Palestinian conflict in some way. However, even the cumulative sum of expenditures does not begin to capture either the opportunity costs of the conflict (alternative ways in which resources could have been used to enhance the lives of the regions residents), the emotional costs of the conflict, or the invaluable cost of human life.[68] Israel's extraordinary defense expenditures have been a necessary evil in a hostile region, but it is undeniable that high defense spending has weakened Israel's economy by diverting spending towards security rather than other national priorities, such as social welfare programs.

Israeli defense expenditures have been determined by a complex array of factors, but these factors can be condensed into three levels of analysis: the national, the regional, and the international.[69] At the national level, electoral cycles and political

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[67] C.R. Anthony et al., *The Costs Of The Israeli-Palestinian Conflict,* RAND Corporation, Santa Monica, CA, (2015).
[68] Ibid.
[69] Alex Mintz and Michael D. Ward, "The Evolution Of Israel's Security Expenditures: 1960-1983," *The Western Political Quarterly,* Vol.41, No.3, (1988) 489-507.

parties have shaped Israeli defense budgets to reflect political priorities (as might be expected during budget negotiations), but in Israel, the military establishment has also been able to exert influence on the size of the overall national budget. This "bottom up" influence from the military establishment distinguishes Israel from other countries in which defense expenditures are primarily determined from the "top-down" by politicians.[70] This may be due to the prominent role that the military plays in Israeli society, but it is at least partially due to the unique geopolitical challenges Israel faces. These geopolitical concerns have been influenced by the regional politics of the Middle East, particularly the Middle East arms race during the Cold War, the influences of non-state actors like Hizbullah and Islamist groups throughout the region, the threat of regional rivals like Iran, and the protracted conflict between Israelis and Palestinians. These regional concerns were also influenced by more broad international trends that affected Israel directly during the Cold War, such as the global rise of terrorism and the superpower politics that shaped worldwide defense spending in that era. All of these factors have combined to make Israeli security expenditures frequently larger than any other country in the world (per capita), including the United States.

Israeli militarization has been fueled in part by Israel's unique geopolitical security concerns, which have dictated national defense strategy. Preemption and prevention (of aggression against Israel) emerged as the central tenants of Israeli security discourse under the first Prime Minister: David Ben-Gurion.[71] This should not be surprising considering Israel's position as a small fledgling country that was surrounded by large Arab countries bent on putting an end to the Jewish state. Israel's

[70] Ibid, 491.
[71] Shlomo Brom, "Is The Begin Doctrine Still A Viable Option For Israel?"in *Getting Ready For A Nuclear Iran*, Sokolski And Clawson, eds., The Strategic Studies Institute, (2005).

resolve to prevent a major invasion/attack rendered preemption and prevention more or less the determining factors in Israeli military strategy in the 1956 Suez Canal Crisis, the 1967 Six-Day War, and the 1982 War in Lebanon. Israel's security dilemma has of course evolved over the years, but at its core, Israeli defense doctrine in the military establishment has centered on preempting and preventing aggression against Israel whether threats be certain or unlikely and whether the aggressor be an individual, a non-state guerrilla group, another state, or recently, the Iranian nuclear program.

1967 is a watershed year in the ideological history of the Middle East; Israel's victory in the Six-Day War put an end to popular support for Pan-Arab socialist movements and the ideals they embodied, which left an ideological void that was partially filled by the rise of Islamist ideologies throughout the Middle East region. Arab defeat in the Six-Day War prompted some Muslims to insist that such a crushing defeat mandated a return to Islam.[72] They argued that only the religious piety of Israel could explain Israeli victories against several large Arab nations. Claims such as these gained momentum in the wake of the 1979 Iranian Revolution, the assassination of Egyptian President Anwar al-Sadat by Islamists in 1981, and the emergence of Hizbullah as a major force in Lebanon- "all of which reflected and in turn accelerated the mobilization of Islam for political transformation."[73] The influence of Islamism didn't gain momentum in the Palestinian Territories for quite some time after the Six-Day War, in part because secular national liberation movements retained a particularly strong political appeal in the absence of a sovereign state.[74] Eventually Islamic Jihad, which was officially founded in 1980, emerged "to oppose the gradualism of the

[72] Euben and Zaman, eds., *Princeton Readings On Islamist Thought*, 357.
[73] Ibid.
[74] Ibid, 358.

Muslim Brotherhood and the PLO strategy of 'occupation management.'"[75] Islamic Jihad cut a clear path for Hamas by wedding Islamism and Palestinian nationalistic aspirations, "thereby lending a religious imprimatur to every anti-Israeli act, pacific and violent alike."[76]

The result of these ideological changes that occurred throughout the Middle East, when combined with other international trends during the Cold War, was a global redefinition of the security dilemma that took place throughout the 1970s and 1980s.[77] Following the Six-Day War, global terror attacks continued a pre-existing trend of increasing in frequency. Between 1976 and 1979 the frequency of global terrorist attacks almost tripled, and the rate of attacks continued to rise until the number of worldwide terrorist attacks reached their twentieth century zenith at more than 5,100 in 1992.[78] Revolutionary movements around the world contributed to this trend, including (but not limited to) Islamist militant groups based in the Middle East who were inspired by the revolutionary writings of Sayyid Qutb.[79] Islamist groups in the broader Middle East didn not contribute to attacks against Israel very often despite anti-Israeli rhetoric, but Israel came to rank among the top 20 countries most frequently targeted by terrorist attacks despite (and certainly contributing to) Israel's history of high defense spending. The vast majority of attacks came from Palestinian nationalist groups that were largely secular before the 1980s, especially the PLO. As the influences of Islamist ideologies grew and the broader Cold War arms race took shape, Israel was forced to focus on

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[75] Ibid.
[76] Ibid.
[77] Yvonne Haddad, "Islamists And The 'Problem Of Israel': The 1967 Awakening," *Middle East Journal,* Vol.46, No.2, (1992) 266-285. Julie Trottier, "A Wall, Water, and Power: The Israeli 'Separation Fence,'" *Review Of International Studies,* Vol.33, No.1, (January 2007): 105-127.
[78] Gary LaFree, "The Global Terrorism Database: Accomplishments And Challenges," *Perspectives On Terrorism,* Vol.4, No.1, (2010).
[79] John Calvert, *Sayyid Qutb And The Origins Of Radical Islam,* Columbia University Press, (2010).

ensuring the security of individual citizens—in addition to the preservation of borders—while facing growing threats from within Israeli-controlled lands and surrounding areas.

By challenging state-centered security paradigms, revolutionary movements forming in the Middle East and beyond fueled a Third World arms race financed largely by the U.S. and the Soviet Union.[80] To put this arms race in perspective, consider that defense expenditures in the Third World alone grew from $104 billion in 1972 to $182 billion in 1982.[81] Such a rapid growth was "clearly a by-product not only of security considerations but also of domestic politics and economic influences" that shaped the decisions of these countries.[82] During this era of growing terrorism and bloating military expenditures, threats against Israel became all-too-common in the apologetic statements and documents released by various revolutionary Islamist groups, including the PLO, Islamic Jihad, and eventually Hamas and Al-Qaeda.[83] Even though these threats were mostly empty, they represent the internationalization of the Israeli-Palestinian conflict and reflect the extent to which the conflict took on a particularly religious tone through the ideological transformations that followed the Six-Day War. Understanding these regional and international trends clarifies why Arab-Israeli peace became a major foreign policy goal for the U.S. throughout the Cold War era and clarifies why Israeli security spending was so high throughout this period.

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[80] Odd Arne Westad, *The Global Cold War: Third World Interventions And The Making Of Our Times*. Cambridge University Press, London, UK, (2005).
[81] *World Military Expenditures And Arms Transfers: 1972-1982*, U.S. Arms Control And Disarmament Agency, Washington, DC, (1984).
[82] Alex Mintz and Michael D. Ward, "The Political Economy Of Military Spending In Israel," *The American Political Science Review*, Vol.83, No.2, (1989): 521-533.
[83] Osama Bin Laden, "Declaration Of War Against The Americans Occupying The Land Of The Two Holy Places," In Roxanne Euben and Muhammad Qasim Zaman, Eds., *Princeton Readings On Islamist Thought: Texts and Contexts From Al-Banna To Bin Laden*, Princeton University Press, Princeton, NJ, (2009).

These evolving threats influenced the development of a special relationship between Israel and the U.S. during the Cold War, when Israel first acted as a strategic military proxy in the satellite politics of the two Cold War superpowers.[84] U.S. interests in the Middle East remain virtually the same today as they were during the Cold War, and these interests "can be summarized by access to oil, ability to deploy military forces in the region and denial of such capability to its rivals, and a commitment to Israel's security."[85] Indeed, during the Cold War Israel helped contain Soviet expansion in the region, and Israel even defeated Soviet client states in regional war (Egypt and Syria), which required Moscow to spend more on arms in the region.[86] However, furthering U.S. interests by supporting Israel has not been a cheap endeavor; Israel has received financial support from Washington that exceeds the amounts provided to any other state, and it is highly doubtful that Israel could have continued its high defense spending without economic collapse if it were not for U.S. financial support.

Israel has been the largest recipient of U.S. direct military and economic aid since 1976, and Israel has been the largest cumulative recipient since WWII.[87] As of June 2015, the U.S. had provided Israel with $124.3 billion in bilateral assistance, and nearly all aid to Israel has been military aid.[88] Israel has received about $3 billion in aid per year—roughly a fifth of the entire U.S. foreign aid budget in any given year— since the U.S. brokered peace between Israel and Egypt at Camp David.[89] This amount is

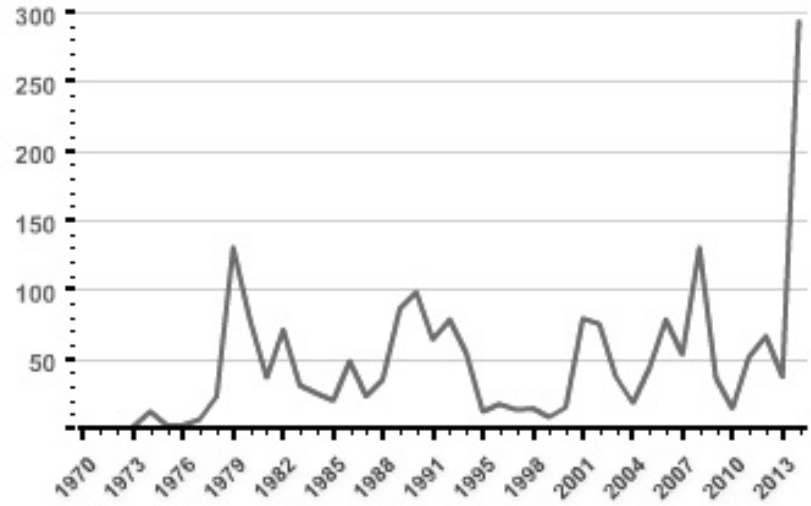
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[84] Touval, "Mediation In The Arab-Israeli Conflict."

[85] Ibid.
[86] John Mearsheimer and Stephen Walt, "The Israel Lobby And U.S. Foreign Policy," *Middle East Policy*, Vol.13, No.3, (2006): 29-87.
[87] Ibid, 31.
[88] Jeremy M. Sharp, "U.S. Foreign Aid To Israel," *Congressional Research Service*, 10 Jun 2015, Web, Retrieved 20 Mar 2016, Https://Www.Fas.Org/Sgp/Crs/Mideast/Rl33222.Pdf.
[89] Ibid.

only expected to increase in the near future, as the Obama administration has committed to bolster financial support to Israel to offset the political blowback of the Joint Comprehensive Plan of Action (commonly known as the Iranian Nuclear Deal) that was signed in July 2015.[90] Israel's role as a crucial partner for the U.S. during the Cold War undoubtedly allowed Israel to increase military expenditures above levels that would have been possible without U.S. aid. Israel's unique security concerns have resulted in high defense spending that has been subsidized by U.S. aid, but just how high is Israeli defense spending and why does it matter?

Figure 1: Terrorist Attacks Against Israel (1970-2013)



Source: National Consortium for the Study of Terrorism and Responses to Terrorism (START), Global Terrorism Database, 2013, Web, Retrieved 29 Mar 2016, http://www.start.umd.edu/gtd

[90] David Makovsky, "U.S. Military Aid To Israel: Debating An Increase," *The Washington Institute*, 14 Mar 2016, Web, Retrieved 20 Mar 2016, Http://Www.Washingtoninstitute.Org/Policy-Analysis/View/U.S.-Military-Aid-To-Israel-Debating-An-Increase

The Social Costs of Israel's Extraordinary Defense Burden

Israeli security expenditures have been truly extraordinary, even when compared to other countries with high defense expenditures, and high defense spending contributed to an economic crisis that U.S. aid helped alleviate. On average countries spend about 3.4% of GDP on defense.[91] The U.S. spends more on defense than any other country, but as a percentage of GDP, U.S. defense spending was only 4.6% in 2014. Prior to 2010, Israeli military spending had never been below 5% of GDP and, today, has never been below 4% of GDP.[92] As Figure 2 and Table 1 show, U.S. defense spending reached 10% of GDP at the height of the Vietnam War in 1968 but rapidly declined thereafter to an average of 6.65% from 1970-1979. These figures are high but not compared to Israeli defense spending during the same period. Israeli defense spending peaked at an unsustainable 15.2% of GDP in 1975 and averaged 13.5% of GDP from 1970-1979.[93] It was during this period, especially after the 1973 Yom Kippur War, that Israeli defense spending jeopardized the overall stability of the state; 1974-1984 is known as Israel's lost decade economically because growth stagnated, government expenditures soared (mainly on defense), and inflation exceeded 400% by 1984.[94] Fortunately, the U.S. prevented the development of a major economic crisis by funding the1985 Economic Stabilization Plan.[95] While there were certainly more broad global trends that contributed to Israel's economic troubles, such as the emergence of

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[91] Paul Collier and Anke Hoeffler, "Military Expenditure: Threats, Aid, and Arms Races," *The World Bank: Policy Research Working Paper No. 2927*, (November 2002) Web, Retrieved 20 Mar 2016, Http://213.154.74.164/Invenio/Record/13296/Files/Wps2927.Pdf.
[92] Shmuel Even "Israel's Defense Expenditure," *Strategic Assessment,* Vol.12, No.4, (2010).
[93] Even, "Israel's Defense Expenditure," 47.
[94] Metzer, Jacob, "Some Perspectives On The Israeli Economy: Stocktakng And Looking Ahead," *Israel Studies*, 2014, Vol.19, No.2, 133-161.
[95] Ibid.

OPEC and the changing global oil landscape, Israeli defense spending certainly didn't help with Israel's economic struggles.[96] The injection of U.S. aid after the peace deal with Egypt alleviated the burden of high defense spending somewhat, but the 1982 Lebanon War and Israel's military incursions in Lebanon thereafter kept defense spending high. Israel's defense spending as a percentage of GDP has been extraordinarily high, since the 1970s, but this measure does not capture the full extent to which the Israeli resources have been devoted to defense.

The domestic defense consumption measure is a more holistic measure of the cost of defense. The Israeli domestic defense consumption measure in Figure 2 and Table 3 shows the full amount of domestic resources in the Israeli economy that were devoted to defense in any given year. The Israeli Ministry of Defense calculates this measure in accordance with the most recent 2008 guidelines of the System of National Accounts (SNA).[97] This statistic aggregates four different measures: compensation, defense imports, sales by the Ministry of Defense, and the purchase of goods and services in Israel. Compensation accounts for the salary paid to civilian and non-civilian employees of the defense establishment, such as conscripted soldiers, lifetime military members, and pensioners. The purchase of goods and services in Israel accounts for expenditures relating to logistical and infrastructural goods needed by the military in Israel and the Palestinian Territories. Defense imports measures the value of goods and services acquired abroad by the defense establishment, which includes the large amount of aid and arms given freely to Israel by the U.S. Sales by the Ministry of Defense

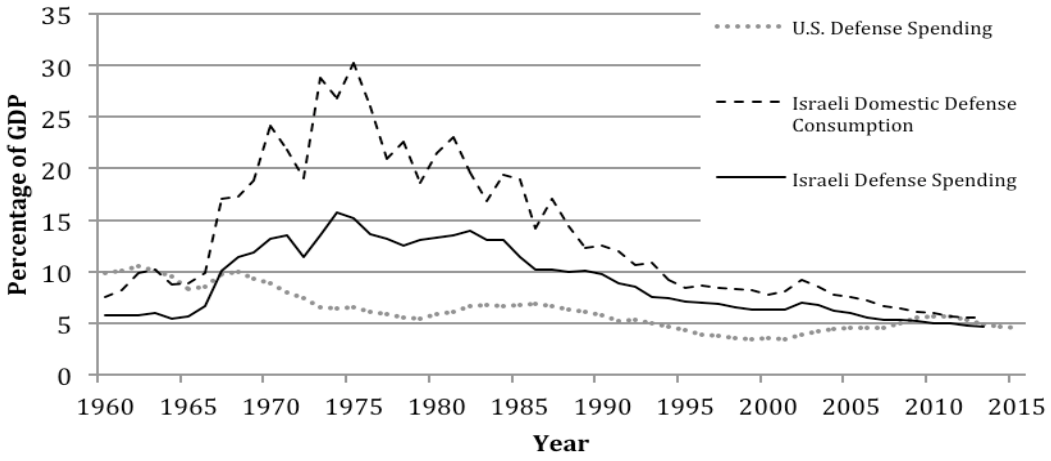
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[96] Jonathan Nitzan and Shimshon Bichler, *The Global Political Economy Of Israel*, Pluto Press, London, UK, (2002): 198-272.

[97] *The System Of National Accounts, 2008*, UN, IMF, OECD, World Bank, European Commission, New York, NY, (2009), Web, Retrieved 22 Mar 2016, Http://Unstats.Un.Org/Unsd/Nationalaccount/Docs/Sna2008.Pdf.

include income from selling surplus military supplies.[98] Taken together, these expenditures paint a clearer picture of the resources devoted to defense in the Israeli economy.

Figure 2: Israeli and U.S. Defense Spending (1960-2014)



Sources: Israeli Central Bureau of Statistics, U.S. Bureau of Economic Analysis, U.S. Census Bureau, The World Bank Data Tables

Table 3: Average Israeli and U.S. Defense Spending as a Percentage of GDP (1960-2010)

Years Averaged	U.S. Defense Spending	Israeli Defense Spending	Israeli Domestic Defense Consumption
1960-1969	**9.59**	**7.38**	**11.69**
1970-1979	**6.65**	**13.47**	**23.98**
1980-1989	**6.45**	**11.84**	**17.78**
1990-1999	**4.48**	**7.55**	**9.79**
2000-2009	**4.34**	**5.96**	**7.57**
1960-2010	**6.23**	**8.91**	**13.53**

Sources: Israeli Central Bureau of Statistics, U.S. Bureau of Economic Analysis, U.S. Census Bureau, The World Bank Data Tables

Figure 2 and Table 3 show downward trends from the peak defense spending years in the 1970's, and this downward trend is primarily due to two factors. First, the large increase in the GDP of Israel over the period decreased the share of defense

[98] Israeli Central Bureau Of Statistics, *Defence Expenditure In Israel: 1950-2013*, Nov 2015, Web, Retrieved 21 Mar 2016, Http://Www.Cbs.Gov.Il/Webpub/Pub/Text_Page_Eng.Html?Publ=7&Cyear=2013&Cmonth=1.

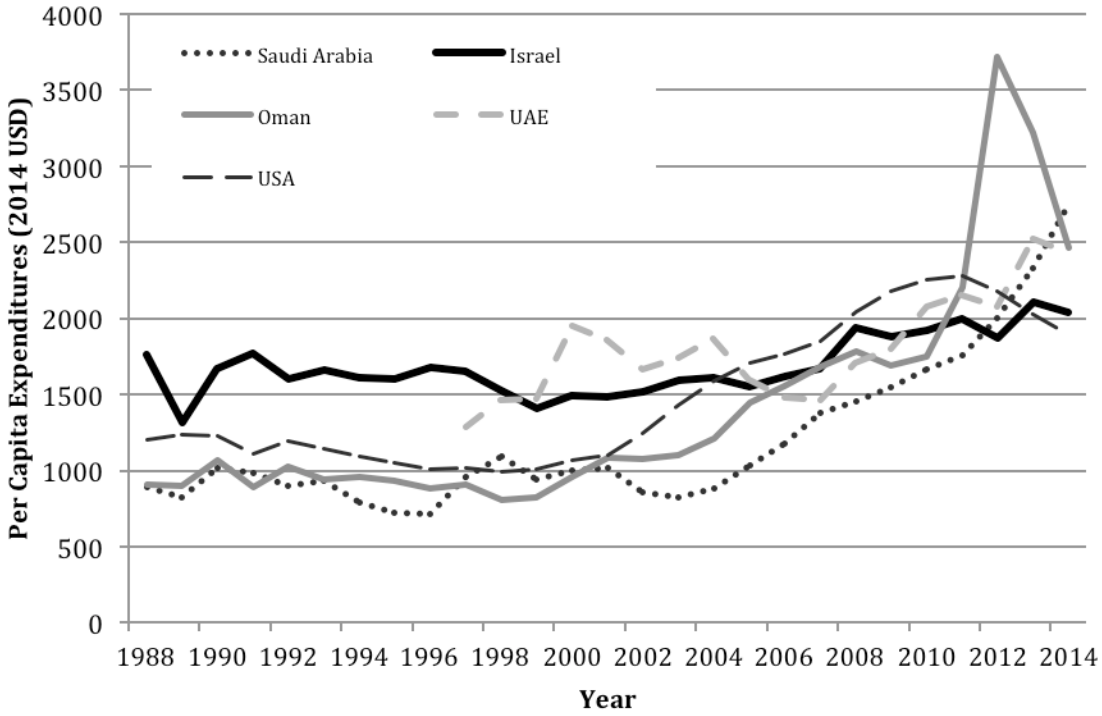
spending in the national budget, as defense spending stayed relatively stable over the same time period. Figure 3 shows that per capita Israeli defense spending has stayed very stable since 1988, the first year in which adequate data is available for comparison. Second, the influx of military aid from the U.S. after the peace deal with Egypt reduced the domestic defense consumption measure; U.S. aid is subtracted from total consumption in the calculation of that measurement rather than added because the Israeli economy is not responsible for this input.[99] U.S. military aid is significant despite that fact that it is not factored into the numbers in Figure 2 or Figure 3; U.S. aid has been said to provide a direct subsidy to each Israeli of roughly $500 per year, and considering that most U.S. aid to Israel is military aid, this means that the per capita defense spending numbers in Figure 3 and Table 4 are biased downward by a significant amount.[100] Even though defense spending and domestic consumption have decreased significantly, this downward trend is somewhat misleading.

Despite the decline in defense spending in recent decades Israel still bears the highest defense burden of any developed country. Figure 3 and Table 4 show that on average Israel has spent more per capita on defense than any other country in the world since 1988. The exceptions to this rule are Saudi Arabia, Oman, and the UAE in recent years, but these gulf countries have had the benefit of large oil revenues, a luxury Israel has not had. The defense burden is a measure of the stress placed on a country's economy by a high defense budget. The defense burden is a more useful measure than pure spending numbers, and it is even more useful than Israel's domestic defense consumption, because the defense burden contextualizes defense spending in relation to

[99] Shmuel, "Israel's Defense Expenditure," 47.
[100] Mearscheimer And Walt, "The Israel Lobby," 31.

other countries. The global average defense burden is estimated at 2% of GDP; Israel's defense burden is therefore excessive to the degree that Israel's defense spending is greater than 2% of GDP.[101] For example, throughout the 2000s Israeli defense spending averaged 5.96% of GDP. This made Israel's defense burden 3.96% on average throughout the 2000's when compared to the rest of the world. This is a considerable gap (remember that average defense spending worldwide is 3.4% of GDP), but it is much smaller than in previous decades. Given Israel's unique security environment, an international comparison of the defense burden in Israel means little to many Israelis who will claim that it is a necessary evil in a hostile region.

Figure 3: Military Expenditures of the Five Largest Per Capita Spenders in Thousands of USD (1988-2014)



Source: Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database. *Data unavailable for UAE prior to 1997. **Data on Israeli expenditures does not include US military aid or the cost of Operation Protective Edge for 2014 expenditures

[101] Ibid, 47.

Table 4: Average Defense Spending of the Five Largest Per Capita Spenders in Thousands of USD (1988-2014)

Years Averaged	Israel**	US	Saudi Arabia	Oman	UAE
1990s	1616	1083	897	924	*
2000s	1633	1596	1109	1358	1706
1988-2014	1685	1476	1194	1407	1805

Source: Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database. *Data unavailable for UAE prior to 1997. **Data on Israeli expenditures does not include US military aid or the cost of Operation Protective Edge for 2014 expenditures

It is true that a strong defense establishment is an absolute necessity for Israel given the numerous security threats facing the state, but this doesn't change the fact that high defense expenditures channel economic resources away from other national priorities, like spending on social programs. This is a major concern for many Israelis outside the military establishment; in 2009 Professor Omer Moav, the chairman of the Israel Council of Economic Advisers, said, "The Ministry of Finance and all the economists who are members of the Council of Economic Advisors agree that the defense budget is too large for the country, and jeopardizes the Israeli economy."[102] Dr. Moav may have a point, as Israel ranks poorly in a number of economic indicators. The Social Progress Index summarizes a number of different well-being indicators into a comprehensive evaluation of "the capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential." Despite a relatively high GDP per capita (PPP) of $31,029, Israel ranks 40th on this index, just above Panama whose GDP per capita (PPP) is $18,793. The report explains that Israel's performance in many categories is on par with top tier countries, but "Israel lags in Personal Safety, Ecosystem Sustainability,

[102] Ibid, 1.

and Tolerance and Inclusion." Israel's high poverty rates and high levels of inequality also lower Israel's ranking.[103] In 2013 Israel had the second highest poverty rate among all OECD countries and was the fourth most unequal OECD country, with a Gini coefficient of 0.371.[104] Even if some consider high defense spending endogenous given Israel's security threats, it is impossible to deny the overwhelming evidence that high defense spending has embattled Israel's economy.

Israeli defense spending has contributed to the cycle of violence by reallocating capital from social welfare to security related activities, and perpetual conflict has imposed high costs on the Israeli and Palestinian societies despite clear evidence that peaceful resolution will improve the welfare of both parties significantly. In 1787, Thomas Paine wrote that "war involves in its progress such a train of unforeseen and unsupposed circumstances that no human wisdom can calculate the end." These seem like strange words from the author of *Common Sense*, the pamphlet widely cited as sparking the flames of anti-British zeal that fueled the American War of Independence.[105] However, he emphasized his disdain for the uncertainties of war by concluding that it "has but one thing certain and that is to increase taxes."[106] Paine was poignantly trying to dissuade England from going to war with Holland, and he went on to remind his audience that "he that goeth to war should first sit down and count the

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[103] Michael Porter, Scott Stern, And Michael Green, *Social Progress Index 2015*, Social Progress Imperative, 2015, Web, Retrieved 30 Mar 2016, http://www.socialprogressimperative.org/system/resources/w1siziisijiwmtuvmduvmdcvmtcvmjkvmzevmzi4lziwmtvfu09dsufmx1bst0dsrvntx0lorevyx0zjtkfmlnbkzijdxq/2015%20social%20progress%20index_final.pdf.

[104] OECD, Income Inequality Indicator, and Poverty Rate Indicator, Web, Accessed 30 March 2016, https://data.oecd.org/.

[105] Bernard Bailyn, *The Ideological Origins Of The American Revolution*, Belknap Press, Cambridge, MA, (1967).

[106] Thomas Paine, "Prospects On The Rubicon," In *Political Writings Of Thomas Paine: Secretary To The Committee Of Foreign Affairs In The American Revolution, Vol. Ii*, Solomon King, New York, NY, (1830), vii.

cost."[107] Israel's security concerns have made it seem as if conflict is an inevitable part of life, but perhaps if Israelis and Palestinians "sit down and count the cost" of the ongoing conflict, then they may be more disposed to pursue the benefits of peace despite the persistence of political disagreement.

[107] Ibid.

Chapter 2: The Israeli Control Regime After the Oslo Accords: Cyclical Violence in Lieu of Peace

2.1 Unrealized Peace Dividends: the Oslo Accords and the Potential Benefits of Peace

Peace is the most preferential economic outcome for both Israelis and Palestinians. The Oslo Accords were the most fruitful time in which Israelis and Palestinians mutually recognized the need for a change in the status quo, and it seemed that both parties were willing to make the necessary compromises to achieve a peaceful resolution. The Oslo Accords were not official peace treaties; they were two separate agreements, signed in 1993 and 1995, which established interim governance agreements and a framework to facilitate final negotiations on a two-state solution between the State of Israel and the Palestinian Liberation Organization (PLO). The Oslo Accords marked unprecedented progress on three fronts: Israel recognized the PLO as a legitimate political party representative of the Palestinian people, the PLO recognized the State of Israel, and both parties agreed to negotiate their differences peacefully.[108] The Oslo Accords changed the relationship between Israel and the Palestinians in many ways, but the economic dimension is most relevant to this study. The Oslo Accords briefly brought hope that a peaceful solution to the Israeli-Palestinian conflict—based on the "land for peace" precedent—could bring about a new age of economic prosperity.

Shortly after the Six-Day War in 1967, the UN passed Resolution 242, and this resolution has since been the basis from which countless diplomats have attempted to

[108] Charles Enderlin, *Shattered Dreams: The Failure of the Peace Process in the Middle East, 1995-2002*, Other Press, New York, NY, 2003.

broker Arab-Israeli peace.[109] Resolution 242 was sponsored by Britain. Resolution 242 succeeded because it tied the main thing the Soviets and Arabs wanted — Israeli withdrawal from territories acquired in the 1967 Six-Day War — and the main thing that the U.S. and Israel wanted— recognition of Israel by neighboring Arab countries.[110] The Oslo Accords followed the "land for peace" precedent that was established in theory by UN Resolution 242 and in practice by the 1979 Camp David Accords.

The 1979 Camp David Accords established the "land for peace" precedent when Israel gave the Sinai back to Egypt in exchange for a peace treaty. The U.S. brokered the negotiations between Egypt and Israel after bilateral efforts proved fruitless.[111] The U.S. promised to bolster the agreement through increased military and development aid to each country, and most of the aid given to both Egypt and Israel has been military aid.[112] Opinions diverge on the relationship between the 1979 Camp David Accords and the Oslo peace process.[113] Some consider the experience at Camp David a blueprint for the Oslo negotiations in 1993, while some consider the two negotiations fundamentally different.[114] At the very least, the 1979 Camp David Accords cleared a path forward towards the Oslo Accords (and the 1994 Israeli-Jordanian Peace Treaty) by creating a

[109] *The Legacy of Camp David: 1979-2009*, The Middle East Institute, Washington D.C., (2010): 7.
[110] Eric Black, *Parallel Realities: A Jewish/Arab History of Israel*/Palestine, Paradigm Press, Cambridge England, (1992).
[111] *The Legacy of Camp David,* 19.
[112] For more on the military aid that followed the Camp David Accords, see Chapter 1, Section 4- "The Determinants of Extraordinary Defense Spending in Israel." Also, see: Daniel C. Kurtzer, and Scott B. Lasensky, *Negotiating Arab-Israeli Peace: American Leadership in the Middle East*, USIP, Washington, DC, (2008).
[113] *The Legacy of Camp David,* 19.
[114] Ibid.

diplomatic category whereby Arabs "could recognize Israel's existence and physical presence but not yet fully accept the legitimacy of a Jewish State."[115]

Gradualism was critical to the architecture of the Oslo peace process; contentious issues like the final status of Jerusalem, the right of return of 1948 Palestinian refugees, the final status of Jewish settlements in the West Bank, and the issue of permanent borders were all left out of the text of the Oslo Accords.[116] The text itself doesn't even mention, let alone promise, the eventual creation of a sovereign Palestinian state. These omissions were certainly purposeful; both sides recognized the need for progress, which had been hindered in the past by diverging opinions on these key issues. The omission of an explicit guarantee that a Palestinian state would be created was not problematic for the Palestinians' chief negotiator: Yasser Arafat. For Arafat, the creation of a Palestinian state was the obvious goal for all parties involved in negotiations, and he thought that the interim five year time period would simply be a time in which contentious details would be worked out.[117] The signing of the first Oslo Accord subsided the First Intifada, a wave of violence that began in 1987, and the hope that briefly came with the Oslo Accords led many to speculate about the potential benefits of a peaceful resolution to the conflict.

When the Oslo Accords were signed and the peace agreement between Israel and Jordan was formalized in 1994, many observers hoped for a substantial peace dividend. The term "peace dividend" gained prominence in the 1990s after the collapse of the Soviet Union; the absence of a second pole to oppose the U.S. allowed for a

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[115] Ibid,15.
[116] Ibid.
[117] Yezid Sayigh and Saeb Erekat, "Who Killed the Oslo Accords?" *Al Jazeera*, 15 Oct 2015, Web, Retrieved 24 Nov 2015, http://www.aljazeera.com/indepth/opinion/2015/10/killed-oslo-accords-151001072411049.html.

substantial decrease in U.S. defense spending, which was supposed to release resources for more productive purposes.[118] The Oslo Accords brought hope for an Israeli-Palestinian peace dividend in which Israeli resources might be reallocated to education and other social areas; many even hoped that joint ventures could develop between Israelis, Palestinians, and Jordanians.[119] A peace dividend never materialized due to violence in the midst of negotiations, but the brief period of hope sparked academic interest in the potential economic benefits of peace between Israelis and Palestinians.

Economic studies have found that a peaceful resolution to the conflict is the best possible outcome for Palestinians and Israelis. In 2015, the RAND Corporation published the most recent and perhaps the most comprehensive study on the potential economic benefits of peace in the Israeli-Palestinian context.[120] This study compared economic outcomes in Israel and the Palestinian Territories in 2024 under five different political outcomes for the Israeli-Palestinian conflict. Using present trends as the baseline, the study found that a two-state solution provides by far the best economic outcomes for both groups. When compared to present trends, Israel would gain $123 billion over ten years under a two-state solution, while Palestinians would gain $50 billion. However, the increase in per capita income would actually benefit the average Palestinian more due to the lower level of average initial income for Palestinians. Under a two-state solution, per capita income would increase by about 36% ($1,100 USD) for Palestinians and by about 5% ($2,200 USD) for Israelis. The study also estimated the costs of a return to violence using current trends. Violent uprising would reduce per

[118] Sanjiv Gupta et al., "The Elusive Peace Dividend," *Finance and Development*, Vol. 39, No.4, (2002).
[119] Abdelmagid Mazen, "When Settlement and Resolution are in Conflict: Searching for a Mideast Peace Dividend," *Negotiation Journal*, Vol.14, Iss.4, (Oct 1998): 357-367.
[120] C.R. Anthony et al., *The Costs of the Israeli-Palestinian Conflict.*

capita GDP in the Palestinian Territories by 46% ($9.1 billion USD) and by 10% ($45 billion USD) in Israel over the next ten years. To arrive at these estimates, the RAND study compared the conditions that Israelis and Palestinians experience today to the conditions that might occur under five alternative assumptions that are widely considered feasible and credible outcomes to the conflict. This counterfactual approach required a thorough understanding of the ways in which the nexus between Palestinian labor mobility, economic development, and violence has evolved since the Oslo peace process began in 1993.

2.2 Cyclical Violence After the Oslo Accords and The Israeli Closure Regime

The lack of a political solution to the conflict has resulted in cyclical violence since the best chance for peace failed to materialize during the Oslo peace process. Many lauded the Oslo Accords as monumental steps towards a final solution to the Israeli-Palestinian conflict, but the failure of Israelis and Palestinians to complete negotiations has erected more barriers than catalysts to a final peace agreement. Since the failure of the Oslo peace process, Palestinian violence has become more frequent and more decentralized, and in the eyes of many analysts the "land for peace" precedent is likely doomed.[121] There have been numerous times of intense violence between Palestinians and Israelis since the Oslo peace process began in 1993; extremely violent episodes include suicide bombings in the midst of negotiations between 1994 and 1996, the Second Intifada, multiple wars against Gaza in the shadow of the 2005 Gaza Disengagement and the election of Hamas in 2006, and the recent uptick in Palestinian violence that has taken place since October 2015. Violence has been so endemic since

[121] Padraig O'Malley, *The Two-State Delusion: Israel and Palestine- a Tale of Two Narratives,* The Penguin Group, New York, NY, (2015).

the Oslo peace process began that these labels are really only useful insofar as they reference periods of particularly intense conflict, and the categorization of violence into these periods can be somewhat misleading because it minimizes the persistent conflict that has afflicted Palestinians and Israelis since 1993. The Oslo peace process resulted in the implementation of closure policies that were designed to prevent Palestinian violence against Israel, but these policies have actually increased the regularity of Palestinian violence due to the disastrous effects that mobility restrictions have had on the Palestinian economies.

The Paris Protocol

Shortly following the initiation of the Oslo peace process in 1993, an economic agreement was reached between the PLO and Israel in Paris. *The Protocol on Economic Relations between the Government of the State of Israel and the PLO, Representing the Palestinian People,* was negotiated in Paris in 1994 and has thereby come to be known as the Paris Protocol.[122] Reflecting the more broad Oslo process, gradualism was also the approach to economic issues; the Paris Protocol sought to enable the Palestinian economies to develop more autonomously, but without clearly establishing borders between the Palestinian and Israeli economies and without cutting ties altogether.

During the negotiations, Palestinians were interested in achieving as much autonomy as possible, while Israeli negotiators wanted to defer as many decisions as possible to final status negotiations. Palestinian negotiating interests help to explain why some Palestinians wanted a free trade agreement (FTA); an FTA would have required the demarcation of economic borders, which would have conferred more

[122] Arie Arnon and Jimmy Weinblatt, "Sovereignty and Economic Development: The Case of Israel and Palestine," *The Economic Journal,* Vol.111, (2001).

responsibility upon the newly created Palestinian Authority in trade matters. Israeli interests also help to explain why Israeli negotiators had firm instructions from Prime Minister Rabin to reject any notion of borders between the two economies; demarcating economic borders may have influenced later negotiations on political borders. In the final stage of negotiations, the Israelis actually did propose an FTA, but only under the condition that the flow of labor from the Palestinian Territories would not be as free as under a customs union.[123] The Palestinians were therefore faced with a dilemma: the greater their autonomy over trade issues, the lesser their potential for employment in the preferential Israeli labor market. Underlying this dilemma is the deeper dilemma that persists for the Palestinians: greater levels of political autonomy will likely worsen economic conditions, while sacrificing autonomy for integration and cooperation with Israel keeps economic conditions more favorable than the alternative. With these dilemmas in mind, the Palestinians opted for a customs union. The effect of the Paris Protocol was to formalize the de facto customs union between Israel and the Palestinian Territories that had persisted since 1967, though there were changes that conferred more responsibility to the newly created PA.

The issue of labor flows was addressed in Article VII of the Protocol. The first paragraph of this article states that "both sides will attempt to maintain the normality of movement of labour between them," but a stipulation was added that each side had the "right to determine from time to time the extent and conditions of its labour movement into its area."[124] While no official number was provided in the Protocol, "the implicit intention of the Israeli side was to have 70-100 thousand Palestinians working in

[123] Ibid, 294.
[124] *The Protocol On Economic Relations Between The Government Of The State Of Israel And The PLO, Representing The Palestinian People,* Paris, France (1994).

Israel," and any interruption of labor flows was supposed to be "transitory and brief."[125] Violence in the midst of the Oslo peace process kept hopes for a more prosperous, more autonomous Palestinian economy from materializing as Israel increased restrictions on "labour movement into its area" for the Palestinians.

[125] Arnon And Weinblatt, "Sovereignty And Economic Development," 297

2.3 Restricting Palestinian Mobility as Counter-Insurgency: The Oslo Accords, The Second Intifada, and Israel's Use of Closure Policies

As Figure 5 shows, Palestinian labor flows to Israel have become much more erratic since the Oslo peace process began in 1993. In the twenty years between 1967 and 1987, the number of Palestinians working in Israel grew steadily. However, the number of Palestinians working in Israel decreased during the Oslo peace process from 115,600 in 1992 to roughly 63,000 in 1996. The number of Palestinians working in Israel began to increase once again after 1997, but this number reached its post-Oslo peak of approximately 110,000 Palestinian workers in 2000, only to be reduced to less than 35,800 Palestinian workers by 2002 in the midst of the Second Intifada.[126] The main cause for the fluctuation of Palestinian labor in Israel was the new Israeli policy to control Palestinian movement as a counter-insurgency measure; the Palestinian economies were striving to become more autonomous after the negotiation of the Paris Protocol, and the stipulation in the Paris Protocol that both Israelis and Palestinians could regulate labor flows helped codify Israel's security justifications for border closures during times of violence between 1993 and 1996 as well as between 2000 and 2005.

Controlling labor flows required the creation of an intricate security infrastructure, which was mostly a reflection of the security concerns that precipitated throughout the 1990s. In the 1970s and 1980s there were only minor barriers for Palestinians to gain access to the Israeli labor market, but following the 1991 Gulf War Israel required all Palestinians seeking work in Israel to have a permit.[127] These permits required Palestinians to be 28 years or older, to acquire a request of employment from

[126] See Figure 5
[127] Arnon And Weinblatt, "Sovereignty And Economic Development," 297.

an Israeli employer, and to obtain a security clearance from the military establishment. The enforcement of these new rules grew stricter as time went on, and following the series of terrorist attacks associated with Yahiya Ayyash between 1993 and 1996, Israel instituted a closure policy in which roadblocks were set up on major transportation routes.[128] These barriers barred entry into Israel from Palestinian areas along main transportation arteries. There were also situations of internal closure. In these instances Israel prevented movement within the West Bank itself, which not only prevented labor flows to Israel but also disrupted normal economic activity within the West Bank. As long as closures were in effect, all work permits were suspended, and the flow of all goods were frozen.[129] Between 1993-2000, Israel closed its borders with the West Bank and the Gaza Strip for 484 effective days, which is the equivalent of nearly three months of closures per year.[130]

In Israel, the frequency of closures injected uncertainty into the local labor markets that prominently featured Palestinian workers, but the substitution of overseas foreigners minimized disruption to normal economic activities.[131] The percentage of Palestinians comprising the total labor force in Israel dropped from 8% in the 1980s to less than 1% in 2000. The percentage of foreign workers in Israel rose from less than 1% to approximately 12% during that same period.[132] In terms of the actual number of workers, the Israeli Central Bureau of Statistics estimates that there were very few foreign workers in Israel prior to 1993 (when the closure policy began to be strictly

[128] Leila Farsarkh, "Palestinian Labor Migration to Israel Since Oslo and Beyond," *Topics in Middle Eastern and North African Economies*, Vol. 4, (2002).
[129] Ibid.
[130] UNSCO. *The Impact on the Palestinian Economy of the Recent Confrontations, Mobility Restriction and Border Closures, 1 October 2000-31 January 2001*, Jerusalem, (2001).
[131] Arnon And Weinblatt, "Sovereignty And Economic Development," 297
[132] Israel Drori, *Foreign Workers in Israel: Global Perspectives*, State University of New York Press, Albany, NY, (2009): 8.

enforced). In 1991, there were only 8,000 overseas foreign workers in Israel.[133] By 1994, this number had grown eight-fold to approximately 65,000 and by 1995 this number doubled once again to approximately 120,000. The substitution of Palestinian laborers with foreigners allowed Israel to implement closure policies with minimal interruption to Israeli economic activities, which was important during the Second Intifada.

The Second Intifada, sometimes called the Al-Aqsa Intifada, was a period of intense violence that claimed the lives of more than 3,300 Palestinians and more than 1,000 Israelis between November 2000 and August 2005.[134] The violence began after Ariel Sharon, the opposition leader in the Israeli government and an opponent of Palestinian statehood, made a heavily escorted visit to the Temple Mount in Jerusalem.[135] Palestinians viewed this visit to the third most holy site in Islam as a political provocation, and the following day a large group of Palestinian protestors gathered to confront the Israeli police on the Temple Mount. Violence between the Palestinian protestors and Israeli security forces ensued. According to the Israeli government there were fourteen policemen injured in these clashes.[136] The U.S. Department of State found that Israeli security forces "used rubber bullets and live ammunition to disperse the protestors, killing four people and injuring about 400."[137] A series of confrontations between Israeli security personnel and Palestinian protesters followed this initial incident, and these clashes quickly evolved into a wider variety of

[133] Miaari and Sauer, "The Labor Market Costs of Conflict."
[134] David Jaeger and Marco D. Paserman, "The Cycle of Violence? An Empirical Analysis of Fatalities in the Israeli-Palestinian Conflict," *IZA Discussion Papers No. 1808*, (October 2005): 4.
[135] Ibid.
[136] George. J Mitchell, Suleyman Demiral, Warren B. Rudman, Thorbjeorn Jagland, and Javier Solana, *Report of the Sharm-el-Sheikh Fact-Finding Committee,* United States Government, (April 2001).
[137] U.S. Department of State, *Country Reports on Human Rights Practices—2000 (Israel),* Bureau of Democracy, Human Rights, and Labor, (February 2001).

violent Palestinian resistance and Israeli responses.[138] Strong evidence has emerged after the Second Intifada that Israel reacted strongly to Palestinian violence by taking counter-insurgency measures designed to limit Palestinian violence, and these measures were somewhat effective in reducing the magnitude of violence.[139]

Scaling up restrictions on the movement of Palestinian labor and goods was one of the major counter-insurgency measures implemented by Israel during the Second Intifada, especially after 2002. In the spring of 2002, Israel initiated "Operation Defensive Shield," which was "a large-scale military offensive against the Palestinian militant and terrorist infrastructure in the West Bank" that included internal closures of West Bank transportation routes.[140] This resulted in intense fighting in the West Bank between the IDF and the Palestinians, and eventually international pressure led Israel to end the operation on May 10, 2002. However, "Operation Determined Path" began in June 2002 in response to continued suicide bombings inside Israel; the IDF met much less resistance from the Palestinians, and the IDF has maintained its presence and its security infrastructure in the West Bank ever since.[141]

2002 was also the year in which Israel began construction on the controversial Separation Barrier, which has the declared intent to restrict Palestinian access to Israel for security reasons.[142] Since construction began in the rural areas of the northern West Bank, the Barrier has slowly progressed towards the most profound transformation of

[138] Mitchell, *Report of the Sharm-el-Sheikh Fact-Finding Committee*
[139] Jaeger and Paserman, "The Cycle of Violence?" 28
[140] Ibid, 6.
[141] Ibid.
[142] Shaul E. Cohen, "Israel's West Bank Barrier: An Impediment To Peace?" *The Geographical Review*, Vol. 96, No. 4, (October 2006): 682-695, 689.

the Palestinian landscape since the 1967 Six-Day War.[143] The Barrier consists of concrete slabs reaching approximately 25 feet in height, ditches, watchtowers, electric fences, security checkpoints, and militarized patrol roads along the fence.[144] The Separation Barrier has been highly criticized for reasons beyond economics; in the first phase of the wall alone 58 communities with more than 170,000 Palestinians were either trapped between the Green Line and the Barrier, encircled by 25 foot-tall wall segments, or physically separated from their lands and agricultural livelihoods.[145] Despite criticisms, the Barrier and Israel's closure policies have been credited with reducing the massive amounts of violence that plagued Israel in the early stages of the Intifada; unfortunately the increased cost and difficulty of travel for Palestinians who work in Israel has contributed to a cycle of violence by exacerbating unemployment, thereby lowering the opportunity cost of violence for Palestinians.[146]

The number of overseas foreigners working in Israel stayed relatively high throughout the Second Intifada, while the number of Palestinians working in Israel declined significantly. The number of overseas foreign workers in Israel peaked in 2002 at 240,000 but subsequently fell to 180,000 by 2004.[147] This was the same year that the number of West Bank Palestinians working in Israel reached an all-time low of 35,800 workers and the West Bank Palestinian unemployment rate peaked at 28.2%.[148] Between the beginning of 1999 and the end of 2004, the average number of foreign

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[143] Peter Lagerquist, "Fencing The Last Sky: Excavating Palestine After Israel's "Separation Wall," *Journal Of Palestine Studies,* Vol 33. No 2., (Winter 2004): 5-35.
[144] Ibid.
[145] Dima Qato Et Al, "West Bank Barrier Decreases Access To Schools And Health Services," *Prehospital And Disaster Medicine,* Vol. 22, No. 4, (2007): 263-266, 263.
[146] Julie Trottier, "A Wall, Water, And Power: The Israeli 'Separation Fence,'" *Review Of International Studies,* Vol. 33, No. 1, (January 2007): 105-127.
[147] Miaari and Sauer, "The Labor Market Costs of Conflict," 136
[148] See Figure 5

workers in Israel was 203,500, but this can be broken down into 131,500 illegal foreign workers and 72,000 legal foreign workers.[149]

Over this same period there were 80,140 two-year work permits given to foreign laborers per year (with a standard deviation of 12, 370); the high number of illegal foreign workers indicates that the risk for deportation was relatively low for foreigners who stayed in Israel after their two-year permit had expired.[150] This low-deportation risk indicates that non-Israeli labor is not necessarily problematic in Israel (Israel has actually grown highly dependent on foreign labor in a number of different sectors), but rather Palestinian labor became problematic during the 1990s and 2000s because Palestinians became associated with the violence that plagued Israel in the Post-Oslo period. The substitution of overseas foreign workers allowed Israel to implement large-scale restrictions on Palestinian movement as a counter-insurgency tactic without causing a major disruption to Israeli economic activities.

[149] Miaari and Sauer, "The Labor Market Costs of Conflict," 136
[150] Ibid.

2.4 Unemployment and Violence After the Imposition of Mobility Restrictions

The Israeli closure policy— both within the West Bank and between Israel and the Palestinian Territories—contributed to erratic and unusually high unemployment rates in the Palestinian Territories between 1993 and 2007. Unemployment rates in this era ranged from 15-37% in the Gaza Strip and from 10-28% in the West Bank. These rates are alarmingly high when compared with the 1970-1993 period; unemployment remained below 7% in both the West Bank and the Gaza Strip during the entire period.[151] These high levels of unemployment are almost entirely attributed to the increase of restrictions on Palestinian mobility, especially internal restrictions of movement within the West Bank.[152] In 2007, internal closures were estimated to have cost the West Bank economy approximately $223 million (USD), or 6% of West Bank GDP for that year.[153] In 2015, Adnan calculated a lower bound estimate of the economic cost of a 50-day increase in the number of border closures per quarter, and he found the cost for the West Bank is about $1.7 million (USD) per day in the subsequent quarter due to increased unemployment.[154] Figure 4 presents graphical evidence that a high degree of correlation exists between comprehensive closure days and unemployment rates among Palestinians in the West Bank, particularly during the Second Intifada. Unfortunately, studies have shown that border closures contribute to Palestinian terrorism by lowering the opportunity cost of violence, and border closures actually increase the quality of Palestinian terrorism as economic conditions worsen.

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[151] Leila Farsakh, *Palestinian Employment In Israel 1967-1997: A Review,* MAS Ramallah, West Bank, (1998).
[152] Massimiliano Cali and Sami Miaari, "The Labour Market Impacts of Mobility Restrictions: Evidence from the West Bank," *Conference Paper: 53rd Congress of the European Regional Science Association*, (2013).
[153] Ibid, 6.
[154] Wifag Adnan, "Who Gets to Cross the Border? The Impact of Mobility Restrictions on Labor Flows in the West Bank," *Labour Economics,* Vol. 34, (2015): 86-99.

Bueno de Mesquita suggested that economic conditions might be correlated with the quality of terrorist attacks in 2005.[155] According to his rationale, individuals have the choice to work in the market economy or to carry out terror attacks, and rational individuals will only choose terror if that brings them more utility than working in the market economy. If this is indeed the case, then low-ability individuals will be more likely to join terrorist organizations when economic conditions are good because they will have trouble finding a job. This also implies that worsening economic conditions should make it easier for terrorist organizations to recruit better-educated and more able people. In short, worsening economic conditions should improve the overall quality of terror attacks, because terror organizations can choose better-qualified individuals to carry out operations.

In 2012, Esteban Klor (the chair of the Depart of Economics at the Hebrew University in Jerusalem) found that Bueno de Mesquita's theory is true in the Israeli-Palestinian context. He analyzed the Second Intifada and found that higher unemployment rates in one quarter increased the average educational attainment and age of Palestinian suicide bombers in the following quarter during the Second Intifada. Additionally, Klor found that a standard deviation increase in unemployment "induces a 17.6% increase in the probability that the targeted city has a large population" relative to the mean population size of cities targeted by terrorist attacks. This is consistent with earlier research; in 2007 Benmelech and Berrebi found that higher-quality terrorists

[155] Ethan Bueno de Mesquita, ''The Quality of Terror,'' *American Journal of Political Science*, Vol. 49 No.3, (2005): 515–30.

cause more fatalities and are less likely to be stopped by security forces.[156] The correlation between economic development and the quality of terror attacks has important implications for the peace process, especially concerning the effectiveness of foreign aid.

The challenges that employment uncertainties and violence posed for the Palestinian economies between 1993 and 2007 was partially offset by the massive amounts of international aid flowing into the Palestinian Territories; rather than providing the fuel behind economic growth and Palestinian state-building, foreign aid acted as more of an insurance policy against the macroeconomic shocks that resulted from violent conflict during the Oslo Peace Process and during the Second Intifada.[157] It was hoped that the peace process would result in rising domestic investment and an influx of foreign investment in the Palestinian Territories. Indeed, more than $7 billion USD was dispersed in the Palestinian Territories between 1993 and 2005.[158] The rise in investment should have stimulated industrial growth and thereby facilitated a rise in local Palestinian employment, which would have reduced reliance on the Israeli labor market. This would have led labor-intensive, value-added Palestinian exports to eventually replace the flow of Palestinian labor to the Israeli labor market.[159] Unfortunately, aid to the Palestinian Territories has mostly been dedicated to emergency relief rather than state-building and economic growth, and as a result, the Palestinian

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[156] Efraim Benmelech and Claude Berrebi, "Human Capital and the Productivity of Suicide Bombers," *Journal of Economic Perspectives*, Vol.21 No.3, (2007): 223–38.
[157] Stéphane Pallage et al., "The Potential of Foreign Aid as Insurance," *IMF Staff Papers*, Vol. 53, No. 3, (2006): 453-475. Jim Zanotti, "U.S. Foreign Aid to the Palestinians, *Congressional Research Services*, 3 Jul 2014, Web, https://www.fas.org/sgp/crs/mideast/RS22967.pdf.
[158] Anne Le More, "Killing with Kindness: Funding the Demise of a Palestinian State, *International Affairs*, Vol. 81, No. 5, (2005): 981-999.
[159] Ishac Diwan And Radwan Shaban, *Development Under Adversity: The Palestinian Economy In Transition.* MAS-World Bank Joint Report, Washington, DC, (1999).

economy has remained dependent on Palestinian labor in the Israeli labor market despite the volatility of labor flows that emerged during the Oslo peace process.[160]

In the Post-Oslo period Palestinians have been neither sovereign nor integrated, neither moving towards one state nor two, but perpetually contained through a complex security infrastructure that prevents the development of a Palestinian state even as Israel governments publically commit to a two-state resolution to the conflict.[161] This cyclical violence has understandably made peace seem impossible, but research on the connection between economic development and violence suggests that the integration of more West Bank Palestinian laborers into the Israeli labor market might reduce violence. Nearly all studies have come to the conclusion that increased labor mobility will have positive effects for the Palestinian economy, but no studies exist that quantify the benefits of increased labor mobility or the consequences of increased mobility restrictions given the current state of affairs in the Israeli-Palestinian conflict. Such a policy is certainly a gamble. The following chapter will seek to estimate the impact of integrating more Palestinians into the Israeli labor force, and it is expected that such a policy may forge a more peaceful path towards political negotiations.

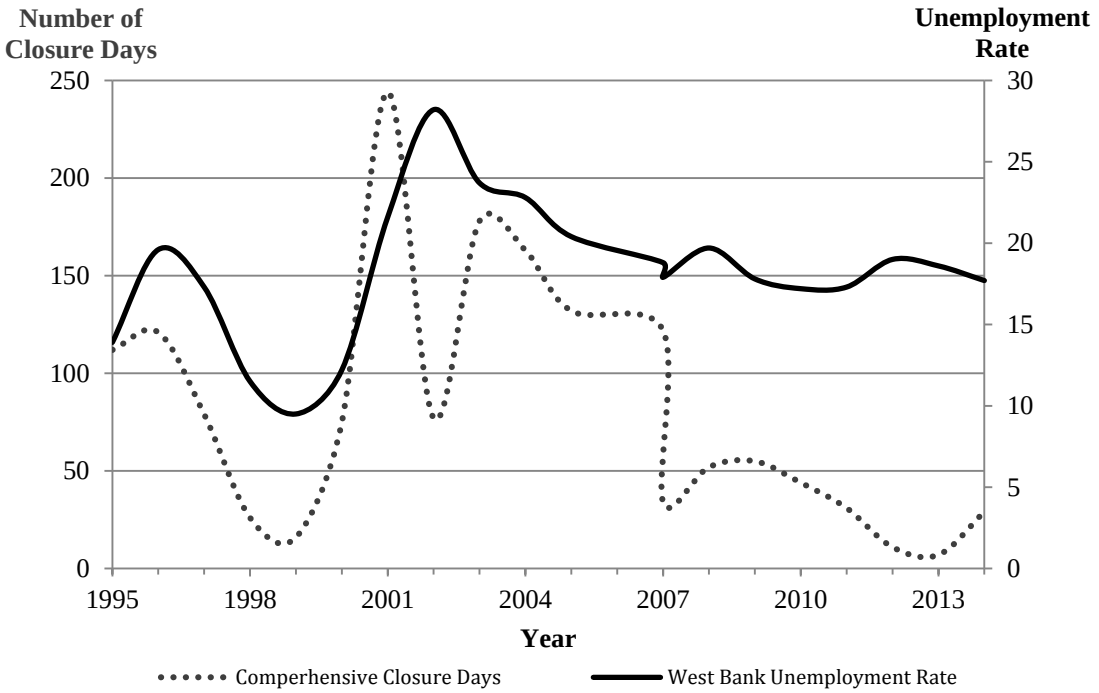
[160] Le More, "Killing with Kindness," 984
[161] Arnon and Weinblatt, "Sovereignty and Economic Development," 293

Table 5: Number of Border Closures Imposed on the Palestinian Territories (1993-2000)

Year	Total Days of Border Closure	Holidays and Weekends During Closure Days	Effective Border Closure Days	Lost Days as a Proportion of Potential Work Days
1993	**26**	**9**	**17**	**6.13%**
1994	**89**	**25**	**64**	**23.1%**
1995	**112**	**28.5**	**83.5**	**29.93%**
1996	**121**	**31.5**	**89.5**	**31.91%**
1997	**79**	**22**	**57**	**20.54%**
1998	**26**	**11.5**	**14.5**	**5.21%**
1999	**16**	**9**	**7**	**2.53%**
2000	**75**	**23**	**52**	**18.81%**

Source: UNSCO. *The Impact on the Palestinian Economy of the Recent Confrontations, Mobility Restriction and Border Closures, 1 October 2000-31 January 2001*, Jerusalem, (2001).

Figure 4: Comprehensive Border Closure Days and Unemployment in the West Bank (1995-2015)



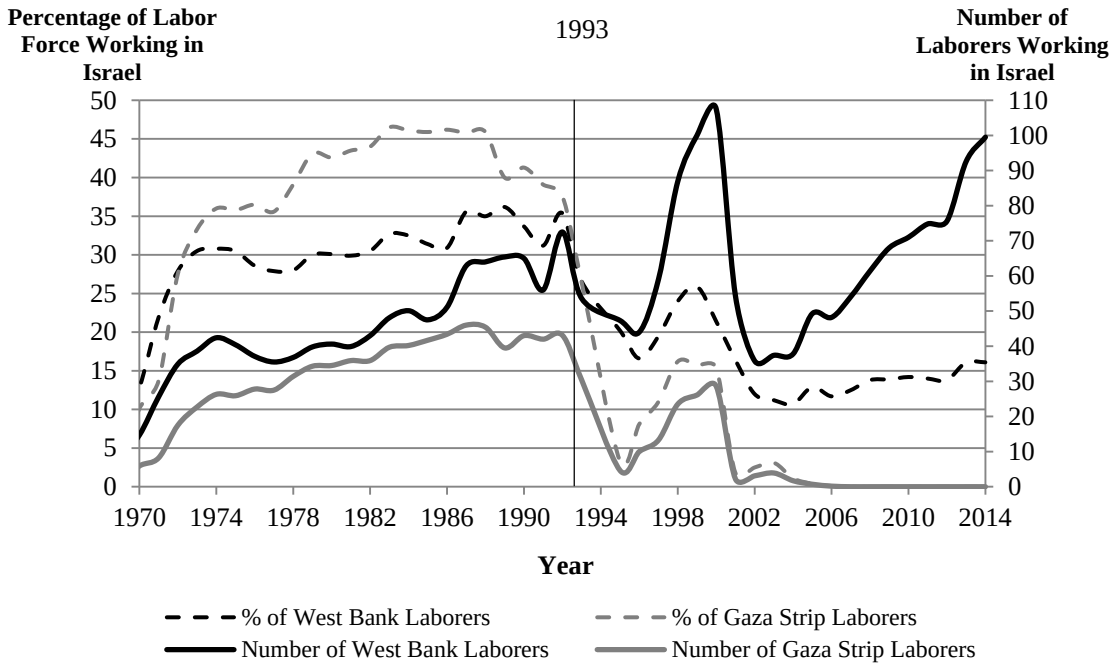
Notes and Sources: Comprehensive Closure Days in this graph does not take holidays and weekends into account, as is the case in Table 2. Comprehensive Closure Days were taken from the website of Israeli human rights group B'tselem: http://www.btselem.org/freedom_of_movement/siege_figures and UNSCO. *The Impact on the Palestinian Economy of the Recent Confrontations, Mobility Restriction and Border Closures, 1 October 2000-31 January 2001*, Jerusalem, (2001). Unemployment rates were taken from various issues of the Palestinian Central Bureau of Statistics' Labor Force Survey.

Table 6: Average Number of Palestinians Working in Israel and Average Percentage of Palestinian Labor Force Working in Israel by Decade (1970-2014)

Years Averaged	West Bank Palestinians	West Bank Labor Force (%)	Gaza Strip Palestinians	Gaza Strip Labor Force (%)
1970-1979	34,580	26.89	22,750	31.07
	(8,340)	(5.58)	(9,439)	(10.88)
1980-1989	51,260	32.48	40,220	44.65
	(9,627)	(2.35)	(3,991)	(2.1)
1990-1999	64,933	25.9	26,222	22.09
	(18,577)	(6.55)	(14,738)	(14.43)
2000-2009	55,378	13.65	4,000	2.44
	(21,133)	(3.02)	(8,744)	(4.69)
2010-2014	82,700	14.84	0	0
	(12,550)	(1.16)	(0)	(0)

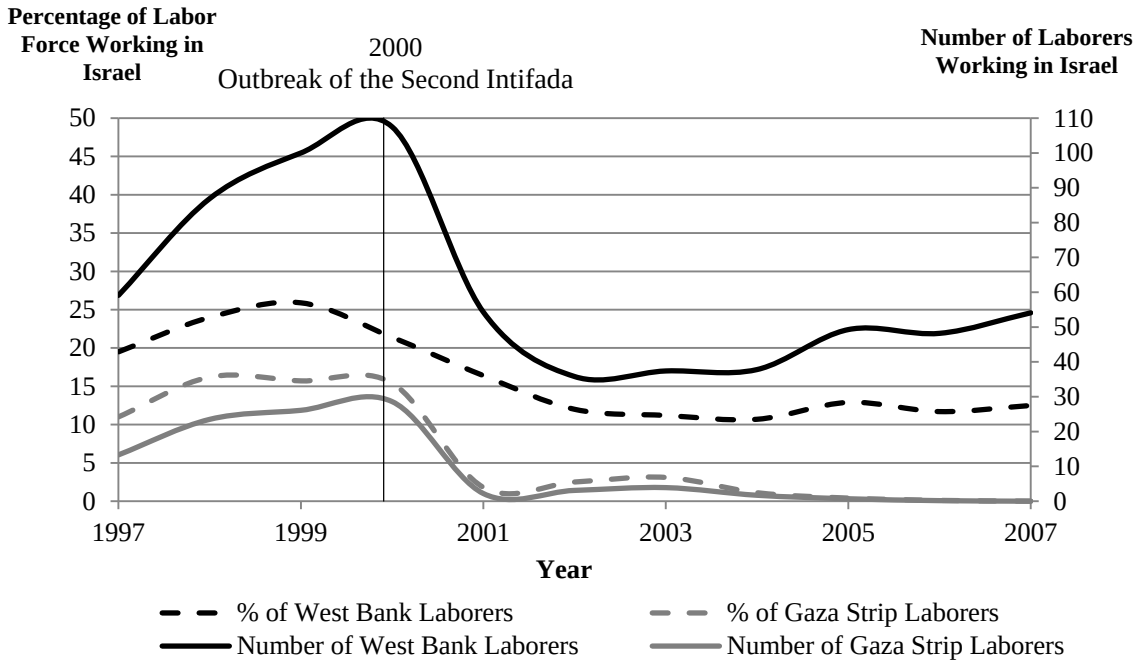
Notes and Sources: Numbers in parenthesis are standard deviations. All numbers before 2000 are derived from various issues of the Statistical Abstract of Israel from the Israeli Central Bureau of Statistics. All numbers after 1999 are derived from various issues of the Palestinian Central Bureau of Statistics' Palestinian Labor Force Survey. Numbers for the West Bank exclude East Jerusalem between 1968-93, but include East Jerusalem thereafter. 1994 figures are not available. Numbers include the underemployed but do not include unemployed. Rounding may cause summation errors.

Figure 5: Palestinian Labor in Israel (1970-2014)



Notes and Sources: All numbers before 2000 are derived from various issues of the Statistical Abstract of Israel from the Israeli Central Bureau of Statistics. All numbers after 1999 are derived from various issues of the Palestinian Central Bureau of Statistics' Palestinian Labor Force Survey. Numbers for the West Bank exclude East Jerusalem between 1968-93, but include East Jerusalem thereafter. 1994 figures are not available. Numbers include the underemployed but do not include unemployed.

Figure 6: Palestinian Labor in Israel (1997-2007)



Notes and Sources: All numbers before 2000 are derived from various issues of the Statistical Abstract of Israel from the Israeli Central Bureau of Statistics. All numbers after 1999 are derived from various issues of the Palestinian Central Bureau of Statistics' Palestinian Labor Force Survey. Numbers for the West Bank exclude East Jerusalem between 1968-93, but include East Jerusalem thereafter. 1994 figures are not available. Numbers include the underemployed but do not include unemployed.

Chapter 3: Modeling the Effects of Integrating More Palestinians into the Israeli Labor Market

In March 2016 the Israeli Knesset passed a bill that increased the penalty for Israeli employers who hire Palestinian workers illegally. According to the Palestinian Central Bureau of Statistics, there were 35,900 Palestinians working in Israel without a permit as of September 2015.[162] The new piece of legislation made hiring these Palestinian workers a felony for Israeli employers, and repeat offenders can now be hit with a 226,000 NIS fine and a four-year prison sentence.[163] This harsher punishment came only one month after the Security Cabinet approved a plan to increase the number of work permits given to West Bank Palestinians by 30,000.[164] Interestingly, these juxtaposed pieces of legislation both had the same goal: reduce the high rate of violence that has persisted since October 2015. One on hand, the military establishment recognizes that Palestinian labor in Israel is crucial to the economy of the West Bank and that increasing the number of Palestinians with permits may reduce violence through economic development. On the other, the presence of illegal workers poses a security threat because they are not subject to the formal security process of obtaining a permit. In both cases, the presence of West Bank Palestinians is seen as a security issue by Israeli authorities due to the history of violence in the conflict.

The agent-based dynamic equilibrium model in this chapter analyzes the effects of allowing more West Bank Palestinian Laborers (henceforth WBPL) to work in Israel

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[162] "Palestinian Labor Force Survey: Q3 2015," *Palestinian Central Bureau of Statistics*, Ramallah, West Bank, (2015).
[163] Lahav Harkov, "Higher Penalty for Hiring Illegal Palestinian workers Passes Final Vote," *The Jerusalem Post*, 15 Mar 2016, Web, Retrieved 3 Apr 2016, http://www.jpost.com/Israel-News/Politics-And-Diplomacy/Higher-penalty-for-hiring-illegal-Palestinian-workers-heads-to-final-vote-447943
[164] Harel, "Military Wants 30,000 More Palestinians."

given the current state of affairs in the Israeli-Palestinian conflict. My results show that Israel should not impose border closures on Palestinians with work permits unless the rate of violence reaches 4.2 fatalities per day over a given period of time, and Israeli economic production will not be reduced by violence even if Israel doubles the number of West Bank Palestinians working in Israel to above 200,000.

3.1 Commuters or Migrants? The Unique Case of Palestinians Working in Israel

Palestinian laborers working in Israel have been both migrants and commuters since partial integration of the two economies began post-1967; however the experiences of Palestinians working in Israel are more similar to that of migrants due to the wage differentials between Israel and the Palestinian Territories, the cultural differences and racial tensions experienced by Arabs in Israel, and the checkpoint system established after the failure of the Oslo Accords. Palestinians will therefor be classified as migrants in this analysis despite the fact that they commute to work. This connects the evaluation of Palestinian labor in Israel in this chapter to the broader field focusing on the effects of migration on economic development. Despite the conditions that make work in Israel more attractive, Palestinian migrants to the Israeli labor market are considered to be migrating by choice, whereas many migrants are forcefully displaced (as has been the case in the recent Syrian migrant crisis).[165] The issue of Palestinian labor in Israel is analyzed in this section according to how it relates to macroeconomic and microeconomic theories of migration, and Palestinian labor in Israel is most pertinent to the recent literature concerning the security issues associated with migration in the post-9/11 era of global terrorism.

[165] These Conditions Were Outlined In Detail In Chapter 1, Section 3- “A Long Term Impasse: The One-State Or Two-State Dilemma In The Economic Relationship Between Israel And The Palestinian Territories”

The first Age of Mass Migration (1870-1910) spurred some of the earliest studies on migration, including German-born geographer E.G. Ravenstein's series of seminal papers entitled "The Laws of Migration."[166] His studies sought to explain migration as completely as possible, though he admitted that this goal might have been too ambitious because "the laws of population, and economic laws generally, have not the rigidity of physical laws."[167] Today there exists a wide array of research on migratory issues within the economic literature, and migration economics is a growing subfield of economic study. As the study of migration economics has progressed, Ravenstein's observation has proven to be astute; studies on migration have reached many different conclusions on the determinants and effects of migration.

Modern research on migration and economic development has indeed grown to be quite prolific, but a single coherent theory of international migration has remained elusive. This is primarily due to the fact that migration is a complex issue that cannot be analyzed without incorporating a variety of disciplines, levels of analysis, and assumptions. Considering the fact that different approaches conceptualize causal processes at different levels of analysis — the individual, the household, the national, the international — different theories cannot necessarily be considered inherently incompatible.[168] It is therefore useful to consider how the established economic models of migration relate to the economic and security concerns that the movement of Palestinians invokes among many Israelis.

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[166] Everett S. Lee, "A Theory Of Migration" *Demography,* Vol.3, No.1, (1966), 47-57.
[167] E. G. Ravenstein, "The Laws Of Migration," *Journal Of The Royal Statistical Society*, Vol.52, (1889): 241-290.
[168] Massey et al., "Theories Of International Migration: A Review and Appraisal" *Population And Development Review,* Vol.19, No.3, (1993): 431-466.

Some of the oldest and most well known theories on international migration are neoclassical theories that were originally developed to explain labor migration in the process of economic development.[169] From a macroeconomic perspective, international migration is caused by the very same factors that drive internal migration within a country, namely the geographic differences in the supply and demand of labor (which dictates wages). From the macro perspective, labor and capital moves from areas of excess to areas lacking one or both of these resources in response to wage differentials and in response to differences in the rate of return to human capital. This perspective explains why Palestinians wanted to work in Israel after 1967; labor moves to where it will be most productive and therefore most financially rewarding.

As was the case in section three of chapter one, macroeconomic explanations execute analysis at the international or national levels with the assumption that the international labor system naturally moves towards equilibrium. As a result, this model is typically a better predictor of the demand for labor migration in host countries than actual migratory flows.[170] This is consistent in the Israeli-Palestinian case, because it is not immediately clear why more Palestinians aren't working in Israel if you simply look at the wage differentials and understand nothing about the politics and the history of violence between the two peoples. The macro perspective does not fully consider the

[169] Lee, "A Theory Of Migration." Gustav Ranis and J.C.H. Fei, "A Theory Of Economic Development" *American Economic Review*, Vol.51, (1961): 533-565. J. R. Harris and Michael P. Todaro, "Migration, Unemployment, And Development: A Two-Sector Analysis." *American Economic Review*, Vol.60, (1970): 126-142.
[170] Douglas S. Massey, "The Political Economy Of Migration In An Era Of Globalization," *International Migration And Human Rights: The Repercussions Of US Policy*, (2009): 25-43.

implications of the political economy of migration, and in many cases the decision-making processes of individuals who choose to migrate are not well modeled.[171]

From a microeconomic perspective, individual rational actors decide to migrate based on a cost-benefit analysis that leads them to believe that migration will yield a net return (typically in monetary terms) from movement.[172] In this model, people choose to move where they can be the most productive given their skills, but they must factor in all the costs of migration to determine whether or not the increased wages will outweigh the costs of migration. These costs are both monetary and intangible, and immigrants choose to migrate to international locations that have the best net future returns for their skills. Evaluating a Palestinian's decision to sneak into Israel without a permit would be an example of a microeconomic analysis of a decision-making process in the Israeli-Palestinian context. If caught, there are consequences (costs) for Palestinians who choose to obviate the formal permit and checkpoint system that regulates who is granted access to work and travel in Israel, but the large number of Palestinians working illegally in Israel in recent decades suggests that these costs are worth the risk for many Palestinians.[173] While the micro perspective models individual decision making processes quite well, this limits the scope of analysis to individual situations and works

[171] Lant Pritchett, Clifford G. Gaddy, and Simon Johnson, "Boom Towns And Ghost Countries: Geography, Agglomeration, And Population Mobility," *Brookings Trade Forum: Global Labor Markets?* (2006): 1-56.
[172] Larry A. Sjaastad, "The Costs and Returns Of Human Migration," *Journal Of Political Economy*, Vol.70S, (1976): 80-93. Michael P. Todaro, "A Model Of Labor Migration And Urban Unemployment In Less Developed Countries." *The American Economic Review*, Vol.59, (1969): 138-48. Michael P. Todaro And Lydia Maruszko,"Illegal Migration And US Immigration Reform: A Conceptual Framework." *Population And Development Review*, Vol.13, (1987): 101-114. Michael P. Todaro, *Internal Migration In Developing Countries*, Geneva: International Labor Office, (1976).
[173] Allan Borowski and Uri Yanay. "Temporary And Illegal Labour Migration: The Israeli Experience." *International Migration* Vol.35, No.4 (1997): 495-511.

much better as an ex post explanatory model than a predictive model of future migration.

In response to the politicization of migration in recent decades, some economists have focused their studies on the impacts of immigration on the labor market and overall economic performance of the receiving country,[174] and some have tried to determine if a certain type of people are likely to choose to migrate.[175] These studies begin with the assumption that migration increases the supply of labor in a particular area, which would increase competition in the local labor market and reduce the wages and numbers of employment opportunities for citizens of the migrant-receiving country. However, most studies have found that migrants typically do not have a negative effect on the labor market opportunities for citizens.[176] This has been the case in the Israeli-Palestinian context. Furthermore, most studies agree that the number of Palestinians working in Israel should be increased.[177] While many studies have concluded that migrants do not negatively affect the labor market opportunities for citizens, the literature concerning how migration may be affecting global economic output is not yet conclusive.

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[174] George J. Borjas, "The Labor Demand Curve Is Downward Sloping: Reexamining The Impact Of Immigration On The Labor Market," *The Quarterly Journal Of Economics*, Vol.118, No.4, (2003): 1335–1374. David Card, "Is The New Immigration Really So Bad?," *Economic Journal,* Vol.115, No. 507, (2005): F300–F323. Gianmarco Ottaviano and Giovanni Peri, "Rethinking The Effect Of Immigration On Wages," *Journal Of The European Economic Association*, Vol.10, No.1, (2012): 152–197.

[175] Daniel Chiquiar and Gordon H. Hanson, "International Migration, Self-Selection, And The Distribution Of Wages: Evidence From Mexico And The United States," *Journal Of Political Economy,* Vol.113, No.2, (2005): 239–280.

[176] C. Dustmann, A. Glitz, and T. Frattini, "The Labour Market Impact Of Immigration," *Oxford Review Of Economic Policy,* Vol.24, No.3, (2008): 477-494.

[177] *Employment Of Palestinians In Israel And The Settlements: Restrictive Policies and Abuse Of Rights,* Kav Laoved, (August 2012). Wifag Adnan, "Who Gets To Cross The Border?" Dorothee Flaig, Khalid Siddig, Harold Grethe, Jonas Luckmann, and Scott Mcdonald, "Relaxing Israeli Restrictions On Palestinian Labor: Who Benefits?" *Economic Modeling,* Vol.31, (2013): 143-150.

Recent literature has estimated that international barriers to migration restrict efficiency in the global labor market, which hinders poverty reduction and reduces global production to fractions of the potential production levels if more spatially optimized labor allocation could be achieved. This literature has observed that the free movement of goods and capital in the post-WWII era has not necessarily brought about the convergence between the living standards of rich countries and poor countries for which the traditional development agenda has hoped.[178] This does not mean that development outcomes have not improved since WWII in many places around the world, but this literature argues that allowing people to move from low-productivity places to high-productivity places is the most efficient policy tool for poverty reduction. Economist Michael Clemens has argued that a modest liberalization of current international migration laws would result in a net increase in global production by about one trillion dollars per year.[179] Unfortunately this research is relatively recent, and the liberalization of migration restrictions for which this literature argues remains highly unlikely given the current political economy of migration in most countries around the world.

In response to the efficiency literature on migration, some recent studies have sought to formalize anti-immigration discourse by arguing that migrants from poor countries carry with them the cultures and institutions that make their home country poor. In this model, global productivity is actually preserved by migration restrictions because migrants from poor countries carry with them whatever cultural or institutional

[178] Michael A. Clemens, "Economics And Emigration: Trillion-Dollar Bills On The Sidewalk?" *Journal Of Economic Perspectives*, Vol.25, No.3, (2011): 83-106. Michael A. Clemens, Claudio Montenegro, and Lant Pritchett, "The Place Premium: Wage Differences For Identical Workers Across The US Border," *Harvard Kennedy School, Faculty Research Working Papers Series,* (2009).
[179] Clemens, "Economics and Emigration"

factors make their home country poor. This is an old argument that has been put forth academically at least as far back as Julius Isaac in 1947 and as recently as Martin Wolf in 2015, but the argument that global efficiency gains would be offset is somewhat new.[180] These studies form the epidemiological case for migration restrictions; they posit that low productivity is something that spreads (like disease or pollution) and if enough low productivity is transmitted from poor countries to rich countries through migrants, then the efficiency gains from labor reallocation will be offset. However, the literature is inconclusive on the validity of this theory, and if this causal mechanism exists, it is difficult to determine to what extent immeasurable variables like culture influence productivity or economic development.[181] It is not impossible to rule out the epidemiological case for migration restrictions altogether, and unfortunately the dialogue concerning refugees and migrants from Muslim countries has reflected this argument in recent years.

Migration has been a security issue for quite some time now, at least in the United States and certainly in Israel, but the rise of militant Islamist groups has thrust security issues to the forefront of migration discussions, especially since 9/11. During the Cold War era, the West saw the Soviet Union as the source of terror and global instability, but in light of the end of the Cold War and the post 9/11 instability, militant Islamist networks like the Taliban, Al-Qaida, and most recently ISIS have become the focus of international security efforts. As was discussed in section four of chapter one, these fears are not unfounded. It is true that numerous attacks carried out by Islamist

[180] Julius Isaac, *Economics Of Migration*, Routledge, Trench, Trubner & Co. Ltd., London, UK, (1947): 110-140. Martin Wolf, "The Benefits Of Migration Are Questionable: Cosmopolitanism Is Incompatible With Our Organization Into Territorial Jurisdictions," *Financial Times,* 2015, September 29.
[181] Michael A. Clemens and Lant Pritchett, "The New Economic Case For Migration Restrictions: An Assessment," *NYU Development Research Institute: Working Paper No. 100,* (January 2016).

groups have caused devastating losses, but public backlash to such attacks is still very troubling.

Studies have found that perceived external threats typically result in an increased sense of nationalism or other forms of in-group solidarity, vilification of the perceived source of the threat, limitations on government actions that may support/protect members of the threatening group, and increased support for belligerent actions directed at the members of the threatening group.[182] These responses have been evident in the post 9/11 era, and such backlash has important consequences not only for members of Muslim communities around the world but also for the rights and freedoms of any person who may be perceived as a part of a threatening group in the future.[183] Given the evolving nexus between migration, economics, and security, the recent decision to increase the number of Palestinians working in Israel by 30,000 warrants a closer look at what the possible side effects of this policy may be.

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[182] Lewis Coser, *The Functions Of Social Conflict,* Free Press, New York, NY, (1956) Martha Cottam, *Images And Intervention: U.S. Policies In Latin America,* University Of Pittsburgh Press, Pittsburgh, PA, (1994). James L. Gibson, "A Sober Second Thought: An Experiment In Persuading Russians To Tolerate," *American Journal Of Political Science,* Vol. 42, (1998): 819-850. Stephen M. Sales And Kenneth E. Friend. "Success And Failure As Determinants Of Level Of Authoritarianism." *Behavioral Science,* Vol.18, No. 3 (1973): 163-172.

[183] Thomas Faist, "The Migration-Security Nexus: International Migration And Security Before And After 9/11," *Working Paper No. 9, Center On Migration, Citizenship And Development,* (2005). Judith Butler, *Precarious Life: The Powers Of Mourning And Violence,* Verso, London, UK, (2004).

3.2 Why An Agent-Based Dynamic Equilibrium Model?

The agent-based economic model employed in this study models Israeli-Palestinian production as a function of violence, which is an inherently social phenomenon. Agent-based economic models seek to analyze the intricate two-way feedback between microstructure and macrostructure that has been recognized within economics for quite some time.[184] Agent-based modelers achieve this by analyzing economies as evolving systems of autonomous interacting agents. This requires the modeler to construct an economy with an initial population of agents that are expected to act in a limited number of ways given the environment in which they operate. This approach is particularly powerful because it allows researchers to investigate how large-scale effects arise from the micro-level interactions of agents—after starting from an initial set of conditions— such as the current state of affairs in the Israeli-Palestinian conflict.[185]

The agent-based model in this study is an adaptation of the economic model found in "The New Economic Case for Migration Restrictions: An Assessment," by Michael Clemens and Lant Pritchett.[186] In their paper, Clemens and Pritchett assess a relatively recent argument in economic research known as the new economic case for migration restrictions. This theory suggests that migration restrictions might be preserving the efficiency of the global labor market by preventing mass redistribution of the global population. This theory assumes that without tight restrictions on migration,

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[184] Leigh Tesfatsion, "Agent-Based Computational Economics: Modeling Economics As Complex Adaptive Systems," *Information Sciences*, Vol.149, (2003): 263-269.
[185] Robert Axelrod, And Leigh Tesfatsion, "A Guide For Newcomers To Agent-Based Modeling In The Social Sciences," In *Handbook Of Computational Economics, Vol.2: Agent-Based Computational Economics*, Edited By Leigh Tesfatsion And Kenneth L. Judd, Elsevier, Amsterdam, The Netherlands, (2006): 1647-1659.
[186] Clemens and Pritchett, "The New Economic Case"

migrants from poor countries may transmit low productivity (measured as Total Factor Productivity) to rich countries. If this were the case, mass migration would offset the efficiency gains from the spatial reallocation of labor from low to high-productivity places.

To evaluate whether or not migrants bring their productivity determinants with them, their paper proposes a model of dynamically efficient migration using three parameters: transmission, assimilation, and congestion. Transmission measures the degree to which origin country Total Factor Productivity (TFP) is embodied in migrants, assimilation measures the degree to which the productivity determinants of migrants become like the productivity determinants of citizens of the home country over time, and congestion measures the degree to which transmission and assimilation change according to the number of migrants in the host country. Their paper finds that the current evidence about these parameters points to a relaxation of international migration restrictions in all scenarios.

Clemens and Pritchett analyze the effects of migration on cumulative production between a home country and a migrant-sending country; in the same manner, this study analyzes cumulative production between Israel and the West Bank, but in the Israeli-Palestinian context the primary concern is not that Palestinians from the West Bank will bring low productivity to Israel. The concern for many Israelis is that more freedom of Palestinian movement will bring more violence upon Israel. Clemens and Pritchett acknowledge that the three parameters in their model are somewhat unknown and may be influenced by a variety of factors, some of which they examine. However, in their analysis they don’t take into account that increased immigration could lead to more

crime and/or more violence. Crime perpetrated by immigrants, especially violent crime, may lower TFP in the migrant-receiving country by eroding trust within society. They likely omitted this variable because migrants are less likely to commit crime or engage in violence in most cases, but this omission might also be due to the fact that migrants rarely want to move into an area of conflict.[187]

Clemens and Pritchett's acknowledgement that the parameters in their model can be influenced by a variety of factors, when combined with the absence of an evaluation of crime and/or violence in their study, makes their economic model adaptable to the Israeli-Palestinian context yet incomplete for the particular factors at play in this context. The intimate proximity of Israelis and Palestinians and the commuter/migrant nature of WBPL require my model to consider social interactions more deeply than did Clemens and Pritchett while analyzing the effects of violence on TFP.

[187] Lesley Williams Reid, Harald E. Weiss, Robert M. Adelman, and Charles Jaret, "The Immigration–Crime Relationship: Evidence Across Us Metropolitan Areas." *Social Science Research* Vol.34, No.4 (2005): 757-780.

3.3 Assumptions, Parameters, and Reasoning

The economic model in this study analyzes the nexus between labor mobility, economic development, and violence in the Israeli-Palestinian conflict by incorporating the available research on these key issues. Rather than assessing the degree to which Palestinian workers affect the efficiency of the Israeli-Palestinian labor market, this model analyzes the degree to which TFP may decrease as a result of violence. The model accomplishes this by analyzing how the recommended number of WBPL permitted to work in Israel changes at different rates of violence. At its core, this model is concerned with the evolution of violence as a social-behavioral norm given an increase in the number of WBPL permitted to work in Israel, but this evolution of social-behavioral norms is modeled with respect to the effect of violence on economic productivity.

The assumptions for the agents in this model are as follows:

1. The conflict has high economic costs (in terms of expenditures and in terms of unrealized potential growth) for Israelis and Palestinians due to the negative effects of violence on economic development.[188]
2. Palestinian violence against Israel is correlated with economic development (violence increases as economic conditions worsen).[189]
3. Israel's labor restrictive policies harm the Palestinian economies by increasing unemployment, which has been correlated with increased violence.[190]

[188] Macartan Humphreys, "Economics And Violent Conflict," *UNICEF Program On Humanitarian Policy And Conflict*, (2003). Anthony et al., *The Costs Of The Israeli-Palestinian Conflict*
[189] Basel A. Saleh, "An Econometric Analysis Of Palestinian Attacks." Solveig Hillesund, "A Dangerous Discepency: Testing The Micro-Dynamics Of Horizontal Inequality On Palestinian Support For Armed Resistance," *Journal Of Peace Research*, Vol.52, No.1, (2015), 76-90.
[190] Edward A. Sayre, "Labor Market Conditions, Political Events."

4. Allowing more WBPL to work in Israel will benefit the West Bank economy through increased capital availability and will benefit the Israeli economy through increased production. Both groups would benefit from reduced violence.[191]
5. Permitting more WBPL to work in Israel and allowing for more freedom of movement within the West Bank can increase support for conciliatory measures.[192]
6. A partial relaxation of Israel's control over Palestinian mobility is politically feasible.[193]
7. The perception that peace may be possible results in increased economic growth through increased investments and lower rates of destruction of human and physical capital by violence.[194]
8. Every day interactions between Palestinians and Israelis, when they occur under optimal conditions, have the potential to reduce the perception that members of the other group are a threat and therefore increase support for peace.[195]

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[191] Siddig, Khalid, Dorothee Flaig, Jonas Luckmann, And Harald Grethe, "A 2004 Social Accounting Matrix For Israel: Documentation Of An Economy-Wide Database With A Focus On Agriculture, The Labour Market, And Income Distribution," (2011).
[192] Daphna Canetti, And Nancy Hite, "A Checkpoint Effect? Evidence From A Natural Experiment On Travel Restrictions In The West Bank," *American Journal Of Political Science*, Vol.58, No.4, (2014): 1006-1023.
[193] Harel, "Military Wants 30,000 More Palestinians."
[194] Abadie and Gardeazabal, "The Economic Costs Of Conflict." Saumitra Jha and Moses Shayo, "Valuing Peace: The Effects Of Financial Market Exposure On Votes and Political Attitudes," *Stanford University Graduate School Of Business: Research Paper No.3389*, (Jan 2016). Asaf Zussman, Noam Zussman, And Morten Ørregaard Nielsen, "Asset Market Perspectives On The Israeli–Palestinian Conflict." *Economica* 75, No.297, (2008): 84-115.
[195] Justin T. Pickett, Thomas Baker, Christi Metcalfe, Marc Gertz, and Rose Bellandi, "Contact And Compromise Explaining Support For Conciliatory Measures In The Context Of Violent Intergroup Conflict." *Journal Of Research In Crime And Delinquency*, (2014).

These assumptions form the initial set of conditions of the Israeli and West Bank economies in the model, and these assumptions are informed by a plethora of scholarly research beyond even the previous chapters in this study and the cited material. However, it is important to consider the full range of possibilities when analyzing the effects of increasing the number of WBPL working in Israel. Therefore this model relates these assumptions—and their counter-arguments—through three parameters of social behavior:

- **Propensity for Violence (*v*) -** the degree to which increased freedom of movement for Palestinians leads to increased violence. More freedom of movement for Palestinians would increase the number of interactions between the two groups of people, which may produce more violence depending on (among other things) the attitudes of Israelis and Palestinians towards each other. Higher levels of violence would lower economic output in the short term by decreasing the TFP associated with trust between the two groups.
- **Pacification (*n*)-** the degree to which Palestinians reduce their propensity for violence over time due to the positive effects of economic development in the West Bank *and* the degree to which Israelis reduce their perception of Palestinians as threatening due to the positive influence of high quality interactions. Put simply, this measures the level of trust between the two groups. This measure is embodied in Palestinians, as their economic development and the interactions that are produced by their increased freedom of movement are the primary determinants of intergroup perceptions and the propensity for

violence. Relations between the two groups pacify more quickly at lower levels of violence.

- **Agitation (*r*)-** the degree to which the positive effects of economic development and peaceful interactions are diminished by violence between Palestinians and Israeli military personnel or other Israelis (during the commute to work or in other daily activities). This also accounts for the influence of highly ideologically motivated Palestinians who remain committed to violent revolt despite the impacts of economic development, and also accounts for the influences of the community in which individual Palestinian laborers live, as certain areas of the West Bank are more or less likely to support violence against Israel.

These parameters differentially affect the total output of the Israeli and West Bank economies by increasing or decreasing TFP, which is a function of violence in the model. They also affect the number of WBPL that should be permitted to work in Israel. I seek to find the number of WBPL that should be allowed to work in Israel given different values for these three parameters.

Allowing Palestinians to work in Israel increases overall Israeli-Palestinian production by reallocating labor from low-to-high marginal product of labor, and allowing more Palestinians to work in Israel produces better economic development outcomes in the West Bank through increased wages, which should lead to a reduction in violence. However, it is important to consider Israeli concerns that giving Palestinians more freedom of movement might lead to more violence, which would lower economic output. More importantly, if giving Palestinians more freedom of

movement truly is a security risk, then the resulting lower economic output is not the primary concern. The potential for the destruction of capital, or even more, the potential for loss of human life, is much more worrisome. The model in this study is therefore of significant importance, because it will illuminate whether integrating more WBPL into the Israeli labor force is more likely to result in increased violence or more likely to interrupt the established cycle of violence through economic development.

Before jumping into the mathematics it is important to understand how the model functions as an agent-based model of social interaction, which should make the connection between economic development, violence, and production more clear. After this is understood, the mathematical model will be explained intuitively with reminders of how the previously explained assumptions and parameters relate to each other in the equations. Finally, the model will be used to estimate how many WBPL can be permitted to work in Israel (without reducing Israeli TFP) given different vales for the three parameters.

3.4 Towards an Economic Model of Social Interaction

The General Aggression Model (GAM) explains how economic development can reduce violence by altering the social interactions between Israelis and Palestinians. The GAM has been in use since 1995 when Dr.'s Craig Anderson, William Deuser, and Kristina DeNeve formulated it to analyze the correlation between high temperatures and violence, and it has since been used to explain the cognitive processes behind many different types of aggression and violence.[196] Dr. Anderson of Iowa State University and Dr. Brad J. Bushman of Ohio State University have championed much of the

[196] Craig A. Anderson, William Deuser, And Kristina Deneve, "Hot Temperatures, Hostile Affects, Hostile Cognition, And Arousal: Tests Of A General Model Of Affective Aggression," *Personality and Social Psychology Bulletin,* Vol.21, Iss.5, (1995): 434-448.

research that utilizes the GAM.[197] The GAM integrates a wide variety of psychological and sociological theories into a single framework for understanding human aggression and violence.[198] This has established the GAM as a framework for scholars to test hypotheses of aggression and violence that is "more expansive than any other social-cognitive model."[199] The Israeli-Palestinian conflict is cited as an example of a cycle of violence according to the GAM.

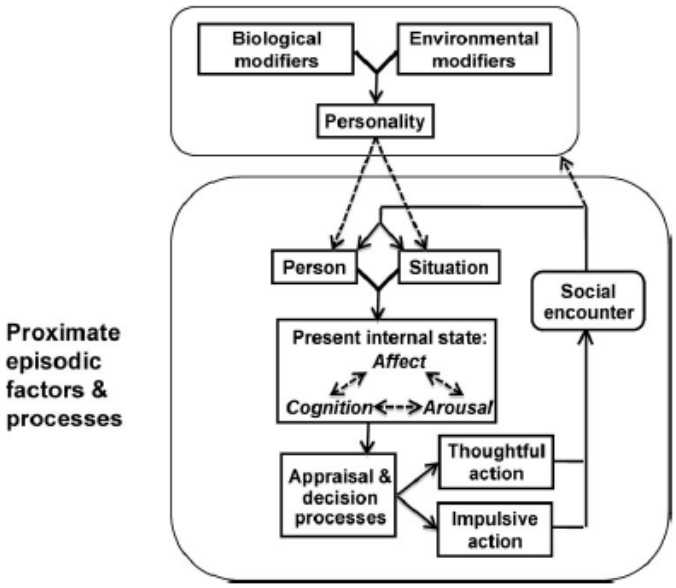
According to the GAM, breaking the violence escalation cycle in the Israeli-Palestinian context "would begin by encouraging citizens of Israel, Palestine, or both countries to perceive that the outcome of their country's retaliation is both important and unsatisfying." Certainly there are people within both Israel and the Palestinian Territories that consider retaliatory violence both problematic and unsatisfying. Unfortunately these people have been either too few or too powerless when it comes to controlling the violence of their countrymen. If one group, either the Palestinians or the Israelis, were to truly relent and opt for widespread non-violence, then GAM predicts that an upward spiral of peace would begin as trust grows between the two groups. Previous sections of this study have shown that Palestinian economic development reduces (or at the very least prevents the proliferation of) violence, which means that permitting more WBPL to work in Israel may be the catalyst needed to initiate an upward spiral of peace.

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[197] Craig A. Anderson and Brad J. Bushman, "Human Aggression," *Annual Review Of Psychology*, Vol.53, Iss.1, (2002): 27-51. Craig A. Anderson and Brad J. Bushman, "Effects Of Violent Video Games On Aggressive Behavior, Aggressive Cognition, Aggressive Affect, Psychological Distrust, Physiological Arousal, and Prosocial Behavior: A Meta-Analytic Review Of The Scientific Literature," *Psychological Science*, Vol.12, Iss.5, (2001): 353-359.
[198] Nathan C Dewall, Craig A. Anderson, and Brad Bushman, "The General Aggression Model: Theoretical Extensions To Violence," *Psychology Of Violence*, Vol. 1, No. 3, (2011): 245-258.
[199] Ibid, 246

The figurative representation of the GAM in Figure 7 helps to explain how economic development can affect social interactions between Palestinians and Israelis. Given assumption number 4 (listed above), increasing the number of WBPL working in Israel will alter the appraisal and decision-making processes of Palestinians as economic development increases the opportunity-costs associated with violence. This should lead to thoughtful action (read non-violence) rather than impulsive action (read violence) during social encounters with Israeli security personnel and/or Israeli civilians. As more and more Palestinians replicate this thoughtful action, Israelis will begin to view Palestinians more favorably and will therefor be less likely to engage in impulsive action during social encounters. In this scenario, the established cycle of violence is interrupted for a cycle of peace and goodwill between the two peoples that is based upon growing trust. Unfortunately, the opposite of this interaction has been all-too-common in the Israeli-Palestinian conflict, and compulsive action has led to escalating cycles of violence of varying magnitudes over the years.

Figure 7: The General Aggression Model (GAM)



3.5 Modeling the Key Parameters

It is important to identify the production functions of the Israeli and the West Bank economies given the current state of affairs in order for the parameters in the model to make sense. Output in Israel is $\boldsymbol{Y = \bar{A}L^{\alpha}}$**,** where **L** is the labor stock in Israel, $\boldsymbol{\bar{A}}$ is TFP in Israel, and $\boldsymbol{\alpha}$ is the labor share of income $\boldsymbol{(0 < \alpha < 1)}$. Output in the West Bank is $\boldsymbol{Y' = \underline{A}L'^{\alpha}}$**,** where $\boldsymbol{L'}$ is the labor stock in the West Bank, $\boldsymbol{\underline{A}}$ is TFP in the West Bank, and $\boldsymbol{\alpha}$ is the labor share of income $\boldsymbol{(0 < \alpha < 1)}$ in the West Bank. Note that $\boldsymbol{\bar{A} \gg \underline{A}}$ due to the long-term effects of Israel's economic policies in the West Bank and the negative effects of protracted conflict, which has disproportionately affected Palestinians economically.[200] As a result of the disproportional level of development, many Palestinians have been both commuters and migrants to Israel since they gained access to the Israeli labor market in the aftermath of the 1967 Six-Day War.

Suppose that the Israeli government decides to increase the number of WBPL allowed to work in Israel at a constant rate over a given period of time in an attempt to increase the amount of capital flowing into the West Bank. Each additional WBPL permitted to work in Israel theoretically represents a risk for violence, which would lower the TFP associated with trust between Israelis and Palestinians if this risk is actualized. Each year a fraction $\boldsymbol{(0 < n < 1)}$ of these newly permitted WBPL are pacified as a result of the positive economic effects of earning higher wages in Israel. As more West Bank Palestinians are pacified through the positive effects of economic development, the risk for violence during social interactions between all Israelis and

[200] The Various Reasons That $\bar{A} \gg \underline{A}$ Was Discussed In Depth In Chapter 1, Section 2 (A Long Term Impasse: The One-State Or Two-State Dilemma In The Economic Relationship Between Israel And The Palestinian Territories)

Palestinians is non-linearly reduced. Additionally, as more and more Israelis have high-quality interactions with Palestinians, Israeli trust for Palestinians grows and Israelis will be less likely to choose impulsive actions. The relationship between the newly permitted WBPL and the pacification rate is represented by $\hat{L}$ in equation **(1),** where the new WBPL commuting to work in Israel over a given period of time ($\boldsymbol{P_t}$**)** constitute a stock of labor that may or may not perpetrate violence against Israelis.

Eq. (1)

$$\hat{L} = P_t + (1-n)P_{t-1} + (1-n)^2 P_{t-2} + \cdots$$

Arab-Israelis living in Israel constitute a stock of Palestinians who are highly unlikely to engage in violence and are therefore excluded from $\boldsymbol{\hat{L}}$**.** In other words, Arab-Israelis are classified as previous "migrants" who have assimilated and therefore do not contribute to the stock of laborers that may perpetrate violence at a given point in time after the policy change. This is a fairly unique case (in the post-WWII era) in which an indigenous group of people has assimilated to a new state created by migrants and have assumed a role in society that is similar to the low-skilled migrants living in other countries.[201] One implication of this is that allowing more WBPL to work in Israel likely will not lead to more violence perpetrated by Arab-Israelis. There have been rare incidents in which Arab-Israelis have carried out attacks against Israeli citizens, but only 42 of 801 fatalities (0.05%) from January 2009 to October 2015 occurred within

[201] Sammy Smooha, "Minority Status In An Ethnic Democracy: The Status Of The Arab Minority In Israel," *Ethnic And Racial Studies*, Vol.13, No.3, (1990). Mtanes Shehadeh and Raja Khalid, "Impeded Development: The Political Economy Of The Palestinian Arabs Inside Israel," In *Decolonizing Palestinian Political Economy: De-Development And Beyond*, Palgrave Macmillan, London, UK, (2014).

Israeli territory.[202] An implication of this statistic is that the WBPL who had been travelling to work in Israel during that period were also not very likely to have perpetrated violence within Israel. However, the commuter nature of WBPL means that people who work in Israel or their relatives could have perpetrated violence in the West Bank. This means it is unclear whether allowing more West Bank Palestinians to work in Israel will lead to an increase or reduction of overall violence in Israel and the West Bank, though much of the literature suggests that such a policy intervention will reduce violence. Unfortunately, this makes the measurement of the Pacification Rate ***(n)*** rather difficult (which is discussed later). Nevertheless, WBPL are the primary agents for analysis in the model, and it is their rate of naturalization that will either decrease or increase TFP according to the degree of violence that results from their increased freedom of movement (regardless of whether that violence occurs in Israel or the West Bank).

Suppose the number of WBPL travelling to work in Israel, $\boldsymbol{p \equiv P_t / L_t}$ is increased at a constant rate over a given period of time. The fraction of Israel's labor stock composed of WBPL who may or may not be pacified and therefore may or may not be disposed to perpetrate violence **($0 < \phi < 1$)** is…

Eq. (2)

$$\phi \equiv \frac{\hat{L}_t}{L_t} \equiv \int_0^{\infty} p(1-n)^t \; dt \approx \frac{p}{n}$$

[202] "Fatalities After Operation Cast Lead," *B'tselem- The Israeli Information Center For Human Rights In The Occupied Territories*, Web, Retrieved 1 Mar 2016, Http://Www.Btselem.Org/Statistics/Fatalities/After-Cast-Lead/By-Date-Of-Event.

Note that ***(n)*** still represents the fraction of newly permitted WBPL that are pacified, so a higher ***(n)*** score will result in a lower ϕ.[203] This means that as ϕ asymptotically approaches 0, the level of violence that results from allowing more Palestinians to work in Israel should also approach 0. This is due to how the other two parameters, the Palestinian Propensity for Violence (***v)*** and the Agitation score (***r***), relate to TFP in the Israeli and West Bank economies.

Increasing the number of Palestinians legally working in the Israeli labor force changes TFP in Israel to…

Eq. (3)

$$\tilde{A} \equiv \overline{A} - (\overline{A} - \underline{A}) \frac{v\phi}{1 - r\phi}$$

where **($0 < v < 1$)** is the collective propensity for violence embodied in each WBPL travelling to work in Israel and (**$r \leqslant 0$**) is the degree to which Palestinians who aren't yet pacified non-linearly reduce cumulative TFP through the violence that may result from their increased interaction with Israelis. Note that without including Agitation **($r=0$)**, violence would be a function of the pre-liberalization attitudes of Israelis and Palestinians towards each other. This would reduce Israeli TFP during liberalization (**$\overline{A}$**) to a weighted average of pre-immigration TFP in Israel and the West Bank with weight (**$0 < v\phi < 1$**). This is however unrealistic in this context, as this would imply totally free movement for the newly permitted WBPL laborers without impediment by barriers or checkpoints, which would result in violence to the degree that pre-liberalization attitudes are hostile and result in impulsive (read violent) action. This is unrealistic because Israel is not going to dismantle all border and security measures.

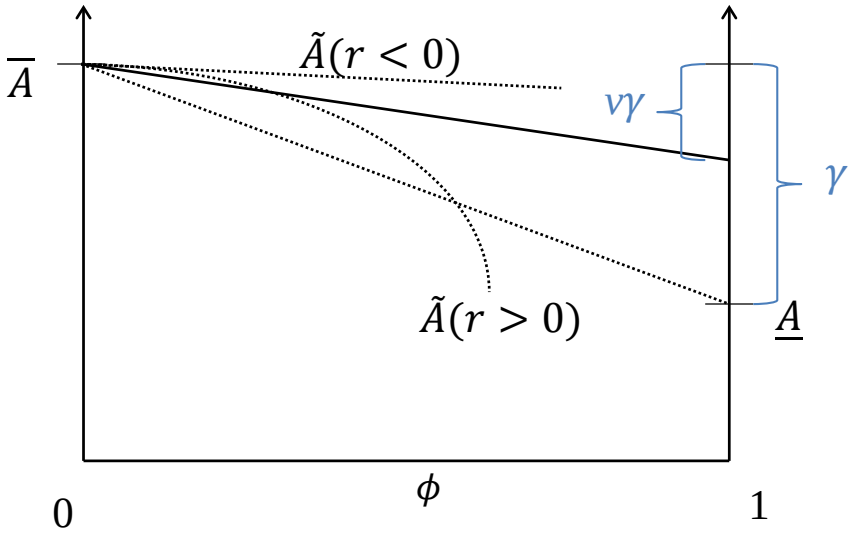
Figure 8 shows how Israeli TFP ($\overline{\boldsymbol{A}}$) is shaped by the fraction of newly permitted WBPL who may or may not be disposed to perpetrate violence with more freedom of movement. There, $\boldsymbol{\gamma \equiv \overline{A} - \underline{A}}$ denotes the gap between Israeli and West Bank TFP; the production lines denote the effect of liberalizing Palestinian movement restrictions and integrating more Palestinians into the Israeli labor force on Israeli TFP given different agitation ***(r)*** values. Note that if $\boldsymbol{r > 0}$, TFP is reduced at a much more drastic rate than it is increased if $\boldsymbol{r < 0}$. In other words, if violent interactions result from increased freedom of movement for Palestinians, TFP is reduced quickly, but if very few or no violent interactions occur, then TFP is slightly increased. This is important because it tempers expectations and establishes a long-term time horizon (think years instead of months) for the positive effects of economic development in the West Bank to be observed, but a short-term time horizon for the negative effects of violence to be observed in Israel. This is intuitive, as it is much easier to see if the number of fatalities increases in the short-term but a long-period in which violence is slowly reduced may not be noticed as easily. This is consistent with the literature on how institutions and norms affect TFP.

Clemens and Pritchett note that most models of norms and institutions exhibit multiple equilibria with high transition barriers between equilibria. In other words, once a norm is established, such as the cycle of violence in the Israeli-Palestinian conflict, it is difficult to break that norm. However, they also note that norms and institutions are ontologically social, which renders the application of the GAM as a model of the relationship between economic development and violence ideal for this context. In Figure 8, the benefits and/or consequences are more pronounced as you move right

across the horizontal axis, as moving right represents a higher proportion of Palestinians working in Israel.

In order to assess the relative benefits and/or consequences of the proposed policy change, it is necessary to evaluate how the policy may affect TFP for both economies. The first term of **(4)** is the gain to Israeli production that should result from the increase in labor supply. The second term is the loss to West Bank production from the departing labor and the level of violence that may result from the increased interactions occurring during the commute of the new WBPL. These definite integrals must be evaluated with respect to the populations of the two economies and must account for the increased number of WBPL in the Israeli workforce.

Figure 8: Israeli Total Factor Productivity as a Function of the Agitation Rate *(r)*



Therefore, at time ***t*** the population of Israel is $\boldsymbol{L_t = L_0(1+p)^t}$ and the gain in production per period between Israel and the West Bank due to decreased violence is…

Eq. (4)

$$\int_{L_0}^{L_0(1+p)^t} \overline{A}\alpha L_t^{\alpha-1} dL_t - \int_{\overline{L}-L_0(1+p)^t}^{\overline{L}-L_0} \underline{A}\alpha L_t^{\alpha-1} dL_t$$

where $\overline{\boldsymbol{L}}$ is the combined labor supply in both Israel and the West Bank. This equation **(4)** forms the starting point to finding the optimal number of WBPL to permit to work in Israel. On one hand, you don't want to increase the number of WBPL so drastically that TFP in Israel and the West Bank is at risk of a large reduction if violence increases. On the other, you don't want to increase the number of WBPL so minimally that the positive effects of economic development have little effect on the resulting level of violence because the actual number of Palestinians affected by increased wages is too small. The optimal policy will maximize production between the two economies by integrating the right amount of WBPL over the best period of time. Unfortunately, this equation **(4)** is cumbersome and difficult to calculate, so it would be beneficial to reduce this to a more wieldy equation.

Suppose that at time 0 ***(t=0),*** the initial population of the West Bank is a multiple $\boldsymbol{\beta}$ times the initial population of Israel, thus $\boldsymbol{\beta \equiv \left(\frac{\overline{L}}{L_0}\right) - 1 > 1.}$ The solution to **(4)** takes a tractable form using the first-order Taylor approximation that, for any *Z* and small *x*, $\boldsymbol{(Z \pm (1+x)^t)^\alpha \approx (Z-1)^\alpha \pm (Z-1)^{\alpha-1}\alpha x t}$. Thus, the gain per period between Israel and the West Bank due to decreased violence (4) reduces to…

Eq. (5)

$$\alpha t p L_0^\alpha (\overline{A} - \beta^{\alpha-1}\underline{A})$$

Unfortunately, accounting for the elasticity of labor demand means that increasing the number of Palestinian laborers working in Israel reduces the TFP of Arab-Israelis,

foreign laborers, and other laborers living in Israel who compete for similar jobs. The reduction in TFP across the entire Israeli economy is greater to the degree that the increase in WBPL working in Israel leads to an increase in violence. However it is also expected that in the long-term the benefits of a widespread reduction in violence will increase TFP to a greater degree than the increased competition for jobs will reduce TFP in the short-term.

The per-period gain in **(4)** corresponds to the green area in Figure 9. In that figure, the horizontal axis is $\overline{L}$. The marginal product of labor is $\boldsymbol{Y_L}$ in Israel, and the labor supply in Israel is read right-to-left from origin **O**. The marginal product of labor is $\mathbf{Y'_L}$, in the West Bank, and labor supply in the West Bank is read left-to-right from origin **O'.** As labor moves from the West Bank to Israel the dotted vertical line shifts to the left.

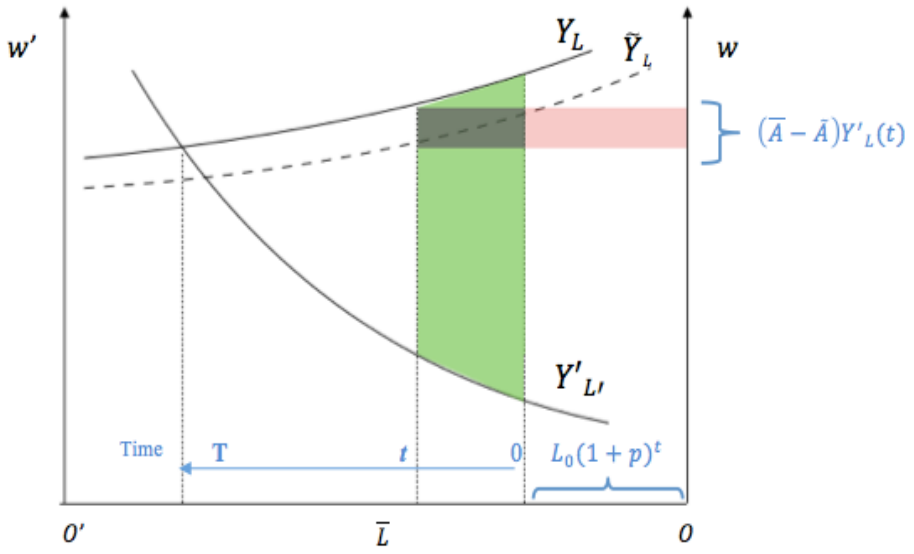
This model requires a slightly different measure of TFP than is typically used. TFP is normally calculated as a residual and is tracked by observing the change in TFP over time. Since this study seeks to estimate the impact of integrating more WBPL into the Israeli labor force, Israel's current TFP can be used as a normalized baseline for analysis.

Normalizing TFP in Israel $(\boldsymbol{\overline{A} \equiv 1})$ makes the loss-per-period…

Eq. (6)

$$\left(1 - \tilde{A}\right)\alpha L_t^{\alpha-1} \cdot L_t$$

Figure 9: The Dynamic Gains and Losses in Production Resulting from Increasing the Number of WBPL Working in Israel



This is the red area in Figure 9. The time to complete the transition towards pacification between Israelis and the WBPL commuting to Israel, thereby equalizing the marginal product of labor, as shown in Figure 9, is **T**. The dynamically efficient level of Israeli liberalization of Palestinian labor mobility restrictions ***(p*)*** sets the present value benefits equal to the present value costs. In other words, the dynamically efficient rate is the point in time at which the negative economic effects of violence offset the positive economic effects of integrating more West Bank Palestinians into the Israeli labor force. Using equations **(4)** and **(6)**, it is now possible to calculate the dynamically efficient rate as follows:

Eq. (7)

$$\int_0^T \int_{L_0}^{L_0(1+p)^t} \left(\alpha L_t^{\alpha-1} - \underline{A}\alpha\left(\bar{L} - L_t\right)^{\alpha-1}\right) dL_t e^{-\rho t} dt$$

$$= \int_0^T (1 - \tilde{A})\alpha L_t^{\alpha-1} \cdot L_t e^{-\rho t} dt$$

Fortunately, this unwieldy equation can be simplified utilizing the Taylor-Approximation in equation **(5)** and over a sufficiently long transition time **(T)**, to the condition: $\mathbf{m} \cdot \left(\frac{\alpha L_0^{\alpha}}{\rho^2}\right)\left(1 - \beta^{\alpha-1}\underline{A}\right) = \left(\frac{\alpha L_0^{\alpha}}{\rho}\right)\left(1 - \widetilde{A}\right)\left(\frac{1+\alpha p}{\rho}\right)$**.** Using this approximation and equations **(2)** and **(3),** the first-order approximation of the dynamically efficient level of Israeli-Palestinian labor integration is…

Eq. (8)

$$p^* = \frac{n - \rho v \tilde{\gamma}}{\alpha v \tilde{\gamma} + r}$$

where $\tilde{\gamma} = \frac{1-\underline{A}}{1-\underline{A}\beta^{\alpha-1}}$ is a modified measure of the initial gap in productivity between Israel and the West Bank as is displayed graphically in Figure 8 ($\frac{d\tilde{\gamma}}{d\gamma} > 0$).

The determinants of optimal integration in equation **(8)** are intuitive given the assumptions in the model. The integration rate that maximizes cumulative economic production between Israel and the West Bank is greater to the extent that the Pacification score **(*n*)** is higher. In other words, as the Pacification score (***n)*** increases, more West Bank Palestinians can be allowed freedom of movement within the West Bank and more WBPL can be allowed to work in Israel. Optimal migration is lower to the extent that:

1. The actual level of violence is higher due to higher initial Propensity for Violence ***(v)***
2. The initial productivity gap between Israel and the West Bank, $\boldsymbol{\gamma}$, is higher
3. The discount rate $\boldsymbol{\rho}$ is higher
4. Agitation **(*r*)** effects are higher, leading to high violence levels

The corresponding optimal transition time ***T***, inversely related to $\boldsymbol{p}^*$ is…

Eq. 9

$$T^* = \frac{\alpha v\tilde{\gamma} + r}{n - \rho v\tilde{\gamma}}(\beta - 1 - (1 - \gamma)^{\frac{1}{1-\alpha}}$$

The determinants of $\boldsymbol{T}^*$ are also intuitive. In addition to the inverse of those listed for $\boldsymbol{p}^*$, the optimal transition time is longer to the extent that the population of the West Bank constitutes a larger proportion of the cumulative population of Israel and the West Bank. As measured by the model, the optimal transition time is longer when $\boldsymbol{\beta}$ is larger and it is also longer when the disparity in economic outcomes between Israel and the West Bank is particularly stark (larger $\boldsymbol{\gamma}$). In other words, the optimal transition time lengthens as the West Bank population continues to grow relative to the Israeli population and as economic conditions worsen for Palestinians.

3.6 Calibrating the Model on Current Evidence

The model can be used to analyze a number of different variables, but I am concerned with the dynamically efficient level of Israeli-Palestinian labor integration: the actual number of WBPL that can be permitted to work in Israel without reducing Israeli TFP (which is represented by equation **(8)**). Some of the parameters in the expression for optimal integration **(8)** are well known, while others are unknown. Calibrating the model— as I attempt to do below— will be very difficult. Clemens and Pritchett present evidence that there isn't a strong correlation between the number of migrants in a country's labor force and TFP, which suggests that there are many other factors at play and that causal mechanisms are not well defined. Calibrating the model also requires a wide range of data specific to this context, and some of the data needed is unavailable in the Israeli-Palestinian context. The focus of the following sections is to define the parameters in the model as plausibly as possible given available data and

research. The known parameters of the model are explained, and the unknown parameters are given values based on three rational scenarios: best-case scenario, worst-case scenario, and most likely scenario. These scenarios act as counterfactuals, and they establish bounds for the expected effects of increasing the number of WBPL working in Israel given the previously outlined assumptions that are implicit in the mathematical model. The values calculated for the unknown parameters in the model will be based on the best research and data available in order to illuminate the number of WBPL that can be permitted to work in Israel before Israeli TFP is reduced. Table 7 summarizes the known parameters, which are as follows.

As of September 2015, there were 113,200 WBPL working in an Israeli labor force comprised of 3,881,000 laborers, thus $\boldsymbol{p=0.029}$ (according to $\boldsymbol{p \equiv P_0/L_0}$).[204] In other words, approximately 0.03% of the Israeli labor force is comprised of WBPL that pose a threat for violence and thereby lower productivity by reducing interpersonal trust. The worldwide gap between rich-and-poor-country productivity, after accounting for differences in human capital, is roughly $\boldsymbol{\gamma = 0.8}$.[205] There are currently no known studies that measure this gap between Israel and the West Bank, and calculating this gap is beyond the scope of this study. I use $\boldsymbol{\gamma = 0.8}$ for my measure of the productivity gap between Israel and the West Bank, but future studies using my method would benefit by determining this gap more precisely. Since initial Israeli TFP is normalized $\boldsymbol{(\overline{A} \equiv 1)}$, this implies that West Bank TFP is 80% lower $\boldsymbol{(\underline{A} \equiv 0.2)}$ due to the differential levels

[204] 113,200 Palestinians working in Israel breaks down as follows: 65,100 with a permit, 35,900 without a permit, and 12,200 with Israeli ID or a foreign passport. Number of WBPL working in Israel found in: "Palestinian Labor Force Survey: Q3 2015," *Palestinian Central Bureau of Statistics*, Ramallah, West Bank, (2015). Israeli labor force numbers found in: "Labor Force Survey Data, February 2016," *Israeli Central Bureau of Statistics*, Jerusalem, Israel (2016).

[205] Robert E. Hall, and Charles I. Jones, "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *Quarterly Journal Of Economics*, Vol.114, No.1, (1999): 83–116.

of economic development in both areas.[206] Relative to the labor force of the West Bank, the combined labor force of Israel and the West Bank in 2014 was $\boldsymbol{\beta = 2.98}$.[207] These are the numbers that I use in my calculations of the modified productivity gap, which is $\boldsymbol{\tilde{\gamma} = 1.78}$.[208] The labor share of income ($\boldsymbol{\alpha}$) in Israel in 2014 was **57%**.[209] While there are no statistics available for the labor share of income in the West Bank, the average for the developing world in the Middle East and North Africa is about **38%**. However, the model is only concerned with Israeli TFP, thus the labor share of income is only relevant in Israel and the labor share of income measure is precise. All of my measures are context specific and precise except for the productivity gap between Israel and the West Bank, but future studies would benefit from a more precise measure of this gap because it is an important variable in the model.

The discount rate ($\boldsymbol{\rho}$) for the Central Bank of Israel was 0.01% in 2014, but this official measure doesn't account for individual's decisions that subconsciously assume a discount rate on future earnings.[210] Clemens and Pritchett set their discount rate at **0.5%**, and the RAND Corporation's *Building a Successful Palestinian State* also sets the discount rate at **0.5%** for the Palestinian economies.[211] I use the plausible social discount rate utilized in the RAND Corporation study on the Palestinian economies

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[206] Chapter 1 discusses the economic policies that Israel has enacted in the Palestinian Territories, which partially explain this production gap.

[207] As explained prior to equation **(5), β** = [Total Labor Force of Israel and the West Bank (5,184,900) / Current Labor Force of the West Bank (1,303,900)] -1 > 1. Labor Force figures obtained from the Israeli Central Bureau of Statistics and the Palestinian Central Bureau of Statistics.

[208] The modified productivity gap is implicit in Equation 8 and is as follows: $\tilde{\gamma} = \frac{1-\underline{A}}{1-\underline{A}\beta^{\alpha-1}}$

[209] Shlomo Swirsky, Etty Konor-Atias, Noga Dagan-Buzaglo, and Tzipi Lazar Shoef, "Workers, Employers And The Distribution Of Israel's National Income – Labor Report 2014: The Report Reveals The Worsening Of The Share Of Workers In Israel Between 2004 and 2014," *Adva Center: Information On Equality And Social Justice In Israel*, 1 May 2015, Web, Retrieved 1 Mar 2016, Http://Adva.Org/En/Workers-Employers2014/.

[210] "Israel Economy Profile 2014," *Index Mundi*, Web, Retrieved 1 Mar 2016, Http://Www.Indexmundi.Com/Israel/Economy_Profile.Html.

[211] *Building A Successful Palestinian State*, The RAND Corporation, Santa Monica, CA, (2007): 193.

(0.5%) and disregard the official discount rate from the Central Bank of Israel. A discount rate of 0.5% is safely within the recommended range for discount rates **(1.3%-8%)** and is therefore considered a risk-free measure that will not bias results.[212]

The unknown parameters for which values are personally calculated are the Propensity for Violence Rate ***(v),*** the Pacification Rate ***(n),*** and the Agitation Rate ***(r)***. Unfortunately, only the Propensity for Violence can be precisely estimated with available data, but the Pacification Rate and the Agitation Rate can be reasonably estimated. Calculating and testing different values for these three parameters will determine how Israeli TFP changes after more WBPL are permitted to work in Israel **(**represented by $\widetilde{\boldsymbol{A}}$ in Equation 3 and Figure 8).

Table 7: Known Measures in the Model

Measure	Symbol in the Model	Value
Israeli TFP	$\overline{\boldsymbol{A}}$	**1**
West Bank TFP	$\underline{\boldsymbol{A}}$	**0.2**
Productivity Gap	$\boldsymbol{\gamma}$	**0.8**
Modified Productivity Gap	$\widetilde{\boldsymbol{\gamma}}$	**1.78**
Population Proportion	$\boldsymbol{\beta}$	**2.98**
Social Discount Rate	$\boldsymbol{\rho}$	**0.5**
Labor Share of Income in Israel	$\boldsymbol{\alpha}$	**0.57**
Labor Share of Income in MENA	$\boldsymbol{\alpha'}$	**0.38**
Current Ratio of WBPL e Israeli Labor Force	$\boldsymbol{p^*}$	**0.029**

Note: All measures have been previously explained, and all sources have been appropriately cited in previous sections of this chapter.

[212] Mark Harrison, "Valuing The Future: The Social Discount Rate In Cost-Benefit Analysis," *Visiting Research Paper, Productivity Commission, Canberra*, Web, Apr 2010, Retrieved Mar 20 2016, Http://Www.Pc.Gov.Au/Research/Supporting/Cost-Benefit-Discount/Cost-Benefit-Discount.Pdf.

3.7 Calculating the Propensity for Violence (v)

The Propensity for Violence ***(v)*** is calculated using fatality statistics in order to accurately estimate the degree to which violence reduces TFP. Interpersonal trust among Israelis and Palestinians is reduced by violence; therefore the TFP associated with trust is also reduced by violence to some degree. This relationship between trust and TFP implies that fewer WBPL should be allowed to work in Israel when the Propensity for Violence Rate ***(v)*** is high, which explains why the Israeli government imposes border closures during particularly violent times. I focus on a subset of violence that is precise, reliable, relevant to this context and often used in research: armed violence. Armed violence refers to "the intentional use of illegitimate force (actual or threatened) with arms or explosives, against a person, group, community, or state, that undermines people centered security and/or sustainable development."[213] The highest rates of armed violence observed during the Second Intifada determine the Propensity for Violence measure in the worst-case scenario, while the best-case scenario unrealistically assumes that economic development will reduce the rate of violence to 0; the best and worst case scenarios form the natural bounds (between 0 and 1) for the Propensity for Violence ***(v)*** that is likely to be observed if more WBPL are permitted to work in Israel.

The upper bound for the Propensity for Violence ***(v)*** is determined by observing fatality rates during the Second Intifada (2000-2005). Fatality data is often used as a proxy for the measurement of violence because the quality of the data is far superior to other measures.[214] The data published by Israeli human rights organization B'Tselem is

[213] Geneva Declaration Secretariat, *Global Burden of Armed Violence*, 2008, Geneva, Switzerland.
[214] The Small Arms Survey, *Conflict, Crime And Violence And Development: A Compendium Of Tools*

widely thought to be the most accurate, reliable, and unbiased information available.[215] They include information on the date, location, and circumstances of every fatal wounding, as well as the date of death, age, gender, the location of residence of the victim, and whether or not the victim was a civilian or a member of security forces. Since ***(v)*** is concerned with the actual level of violence that may result from giving Palestinians more freedom of movement within the West Bank and Israel, armed violence that has resulted in death anywhere within the West Bank and Israel should inform this measure regardless of the ethnicity of the victim, the cause of death, or other available information.

Table 8 summarizes B'Tselem fatality statistics during the Second Intifada and separates the period into five categories based on important events that occurred between September 29th, 2000 and January 15th, 2005. Table 8 includes data from the West Bank and the Gaza Strip, because Palestinians from both areas worked in Israel prior to the outbreak of the Second Intifada. Table 9 disregards Palestinian fatality data from the Gaza Strip. Including fatalities from the Gaza Strip in Table 8 but not Table 9 is not problematic; the data represented in Table 8 is used to form the bounds for the expected rate of violence, so it will actually set the upper bound slightly higher than it would be if only West Bank and Israeli fatalities are included. In addition, Israel has not allowed Palestinians from the Gaza Strip to work in Israel since the Second Intifada,

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For Measurement, Monitoring And Evaluation: *Sources Of Conflict, Crime And Violence Data,* Feb 2013, Web, http://www.smallarmssurvey.org/fileadmin/docs/M-files/CCRVI/CCVRI-Practice-Product-Sources-of-Data.pdf.

[215] David A Jaeger, Esteban Klor, Sami H. Miaari, and Marco D. Paserman, "The Struggle for Palestinian Hearts and Minds: Violence and Public Opinion in the Second Intifada," *IZA Discussion Papers No. 3439,* (2008).

and integrating more Palestinian laborers from the West Bank should not have an effect on violence originating from the Gaza Strip.

In the worst-case scenario, increasing the number of WBPL working in Israel would result in approximately 6.05 fatalities per day across Israel and the Palestinian Territories. The worst-case scenario is determined by observing the rate of violence during distinct political periods in the Second Intifada to identify the most violent time period. Table 8 shows that the most violent period in the history of the conflict followed Operation Defensive Shield (which was initiated on March 29th, 2002). There were 4.25 Palestinian fatalities per day and 1.8 Israeli fatalities per day during this period; if you add these rates of violence together, there were 6.05 fatalities per day in Israel and the Palestinian Territories during Operation Defensive Shield. This was much higher than the average over the entire observed period of 2.06 Palestinian fatalities per day and 0.63 Israeli fatalities per day. If the Propensity for Violence score is 1 (***v = 1***), then integrating more WBPL into the Israeli economy would likely result in levels of violence similar to those observed during Operation Defensive Shield (6.05 fatalities per day), which would be disastrous for interpersonal trust and TFP.

In the best-case scenario, integrating more WBPL into the Israeli labor force would result in 0 fatalities per day. It is theoretically possible that economic development could increase the opportunity cost of violence to the point that violence is eliminated altogether after a number of years. In this case, Palestinians would fully resemble Israelis in terms of posing a threat for violence, and as a result it would be possible to fully integrate the two societies through a political solution that creates a shared state or federation. Estimates based on the best-case scenario far exceed the

plausible number of WBPL to integrate into the Israeli labor force, indicating that it is possible to integrate an infinite number of WBPL without reducing Israeli TFP through violence. This conclusion is of course unrealistic currently. The best-case scenario is unlikely in the short term due to the unpredictable violence that has persisted for decades and the influence of anti-peace ideologies among some Palestinians and some Israelis.

The Propensity for Violence score ***(v)*** in the most likely scenario is calculated by normalizing the rate of violence observed in Table 9 given the bounds established in Table 1 (**0 < *v* < *1***), where 0 is the number of fatalities per day that would occur in the best case scenario (v=***0***) and 6.05 is the number of fatalities per day that would occur in the worst-case scenario (***v=1***). Thus,

Eq. (10)

$$v = \frac{f_t - fmin\ (0)}{fmax\ (6.05) - fmin(0)}$$

where $\boldsymbol{f_t}$ is an observed fatality rate that occurred in Israel and the West Bank during a given period of time, $\boldsymbol{fmin}$ is the lowest number of fatalities ever observed in Israel and the West Bank during a given period of time (0), and $\boldsymbol{fmax}$ is the highest rate of violence ever observed in Israel and the West Bank (6.05), which occurred during the Second Intifada. The values indicated in parenthesis are the current bounds for ***(v)***, but $\boldsymbol{fmax}$ is subject to change in the future during a particularly violent time.

Based on the most recent fatality data available (displayed in Table 9), ***v=0.0375*** for August 26th, 2014 to November 30th, 2015. In practical terms, this means that the level of violence that will result from integrating more WBPL into the Israeli labor

force should be very low in comparison to previous rates of violence observed in the conflict. However, the most recent data available only includes fatality statistics from the first month of the recent wave of violence that began in October 2015, which means that this estimate may be biased downward. For this reason, I also test the model using the average fatality rate from the entire Second Intifada (***v=0.446***). In addition to testing these two estimates, I also test different values of ***(v)*** to determine the extent to which violence reduces TFP during turbulent and peaceful times.

Table 8: Number and Daily Rate of Israeli and Palestinian Fatalities During the Second Intifada, by Period

	Barak Government	Sharon Government Pre 9/11	September 12th 2001-ODS	ODS-Roadmap	Roadmap-Ceasefire	Ceasefire	Post Ceasefire	Total
	29/9/2000-06/02/2001 131 days	**07/02/2001-11/09/2001 217 days**	**12/09/2001-24/06/2002 88 days**	**29/03/2002-24/06/2002 369 days**	**25/06/2002-28/06/2003 51 days**	**29/06/2003-21/08/2003 51 days**	**22/08/2003-15/01/2005 516 days**	**29/09/2000-15/01/2005 1570 days**
Israelis								
Fatalities	51	116	218	**160**	241	7	201	994
Fatalities/Day	0.389	0.535	1.101	**1.818**	0.653	0.137	0.39	0.633
Daily Incidence of Fatalities	0.237	0.212	0.318	**0.341**	0.187	0.098	0.107	0.19
Share by Gunfire	0.764	0.379	0.423	**0.275**	0.432	0.286	0.289	0.407
Share by Suicide Attacks	0	0.422	0.44	**0.613**	0.461	0.571	0.587	0.479
Palestinians								
Fatalities	308	206	568	**374**	730	10	1,048	3,244
Fatalities/Day	2.351	0.949	2.869	**4.25**	1.978	0.196	2.031	2.066
Daily Incidence of Fatalities	0.664	0.479	0.672	**0.83**	0.65	0.137	0.609	0.61
Share by Gunfire	0.929	0.68	0.754	**0.85**	0.699	0.6	0.676	0.739
Share by Aircraft or Tank Shelling	0.052	0.277	0.151	**0.099**	0.221	0.2	0.306	0.21
Targeted Killings	0.046	0.151	0.129	**0.048**	0.129	0	0.1	0.089
Propensity for Violence (*v*)	**0.453**	**0.245**	**0.656**	**1**	**0.435**	**0.055**	**0.4**	**0.446**

Source and Notes: David Jaeger et al, "The Cycle of Violence? An Empirical Analysis of Fatalities in the Palestinian-Israeli Conflict," *IZA Discussion Papers No. 1808,* (2005): Table 2. Palestinian data includes the Gaza Strip and the West Bank, and fatalities are classified according to the date and location of the fatal wounding rather than the actual date and location of death. Israeli fatality count includes all civilians and members of Israeli security forces killed either in Israel or in the Palestinian Territories and also include foreign civilians killed by Palestinians. The Palestinian Fatality count includes all civilians and members of the PA security forces, and also includes foreign civilians killed by Israeli security forces.

Table 9: Most Recent Number and Daily Rate of Israeli and Palestinian Fatalities

	End of Operation Protective Edge-Beginning of Knife Intifada
	26/08/2014-30/11/2015
	461 Days
	Israelis
Fatalities	23
Fatalities/Day	0.049
Daily Incidence of Fatalities	0.039
Share by Gunfire	0.391
Share by Stabbing	0.348
Share by Car Ramming	0.26
	Palestinians
Fatalities	82
Fatalities/Day	0.178
Daily Incidence of Fatalities	0.093
Share by Gunfire	0.96
Share by Arson	0.034
Propensity for Violence (*v*)	**0.0375**

Source: B'Tselem Fatality Statistics

Notes: The methodology used in Jaeger et al, "The Cycle of Violence?" was used to categorize fatalities during this period. Data only includes Palestinian Fatalities in the West Bank and Israel, and fatalities are classified according to the date and location of the fatal wounding rather than the actual date and location of death. Israeli fatality count includes all civilians and members of Israeli security forces killed either in Israel or the West Bank and also include foreign civilians killed by Palestinians. The Palestinian Fatality count includes all civilians and members of the PA security forces, and also includes foreign civilians killed by Israeli security forces

3.8 Calculating the Pacification Rate (n)

The Israeli permit system acts as a selection effect that limits the types of Palestinians permitted to work in Israel to those who are already unlikely to perpetrate violence. This implies that WBPL who are permitted to work in Israel are already likely to have a high Pacification Score ***(n)***, and their higher earnings further discourages violence among these individuals. For these reasons, I assume that the Pacification Rate of newly permitted WBPL is **0.5** in the worst-case scenario and **1** in the best-case scenario, but I include all values between 0 and 1 in my analysis.

The Pacification Rate ***(n)*** is precisely defined in the model by equations **(1)**-**(3)**, but these equations reveal nothing about the determinants of the Pacification Rate ***(n)***. Remember that the Pacification Rate ***(n)*** measures how Palestinian Laborers come to resemble native Israeli laborers in terms of posing a threat for violence. In other words, how quickly do Palestinians come to resemble Israeli citizens in terms of posing a threat for violence due to the positive economic effects earning higher wages in Israel?

The Israeli permit system is already designed to give permits to Palestinians with a low likelihood of perpetrating violence, so it is likely that the Pacification Rate ***(n)*** will be high. Tens of thousands of Palestinians are blacklisted from entering Israel by the Israel Security Agency. These people are prohibited from entering Israel for work because they are allegedly a "resident of the [West Bank] who may pose a security risk to the State of Israel."[216] The origin of these restrictions "is the prevailing presumption held by security agencies that young men who have no family represent a higher risk potential" and therefore may be more disposed to perpetrate violence.[217]

[216] Ibid, 12.
[217] Ibid, 12.

Essentially, younger men are considered to have lower opportunity costs for violence and are therefore more of a threat. The Israeli permit system reflects these assumptions. Palestinian employment in Israel is restricted to a few labor-intensive sectors: construction, agriculture, industry, and services.[218] Remember that the number of WBPL permitted to enter Israel is subject to quotas, which are determined by the Israeli government for each sector independently. In addition to the quota and sector restrictions, there are age and family status restrictions; Palestinians must be at least 25 years of age and they must be married in order to obtain a permit.[219] The current permit system has problems and inefficiencies, but it acts as a natural selection effect that renders the Pacification Rate ***(n)*** of newly permitted WBPL high for the purposes of this study. Despite the natural bounds that the permit system creates, I explored other methods and determined that there is no known dataset that can be used to determine a more precise Pacification Rate ***(n)***.

Since violence in this context has been correlated with political attitudes, the Pacification Rate ***(n)*** could theoretically be determined by data relating to Palestinian political attitudes. However, Palestinian political attitudes are not influenced by violence in a homogeneous manner, the short-term effects of violence on Palestinian political attitudes are insignificant, and the long-term effects of violence on Palestinian political attitudes are unclear.[220] Even if political attitudes can be measured in a meaningful way in the future, this does not rule out the possibility that individuals who are currently unlikely to perpetrate violence will not be prone to violence in the future, even if their economic conditions improve. For instance, it is possible that controversial

[218] Kav LaOved, *Employment of Palestinians in Israel.*
[219] Ibid.
[220] Jaeger et al, "The Struggle for Palestinian"

incidents—such as the recent execution of a wounded Palestinian in Hebron on 24 March 2016— can radicalize individuals who wouldn't normally be prone to violence (especially relatives of Palestinians who have been killed).[221] Abnormal incidents that are widely publicized, like the recent incident in Hebron, might encourage retaliation among Palestinians who wouldn't normally take part in violence. This hypothesis is supported by rigorous research, which claims that fatalities have a stronger effect on political attitudes in the Palestinian localities affected by violence.[222] Regardless of whether this is or is not the case, this is the line of thinking for the Israeli security establishment; in April 2016 hundreds of Palestinians had their permits to work in Israel revoked without warning because their relatives had taken part in the recent wave of violence.[223]

In short, the causal pathway between violence and public opinion has not been as well defined as the causal pathway between economic conditions and violence in this context, though it is clear that politics matter. Additionally, there is no known dataset that categorizes Palestinian fatalities according to their employment location to examine the extent to which Palestinians working in Israel take part in violence. In the absence of relevant data, I use the Israeli permit system as natural bounds in order to estimate that the Pacification Rate ***(n)*** is likely to be between 0.5 and 1, but I include data for all values between 0 and 1.

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[221] Robert Mackey, "Israeli Rights Group Releases Video of Army Medic Executing Wounded Palestinian Suspect," *The Intercept*, 24 March, 2016, Web, Retrieved 20 April, 2016, https://theintercept.com/2016/03/24/israeli-rights-group-releases-video-soldier-executing-wounded-palestinian-suspect/

[222] Jaeger et al, "The Struggle for Palestinian"

[223] Jack Khoury, "Hundreds of Palestinian Laborers Discover Their Permits to Work In Israel Have Been Revoked," *Haaretz*, 15 Apr 2016, Web, Retrieved 23 Apr 2016, http://www.haaretz.com/israel-news/.premium-1.714544

3.9 Calculating the Agitation Rate (r)

Remember that the Agitation Rate ***(r)*** measures the degree to which the Propensity for Violence ***(v)*** and the Pacification Rate ***(n)*** change during a period in which more WBPL are permitted to work in Israel. If violence increases when more WBPL are permitted to work in Israel, it is expected that the Pacification Rate ***(n)*** will decrease, and conversely, if violence decreases the Pacification Rate ***(n)*** will increase. However, the degree to which the Propensity for Violence and the Pacification Rate affect each other is nonlinear. The Agitation Rate accounts for the nonlinear inverse relationship between these two parameters. If the Agitation Rate is 0 (***r=0***), the Propensity for Violence ***(v)*** and the Pacification Rate ***(n)*** do not have any affect on each other, but if the Agitation Rate is 1 (***r=1***), the Propensity for Violence and the Pacification Rate ***(n)*** are highly elastic, which means that higher levels of violence will drastically reduce the number of WBPL that should be permitted to work in Israel.

When the number of WBPL commuting to work in Israel reaches a certain scale, it could change the nature of Israeli-Palestinian interactions; this change might theoretically enable violence to reach unprecedented heights if interactions turn violent, but it could also enable trust to accelerate if peaceful encounters persist. Unfortunately, no evidence exists that might inform how many WBPL would need to work in Israel before Agitation Effects ***(r)*** set in.[224] Even though the Israeli permit system screens workers to mitigate the risk that WBPL will perpetrate violence, it is impossible to predict whether or not an individual will perpetrate violence with certainty. Clemens and Pritchett point out that this uncertainty makes it impossible to rule out nonlinear

[224] George J. Borjas, "Immigration and Globalization: A Review Essay," *Journal of Economic Literature*, Vol. 53, No. 4, (2015): 961-974.

Agitation effects ***(r)***, but they do suggest that "if they do exist, they do not set in automatically even at high migrant stocks."[225] After testing for Congestion (Agitation) effects, Clemens and Pritchett arrive at the conclusion that "0.5 represents a conservatively high upper bound on the magnitude" of any true agitation effects, and my model supports this conclusion in the Israeli-Palestinian context.

While the contexts of their tests are different, I set my Agitation Rate ***(r)*** at 0.5 for my tests in all scenarios in order to produce conservative estimates for the number of WBPL that can reasonably be permitted to work in Israel. However, I discuss how the results of the model change at different Agitation Rates ***(r)*** in the robustness checks. In the absence of a precise measure of the Pacification Rate ***(n)*** and a precise measure of the Agitation Rate ***(r)***, I test the model using different values for both measures to estimate a plausible dynamically efficient number of WBPL to permit to work in Israel.

[225] Clemens and Pritchett, "The New Economic Case," 31.

3.10 Results

Initial tests show that the best and worst-case scenarios are not particularly helpful. In the best-case scenario, the parameters suggest that WBPL are nearly identical to Israeli laborers in terms of posing a risk for violence. This makes the number of WBPL that Israel can integrate infinite because they are essentially the same as the Israeli laborers that already determine Israeli TFP. In the worst-case scenario, the parameters suggest that all WBPL pose a significant risk for violence, and Israeli TFP would be drastically reduced if more WBPL were permitted to work in Israel. Establishing the bounds are between 0 and infinity is not particularly helpful. However, the results of the model—even when tested for a range of measures— show that the number of WBPL permitted to work in Israel should be increased in order to achieve the dynamically efficient rate of integration.

Figure 10 shows how many WBPL should be permitted to work in Israel given different Propensity for Violence ***(v)*** rates. In Figure 10, the y-axis is the Pacification Rate ***(n)*** and the x-axis is the number of WBPL that should be added or removed from the Israeli labor force (starting from 0) in order to keep Israeli TFP at its current level. The y-intercept for each line reveals the Pacification Rate ***(n)*** needed before it is advisable to integrate more WBPL into the Israeli labor force given that line's Propensity for Violence ***(v)*** rate.

For example, when ***v=0.446*** (the average for the Second Intifada) it isn't advisable to allow WBPL into Israel unless their Pacification Rate exceeds 0.4 (***n=0.4***). Keeping with the same Propensity for Violence line (***v=0.446***), when ***n=0.5*** it is possible to permit 419,917 WBPL to work in Israel and Israeli TFP will stay at its

current level. This is because the moderately high pacification rate erodes the negative effects of violence on Israeli TFP over time. When ***v=0.7*** and ***n=0.5***, you would theoretically need to remove 394,443 WBPL from the Israeli economy in order to keep Israeli TFP at its current levels. This is because the high Propensity for Violence ***(v)*** erodes the Pacification Rate ***(n)*** and reduces the Israeli TFP associated with interpersonal trust. Since the Israeli permit system sets natural bounds for the Pacification Rate ***(n)***, 0.7 is the threshold for the Propensity for Violence ***(v)*** in the model; integrating more WBPL into the Israeli labor force does not pose a significant threat for violence as long as ***v < 0.***7.

In Figure 10, nearly all parameter estimates point to the conclusion that the current number of WBPL working in Israel is not dynamically efficient. For most of the parameter estimates the corresponding number of WBPL that should be permitted to work in Israel is at least several times the current level and in many cases the estimates exceed the working population of the West Bank. This is consistent with the findings in Clemens and Pritchett on global migration and production; in both cases, the number of foreigners (WBPL) that it would take to noticeably reduce TFP in a rich country (Israel) is unrealistically high, because in most scenarios people migrating to work are unlikely to affect rich country (Israeli) TFP through violence or other activities. Even in the cases when the WBPL should be theoretically removed in Figure 10, the Propensity for Violence ***(v)*** and Pacification Rates ***(n)*** required to make such an action advisable are not very likely.

In Table 10 it is clear that Israeli TFP is very sensitive to violence, because the number of WBPL that should be added to or removed from the Israeli economy changes

drastically at different Propensity for Violence ***(v)*** and Pacification Rates ***(n)***. In the most recent period analyzed (***v=0.375***), a Pacification Rate ***(n)*** of only 0.05 is needed in order make the current number of WBPL working in Israel (113,200) advisable. This implies that actual Pacification Rate ***(n)*** of WBPL would need to be reduced drastically (if we assume it is between 0.5 and 1) in order to make Israel's current number of permits dynamically efficient. The results of the model suggest that Israel can increase the number of WBPL permitted to work in Israel far above what is practically possible, and Israeli TFP will not be harmed as long as the rate of violence stays below 4.2 fatalities per day over a given period of time (***v=0.7***)

Robustness Checks

It is entirely plausible that the Agitation Rate ***(r)*** could be much smaller, and when I tested the model for ***r=0.01*** the results did not change in any meaningful manner. The slope of the lines became smaller, revealing that the number of WBPL that you can integrate increases drastically as ***r*** approaches 0, but the thresholds observed in Table 10 did not change. In other words, as long as WBPL have a Pacification Rate of at least 0.7 (which is entirely plausible given the permit system), it is possible to increase the number of permits to an infinite amount if ***r=0.01***. Even if it is unrealistic, I tested the model using **0.99** as my agitation rate ***(r)*** in the worst-case scenario. Even if ***r=0.99***, it is still possible to integrate more WBPL than is realistically possible as long as ***n < 0.7***, but the number of WBPL that the model estimates does decrease drastically. This is consistent with the determinants of optimal migration listed after equation **(8)**, which states that optimal migration is lower to the extent that Agitation effects ***(r)*** are higher.

I tested the model using different measures for the social discount rate, and the model supported the other two determinants of optimal migration listed after equation **(8)**. When the social discount rate is increased, the y-intercepts observed in Figure 10 move up the y-axis, and the number of WBPL that should be permitted into the Israeli economy decreases. This implies that the number of WBPL that should be allowed into Israel is lower to the extent that interpersonal trust is already lower at the time that more permits are allotted, thereby leading people to discount future earnings to a greater extent. However, even in this case it is advisable to increase the number of WBPL permitted to work in Israel as long as $\boldsymbol{v < 0.3}$. In other words, a policy aimed at increasing the number of WBPL permitted to work in Israel (such as the 30,000 person increase passed in February) will be most effective if implemented during times with low rates of violence rather than times with high rates of violence. Changing the adjusted productivity gap between Israel and the West Bank also changes the threshold for violence. As the productivity gap increases, the number of WBPL that can be permitted to work in Israel without decreasing Israeli TFP is decreased. This is consistent with the literature on the relationship between economic development and violence in this context; when economic conditions are more unequal between the two areas it is more likely that Palestinians will engage in violent revolt, which would decrease Israeli TFP. However, even the high estimates provided by my model are conservative estimates.

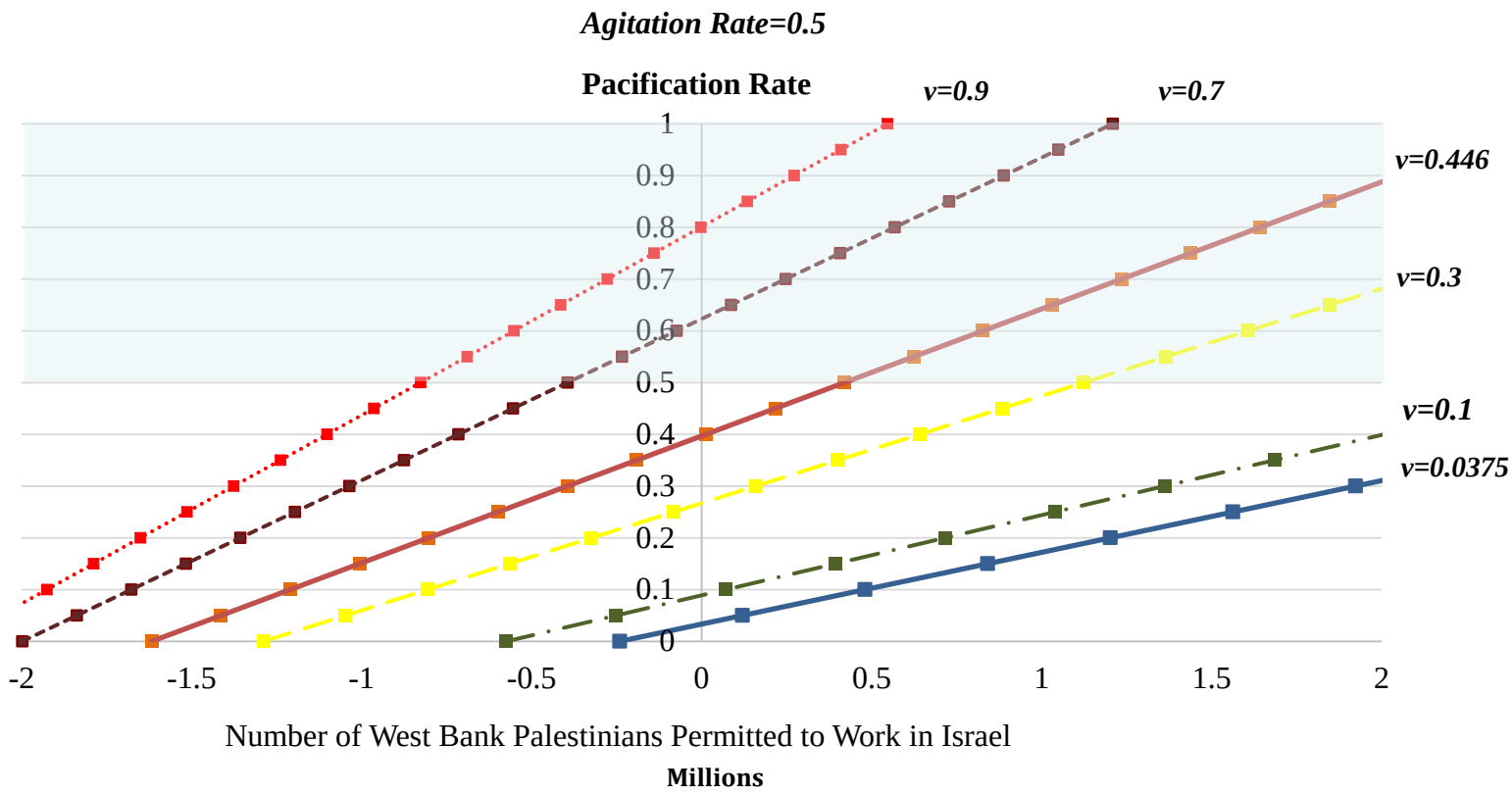
There are a number of assumptions implicit in the dynamic equilibrium model that makes the dynamically efficient estimates conservative. First, the model assumes that increasing the number of WBPL permitted to work in Israel can only reduce Israeli

TFP through violence, but this ignores the fact that a significant reduction in violence could potentially increase TFP over time. This implies that the model does not account for the gain in Israeli production that would be observed in each time period after the dynamically efficient rate is reached. In other words, the gain in production that begins at time T* (Equation 9) and continues to infinity in the steady-state is not accounted for in the estimates, which make them downward bias. The model does not account for the positive effects of economic development on people living in the West Bank who are not working in Israel. In other words, the model does not take into account that higher earnings increases the opportunity cost of violence for Palestinians due to spillover effects from the higher earnings of family members and/or community members. Such spillover effects could reduce the Propensity for Violence likely to be observed overtime and would therefore make the model's current estimates downward biased. Finally, the Agitation Rate used in Figure 10 (***r=0.5***) is a conservative choice, and it is entirely possible that actual Agitation Rates could be lower.

While my model suggests that Israel can drastically increase the number of WBPL permitted to work in Israel in most cases, future studies would benefit from more precise estimates of the actual Pacification Rate ***(n)*** and Agitation Rate ***(r)***. Additionally, the model does support the use of border closures or other security measures in certain cases. Any point left of the y-axis on the model represents a time in which border closures or other security measures are advisable, but in most cases the Propensity for Violence ***(v)*** and Pacification Rate ***(n)*** needed to make border closures justified are not very likely. Some of the other measures, such as the productivity gap ($\boldsymbol{\gamma}$), are well defined but not context specific. Regardless of the assumptions that I was

forced to make, robustness checks support the conclusion that Israel can increase the number of WBPL permitted to work in Israel, and it is likely that more accurate measures of my assumed values in the model will also produce results that support this conclusion. Even though this model is specific to the Israeli-Palestinian conflict, it is likely that my method of analyzing how violence affects TFP (in the context of migration) can be adapted to other scenarios.

Figure 10: The Dynamically Efficient Number of West Bank Palestinian Laborers Permitted to Work in Israel



Note: This figure models equation 8, which returns a decimal that shows the ratio of Palestinian labor to Israeli labor that should be allowed into the Israeli labor force. When $\boldsymbol{p^*}$ is plugged back into the equation $\boldsymbol{p \equiv P_t / L_t}$ it is possible to calculate the actual number. I altered equation 8 in order to calculate this number, thus the equation represented in this figure is actually….

$$\frac{P_t}{3{,}881{,}000} = \frac{n - \rho v \tilde{\gamma}}{\alpha v \tilde{\gamma} + r}$$

Table 10: The Dynamically Efficient Number of West Bank Palestinian Laborers That Should be Permitted to Work in Israel Given Plausible Parameter Measures

	Propensity for Violence (v)					
Pacification Rate (n)*	**0.0375****	**0.1**	**0.3**	**0.446*****	**0.7**	**0.9**
0.5	3,365,821	2,652,031	1,124,186	419,917	0	0
0.6	4,087,132	3,297,294	1,606,669	827,366	0	0
0.7	4,808,444	3,942,558	2,089,153	1,234,815	246,927	0
0.8	5,529,756	4,587,821	2,571,636	1,642,264	567,613	0
0.9	6,251,068	5,233,084	3,054,119	2,049,713	888, 298	271,890
1	6,972,379	5,878,347	3,536,603	2,457,162	1,208,984	546,526

Note: Agitation Rate ***(r)*=0.5**

***** The Pacification Rate ***(n)*** is only displayed from 0.5-1 because the Israeli permit system acts as a natural selection effect, as was explained

****** ***(v)=0.0375*** during the period August 26th, 2016 and October 11th, 2016

*** ***(v)=0.446*** during the entire Second Intifada period, but Table 1 shows that this varied during different periods

Conclusion

This study has traced the economic history of the Israeli-Palestinian conflict with particular emphasis on the ways in which economics, politics, and violence have evolved since the 1967 Six-Day War. Unfortunately, peace has remained elusive despite the clear economic advantages that a peaceful resolution to the conflict has for both peoples. Current evidence on the relationship between economics development, politics, and violence point to economic development policies as the most fruitful path forward.

The dynamic equilibrium model in this study presents strong evidence that allowing more West Bank Palestinians to work in Israel will not reduce Israeli economic productivity, and more importantly, will promote a more trusting environment for political negotiations as violence is reduced through Palestinian economic development. It is however naïve to think that Palestinian aspirations for a sovereign state will be altogether extinguished by economic development. While many analysts of the Israeli-Palestinian conflict hold peace to be a utopian impossibility, it is precisely the impossibility of the aim that sustains efforts towards its completion.

The traditional utterance of the Passover Seder, "next year in Jerusalem," is a reminder of the impossibility of being in the philosophical Jerusalem, a place that embodies the utopian human existence to which one must always aspire, even while living in the dystopian reality that is embodied in the geographic Jerusalem (and in the broader world).[226] Jerusalem is perhaps the most poignant physical embodiment of the ways in which competing visions for a better life—whether between Jews and Arabs, Americans and Soviets, or any other conflicting groups— produce conflict and

[226] Elliot R Wolfson, "Assaulting the Border: Kabbalistic Traces in the Margins of Derrida," *Journal of the American Academy of Religion,* Vol.70, No.3, (September 2002): 475-514.

suffering. This study has argued that economic development holds the key to unlocking a path towards peace in the Israeli-Palestinian conflict, but I return to the Rashomon effect with which this venture began; only when competing visions for the future find a middle ground for cooperation is progress possible, and economic development is currently the most promising method through which Israelis and Palestinians can move towards a middle ground.

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