**BAR-ILAN UNIVERSITY**

**Israel, West Bank and Gaza Strip:**

**Involuntary economic integration**

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**Abstract**

Israel and the West Bank and Gaza strip (WBG) maintain close economic ties. These are the result of geographic proximity, history, culture, geopolitical conflicts, and economic agreements. Over the years, the degree of economic integration between the economies has varied, a process reflected in trade, labor, monetary and banking, infrastructures and resources, movement of population and wealth and standard of living. Our study starts with a review of the geopolitical events and aspects of economic integration in the region over the past century that shaped the economic ties between Israel and the WBG as they exist today. In each period we describe the economic activity that took place in the region and the impact of the geopolitical events on it.

Due to the importance of economic ties with Israel, the New Israeli shekel (NIS) is one of the main currencies used by businesses and consumers in the Palestinian economy in day-to-day trading. For this reason, we closely analyze the scope and method of monetary and banking relations between Israel and the WBG, and estimate the scope and share of usage of cash in the WBG out of total NIS in circulation, based on the methodology of the European Central Bank (ECB). We found that this share is estimated at about 21% as of 2019.

Then, we construct what we term the Israel-WBG integration index (ISR-WBG-II), a methodological tool for monitoring the level of economic integration based on well-known regional integration indices. According to our findings, we suggest that in a long term perspective (1968-2019), in the twenty years after the 1967 war, thanks to Israel's open policy toward the West bank and the Gaza Strip, there has been a dramatic increase in the level of integration to a level that has not been achieved again (1987 is the peak year(. After the “First Intifada” in the late 1980s, the level of integration began to decline in the face of periodic closures and restrictions on the movement of people and the beginning of the terrorist events that accompanied this period and finally ended in the Second Intifada in the early 2000s. After the end of the Second Intifada, a certain recovery was observed, that reflects a steady increase in the level of integration. In recent years, a certain decrease in the level of integration has been observed as a result of lack of progress in the political process, and steps and policies taken by the Palestinian Authority to reduce the significant dependence on Israel. In order to address the situation in the Gaza Strip resulting from Hamas' rise to power in 2006 which created de facto two separate economies in the territories, we breakdown the ISR-WBG-II by geographical areas, so as to monitor each area separately as the view that WBG is a contiguous area economically may be misleading.

Finally, we use the Granger causality test for determining whether terrorism Granger causes the level of economic integration, or vice versa, the level of integration Granger causes terrorism. Similarly, we implement the same test on unemployment rate in the WBG and the level of economic integration and unemployment rate and terrorism.

We found that the level of economic integration Granger causes terrorism. This finding supports early work by scholars that argue that terrorism is a response to political conditions and long-standing feelings of indignity and frustration that have little to do with economics and low market opportunities or ignorance. For example, the years preceding the 1987 uprising had been marked by growing frustration on the part of the Palestinians. The ISR-WBG-II confirms that before the “First Intifada” the level of economic integration was the highest which was reflected in the fact that the unemployment rate was at an all-time low and the relative standard of living was at its peak. Also before the “Second Intifada” we found a rise in the integration level and reduction in unemployment rates in the WBG.

We also found that unemployment rate in the WBG Granger causes the level of economic integration. This finding could be linked to the Israeli policy toward the territories, that when there is a fear of a significant decrease in the standard of living in the WBG caused by, among other things, a high unemployment rate, Israel allows for more economic activity with the WBG, for example the movement of workers without permits to work in Israel and also increases the quota of working permits in Israel.

Our findings are relevant in the context of the discussion of the idea of a one state scenario or the idea of a two-state scenario. According to our findings, the degree of dependence of the Palestinian economy on the Israeli economy, which is reflected in the level of economic integration between the Israeli and Palestinian economies, is very high and unilateral. We can argue that the more the Palestinian economy will be an independent and strong, the greater the chance of a scenario of two states side by side, while the more the Palestinian economy depends unilaterally on the Israeli economy, the greater the chance of a one state scenario. In that context and to the extent that no significant geopolitical change occurs, there should be also a discussion of a scenario of three economic and political entities between the Mediterranean and the Jordan River.

To conclude, this study contributes to an understanding of economic processes impacting the region and provides an economic backdrop for possible economic and political processes that may occur in the future.

The case of Israel and the WBG illustrates the process of *involuntary economic integration*, where the protagonists are bound in a Gordian knot.

**Table of contents**

1. Chapter 1: Introduction
2. Chapter 2: Geopolitical and Economic History – Israel and the WBG
   1. British Mandate of Palestine (1922-1947)
   2. Between the Wars (1948-1967)
   3. The WBG under Israel Control (1967-1993)
   4. From Peace Process to Entangled Reality (1994-2004)
   5. Israel Disengages from the Gaza Strip and the Hamas Electoral Victory (2005 - 2021)
   6. Recent Years
3. Chapter 3: Monetary Relations Between Israel and the WBG
   1. The NIS Role in the Palestinian Banking System
   2. Monetary Policy in Israel, the Transmission Mechanism and the Effects on the Palestinian Economy.
   3. Correspondent Banking Relationship Between Israel and the WBG
   4. Assessing the Amount of NIS Cash in Circulation in the WBG
4. Chapter 4: Israel-WBG Integration Index (IWBGII)
   1. Methodology and Technical Details
   2. Results
5. Chapter 5: Breakdown by Geographical Areas
6. Chapter 6: Economic Integration, Terrorism, and Unemployment
7. Chapter 7: Concluding remarks
8. List of References

Appendixes

Appendix I – ISR-WBG-II Indicators

Appendix II – Empirical results: PCA and Weightings ISR-WBG-II 2010-2019

Appendix III – Contribution of Indicators

Appendix IV – Indices Results

Appendix V – WB and GS Indices

List of Figures

Figure 1- Geopolitical events

Figure 2 - Division of the British Mandate of Palestine

Figure 3 - UN Partition Plan Map for two states

Figure 4 - The results of the War 1949-1967

Figure 5 - After the Six Day War

Figure 6 - Palestinians employed in Israel and unemployment rate in the WBG (1970-1993)

Figure 7 - The Oslo Accords

Figure 8 - Clearance Revenues

Figure 9 – Palestinian employment in Israel (1968-2019)

Figure 10 – Palestinian export and imports to and from Israel

Figure 11 - Israeli disengagement from the Gaza Strip

Figure 12 - GNI Per Capita at current prices by georgical area

Figure 13 - Unemployment rates by georgical area

Figure 14 - Distribution of deposits governorates by currency in millions of US $ and in percentage

Figure 15- Distribution of gross credit facilities governorates by currency in millions of US $ and in percentage

Figure 16 – Distribution of checks presented for clearing in the Palestinian Authority governorates by currency in millions of US $ and in percentage

Figure 17 - The BOI key policy rate and the interest rate on NIS loans in the Palestinian banking system

Figure 18 - Annual inflation rate, Israel and the WBG

Figure 19 - The sum of Credit and deposits in the Palestinian banking system by currency out of Gross national income

Figure 20 – Yearly Checks and Money transfer Volume between Palestinian banks and Israeli banks, in NIS (billions)

Figure 21 – Excess cash of the Palestinian banks (in billions of NIS) deposited in Israel

Figure 22 - Cash in circulation to GDP – Selected countries

Figure 23 - Cash in Circulation (NIS)

Figure 24 - Currency in circulation in Palestine according to cash to demand deposit ratio (million USD)

Figure 25 - Holdings of euro banknotes by non-euro area residents (EUR billion at end of period)

Figure 26 - Net monthly shipments of euro banknotes to destinations outside the euro area (EUR billions; adjusted for seasonal effects)

Figure 27 - Estimated amount of cash (NIS) circulates in the WBG (in billions)

Figure 28 - Estimated Share of NIS cash circulates in the WBG out of total NIS cash in circulation

Figure 29 - WBG - Estimated amount of NIS cash to GNI

Figure 30 - Israel - cash in circulation to GDP

Figure 31: ISR-WBG-II 1968-2019 – Total index

Figure 32: ISR-WBG-II 1968-2019 by dimensions

Figure 33: ISR-WBG-II 1968-2019 by contribution of dimensions

Figure 34: ISR-WBG-II 1996-2019 – Total index

Figure 35: ISR-WBG-II 1996-2019 by dimensions

Figure 36: ISR-WBG-II 1996-2019 by contribution of dimensions

Figure 37: ISR-WBG-II 2000-2019 – Total index

Figure 38: ISR-WBG-II 2000-2019 by dimensions

Figure 39: ISR-WBG-II 2000-2019 by contribution of dimensions

Figure 40: ISR-WBG-II 2010-2019 – Total index

Figure 41: ISR-WBG-II 2010-2019 by dimensions

Figure 42: ISR-WBG-II 2010-2019 by contribution of dimensions

Figure 43: Development in dimensions 2010, 2015 and 2019

based on ISR-WBG-II 2010-2019

Figure 44: ISR-WBG-II by periods

Figure 45: ISR-WBG-II by index

Figure 46: Indicators by areas

Figure 47: Integration indicis by areas

Figure 48: Dimensions contribution analysis

Figure 49 - ISR-WBG-II 1968 and terrorism fatalities

Figure 50- ISR-WBG-II 2010 and terrorism fatalities

Figure 51 - ISR-WBG-II 1968 and unemployment rate in the WBG

List of Tables

Table 1: Dimensions and indicators

Table 2: Dimensions, indicators and weights 1968-2019

Table 3: Dimensions, indicators and weights 1996-2019

Table 4: Dimensions, indicators and weights 2000-2019

Table 5: Dimensions, indicators and weights 2010-2019

Table 6: Dimensions, indicators and weights 2008-2019

Table 7: Granger causality Wald tests (mFtaodel with 2 lags)

1. **Chapter 1: Introduction**

Economic integration is a well-defined subject in the literature. As predicted in international trade theory, first and foremost, you trade with your neighbors, and according to empirical findings, proximity is the main engine for trade between two economic entities (Combes, Mayer and Thisse 2008). Balassa (1961) describes economic integration as a process that occurs between countries/territories in the same geographical area that allows the removal of barriers to the movement of goods, services and capital, in order to promote economic welfare and prosperity. Rivera and Romer (1991) argue that in a world with two developed economies, economic integration can cause a steady increase in global growth. Starting from the position of isolation, closer integration can be achieved by increasing trade in goods or by increasing the flow of ideas. However, if the economies have different endowments or technologies, it will induce allocation effects that shift resources between the two sectors in each country. At the international level Rodrik (2000) discuss the process of internationalization. In a long-term perspective, international economic integration has still a long way to go. The process will continue as technological progress will both foster economic integration and remove some of the traditional obstacles. Second, it is hard to envisage that a substantial part of the world’s population will want to give up the material benefits that an increasingly integrated world market can deliver. Third, hard-won citizenship rights are also unlikely to be given up easily, keeping pressure on politicians to remain accountable to the wishes of their electorate.

Regarding the idea of monetary integration, Mundell (1961) presented the idea of ​​an *Optimal Currency Area* (OCA) as a group of countries that maintain a single currency, or if they maintain separate currencies these are at fixed exchange rates with full convertibility of corresponding currencies. Mundell identified the mobility factor as the key feature of an Optimum Currency, since when such mobility exists, less variation of the exchange rate is needed to correct external imbalances.

McKinnon (1963) further developed the idea of OCA by discussing the influence of the openness of the economy, i.e., the ratio of tradable to nontradable goods, on the problem of reconciling external and internal balance, emphasizing the need for internal price stability. Kenen (1969) further refined the idea, maintaining that fiscal integration should be a criterion to judge optimality for participation in a single-currency-area. He also introduced the idea that product diversification can be used to assess the desirability of permanently fixed exchange rates. Highly diversified economies are better candidates for currency areas than less-diversified economies since diversification provides some insulation to the effects of sector-specific or industry-specific shocks, forestalling the need for frequent changes in the terms of trade via the exchange rate. Calvo and Végh (1992) defined "currency substitution" as the use in a given country of multiple currencies as medium of exchange. This phenomenon developed in the 1980s, with currencies that displayed high inflation being replaced as medium of exchange by currencies such as the US dollar that had earned a reputation for being relatively successful in maintaining their purchasing power over time. The pros and cons focused on the viability/inefficiency of adopting foreign currency as a substitute for local currency. Promoting the use of local currency gives the government another way to collect taxes and the possibility to respond to exogenous shocks. However, such additional freedom invites a surplus reliance on inflation tax. Thus, extreme measures against the use of domestic currency, such as "dollarization" control, may provide at least temporary relief against inflation. However, they argued that full dollarization without the "lender of last resort" function could make the local banking system vulnerable, if such a system was not abandoned when the actual limit of a full-dollar run on banks was likely to lead to a deep financial crisis. According to Mundell (1997), a *Currency Board Arrangement* (CBA) represents an ideal monetary arrangement for a small country economically close to a large one, with a stable inflation rate that is compatible with domestic inflation preferences. In a CBA, central bank money is completely backed by foreign exchange reserves (pure CBA). A CBA is the tightest form of fixed exchange rates, short of entering a complete monetary union; it falls short with regard to preserving the national currency, and it leaves open the option that the CBA may be altered if needed in the future. CBA can produce all or most of the conditions of economic convergence that would be obtained by a monetary union without the political integration implied by a monetary union.

The case of Israel and the West Bank and Gaza strip (WBG) economic ties will be examined in our work. Over the years, the degree of economic integration between the economies has varied -- mainly as a result of geopolitical conflicts, and economic agreements -- a process reflected in trade, labor, monetary and financial processes, and movement of population. Due to the importance of economic ties with Israel, the Israeli shekel (NIS) is one of the main currencies used by businesses and consumers in the Palestinian economy in day-to-day trading. Our aim is to measure – both qualitatively and quantitatively -- the level of economic integration between Israel and the WBG over a period of the last 100 years.

While economics is our prime focus, we cannot completely ignore the geopolitical situation and the aspirations associated with it. According to Gross (2000), the argument between those who promote the cause of economic integration in the Middle East and the proponents of economic separation between Israelis and Palestinians reflects, to a large extent, the duality of national sovereignty and independence versus advantages derived from trade liberalization.

Arnon and Weinblatt (2001) discuss the trade-offs between sovereignty and prosperity, with regard to the Israeli-Palestinian mechanism, and argue for the establishment of economic borders and a regime characterized by less-than-full integration and propose that such an arrangement might constitute a better macroeconomic environment than one with complete economic integration.

Arnon (2007) examines the Israeli policies towards the WBG with all their twists, turns and reversals. He argues that since 1967, both before and after the Oslo process, Israeli policy was directed at preventing the ‘Two’, i.e. the division of the land into two states and two economic (and political) sovereign entities while also negating the ‘One’, i.e., the establishment of a single political and economic entity. Although Israeli policy repudiated both the ‘Two’ and the ‘One’, it changed character and formulations from time to time.

Following this introductory section, Chapter 2 presents a description of the geopolitical and economic history over 100 years with an emphasis on the level of economic integration between the region of Israel and the WBG. Our review begins with the British Mandate of Palestine (1922-1947), continues over the period between the Wars (1948-1967), then precedes to the period when the WBG came under Israeli control (1967-1993), then precedes to the period after the "Oslo Accords" (1994-2005), and finally deals with the Israeli disengagement from the Gaza strip and its consequences (2005 onwards). Chapter 3 discusses the aspects of monetary integration between the region of Israel and the WBG and presents assessment of the amount of NIS cash in circulation in the WBG by using the European Central Bank (ECB) method of estimation of euro currency in circulation outside the euro area. In chapter 4 we develop the Israel-WBG integration index (ISR-WBG-II), present our dataset, data treatment and the methodology. Finally, the results, as well as Sub-indexes of the individual components of the index, are presented. In Chapter 5 we breakdown the ISR-WBG-II by specific geographical areas – the West bank and the Gaza strip . In Chapter 6 we examine the relations between economic integration, terrorism, and unemployment rates. In this context we assess Granger causality between the various above-mentioned elements. Chapter 7 concludes our main findings: According to the ISR-WBG-II, in a long-term perspective, the years before the “First Intifada” were the years where the level of economic integration was at the peak, since then it began to decline in the face of periodic closures and restrictions on the movement of people and the beginning of the terrorist events. Some recovery was observed after the "Second Intifada". The political and economic situation in the Gaza strip since Hamas' rise to power in 2006, requires an examination of Israel's activities separately in relation to each area and discussion of three political and economic entities in the region. We also found that the level of economic integration Granger causes terrorism. This finding supports the argument that terrorism is a response to political conditions and frustration that have little to do with economics and low market opportunities. We also found that unemployment rate in the WBG Granger causes the level of economic integration. This finding could be linked to the Israeli policy toward the territories, that when there is a fear of a significant decrease in the standard of living, Israel allows for more economic activity with the WBG.

1. **Chapter 2: Geopolitical and economic history**

In the Israeli-Palestinian case, geopolitical events and political arrangements have played a significant role. Over the past 100 years, there have been a number of significant events that have led to changes in the control and governance over the region:

**Figure 1- Geopolitical events**

The purpose of this chapter is to review the geopolitical events and aspects of economic integration in the region over the past century that shaped the economic ties between Israel and the PA as they stand today. Reviewing this history is essential to understand the current situation. In each period we describe the economic activity that took place in the region, and the impact of geopolitical events on it. The chapter does not deal with a comprehensive historical economic review of the development of the Palestinian and Israeli economies, but focuses on the economic activity that took place between Israel and the WBG as a background for further research.

* 1. **British Mandate of Palestine (1922-1947)**

From about 1517 to 1917, the Ottoman Empire ruled much of the region. As a result of World War I, the region came under the control of Great Britain in 1918. The borders of the land, as a separate country, were defined for the first time in many centuries. Until then, under the Ottoman Empire, the land's boundaries had not been defined because it was part of other large Ottoman districts and was not a distinct political unit. The territory of the British Mandate included land on both sides of the Jordan River, encompassing the present-day countries of Israel and Jordan. In 1921, Great Britain created at the east of the Jordan River a separate administrative entity called Transjordan[[1]](#footnote-2). In July 1922, the League of Nations entrusted Great Britain with the Mandate of Palestine[[2]](#footnote-3).

**Figure 2 - Division of the British Mandate of Palestine**

Map

Description automatically generated

Source: IDF Mapping Unit and Israel MFA

According to Metzer (1998), the Mandatory Government provided an official “state” identity and citizenship and created a unified civil administration: a legal structure enforced by state police and courts, a centrally designed and administered fiscal system, an integrated monetary regime, and a modern transportation and communication infrastructure. As such, they constituted a common framework for the conduct of civil affairs, for internal economic activity and for external trade. De facto, the Mandatory Government provided a solid institutional and operational foundation for the formulation of a single economy. But the British task also involved an explicit commitment to the promotion of a Jewish national home, as embedded in the Mandate’s wording[[3]](#footnote-4). Regarding currency arrangements, until 1918, the Palestine area was an integral part of the Ottoman Empire and therefore used its currency. In 1921 the British administration ordered that only Egyptian currency and the British gold sovereign would be legal tender in the area. In 1926, the British Secretary of State for the Colonies appointed a Palestine Currency Board to introduce a local currency[[4]](#footnote-5). The board decided that the new currency would be called the Palestine pound, fixed in value to the British pound and it became legal tender on November 1927[[5]](#footnote-6).

According to Shoukair’s analysis, it is fair to speak of two rather than one Palestinian economy. As he puts it (2013, 52): “while the Arab economy was based primarily on agriculture and commerce, the Jewish economy was more broad-based. Seeking to create a European lifestyle in Palestine to attract and consolidate Jewish immigration, the Jewish community erected urban centers and established capital-intensive industries. Given the social, demographic, organizational and political differences between the Jewish and Arab populations, economic integration in Mandatory Palestine was limited. Political ideologies and events exacerbated socio-economic segregation”.

Metzer and Kaplan (1985) discuss the Arab-Jewish dualism and economic growth in Mandatory Palestine. According to their research, under the relatively stable conditions of the British mandate a Jewish community was built alongside the Arab community. This turned Palestine into a binational dualistic entity, administratively united by the mandate. Palestine's dualism was reflected in two distinct economies - one was the low-income and relatively backward Arab economy, and the other was the relatively modern, high-income, and urban Jewish economy. As they wrote (1985, 339-341):

"Besides the typical dualistic trade in agricultural products, Arab transport and trade services were used intensively by Jews. Arab building materials-primarily quarry products-fed the expanding Jewish construction industry, and dwelling services sold by Arab landlords housed part of the rapidly increasing Jewish population of the mixed towns. On the other hand, the proportion of Arab labor services bought by the Jewish economy, while rising, was still relatively small in 1935"….."A special role in intersectoral trade was played by the land sold by Arabs to Jews"….. "there has been substantial rise in the product share of Arab exports to the Jewish economy, growing from 9.3 percent of Arab net product in 1921 to 14.0 percent in 1935 (including land sales, it rose from 13.9 to 24.5 percent of Arab product between the two years) while Jewish exports to the Arab economy were negligible in 1921 and reach to 7.8 percent of Jewish product".

Metzer and Kaplan’s findings indicate that the political conflict between the two communities -- in view of the efforts made to limit intersectoral relations at that period -- played only a minor role in shaping their economic interrelationship and performance.

According to UNCTAD (1995), both the West Bank and the Gaza Strip were highly integrated into the economic network of Mandatory Palestine. The economy of the WBG was by and large based on agriculture: the West Bank, primarily a Semi-arid farming area, sold much of its output to the coastal urban centers. The Gaza Strip was primarily a citrus producing area. Both areas also found an outlet for their surplus labor in the central coastal area. It is estimated that up to 1948, at least 80,000 persons from the West Bank worked, both seasonally and for extended periods, in the coastal urban centers. The Gaza Strip was also economically integrated into the coastal region to the north and it is estimated that around 80 per cent of the Gaza area population depended on contacts with the rest of Palestine for their livelihood.

In 1936, an Arab revolt in Palestine took place. It was a nationalist uprising by Palestinian Arabs against the British administration, demanding Arab independence and the end of the policy of open-ended Jewish immigration and land purchases with the stated goal of establishing a "Jewish National Home". The hostilities contributed to further disengagement of the Jewish and Arab economies in Palestine, which were intertwined to some extent until that time. The revolt included a general strike and economic boycott of the Jewish sector. But the revolt did not achieve its goals: the Jewish sector was not materially harmed by those acts and its economic activities even intensified. Development of the Jewish economy and infrastructure were accelerated- for example, there was construction of a separate Jewish-run seaport in Tel Aviv and a Metal works was established to produce armored plating for vehicles, in addition a rudimentary arms industry was founded. Transportation capabilities were enhanced, and Jewish unemployment declined in light of employment of Jewish police officers, and replacement of striking Arab laborers, employees, craftsman and farmers, by Jewish workers.  On the other hand, Palestinian houses were destroyed, and massive financial costs were incurred because of the general strike and the devastation of fields, crops and orchards. The economic boycott further damaged the fragile Palestinian Arab economy through loss of sales and goods and increased unemployment[[6]](#footnote-7).

According to Goren (2017), one of the serious consequences of the Arab uprising was the heavy economic damage inflicted on the Arab sector. Expressions of economic damage are particularly evident in those places where extensive trade relations between Arabs and Jews existed in the past, such as in the coastal cities of Haifa and Jaffa. After the Arab uprising ended, and with the start of World War II, the Palestinian had not yet freed themselves from the economic impact of the uprising and were thus forced into another unconventional period that brought them new problems such as increased economic slowdown and unemployment. In view of the dismal situation, the Arab public naturally tended to seek conditions that would allow it to repair the damage of the period of the Arab uprising, and alleviate the daily subsistence challenges it faced as a result of the war. The Arab public turned its interest to day-to-day economic issues, some of which were influenced by the very state of the war. The problems of the proper management of economic life during the war also occupied the Jewish community, and therefore Jewish-Arab cooperation was formed during this period. This cooperation, which was fundamentally beneficial, stood out in areas where there was a combination of Jewish-Arab interests, and first and foremost the economic field. However, beginning in 1943, when it became clear that Britain and its allies would win the war, the political resurgence of the Arab sector began, with a certain retreat in the scope of ties. The period of World War II, unlike the period before it, was therefore characterized by a significant improvement in the relations between Arabs and Jews within the mixed cities and between Arab and Jewish localities.

Stein (1987) identified and explained factors which influenced the rural economy's evolution, and indicated how Palestine's rural population faired during the emerging Arab-Zionist struggle to control the country's political future. The result of this struggle was that the rural economy penultimately alienated the peasant from the land. The ultimate cause of displacement was the magnetic attraction of British and Jewish capital through public works projects and land sales respectively.

Metzer (1998) finds that over the period 1922 to 1947, the Jewish sector of the Palestine economy maintained an annual growth rate of 13.2 percent (4.8 precent in per capita terms), and in 1947 accounted for 54 percent of the net domestic product of the Jewish and Arab economies combined[[7]](#footnote-8). By contrast, the Arab sector of the economy grew at less than a half that rate (6.5 percent annually) over the same period (3.2 percent in per capita terms).

On 29 November 1947 the United Nations General Assembly vote for the Partition Plan for Palestine into Arab and Jewish States, which would maintain "Economic Union”, albeit also stating “that the present situation in Palestine is one which is likely to impair the general welfare and friendly relations among nations[[8]](#footnote-9)".

**Figure 3 - UN Partition Plan Map for two states**

Map

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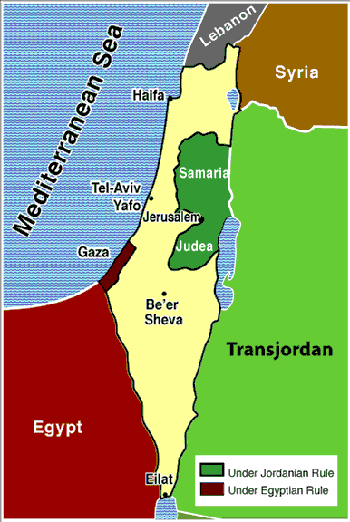
Source: Israeli Ministry of Foreign Affairs

Immediately after the decision, de facto the "Israeli War of Independence" or as it is known in Arabic, "Nakba" began. The first phase of the war took place until the termination of the British Mandate and Israeli proclamation of statehood on 14 May 1948.

* 1. **Between the Wars (1948–1967)**

The war of Independence continued until July 1949. The UN November 1947 resolution for an Arab and Jewish states did not materialize. At the end of the war, Israel captured and held some 5,000 km² over and above the areas allocated to it by the 1947 United Nations resolution. The outcome of the 1948 war, brought about a complete halt to economic ties between Israel and the WBG. It also left the Arab population divided into two distinct geographic and political regions: the West Bank was under Jordanian jurisdiction, while the Gaza Strip was under the control of Egypt. This had far-reaching implications for both territories. Their economies lost geographic and functional continuity, and the population (both indigenous and refugee) was disoriented - there was little, if any, interaction between the West Bank and Gaza Strip, which were geographically separated by Israel.

**Figure 4 - The results of the War 1949-1967**



Source: Jewish Virtual Library, Israeli War of Independence: Background & Overview

Economically, both the West Bank and the Gaza Strip lost access to their primary markets and to shipping ports and routes, the source of supply for a wide range of products. Their transportation networks and communication systems were disrupted and rendered redundant; access to jobs for many of the indigenous inhabitants was hindered and many border villages lost much of their agricultural land. Both the West Bank and the Gaza Strip faced the difficult process of reorienting their economies to Jordan and Egypt, respectively. Both Jordan and Egypt were more concerned with the political stability than with the economic development of these areas (UNCTAD (1995, p.11).

According to Mansour (1988) and Shoukair (2013) the 1948 war caused the displacement of more than 276,000 Palestinians to refugee camps set up in the West Bank, increasing its population by approximately 60% during the years of 1948-1952. This resulted in extremely high levels of unemployment (50% by 1954), which made many seek their livelihood in other Arab countries, particularly Jordan and the Arab Gulf states.

According to Cohen (1986, p.92), in the early 1950s, the West Bank was more highly developed and advanced than Jordan in almost every respect; however, this was to change under Jordanian rule. In the years following the annexation of the West Bank to Jordan in 1950, several factors led to the economic development of the East Bank. First, many professionals left the West Bank in search of work elsewhere. In addition, as a result of the separation from the ports of Haifa and Jaffa in Israel, new transport outlets had to be created. Jordanian investments in infrastructure were allocated primarily to the East Bank and Amman emerged as a key center for trade and commerce.

According to Hilal (1976), the eighteen years (1948-1967) of Jordanian rule left the West Bank region severely underdeveloped. The West Bank economy suffered not only from the general crisis of the Jordanian economy, but also from the Hashemite regime's policy of economic discrimination against the area, which prevented the development of its productive forces. Deprived of any real industrial or agricultural investment, the region had an extremely high rate of unemployment during these eighteen years.

According to Shoukair (2013), the new geo-political reality imposed in wake of the 1948 war affected patterns of foreign trade in the West Bank. While most imports (predominantly industrial) came from abroad, almost 50% of West Bank exports (predominantly agricultural) were sold in Jordan. The West Bank’s trade deficit did not disappear with the end of the British Mandate and separation from the Jewish community. By the close of the period of Jordanian governance, the deficit exceeded 82% of the total value of trade. The West Bank economy under Jordan remained largely underdeveloped.

In contrast, unlike the West Bank, which was formally annexed to Jordan in 1950, the Gaza Strip was never annexed to Egypt and its residents were never entitled to Egyptian citizenship. Egypt treated Gaza as a controlled territory, and it was administered by a military governor[[9]](#footnote-10). The economy of the Gaza Strip just after 1948 was on the verge of collapse: "Having lost most of its cultivable land and many of its domestic trade links, the Strip's rural, agrarian sector could not absorb its massive population….. Agriculture was clearly the primary economic activity; industrial activity remained virtually undeveloped….. Trade and commerce became important income-producing sectors, focused strongly on the development of an entrepot and smuggling trade since custom duties inside Gaza were relatively lower than those prevailing in Egypt…. The infrastructure of the Gaza Strip remained rudimentary, and, in the absence of an integrated market and skilled manpower base, the economy as a whole stagnated" (Roy (1987), pp. 58-59).

Regarding currency arrangements, the Israeli pound was the currency of the State of Israel from June 1952, the Palestinians in Gaza used the Egyptian Pounds and the Palestinians in the West bank used Jordan Dinar.

This period ended with the outbreak of the Six Day War which was a war between Israel and her neighboring countries - Egypt, Syria and Jordan – from 5-10 June 1967.

* 1. **The WBG under Israel control (1967 – 1993)**

As a result of the Six Day War, Israel took control of the West Bank and Gaza Strip, the Sinai Peninsula, and the Golan Heights. Israel tripled in its size after the war, and gained sovereignty over an Arab population of approximately one million citizens (in addition to 300,000 Israeli Arabs living in Israel at the time)[[10]](#footnote-11).

**Figure 5 - After the Six Day War**

Map

Description automatically generated

Source: IDF Mapping Unit and Israeli Ministry of Foreign Affairs

According to Arnon (2007), within a few days after the war, the external borders under Israel’s control were closed, while within a short time the internal borders practically disappeared, allowing economic transactions. Israel implemented its own trade protocol on the new external borders and created a customs envelope (Israel and the WBG). Israel arranged the terms of the customs union according to its own needs, and there was no agreement on sharing the revenues from import taxes. The public sector of the Palestinian economy, which deals with taxation, providing services, investment in infrastructure etc. was under Israeli control. A macroeconomic policy aimed at serving the needs of the Palestinian economy, was never implemented; additionally, since local currency did not exist, neither did any monetary policy. The local banking system had been ordered to close in 1967 and was not reopened until the 1980’s, and even then, in a very limited manner. During the first decades of the occupation a few Israeli banks operated very sparingly in the WBG. Financial institutions barely existed; minimal financial transactions were available through a relatively well-developed network of money changers that worked with the Jordanian banking system.

Naqib (2015) analyzes the dynamics of the relationship between the Israeli economy and the Palestinian economy as it evolved after 1967 in the context of two opposing effects: (i) a positive one that tends to help the Palestinian economy expand (new opportunities that opened up for employment in, and trade with, Israel and for some transfer of technology) develop and grow, and (ii) a negative one that tends to impede economic evolution and reinforce underdevelopment (restrictions on resource use, business activities and domestic and international trade, resource transfer to Israel and the neglect of the Public Sector). Accordingly, the Palestinian economy benefited significantly from its relationship with Israel in just the first decade where the Palestinian GDP per capita grew from nine percent of that of Israel to 15 percent, but afterwards the ratio declined continuously. Thus, in the first decade the relations between the two economies went through a process of convergence; the poor economy grew at a rate faster than the rich economy. Afterwards, the process was reversed and became one of divergence; the rich economy growing at a faster rate.

Arnon and Gottlieb (1993) found that the driving force behind the economic processes after 1967 war was the interaction between two very different economies which met in the market place. The rapid rise in standards of living until 1987 was led by high employment in Israel, while domestic growth of output was more limited. In an economic environment free of controls, it is not obvious that income gaps between such different economies should have been narrowed mainly through labor flows reflecting an unbalanced economic interdependence with Israel. In spite of growing standards of living and high saving rates, only a small share of savings was channelled into productive investment and as a result industry hardly contributed to economic growth.

Arnon and Spivak (1996) found that Israel and the WBG were closely integrated, whereas economic integration between the WBG and Jordan was much weaker. They computed the shocks to the economies and the correlation between the transitory shocks and between the permanent shocks. Based on the circumstances of the past, the (imposed) monetary union between Israel and the Palestinian economy was warranted.

According to Shikaki (2019) by the end of the 1967-1993 period, the Palestinian economy had become completely dependent on the Israeli labor and goods market. The contribution of productive sectors diminished, and economic activity revolved around work in Israel. Half of the labor force worked in or for the Israeli economy, which had become the undisputed trade partner for the WBG.

As such, the Palestinian labor force more than doubled, but domestic employment in the WBG grew by less than 33 percent. Employment in Israel has been key for keeping unemployment in the WBG at less than 7 per cent between 1970 and 1993, and for sustaining a population that has been growing at more than 2.2 percent per annum since 1970 (Farkash 2005, p-26).

**Figure 6 - Palestinians employed in Israel and unemployment rate in the WBG (1970-1993)**

Chart, line chart

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Source: Farkash (2005), Appendix

According to Farkash (2005, p-41), between 1967 and 1993, the Palestinian economy of the WBG witnessed a process of structural change that made it dependent on Israel:

“This dependency was a result of an Israeli policy of economic integration that dealt with the Palestinian demographic challenge by allowing an improvement in individual economic welfare while diminishing the capacity of the WBGS’s economy to stand on its own feet. Growth of the Palestinian economy became dependent on Israeli regulations and demand, rather than on domestic growth and linkages between domestic sectors. It became dependent on access to Israeli labor and product markets, rather than on domestic or international markets. While the economy shifted from being a predominantly agricultural economy to a service-oriented one, its employment-generation and productive capacities remained limited. Palestinian labor flows to Israel, meanwhile, played three key roles: they fostered the integration of the WBG into Israel, they shaped the nature of Palestinian development, and they provided an important source of income at both the individual and the national level. Meanwhile, as the economy became further integrated into that of Israel, the boundaries of the WBG’s economy became more difficult to delineate”.

In late 1987 the “First Intifada” broke out: thus started as a series of Palestinian protests against the Israeli military occupation of WBG, and the violent riots which began in the Jabalia refugee camp and spread to Gaza, the West Bank and East Jerusalem. According to Arnon (2007), it caused a severe economic crisis in its first year, but it was limited to certain areas. Over the following years the ties to Israel continued in the areas of employment, especially in the West Bank, and in trade. There were not severe limitations on movement of workers and goods, so there was a rapid return to the conditions that had prevailed over the previous twenty years. Arnon and Gottlieb (1993, pp 24-25) calculated the economic affects of the “First Intifada” on the West Bank:

“The level of GDP fell short of its potential in the first year of the Intifada (1988) by about 15 percent of actual GDP. Thereafter the potential output loss was considerably reduced to 8 and 2 percent in 1989 and 1990. By the year 1991 the level of output returned to its normal level. Over the four years the cumulative output loss is estimated at about 1/4 of current GDP. The calculation also implies a cumulative loss of about 30,000 jobs in the domestic economy. The shortfall in private consumption was much larger (in relative terms) than in output, mainly due to the negative effect of employment in Israel”.

The “First Intifada” lasted until the beginning of political discussions of a peace process (Madrid conference, 1991) and the end of the Gulf War, which led to the Oslo Accords.

* 1. **From Peace Process to entangled reality (1994 – 2004)**

In September 1993, Israel and the Palestine Liberation Organization (PLO) signed a "Declaration of Principles (DOP) On Interim Self-Government Arrangements", known also as the Oslo 1 Accord. Its goal was to end the Israeli-Palestinian conflict by eventually signing a comprehensive peace agreement. During a five-year interim period, negotiations would be held on the main issues of a permanent peace agreement: Jerusalem, refugees, settlements, security arrangements, borders, relations and cooperation, and other issues such as water. It also provided for the withdrawal of Israeli forces from parts of the WBG, and for the creation of a Palestinian interim government, the Palestinian Authority (PA) - the first instance of Arab self-government in history within the borders of the Land of Israel (“Palestine”). The Oslo 1 Accord was concluded following secret talks held in Oslo, Norway between Israeli and Palestinian delegations and signed officially in Washington D.C. on 13 September 1993. It served as the basis for a series of subsequent agreements. The most significant of these was the Interim Agreement on the West Bank and the Gaza Strip, also known as Oslo 2, signed in September 1995. The 1995 Interim Agreement expanded Palestinian self-government to the rest of the Palestinian towns and to many of the villages in the West Bank and Gaza Strip[[11]](#footnote-12). It divided the West Bank and the Gaza Strip into three zones - A, B and C - which served as the basis for the redeployment of Israeli forces. As a result of all the Oslo accords, almost all of the Palestinians in the West Bank and the Gaza Strip are under the Palestinian authority[[12]](#footnote-13).

**Figure 7 - The Oslo Accords**

Map

Description automatically generated

Source: IDF Mapping Unit and Israeli Ministry of Foreign Affairs

In April 1994, the "Protocol on Economic Relations between the Government of the State of Israel and the PLO, representing the Palestinian people", also called the Paris Protocol[[13]](#footnote-14), was signed and stated[[14]](#footnote-15): "the two parties view the economic domain as one of the cornerstone in their mutual relations with a view to enhance their interest in the achievement of a just, lasting and comprehensive peace. Both parties shall cooperate in this field in order to establish a sound economic base for these relations, which will be governed in various economic spheres by the principles of mutual respect of each other's economic interests, reciprocity, equity and fairness".

The Paris Protocol (PP) regulates the following main areas: customs, taxes, labor, monetary and financial issues, agriculture, industry, and tourism. Originally, the PP was to remain in force for an interim period of five years. As of 2022, however, the PP was still applicable.

A major element of the agreement was the establishment by the Palestinian Authority of a monetary authority (PMA) to regulate and supervise banks, foreign currency reserves and transactions. The Palestinians will levy income tax on individuals and corporations, property and municipal taxes, and have similar import policies to Israel. Palestinians will be able to import mutually agreed goods at customs rates different than those prevailing in Israel. The Israeli Shekel will remain legal tender in the areas until an agreement is reached on a Palestinian currency. The Palestinian Authority will impose a value added tax similar to Israel.

The Protocol integrated the Palestinian economy into the Israeli one - according to Article III of PP, the Israeli and Palestinian economies are part of a unified customs envelope that Israel manages. Israel transfers to the PA the taxes (tax revenues) it collects on Palestinian economic activity, including customs on goods directly entering the Palestinian economy, VAT on the net purchases made by Palestinians in the Israeli economy, and excise on fuel and purchase taxes[[15]](#footnote-16).

**Figure 8 - Clearance revenues**

Source: PMA and PCBS

According to article VII of the Protocol, "Both sides will attempt to maintain the normality of movement of labor between them, subject to each side's right to determine from time to time the extent and conditions of the labor movement into its area".

**Figure 9 – Palestinian employment in Israel (1968-2019)**

Source: ICBS and PCBS and author calculations

According to Arnon (2007, p-17) those who signed the PP anticipated an increase in economic integration between the two economies, but the reality was unilaterally imposed and growing separation. After the agreement was signed many more restrictions were introduced on free movement, on the flows of both goods and labor, and even on free movement of labor within the WBG. Many political and security reasons were given for the restrictions, created, and enforced by Israel. Violence and hostilities between Israelis and Palestinians overshadowed ongoing bargaining between the sides, and contributed to fading hopes of economic prosperity.

More than 80% of reported Palestinian exports are exported to Israel or through Israel abroad, including the export of plastics, furniture, and footwear. About 60% of Palestinian imports come from Israel or through Israeli importers, consisting mostly of fuel, grain, fodder, construction materials and machinery.

**Figure 10 – Palestinian export and imports to and from Israel**

Source: ICBS and PCBS and author calculations

The number of Palestinian workers in Israel dropped drastically. As Arnon put it (2007, p- 18):

“Before the 1994 interim agreements, 30% of the Palestinian labor force in the West Bank and more than 40% of that in Gaza worked in Israel. In 1995-6 the percentage of West Bank workers in Israel dropped to 18% and those from Gaza to only 6%. Thus salaries paid to workers from the Territories declined; remittances from work in Israel dropped from more than 30% of the GDP in the West Bank, to about 20%; while in Gaza remittances dropped from some 50% of the GDP in the 1980s to less than 10%. At the same time, the rate of unemployment in the Territories, which had been relatively low until 1993, rose to very high levels: around 20% in the West Bank and more than 30% in Gaza in 1996. These rates dropped a bit after a major closure ended in 1996 allowing more movement of workers during the late 90s”.

More than 60% of the revenues of the Palestinian Authority, excluding international aid, were transferred from Israel in the years 1995-2000 (Clearance revenues). Thus, dependency on Israel did not disappear – it changed; from dependency on Israel's labor and goods markets, to include financial support to the Palestinian public sector (Arnon, 2007, p- 19).

Al-Botmeh and Kanafani (2006) discuss the reasons behind the failure of the Paris protocol (1994). Three main perspectives were presented: The first one argued that the protocol was flawed from the outset, since it did not build on political or economic sovereignty for the Palestinians. Another perspective argued that the problem lies in the political and security environment that rendered the implementation of the PP obsolete. The third perspective saw the demise of the PP as a result of faults in its design as well as in its implementation, exacerbated by the lack of a conducive political environment. Their recommendation for an alternative trade regime includes the following principles—granting the Palestinians a reasonable degree of sovereignty over their trade policy and economy, while at the same time maximizing the potential economic benefits from being in close proximity and having special and privileged access to an advanced neighboring economy such as that of Israel.

In July 2000, the Camp David Summit[[16]](#footnote-17) failed to reach a permanent agreement to end the Israeli–Palestinian conflict. In September 2000, the “Second Intifada” broke out and terminated the Oslo Accords process. The “Second Intifada” was a period of intensified Israeli–Palestinian violence with thousands of casualties. On the March 29, 2002, Israel launched Operation Defensive Shield - the main objective of the operation was to strike Palestinian terrorist infrastructures and put an end to the wave of terrorist attacks against Israeli citizens. One of the main triggers of the operation was the March 27, 2002 attack at the Park Hotel in Netanya with numerous deaths and wounded. The operation was concentrated on cities in Judea and Samaria, in particular Nablus, Ramallah, Jenin and Bethlehem, which housed most of the terrorist infrastructures. As the Israel military controlled the main cities, it used other mitigation tools. Israel also started to build the separation barrier between Israel and the West Bank (“Israeli West Bank wall”) to offset the terror attacks.

The hostilities dramatically affected both economies. Successive closures led to de facto separation, which resulted in a dramatic across the board decrease in commerce, employment and investments. Israel suffered a three-year recession and its GNP fell by about 8%. The Palestinians suffered from an economic collapse on a different scale. In the first three years of the Second Intifada, living standards dropped by about 30% - GDP contracted by 8.7% in 2000. It fell by an additional 8.6% in 2001, and by 13.3% in 2002. The unemployment rate rose to levels unknown in modern economies – about 30% in the West Bank and nearly 40% in Gaza. Approximately 180 thousand Palestinians (of these 100 thousand employed in Israel) lost their jobs in the second half of the year 2000. Wages from abroad plunged in 2001, declining to 40% of what they had been in 1999.

International aid from the donor states rose to the unprecedented level of over one billion dollars a year, about one-third of the GDP. This assistance, rather than helping to build the Palestinian economy, became an emergency safety net (Arnon (2007) and Shoukair (2013)).

Many consider the Sharm el-Sheikh Summit on 8 February 2005 to be the end of the “Second Intifada”. The PA and the GOI agreed that all Palestinians factions would stop all acts of violence against all Israelis, while Israel would cease all its military activity against all Palestinians. They also reaffirmed their commitment to the Roadmap for peace process.

* 1. **Israel Disengages from the Gaza Strip and the Hamas Electoral Victory (2005 - 2021)**

The Israeli disengagement from Gaza in 2005 was the unilateral dismantling of the 21 Israeli settlements in the Gaza Strip, and the evacuation of the settlers and Israeli army from inside the Gaza Strip. Israel has continued to maintain direct external control over Gaza and indirect control over life within Gaza: it controls Gaza's air and maritime space, and land crossings, Gaza remains dependent on Israel for its water, electricity, telecommunications, and other utilities[[17]](#footnote-18).

The entry of a resident of the Gaza Strip into Israel also requires a permit, as does the entry of Israelis and foreigners into the Gaza Strip. Gaza residents’ ability to cross Erez was gradually limited over the years. Since 1991, residents have been required to obtain exit permits, and the number of permits given gradually declined.

**Figure 11 - Israeli disengagement from the Gaza Strip**

תמונה שמכילה מפה

התיאור נוצר באופן אוטומטי

Source: Israeli Ministry of Foreign Affairs

Israel's disengagement, created a new situation, and actually hastened the establishment of Hamas’ control of the Gaza Strip. On January 25, 2006, Hamas won a landslide victory in the Palestinian Legislative Council elections. The Hamas victory sent shock waves through both the Palestinian community, and the international community as well. For the first time in Middle Eastern history, an overtly terrorist organization with a radical Islamic ideology took over a government by means of a democratic election. The results of the election reflected the will of many Palestinians who were fed up with the rampant corruption and lack of effectiveness of the Palestinian Authority, and sought a change which they hoped to find with Hamas and the worldview it represented. During 2006, Hamas built up its military strength in the Gaza Strip, rapidly establishing itself as both the central military and political power[[18]](#footnote-19). In June 2007 the Fatah–Hamas conflict reached its height and Hamas took control over the Gaza Strip. In September 2007, due to continued terrorist attacks emanating from Gaza and targeted at its civilian population, the Israeli Security Cabinet designated the Gaza Strip as a "hostile territory". While Israel remains committed to averting any humanitarian crisis, it does not feel required to provide any supplies which go beyond that[[19]](#footnote-20).

Since Hamas took control over the Gaza Strip, the economic relations of the Gaza Strip with Israel and the WB have deteriorated. In figures 12 and 13 below we can find the results of this in terms of GNI per capita, and unemployment rates for the WB and GS.

**Figure 12 - GNI Per Capita at current prices by georgical area**

Source: Palestinian Central Bureau of Statistics

**Figure 13 - Unemployment rates by georgical area**

Source: Palestine monetary authority

Through the years, violence continued to reflect the situation in the region, mainly in the Gaza Strip:

* In December 2008, due to continuing rocket fire from the Gaza Strip on towns and villages in the Israeli south, Israel launched Operation Cast Lead[[20]](#footnote-21), during which the IDF endeavored to destroy terrorist infrastructures in the Gaza Strip, in particular rocket launching capabilities.
* In November 2012, the IDF launched Operation Pillar of Defense[[21]](#footnote-22) against terrorist organizations in the Gaza Strip, with the objective of reducing the number of rocket attacks directed at Israeli civilians.
* In July 2014, Israel launched “Operation Protective Edge״ in the Gaza Strip[[22]](#footnote-23), in response to increasing rocket and mortar fire on Israel from the Gaza Strip. Furthermore, ground forces entered the Gaza Strip to identify and neutralize the cross-border assault tunnels, which originated from the outskirts of the urban areas of the Gaza Strip.
* The 2015–2016 wave of violence called the "Intifada of the Individuals" began as suspicion spread among Palestinians that Israel was attempting to change the status quo of the Temple Mount in Jerusalem by imposing age and gender restrictions on Muslim access, while allowing entry to larger groups of Jewish activists. During the events, Palestinians from the West Bank and East Jerusalem carried out assaults against Israeli soldiers, policemen as well as against civilians.
* Between March 2018 and December 2019 - Hamas instigated a campaign that was billed as a peaceful civilian protest but was actually an excuse for violent riots on the Gaza Strip-Israeli border. In addition, kites and helium balloons with incendiary material attached were launched from the Gaza Strip to the Israeli side. The resulting fires destroyed thousands of acres of forests and agricultural land, with a huge cost to farmers and to the entire ecosystem of the western Negev​. During this same period, rocket launches from the Gaza Strip also increased.
* In May 2021, operation Guardian of the Walls[[23]](#footnote-24) was launched after rockets were fired toward Jerusalem, by terror organizations in the Gaza Strip, and later Israel was attacked by fired thousands of rockets. In response to these attacks, the IDF struck at Hamas terrorist targets in Gaza. Among these targets, the IDF struck many kilometers of Hamas’ extensive tunnel system.
  1. **Recent years**

Recent years have been characterized by a lack of progress in the political ND peace process. Therefore, the Palestinian Authority started exploring steps and policies to reduce its significant dependence on Israel.

In February 2018, the PA decided to establish a government committee that would prepare operative action plans for the separation of the PA from Israel on all levels, including the economic agreements and the Paris Protocol. The PA statement said that, among other things, the possibility of stopping the use of the NIS and issuing an independent Palestinian currency or using another currency was being examined.

Beyond these statements, the Palestinians resented the practical significance of the Paris Protocol and the need to obtain Israeli approval for any significant economic move by the PA, which prevented the growth of the Palestinian economy. Later on, there was another announcement, that it decided to end its commitment to agreements signed with Israel and withdrew its recognition of Israel until it recognized a Palestinian state. subsequently, the PA established another committee to discuss the final situation and relations with Israel, the United States and Hamas. In 2019, Israel agreed to re-examine economic agreements with the Palestinian Authority, and to open the Paris Protocol and update it[[24]](#footnote-25).

In the years 2019-2020, as an act of protest, the Palestinian Authority refused to receive clearance revenues from Israel, after Israel implemented a law requiring the deduction and freezing of a sum equal to the amount paid by the PA to Palestinians detained in Israel (including prisoners convicted of bombings and murder), as well as to their families and to released prisoners. This continued in 2020, as part of its decision to suspend coordination with Israel in protest after an Israeli announcement of intention to annex large areas in the West Bank. Although these issues were eventually resolved, they had an impact on the Palestinian economy and impaired the Palestinian Authority's ability to function, as a significant percentage of the PA's revenues were damaged over a long period of time which triggering a reduction in the activity, salary cuts and additional funding from banks at the expense of the private sector.

Another event worth noting is a trade war between Israel and PA that began in 2019, when the PA decided to stop the import of calves from Israel as part of an attempt to reduce the PA’s economic dependence on Israel (accounting for about 60 percent of meat consumption in the PA territories). Israel reacted with sanctions against the PA, including revoking the trade credentials of Palestinian businessmen, and barred the Palestinians from importing calves from any other source, and blocking of all West Bank agricultural goods.

On the other hand, in November 2021 Israel approved, for the first-time a quota of tech work permits for WB Palestinians[[25]](#footnote-26), and granted the Israeli Standards Mark, for the first time, to four Palestinian factories from the West bank. The Standards Mark will enable the Palestinian factories to sell their products in Israeli markets and in the European marketplace[[26]](#footnote-27).

Regarding relations with Gaza Strip, the political situation created by Hamas makes it difficult to create a process for economic rehabilitation and development. While long term projects are hard to put into effect, in November 2020, Israel approved marketing processed foods from the Gaza Strip in the West bank[[27]](#footnote-28). Israel also approved the entry of 10,000 Gazan workers into Israel after a long period of disengagement[[28]](#footnote-29).

At the time of writing this, Israel is planning to ease a series of restrictions currently in place on the Gaza Strip, aiming to alleviate some of the territory’s economic woes, and prompt the population to pressure the Hamas leadership to keep the calm,

while improving the standard of living of the population.

1. **Chapter 3: Monetary relations between Israel and the PA territories**

In this section we analyze the scope and method of monetary relations between Israel and the PA territories, inter alia, the NIS role in the Palestinian banking system, monetary policy in Israel and the transmission mechanism to the Palestinian economy, correspondent banking relationship, and finally assess the amount of NIS cash in circulation in the PA territories.

* 1. **The NIS role in the Palestinian banking system**

Article IV of PP regulates monetary and financial issues between Israel and the PA territories, and states that:

* "The New Israeli Shekel (NIS) will be one of the circulating currencies in the areas and will legally serve there as a means of payment for all purposes, including official transactions. Any circulating currency, including the NIS, will be accepted by the PA and by all its institutions, local authorities and banks when offered as a means of payment for any transaction."
* "Both sides will continue to discuss… the possibility of introducing mutually agreed Palestinian currency or temporary alternative currency arrangements for PA".
* "Banks in the Areas will accept NIS deposits".
* "The PMA will have the right to convert at the BOI excess NIS received from banks operating in the areas into foreign currency in which the BOI trades in the domestic interbank market".

The main function of the Bank of Israel (BOI) is to maintain price stability, i.e., to preserve the currency's purchasing power. Monetary policy is primarily directed towards attaining this objective, the achievement of which is essential for growth and economic stability. As is the case in many advanced economies, the main tool of monetary policy is its effect on the price of money, i.e., the interest rate. The range of price stability is defined as the target rate of annual inflation, (as of 2022 1–3 percent). The decision on the short-term interest rate required to meet the inflation target set by the Israeli government is the responsibility of the BOI. The Bank of Israel Law grants the Bank autonomy with regard to that decision. The BOI operates a flexible inflation targeting policy that allows temporary deviations from the target, but is designed to ensure that inflation returns to within the target range within two years at most.[[29]](#footnote-30) The Palestine Monetary Authority (PMA) does not conduct an independent monetary policy. The Palestinian economy operates in a financial system with a large number of currencies affected by the monetary policy of the countries that issued the currencies. The interest rates, including interest on deposits and loans, in the Palestinian market are linked to market mechanisms and competition in the banking system, but also to interest rates in the issuing countries, the US dollar, the Jordanian dinar and the Israeli shekel.[[30]](#footnote-31)

Due to the importance of economic ties with Israel, the Israeli shekel is one of the main currencies used by businesses and consumers in the Palestinian economy in day-to-day trading. The Palestinian banking system maintains accounts in 3 main currencies (shekel, dollar, Jordanian dinar). This "multi-currency" reality is reflected, for example, in activity and the share of shekel deposits out of total deposits (36%), the share of credit in shekels out of total credit (40%) and checks in shekels presented for clearing (80%) in 2019. In figures 14, 15 and 16 we find upward trend in the use of NIS in core banking operations:

**Figure 14 - Distribution of deposits governorates by currency in millions of US $ and in percentage**

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| --- | --- |
|  |  |

Source: PMA

**Figure 15- Distribution of gross credit facilities governorates by currency in millions of US $ and in percentage**

|  |  |
| --- | --- |
|  |  |

Source: PMA

**Figure 16 – Distribution of checks presented for clearing in the Palestinian Authority governorates by currency in millions of US $ and in percentage**

|  |  |
| --- | --- |
|  |  |

Source: PMA

Some scholars have examined a change in the existing mechanism under which the Palestinian Authority will issue its own independent currency: Arnon and Spivak (1995) found that there are substantial revenues to be gained from the introduction of a Palestinian currency—it will yield a short­-term revenue amounting to more than 22% of the GDP (in the first five years) and around 1.29% annually in the long­-run. The revenues will decrease in direct proportion to an increase in the actual money­-multiplier. Cobham (2004) suggested that a new Palestinian state would initially have no alternative but to opt for a relatively hard peg, with a low level of discretion in monetary policy. He claimed that in the long run, the eurozone will become the PA’s most important trading partner, as the euro is a stable and suitable anchor currency. The long run goal should therefore be a monetary framework with a peg to the euro, but some scope for short run discretion and for the operation of the lender of last resort function. In the short run, the PA should move toward this goal via the introduction of a Palestinian currency under a currency board, with a peg initially to the NIS, but later to the euro. Wazir, Atallah and Sarsour (2011) considered the problems in estimating the money supply in the PA territories, which is a complex matter because of the absence of a national currency, the regular use of 3 currencies (JD, USD and NIS) and the unavailability of data on currency in circulation in the PA territories. They discussed a method for determining the amount of a Palestinian national currency to be issued, if and when that occurs, using indicative ratios (cash to GDP, cash to bank deposits, and GDP to money supply) from Jordan and Israel to estimate the money supply in the PA territories. More recently, Arnon and Bamya (2015) discussed how the PMA will carry out the functions of a modern central bank in the case of political and economic sovereignty. A successful launching of a Palestinian currency must be able to convey to the public that the currency is credible and stable.

* 1. **Monetary policy in Israel, the transmission mechanism and the effects on the Palestinian economy.**

Arnon and Spivak (1996) found that Israel and the WBG were closely integrated, whereas economic integration between the WBG and Jordan was much weaker. They computed the shocks to the economies and the correlation between the transitory shocks and between the permanent shocks. Based on the circumstances of the past, the (imposed) monetary union between Israel and the Palestinian economy was warranted. However, optimal monetary arrangements in the future will depend on the extent of changes in real flows and on a satisfactory settlement of the seigniorage issue.

Beidas and Kandil (2005) shed light on the quantitative behavioral responses of key economic variables in the Palestinian economy in the face of major economic shocks. Their analysis shows that (i) wages and prices are flexible in the face of various shocks; (ii) the real wage appears rigid in the face of various shocks and increases despite higher unemployment; (iii) an appreciation of the NIS real effective exchange rate decreases exports and imports; and (iv) money demand appears stable in the face of exchange rate shocks. They concluded that although a fixed exchange rate system may initially be desirable to establish credibility of the new currency, some flexibility of the exchange rate is desirable over time.

Sarsour (2012) investigates the channels through which external or internal monetary policy shocks can affect the real economy and inflation in WBG. Empirical results in general indicate that monetary policy shocks have limited influence on economic activities and inflation in WBG. However, results show that pass-through from domestic lending interest rates of the US dollar (or Jordanian dinar) is higher than for the NIS. He finds a presence of significant but relatively low pass-through for policy rates onto domestic lending interest rates, and therefore, on real economic activities. Israeli monetary policy has a significant impact on Palestinian real economic activities, mainly net exports and the inflation rate. Furthermore, the exchange rate channel influences GDP by affecting wealth and net exports.

Draghma and Iriqat (2016) examined the causality between the Palestinian, Jordanian, and Israeli economies using three macroeconomic measurement indices: Gross Domestic Product, Inflation Rate and Unemployment Rate over the years 1997–2014. Their findings statistically support the notion that both GDP in Israel and GDP in Jordan affect Palestinian GDP.

Recent evidence for the impact of the interest rate channel may be seen in Figure 4.

**Figure 17 - The BOI key policy rate and the interest rate on NIS loans in the Palestinian banking system**

Source: BOI and the PMA

In terms of inflation, the West Bank is affected mainly by price trends around the world and in Israel, while the Gaza Strip, where there are barriers to the movement of goods, is less affected by these trends. Local prices are therefore affected largely by the prices of basic commodities in the global market as well as by import costs, mainly from Israel, and are also affected by local prices of similar goods in Israel.[[31]](#footnote-32)

**Figure 18 - Annual inflation rate, Israel and the WBG**

Source: BOI and the PMA

In figure 17 we can find the sum of credit and deposits in the Palestinian banking system by currency out of GNI. This index may reflect the potential impact of Israel's monetary policy on the Palestinian economy.

**Figure 19 - The sum of credit and deposits in the Palestinian banking system by currency out of Gross national income**

Source: PMA

* 1. **Correspondent banking relationship between Israel and the WBG**

The definition of correspondent banking by the IMF (2017)[[32]](#footnote-33) is, "The provision of a current account (called a nostro account) by a bank to another bank, which uses this nostro account to facilitate cross-border payments and trade finance transactions of its customers (e.g., individuals, legal entities, or even other banks). The bank may also use the nostro account for its own liquidity management and related services (cash clearing, short-term borrowing and investment services in other currencies). The bank providing the nostro account is called the correspondent bank, and the bank using the nostro account is called the respondent bank. The relationship between the correspondent and respondent bank is called a Correspondent Banking Relationship (CBR)".

According to Article IV of PP: "The clearing of money orders and transactions between banks operating in the areas and banks operating in Israel will be done between the Israeli and the Palestinian clearing houses on the same working day basis, according to agreed arrangements", and "Both sides will allow correspondential relations between each others' banks".

The means of payment used in transactions between Israel and the WBG include:

* Checks—used for payments whose average value reaches tens of thousands of shekels per check.
* Bank transfers—used for payments whose average value reaches millions of shekels for transfer.

According to the IMF report to donor countries (AHLC SEP 2016)[[33]](#footnote-34), transactions settled through CBR are a large part of the WBG's economic activity. In 2015, approximately 300,000 checks were issued by Palestinians to Israeli beneficiaries deposited with Israeli correspondent banks and 800,000 checks were issued by Israelis to Palestinian beneficiaries and deposited in Palestinian banks. These transactions were estimated at NIS 8 billion and NIS 7 billion, respectively, which was about 30% of the WBG's GDP. A similar system was used to transfer money in and out of the shekel, which amounted to around NIS 8 billion and NIS 14 billion, respectively, or about 16% and 28% of WBG's GDP.

In figure 6 below we can find the Yearly Checks and Money transfer Volume between Palestinian banks and Israeli banks, in NIS billions. We can see that the upward trend stopped at the end of 2016, among other things, because of the decision of the Israeli banks to end the CBR, as will be explained below.

**Figure 20 – Yearly Checks and Money transfer Volume between Palestinian banks and Israeli banks, in NIS (billions)**

Source: PMA

* + Cash—used for low-volume transactions, wage payments for Palestinian workers in Israel, and purchases made by Israeli Arabs in the West Bank. This cash flows into the WBG, and generates excess cash in the Palestinian banking system. The excess cash is deposited in the correspondent bank accounts, using a quota mechanism. It is important to note that the procedure enables the Palestinian banks to manage their liquidity. The excess cash create significant costs for the Palestinian banking system (insurance fees, transportation cost and deposit fees, loss of alternative yield). In April 2022

In April 2022, it was reported that during 2022, a mandatory solution would be presented for the transfer of salaries to Palestinian workers in Israel through bank transfer as a substitute for cash payment[[34]](#footnote-35).

**Figure 21 – Excess cash of the Palestinian banks (in billions of NIS) deposited in Israel**

Source: PMA

The settlement and clearing processes between Israel and the WBG takes place within the framework of the correspondent services that the Palestinian banks receive from Israeli banks. Palestinian banks are members of the Israeli Banking-Clearing House (CH). The decision in principle regarding their acceptance to the CH was made even before the establishment of the PA. The members of the CH obligate all its members to act in accordance with the rules and principles anchored in the CH rules—an agreement between the members of the CH, which includes, inter alia, the requirements regarding standardization, records and transmissions, forms and dates, and the transmission of messages between members. The CH rules allow members to participate in the clearing settlements themselves or to be represented by another CH member (Correspondent Bank). In order to reduce the risks of the clearing process, the Correspondent banks take collateral from the Palestinian banks. It should be noted that the Palestinian banks are not directly connected to the CH, and therefore cannot send payment instructions directly to the system, in which the correspondent banks and the Israeli banking corporations have controls on money laundering and terror financing**.**

Over the past decade, there has been a phenomenon of reducing relations between banks around the world. This phenomenon has also been called "de-risking". This phenomenon began due to the attribution of responsibility to the global correspondent banks for international bank transfers carried out through them, in view of the fact that the transfer data are known to the correspondent banks .Global correspondent banks have been fined billions of dollars by law enforcement agencies and regulators, mainly in the United States, and are also facing tort claims mainly in terms of financing terrorism.

In recent years, and especially in light of the regulatory uncertainty, the correspondent banks have begun to examine the end customers, and demand that the representative banks refrain from transfers related to customers of a certain type[[35]](#footnote-36). Concerned about the economic impact of the phenomenon, in 2017[[36]](#footnote-37) the IMF recommended to countries/territories that have been drastically affected by the retreat of CBR, to examine whether it is worthwhile to establish temporary mechanisms, including through public entities, to provide payment and settlement services. Earlier in 2016, due to the money laundering and terror financing risks involved in those services, the Israeli correspondent banks informed the Government of Israel (GOI) that they planned to terminate the services they were providing to the Palestinian banks.

Due to the high level of integration between Israel and the WBG, the implications of CBR termination could generate the following events:

* Reducing transactions between Israelis and Palestinians in a manner that will harm consumers, employment and the Palestinian economic growth.
* Adverse impact to the supply of essential services to the PA (electricity, fuel, water) and an inability to transfer tax revenues.
* A shock to the stability of the Palestinian financial system through the payment systems.[[37]](#footnote-38)
* The possibility of further de-risking with foreign banks.
* A decrease in the effectiveness of the anti-money laundering and counter terrorist financing regime by expanding the use of means of payment and financial agents whose supervision is not tight.

In 2017, the GOI approved the provision of letters of indemnification and immunity to the Israeli correspondent banks, for a limited period[[38]](#footnote-39), and instructed the authorities to find a long-term solution for the CBR with the Palestinian banking system. In 2018, the GOI approved the recommendations of an interministerial team led by the BOI and established[[39]](#footnote-40) a new governmental company whose role is to provide the correspondent services instead of the Israeli correspondent banks. This company will represent the PMA vis-à-vis the CH and the PMA will represent the Palestinian banks (Government-to-Government sector solution). Following Israel, in Feb 2021 the PMA announced the establishment of the Palestinian Correspondent Company to facilitate the implementation of financial transactions, and procedures for paying the prices of purchases and sales and making cash transfers, which will contribute to accelerating the economic cycle[[40]](#footnote-41).

* 1. **Assessing the amount of NIS cash in circulation in the WBG**

It would seem that physical currency should be fading out as the world of payments is increasingly electronic, with new technologies emerging at a rapid pace, and as governments look to restrictions on transaction based on cash, as a way to reduce crime and tax evasion. Nonetheless, the quantity and value of banknotes and coins in circulation are affected by several factors, such as changes in the extent and number of transactions, the rate of inflation, population growth, and the use of automated teller machines, checks, credit and debit cards and advanced means of payments (Judson 2017).

**Figure 22 - Cash in circulation to GDP – Selected countries**

Source: Department of currency report, 2019, Bank of Israel

The Bank of Israel has the sole right to issue currency in Israel. According to BoI (2019), the use habits of cash and other means of payment are influenced more now than in the past by changes in technology and regulation. The BoI encourages the use of advanced nonpaper-based means of payment, and as such supported the legislative process for the “Reducing the Use of Cash Law, 5778–2018”, which came into force in January 2019. The continued increase in the circulation of cash, as well as survey findings, show that cash is a significant means of conducting transactions in Israel.  Cash expenditures constituted about 26 percent of total daily expenditures, while credit cards or debit cards accounted for about 38 percent. Cash transactions are mostly in low amounts.

**Figure 23 - Cash in Circulation (NIS)**

Source: BOI

But NIS cash is also heavily used in the WBG. One should ask how much cash (NIS) circulates in Israel and how much circulate in the WBG. This question is very important for policy makers, anti-money laundering authorities and for financial inclusion strategies.

Although part of that circulation is related to illegitimate activities (such as tax evasion) most of it related to real economic activity (trade and employment) and should indicate a level of economic integration.

**Possible methodologies - direct methods and indirect methods**

Wazir, Atallah and Sarsour (2011) considered the problems in estimating the money supply in the WBG, which is a complex matter because of the absence of a national currency, the regular use of 3 currencies (JD, USD and NIS) and the unavailability of data on currency in circulation in the WBG. They discussed a method for determining the amount of a Palestinian national currency to be issued, if and when that occurs, using 3 indicative ratios from Jordan and Israel (cash in circulation to GDP, cash in circulation to bank deposits, and GDP to money supply) to estimate the money supply in the WBG. In each case they assumed that the same ratio holds in the WBG and applied it to the known total of bank deposits and nominal GDP. The results derived from the cash in circulation and GDP to money supply produced poor results that are inconsistent with the Palestinian reality. On the other hand, the cash to demand deposit ratios predict broadly similar amounts of cash in both cases.

Where,

= cash in circulation in WBG outside the banking system.

= demand deposits in WBG in all currencies.

CC/DD = ratio of cash in circulation to demand deposits in Jordan or Israel[[41]](#footnote-42).

Below we can find the results of their exercise, in addition to the average results of cash in circulation to GDP ratio.

**Figure 24 - Currency in circulation in Palestine according to cash to demand deposit ratio (million USD)**

Source: Wazir, Atallah and Sarsour (2011)

The European Central Bank (2017) uses[[42]](#footnote-43) a linear combination of two methods. Two estimates were chosen to set boundaries to circulation outside the euro area by establishing a lower limit and an upper limit. The mean point of the interval is proposed as the point estimate of circulation outside the euro area.

**Lower bound:** accumulated shipments of high denomination banknotes:

where represent the circulation abroad as the accumulation of official exports and imports (,) based on information of official exports and imports shipments of euro banknotes to/from countries outside the euro-area, and the accumulation of other unofficial cross-border flows (, ), e.g. travel/tourism or other cross-border cash payments. Given that there is no suitable information for the unofficial flows, net shipments serve as a lower bound to F if the assumption is that the unofficial channel presents net positive outflows[[43]](#footnote-44).

**Upper bound:** ratio of coins to banknotes:

Where “B” is total banknotes in circulation, “C” coins and “r” the maximum value of the coins-to-banknotes ratio. The upper bound uses an indirect method, combining observed information on domestic circulation, coin circulation and assumptions on what is not observed, in turn based on an assumption of the maximum possible ratio of coins to banknotes in domestic circulation.

The observed coins to total banknotes ratio prevailing in 2002 (4.16%) was chosen as the maximum ratio (r), i.e. the actual unobserved ratio is assumed to lie below that level,using the fixed coins-to banknote ratio estimated for 2002 implies that the growth of banknote issuances since that year that exceeded the growth of coin issuances is entirely attributed to non-resident holdings, an assumption that may indeed only be justifiable for an upper bound estimate**.**

By taking the average of the lower and upper bounds, the method estimates the results below:

**Figure 25 - Holdings of euro banknotes by non-euro area residents**

**(EUR billion at end of period)**

**Chart, line chart

Description automatically generated**

Source: Estimation of euro currency in circulation outside the euro area, ECB

**Figure 26 - Net monthly shipments of euro banknotes to destinations outside the euro area (EUR billions; adjusted for seasonal effects)**

**Chart

Description automatically generated**

Source: Estimation of euro currency in circulation outside the euro area, ECB

According to Judson (2017) demand for U.S. dollar banknotes continues to grow, and consistently increases at times of crisis both within and outside the United States because it remains a desirable store of value and medium of exchange in times and places where local currency or bank deposits are inferior. Judson presents updates on indirect methods of estimating the stock of currency held abroad. These methods continue to indicate that a large share of U.S. currency is held abroad, especially in the $100 denomination. Judson uses the following indirect methods:

* **Estimates Based on Money Demand and Comparisons with Canada**. Canada has similar income levels, payments technologies, holiday patterns, and GDP growth rates to those in the United States, but little Canadian currency is believed to circulate externally. If we assume that the Canadian ratio of currency to nominal GDP is the same as its U.S. counterpart for domestic demand, then the foreign share of U.S. demand can be estimated (foreign component) as:

An alternative assumption would be that Canadian and U.S. domestic demands for currency relative to income are the same at the same levels of per capita income. In order to construct an estimate of the share of U.S. currency abroad using this assumption, Judson regressed the ratio of Canadian currency to GDP on the log and level of Canadian per capita GDP and then constructed the estimated domestic share of U.S currency for a given level of U.S. per capita GDP using the regression results. The estimate is then constructed as:

* **The Seasonal Method.**

In general, the seasonal method presupposes that U.S. currency held abroad behaves differently from U.S currency held at home in some measurable respect. The average measured characteristic of currency, say X, will be a weighted average of the characteristic for the domestically held currency, ,and of that for the foreign-held currency, , as follows:

Where the weight β is the domestic share of total currency outstanding, and 1 − β is the foreign share. By observing the overall behavior of currency, we know X. It is necessary to exploit various data to infer or , thus allowing an estimate of the shares of currency held at home and abroad.

The seasonal method (also known as The Seasonal Variation Technique) uses relative seasonal variations in the currency circulating in the United States and Canada to infer overseas holdings of dollars. The share of U.S. currency abroad can be deduced by comparing the seasonality of Canadian currency in circulation to the seasonality of all U.S. currency in circulation.

* **Biometric method.**

The method mimics a technique used by biologists to estimate the size of an animal population when they are able to capture only a sample of the population at any given time[[44]](#footnote-45). The approach used estimates how much U.S. currency is abroad by combining information of currency shipped to and from local banks allow to obtain virtually continuous ‘‘samples’’ of currency, and statistics for the series note which contains an embedded security thread. Thus, for any geographic area, the total population of notes to be estimated, N, can be expressed in relation to three known numbers: M, the total number of marked notes; n, the number of notes in a sample; and m, the number of marked notes in a sample. Assuming that the notes circulate freely and randomly, so that the sampled proportions of marked notes are representative of the notes circulating in the area chosen, thus the biometric approach tells us that the sample proportion of marked notes is equal to the proportion of marked notes in the whole population:

* **Estimating a Currency Demand Function.** This approach specifies a demand function for U.S. currency that allows for foreign shipments as well as domestic factors. The general assumption has been that currency demand consists of two components: a domestic component, which should be correlated with the typical determinants of money demand (GDP, Short-term interest rate); and an international component, which is driven by routine as well as crisis-related fluctuations in foreign demand for U.S. currency.

Dias (2018) discusses the non-trivial problem of a country’s currency circulation within a monetary union, focusing on an internationally relevant currency with significant intra monetary union cash flows: the euro. Dias examine a set of alternatives to estimate the Euros in circulation in some Euro area countries, based on different hypothesis, techniques and data. Although using a structural money demand model may be useful for some countries, his conclusions suggest that allocating a proportion of the Euros estimated to circulate in the Euro area to each country is more adoption ready and could offer relatively harmonized estimates.

**Chosen methodology**

Given the data available to us, we have chosen to adopt the methodology used by the ECB to try and assess how much of the NIS cash circulates in the WBG. Using data published by the BOI and the PMA, we have calculated an upper bound and a lower bound and their average is our final estimate.

The upper bound is also based on the ratio between coins and total cash in circulation. we took a ratio of 4.8% - average of the years of the second intifada (2002-2004) where the volume of economic activity between Israel and the WBG decreased significantly. We have chosen these years to reflect--as much as possible-- a ratio of coins to total cash in circulation based mainly on the use of Israelis (similar to the ECB that chose the year 2002 - the year of the launch of the euro currency). The lower bound is based on the amount of NIS cash held in vaults by the Palestinian banking system. The estimate is a simple average of the lower and upper bounds.

**Results**

We find that the share of NIS cash that circulates in the WBG is on average 20% of total NIS circulation between 2010-2019, and is estimated at NIS 18 billion in 2019. Excess cash deposited in Israel by Palestinian banks is positively correlated with our estimate. This means that some of the NIS cash that flows to the WBGs remains in the Palestinian economy for the purpose of store of value and means of payment. The increase in NIS cash in Palestinian banks vaults reflects, among other things, liquidity needs, but also the inability of the Palestinian banks to deposit the excess cash back to the Israeli banking system, as explained above.

**Figure 27 - Estimated amount of cash (NIS) circulates in the WBG (in billions)**

**Figure 28 - Estimated Share of NIS cash circulates in the WBG out of total NIS cash in circulation**

Source: author calculations

The estimate of cash in NIS relative to GNI is on average 23% over this period.

**Figure 29 - WBG - Estimated amount of NIS cash to GNI**

Source: author calculations

Israel revised ratio of NIS in circulation to GDP is 4.9% against the published ratio of 6.2%.

**Figure 30 - Israel - cash in circulation to GDP**

Source: author calculations

**Summary**

This chapter finds that monetary relations between Israel and the WBG are significant for both sides and especially for the Palestinian economy. It was found that economic integration affects the use of the NIS within the Palestinian economy and not only on activity between the regions.

On the one hand, termination of the ability to carry out banking activity in NIS between Israel and the PA may be destructive to economic integration, while on the other hand, improving the ability to carry out digital banking transactions will certainly strengthen economic integration between the regions, and the dominance of NIS in the PA.

1. **Chapter 4: Israel-WBG integration index**

In this chapter we develop the Israel-WBG integration index (ISR-WBG-II). We first present our dataset and proceed to the structure of the ISR-WBG-II developed, focusing on data treatment and the methodology. Finally, the results, as well as Sub-indexes of the individual components of the index, are presented.

* 1. **Methodology**

Several criteria have been developed to evaluate the degree of economic integration in, and between regions, globally. The criteria of integration can be broadly classified into two categories, namely quantity-based and price-based measurements. The quantity-based category includes measurements such as openness and restrictiveness in trade and financial transactions, capital flows, output correlation, savings-investment correlation and consumption correlation. The price-based category consists of tests derived from price differentials in goods and financial markets (Cheung, Yiu and Chow 2008). Economic Integration indices have already been used for analyzing trade integration, monetary integration, capital market integration, labor market integration and institutional integration, and have been used to examine the degree of integration of different regions, such as the Globalization Index[[45]](#footnote-46), EU[[46]](#footnote-47), Africa[[47]](#footnote-48), Asia-Pacific Region[[48]](#footnote-49), and more. We also used the "Handbook on Constructing Composite Indicators" by the OECD (2005) as a methodological tool and user guide to construct the ISR-WBG-II.

Below the 4 steps we followed so as to construct the ISR-WBG-II composite index:

* Data selection
* Normalization
* Weighting
* Aggregation

**Data selection**

The indicators should be selected were based on their analytical soundness, measurability, and relevance to the phenomenon being measured and relationship to each other.

The Israel-WBG index comprises 5 dimensions of integration:

1. **Trade, employment, and taxes** - Real economic activity is the main channel through which the Israeli and Palestinian economies integrate. The unified customs envelope encourages trade between the Israeli and the Palestinian economies because it reduces barriers to mutual trade. Employment of Palestinians in Israel plays a key factor and is a significant anchor of the Palestinian economy.
2. **Movement of people -** Allowing people to move more freely helps build economies of scale, develop effective value chains, and foster social links. These aspects are very relevant, including to trade, employment and manufacturing, medicine, and tourism. Israel maintains a system of permits for the entry of Palestinians into Israel, mainly for the following needs: health, legal, education, employment, economy, religious worship, family reunification, tourism and more.
3. **Resources and infrastructure** **-** The share of resources such as information and communication technology, water and cross-border electrical infrastructure directly affect transaction costs, prosperity, stability and encourages economic growth. With the rapid development of mobile telephony and the global expansion of the Internet, information and communication technologies are increasingly recognized as essential tools of development, contributing to integration.
4. **Banking and money** - A high rate of usage of the Israeli shekel in the Palestinian Authority will indicate high monetary integration between the regions in a way that helps reduce transaction costs and promotes monetary stability.
5. **Wealth and Standard of living –** A positive process of integration will enable economic convergence and closing the gaps in the standard of living between the regions.

In light of the fact that the Palestinian economy is significantly dependent on the Israeli economy and not the other way around, we chose to assess -- through the selected indicators -- **the level of integration of the Palestinian economy into the Israeli economy and not the other way around**. That is, the indicators were calculated so that the measurement is made on each issue in relation to the Palestinian economy. For example, the volume of imports or exports between the regions is measured in relation to the total Palestinian exports or imports.

Data limitations, missing data treatment and data coverage

The indicators in each dimension were chosen so as to represent significant activities and the state of integration that take place between the regions, and adequately represents the dimension to which they belong. Of course, there are other relevant indicators, but it was not possible to find reliable data for them. It is important to note that the frequency of all indicators is on an annual basis. But each indicator has a different time which necessitated creation of a number of integration indices. Indicators were included, only where reliable data was available for most of years of coverage. In a few cases where data was missing, we used the most similar datasets or an average of the adjacent years.

Table 1 below summarizes the dimensions and relevant indicators and details of data sources and years covered:

**Table 1: Dimensions and indicators**

|  |  |  |  |
| --- | --- | --- | --- |
| **Years of coverage** | **Data sources** | **Indicator** | **Dimension** |
| 1968-2019 | PCBS, ICBS, WB | Palestinian exports of goods and services to Israel out of total Palestinian exports | **Trade, Employment and Taxes** |
| 1968-2019 | PCBS, ICBS, WB | Palestinian imports of goods and services from Israel out of total Palestinian imports |
| 1996-2019 | PMA | Share of gross clearance revenues out of total PA net revenues and grants |
| 1968-2019 | PCBS, ICBS | Palestinians employed in Israel out of total Palestinian individuals employed |
| 1968-2019 | PCBS, ICBS | Remittances of Palestinians workers in Israel out of WBG GNI |
| 2010-2019 | ICA, ICBS | Percentage of Israeli cars entering the WB | **Movement of people** |
| 2010-2019 | ICA, PCBS | Movement of people between Israel and the WB |
| 2010-2019 | COGAT, PCBS | Percentage of Palestinians entering Israel for medical treatment |
| 2010-2019 | PCBS | Percentage of Israeli guests’ nights in WB Hotels |
| 1996-2019 | PCBS | Percentage of Palestinian households that conducted Outbound Trips to Israel |
| 2000-2019 | World Bank | Mobile cellular subscriptions (ratio ) | **Resources and infrastructure** |
| 2000-2019 | World Bank | Individuals using the Internet (ratio) |
| 2010-2019 | World Bank | Fixed broadband subscriptions (ratio) |
| 2004-2019 | PCBS | Electricity imported from Israel out of total available electricity in the WBG |
| 2000-2019 | PCBS | Water Purchased from Israel out of available water quantity in the WBG |
| 2010-2019 | PMA | Share of NIS deposits in the Palestinian banking system | **Banking and money** |
| 1996-2019 | PMA | Share of NIS credit in the Palestinian banking system |
| 2000-2019 | PMA | Share of NIS checks presented for clearing in the Palestinian banking system |
| 2010-2019 | PMA, BoI | Excess NIS cash deposited in Israel out of total NIS circulation |
| 2010-2019 | PMA | Checks and Money transfers volume out of WBG GNI |
| 1968-2019 | WB | GDP per Capita (ratio) | **Wealth and Standard of living** |
| 1996-2019 | WB | Price level (ratio) |
| 2000-2019 | PMA, TASE | Market capitalization (ratio) |
| 1968-2019 | PCBS | Daily wage (ratio) |

As can be seen in table 1 above, not all indicators have observations starting in 1968, but rather only from a later period. Our way to solve this matching problem was to produce several indices that start at different periods and include a different number of indicators. Thus, the more advanced the period, the greater the number of indicators and dimensions can be found in the index, as expressed below:

* the index starting in 1968 includes 3 dimensions and 6 indicators,
* the index starting in 1996 includes 4 dimensions and 10 indicators,
* the index starting in 2000 includes 5 dimensions and 15 indicators,
* the index starting in 2010 includes 5 dimensions and 24 indicators

Additional explanations and graphs of the indicators that make up the integration indices can be found in **Appendix I**.

**Normalization method**

ISWBGII is made up of varied indicators measured in different units, from the share of NIS deposits in the Palestinian banking system to Palestinians employed in Israel out of total Palestinian individuals employed. A common scale (normalization) is thus required prior to aggregation. We adopt min–max rescaling, which has been used in several integration indexes mentioned above[[49]](#footnote-50). The indicators are normalized so that they range between 0 and 1, where 0 denotes the lowest integration level and 1 the highest level:

**Weighting**

Although all the indicators used in ISR-WBG-II are relevant, their relative influence on regional integration may vary. Different indicators do not necessarily have the same economic significance; therefore, weights are necessary to account for these differences. As such, we can use an equal weighting system where all indicators have the same weight. This approach assures that weighting does not have a differential impact on the results. Another approach can be setting the weights, in an objective manner, however it is a daunting task as there exists no consensus in the literature as to which method is the best. Heavy weights on indicators can strongly influence the final scores and they should, therefore, be assigned using a sound methodology (Nardo et al., 2005).

Principal components analysis (PCA) is a methodology been used in constructive a number of important and well-known indices such as: Asia-Pacific Regional Cooperation and Integration Index and Africa Regional Integration Index[[50]](#footnote-51). PCA is a statistical methodology that allows robust computation of weights while maintaining objectivity. PCA derives weights based on the structure of the data. It also preserves variations in the data. We also use the Kaiser-Meyer-Olkin (KMO) Test to measure how suitable are our indicators - A high KMO (> 0.5) indicates that PCA is relevant. In a few of the individual indicators, the KMO test showed poor results (<0.5). Despite this, we have chosen to maintain the results of the PCA method as we implemented the equal weighting system and found there are no significant discrepancies in results.

We decided to use **both** methodologies (an equal weighting system where all indicators have the same weight, and PCA) to compute the weights to assign to each indicator and dimensions before building the aggregate index.

For the indices starting in 1968 (6 indicators), 1996 (10 indicators), and 2000 (15 indicators) we decided to use an equal weighting system while for the index starting in 2010 (24 indicators) we use the PCA methodology.

The reason we choose an equal weighting system for the first 3 indices is that the dimensional composition includes a small number of indicators relative to the later index, beginning in 2010. Also, the dimensions often included only one indicator to represent them, so to avoid bias in the results we decided to intervene it and reduce the weights, as will be explained in more detail in the section below.

Equal weighting system

This includes a two-stage procedure set the weights:

* In the first stage, we set a weight for each indicator in each dimension in an equal manner - that is, if there are 3 indicators, each indicator is given a weight of one third.
* In the second stage, each dimension was given a weight according to the number of indicators available in it - so that if the index includes 10 indicators and there are 4 dimensions (the index that begins in 1996), each indicator gets a weight of 1/10. Then the weight of each dimension is the number of indicators present in it multiplied by 1/10.

Principal components analysis

Our approach includes a two-stage PCA estimation to set out the weights:

* In the first stage, PCA is applied to each of the dimensions independently, and the implied weights assigned to the indicators are used for constructing a set of dimensional composite indexes.
* In the second stage, PCA is applied again to weight the dimensional indices to produce an overall index.

**Aggregation scheme**

Indicators in a composite index can be aggregated using a linear or a geometric aggregation method ("Handbook on Constructing Composite Indicators" by the OECD (2005)). Linear aggregation is an additive method that involves the summation of individual indicators. It ensures full compensability, that is poor performance in some indicators can be compensated by good performance on others. The most widely used aggregation techniques are additive techniques. Its advantages are simplicity and independence from the impact of outliers. Its disadvantage is that the method loses the absolute value information. Geometric aggregation is a multiplicative method, and it involves partial compensability where elements with higher scores are given more importance. Given that indicators have been normalized and are on the same scale and that indicators have already been weighted to reflect their importance, a simple linear aggregation method has been used.

* 1. **Results**

We have created 4 indices starting in different years (1968, 1996, 2000 and 2010). As mentioned, each index contains different number of indicators.

Below are the results of the indices according to the different dimensions and their contribution to the aggregate index. In each section we describe the composition of the index (dimensions, indicators and weights), the overall result, the result at the level of the dimensions and the contribution of the various dimensions to the integration index.

* + 1. **ISR-WBG-II 1968-2019**

**Table 2 -** **Dimensions, indicators and weights 1968-2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Indicator** | **Indicator weight** | **Dimension weight** |
| Trade | Palestinian exports of goods and services to Israel out of total Palestinian exports | 50.00% | 33.33% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 50.00% |
| Employment | Palestinians employed in Israel out of total Palestinian individuals employed | 50.00% | 33.33% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 50.00% |
| Wealth and standard of living | GDP per Capita ratio | 50.00% | 33.33% |
| Daily Wage ratio | 50.00% |

Number of dimensions: 3

Number of indicators: 6

The weighting technique - Equal weighting system

**Figure 31: ISR-WBG-II 1968-2019 – Total index**

**Figure 32: ISR-WBG-II 1968-2019 by dimensions**

**Figure 33: ISR-WBG-II 1968-2019 by contribution of dimensions**

* + 1. **ISR-WBG-II 1996-2019**

**Table 3 -** **Dimensions, indicators and weights 1996-2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Indicator** | **Indicator weight** | **Dimension weight** |
| Trade, employment and taxes | Palestinian exports of goods and services to Israel out of total Palestinian exports | 20% | 50% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 20% |
| Share of Gross clearance revenues out of Total PA net revenues and grants | 20% |
| Palestinians employed in Israel out of total Palestinian individuals employed | 20% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 20% |
| Movement of people and Services | Percentage of Israeli guests’ nights in WB Hotels | 100% | 10% |
| Banking and money | Share of NIS credit in the Palestinian banking system | 100% | 10% |
| Wealth and Standard of living | GDP per Capita (ratio) | 33.33% | 30% |
| Price level (ratio) | 33.33% |
| Daily Wage (ratio) | 33.33% |

Number of dimensions: 4

Number of indicators: 10

The weighting technique - Equal weighting system

**Figure 34: ISR-WBG-II 1996-2019 – Total index**

**Figure 35: ISR-WBG-II 1996-2019 by dimensions**

**Figure 36: ISR-WBG-II 1996-2019 by contribution of dimensions**

* + 1. **ISR-WBG-II 2000-2019**

**Table 4 -** **Dimensions, indicators and weights 2000-2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Indicator** | **Indicator weight** | **Dimension weight** |
| Trade, employment and taxes | Palestinian exports of goods and services to Israel out of total Palestinian exports | 20.0% | 33.3% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 20.0% |
| Share of Gross clearance revenues out of Total PA net revenues and grants | 20.0% |
| Palestinians employed in Israel out of total Palestinian Individuals employed | 20.0% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 20.0% |
| Movement of people and Services | Percentage of Israeli guests’ nights in WB Hotels | 100.0% | 6.7% |
| Resources and infrastructure | Mobile cellular subscriptions (ratio) | 33.3% | 20% |
| Individuals using the Internet (ratio) | 33.3% |
| Water Purchased from Israel out of available water quantity in the WBG | 33.3% |
| Banking and money | Share of NIS credit in the Palestinian banking system | 50.0% | 13.3% |
| Share of NIS checks presented for clearing in the Palestinian banking system | 50.0% |
| Wealth and Standard of living | GDP per Capita (ratio) | 25.0% | 26.7% |
| Price level (ratio) | 25.0% |
| Market capitalization (ratio) | 25.0% |
| Daily Wage (ratio) | 25.0% |

Number of dimensions: 5

Number of indicators: 15

The weighting technique - Equal weighting system

**Figure 37: ISR-WBG-II 2000-2019 – Total index**

**Figure 38: ISR-WBG-II 2000-2019 by dimensions**

**Figure 39: ISR-WBG-II 2000-2019 by contribution of dimensions**

* + 1. **ISR-WBG-II 2010 – 2019**

**Table 4 -** **Dimensions, indicators and weights 2010-2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Indicator** | **Indicator weight** | **Dimension weight** |
| Trade, Employment and taxes | Palestinian exports of goods and services to Israel out of total Palestinian exports | 21.2% | 18.2% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 20.3% |
| Share of Gross clearance revenues out of Total PA net revenues and grants | 18.3% |
| Palestinians employed in Israel out of total Palestinian individuals employed | 19.3% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 20.9% |
| Movement of people and Services | Percentage of Israeli cars entering the WB | 22.9% | 22.4% |
| Movement of people between Israel and the WB | 21.3% |
| Percentage of Palestinians entering Israel for medical treatment | 18.4% |
| Percentage of Palestinian households that conducted Outbound Trips to Israel | 22.6% |
| Percentage of Israeli guests’ nights in WB Hotels | 14.8% |
| Resources and infrastructure | Mobile cellular subscriptions (ratio) | 19.2% | 22.4% |
| Individuals using the Internet (ratio) | 20.7% |
| Fixed broadband subscriptions (ratio) | 22.8% |
| Electricity imported from Israel out of total available electricity in the WBG | 17.9% |
| Water Purchased from Israel out of available water quantity in the WBG | 19.4% |
| Banking and money | Share of NIS deposits in the Palestinian banking system | 20.4% | 19.8% |
| Share of NIS credit in the Palestinian banking system | 20.5% |
| Excess NIS cash deposited in Israel out of total NIS circulation | 17.2% |
| Checks and Money transfers volume out of WBG GNI | 21.6% |
| Share of NIS checks presented for clearing in the Palestinian banking system | 20.3% |
| Wealth and Standard of living | GDP per Capita (ratio) | 24.2% | 17.2% |
| Price level (ratio) | 28.4% |
| Market capitilazation (ratio) | 20.7% |
| Daily Wage (ratio) | 26.7% |

Number of dimensions: 5

Number of indicators: 24

The weighting technique - PCA (please see **Appendix II**).

**Figure 40: ISR-WBG-II 2010-2019 – Total index**

**Figure 41: ISR-WBG-II 2010-2019 by dimensions**

**Figure 42: ISR-WBG-II 2010-2019 by contribution of dimensions**

* + 1. **Discussion of the results**

As can be seen in figure 1 above, the long-term trend is mixed. In the twenty years after the 1967 war, as a result of Israel's open policy toward the West bank and the Gaza Strip, there was a dramatic increase in the level of integration, to a level that was not been achieved again (1987 is the peak year(. After the first intifada in the late 1980s, the level of integration began to decline in the face of periodic closures and restrictions on the movement of people, and the beginning of the terrorist events that accompanied this period, and finally ended in the second intifada in the early 2000s. According to Arnon (2007), those who signed the Paris Protocol (1994) anticipated an increase in economic integration between the two economies, but the reality was a growing, unilaterally imposed, separation.

Over the period 1996 - 1999 the relative security calm led to a temporary increase in integration (as can be seen in figure 2) until the beginning of the second intifada. The results of the second intifada are clearly reflected in the indices (see graphs 1, 4 and 7).

After the end of the second intifada, a certain recovery was observed. As can be seen in figures 7 and 10, after the second intifada there is an upward trend that reflects a steady increase in the level of integration. As can be seen in figures 8 and 11, the main dimensions that contribute to increase of the index is “Banking and money”, “Resources and infrastructure” and “Movement of people and services”, while the dimension that reduces the integration is Wealth and standard of living.

As can be seen in figure 10, in 2014 and 2015 there is a slight decline in the level of integration, as a results of “Operation Protective Edge״ in the Gaza Strip which took place in 2014 and wave of violence called the "Intifada of the Individuals" that began in 2015.

In recent years, a certain decrease in the level of integration has been observed in all indices. The main factor explaining this is the continuing decline in “Wealth and standard of living” dimension.

Figure 13 shows in radar chart, the development of dimensions between years specific (2010, 2015 and 2019). As can be seen, “Banking and money”, “Resources and infrastructure” and “Movement of people and services” dimensions are contributing to increase in the level of integration between the regions, while "Wealth and standard of living" dimension reduces the level of integration. The "Trade, employment and taxes" dimension increased between the year 2010 to 2015 but lagged behind between 2015 to 2019.

**Figure 43: Development in dimensions 2010, 2015 and 2019**

**based on ISR-WBG-II 2010-2019**

For the specific contribution of each indicator to its dimensions and to the total index see **Appendix III**.

* + 1. **An overview of the indices**

In Figures 14 and 15 we summarize the results of the indices graphically. In Figure 14 we see the results of the 4 indices together, and in Figure 15 the indices are shown according to the period in which they include the most indicators, as compared to other indices. It should be noted that methodologically it is incorrect to compare or link the indices to each other as they include several different dimensions and indicators, as well as normalization and weighting processes that include the observations relevant to the specific index. However, indices are presented in this way, so that it is possible to get a general and graphical impression of the indices.

**Figure 44: ISR-WBG-II by periods**

**Figure 45: ISR-WBG-II by index**

1. **Chapter 5: Breakdown by geographical areas**

In this chapter, we will examine economic integration between Israel and the WBG while separating the West Bank and Gaza Strip. This examination is bound by reality as the two areas - the West Bank and the Gaza Strip - behave and are managed almost completely separately, as a result of Hamas' rise to power in 2006. First, we will present 13 indicators we used already in the previous integration indices (ISR-WBG-II) to understand how the specific areas behave compared to the whole area (WBG).

Then, we will present the specific integration indices and make comparison between them:

* ISR-WB-II 2008-2019
* ISR-GS-II2008-2019
* ISR-WBG-II 2008-2019

**Indicators comparison**

Trade and employment dimension:

In absolute terms, the West Bank's contribution to economic integration with Israel is more significant both in terms of imports and exports of goods and employment. Specifically, it can be found that in the West Bank, the rate of import and export of goods from Israel is declining (with a significant decline in imports). Regarding the Gaza strip, since the end of 2007 until the beginning of 2015, the Gaza strip has not exported any goods to Israel (the data are based on truck numbers[[51]](#footnote-52)). On the other hand, on the imports side, Gaza depends entirely on the entry of goods from Israel. Regarding employment, in the West Bank, the number of Palestinians workers in Israel is growing and so is their compensation to gross national income. On the other hand, since 2007, Israel has not issued permits to Gazan workers to work in Israel (in recent years Israel started to change this regime).

Movement of people and services:

While the movement between Israel and the West Bank includes the movement of millions of people a year (the majority are Palestinian workers), the movement to and from the Gaza Strip is low in comparison and involves movement of hundreds of thousands of people[[52]](#footnote-53). Thus, an increase in the movement of people in relation to the population (Israel and the West Bank) can be seen, while for the Gaza Strip the trend is quite stable. Regarding the provision of medical care to Palestinians in Israel (including hospitals in East Jerusalem), the scope of the permits granted for this seems quite stable: about 100,000 a year in the West Bank and about 10,000 in the Gaza Strip (with a slight increase).

Resources and infrastructure:

Reliance rates of electricity supply from Israel to the West Bank and Gaza Strip are very high. In the West Bank, this rate is about 98%, while in Gaza strip it is about 67% on average (for the two areas together, about 88%). Regarding the purchase of water from Israel, the rates are lower - while in the West Bank the rate of reliance on Israel is about 36% on average, in the Gaza Strip the rate is only 4% (for the two regions together about 20%).

Banking and money:

The rates of use of the NIS in the Palestinian banking system in credit products, deposits, and checks, have increased over time, both in the West Bank and the Gaza Strip. In recent years, rates of use in the West Bank have averaged 37% in deposits, 43% in credit and 80% in checks. In the Gaza Strip, these rates are slightly lower and stand at 21% on deposits, 30% on credit and 68% on checks.

Wealth and Standard of living:

There is a considerable gap between the West Bank and the Gaza Strip, a result of the rise of Hamas. In terms of GDP per capita, we see a reduction in the gap between Israel and the West Bank between 2005 and 2016 (from 9.6% to 13%), with a certain decline in recent years (12.4%). In contrast, the trend in Gaza is clear with a continuing decline in the ratio (from 9.2% to 3.5%). In the WBG region the ratio stands for 8.5% as of 2019.

In terms of the wage ratio -- between Palestinian workers in the West Bank and Gaza Strip to Palestinian workers in Israel -- it can be seen that since the Oslo agreements there has been a continuous decline in this ratio, while in the Gaza Strip the decline is sharper.

**Figure 46: Indicators by areas**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  | |

**Source: See Appendix 1**

**Methodology**

To construct the 3 regional indices, we selected 13 parameters for which we found data in the segmentation of the West Bank, Gaza Strip and the entire region (WBG). We divided this into the relevant dimensions, performed normalization by applying the min – max rescaling approach, and used the equal weighting system approach.

**Table 6 -** **Dimensions, indicators and weights 2008-2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Indicator** | **Indicator weight** | **Dimension weight** |
| Trade and employment | Palestinian exports of goods and services to Israel out of total Palestinian exports | 25% | 31% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 25% |
| Palestinians employed in Israel out of total Palestinian employed Individuals | 25% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 25% |
| Movement of people and services | Percentage of Palestinians entered to Israel for medical treatment | 50% | 15% |
| Movement of people between Israel and the WBG | 50% |
| Resources and infrastructure | Electricity imported from Israel out of total available electricity in the WBG | 50% | 15% |
| Water Purchased from Israel out of available water quantity in the WBG | 50% |
| Banking and money | Share of NIS deposits in the Palestinian banking system | 33% | 23% |
| Share of NIS credit in the Palestinian banking system | 33% |
| Share of NIS checks presented for clearing in the Palestinian banking system | 33% |
| Wealth and Standard of living | GDP per Capita Ratio | 50% | 15% |
| Daily Wage Ratio | 50% |

Number of dimensions: 5; Number of indicators: 13.

**Figure 47 - Integration indicis by areas**

**Figure 48 - Dimensions contribution analysis**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  | |

**Discussion of the results**

As can be seen in Figure 5, according to the ISR-WBG-II 2008-2019, the general trend is an increase in the level of economic integration. While in the West Bank there is a gradual increase, in the Gaza Strip there was a decrease in the index until 2014 (“Operation Protective Edge") and an increase in the integration environment thereafter.

It is important to note that it is not possible to compare the level of integration between the indices due to the normalization method, but it is possible to learn about the overall trend[[53]](#footnote-54).

As for the contribution of the various dimensions - it can be seen in Figure 6 that overall, the dimensions behave more or less the same between the areas, except for more extreme fluctuations in the Gaza Strip due to the geopolitical events that occur from time to time. The “Banking and money”, “Resources and infrastructure” dimensions are the strongest contributors to increase in the level of economic integration between the regions in all areas. Followed by “Movement of people and services” and "Trade and employment” dimensions, while "Wealth and standard of living" dimension reduces the level of economic integration.

1. **Chapter 6: Economic integration, terrorism, and unemployment**

In general, economic theory of crime (Becker, 1968, p. 177) predicts that: “a rise in the income available in legal activities or an increase in law-abidingness due, say, to ‘education’ would reduce the incentive to enter illegal activities and thus would reduce the number of offenses".

In the aftermath of the events of September 11, 2001, President George W. Bush (2002) called for increased aid and educational assistance to end terrorism - “We fight against poverty because hope is an answer to terror.” But the evidence in the literature supports this are mixed.

For example, Stein (1990) compared the First Intifada and the Arab Uprising in 1936. In both cases the years preceding the uprising had been marked by growing frustration on the part of the Palestinians. Adding to the Palestinian frustrations was economic hardship borne of unemployment and underemployment, the drying up of traditional sources of capital import, and dramatic price drops, particularly in agriculture. Against this background, elements of militant Islam were on the rise.

Nassra Hassan’s (2001) informal observations about Palestinian suicide bombers were: "None of them were uneducated, desperately poor, simple-minded, or depressed. Many were middle class and, unless they were fugitives, held paying jobs. More than half of them were refugees from what is now Israel. Two were the sons of millionaires. They all seemed to be entirely normal members of their families". Berrebi (2007) finds that both higher education and standard of living are positively associated with participation in Hamas or Islamic Jihad and with becoming a suicide bomber, while being married significantly reduces the probability of participation in terrorist activities.

Krueger and Maleckova (2003) argue that any connection between poverty, education and terrorism is indirect, complicated and probably quite weak. The evidence they assembled was based upon public opinion data from the West Bank and Gaza Strip regarding Palestinians’ attitudes toward violence and terrorism, brought them to conclude that instead of viewing terrorism as a direct response to low market opportunities or ignorance, it is more accurately viewed as a response to political conditions and long-standing feelings of indignity and frustration that have little to do with economics.

Saleh (2004) provides evidence that Palestinian economic conditions are related to the level of attacks against Israelis from 1990-2002, likewise, his model predicts that a reduction in the unemployment rate would reduce the incentive for young Palestinians to participate in political violence.

Burgoon (2006) argues that social welfare policies may reduce international and domestic terrorism. Social policies likely affect terrorism in offsetting ways but, on balance, should diminish preferences for terrorism by reducing economic insecurity, inequality, poverty, and religious-political extremism.

Benmelech, Berrebi and Klor (2010) find robust evidence that terror attacks have important economic costs - a successful attack causes an increase of 5.3% in unemployment, increases the likelihood that the district’s average wages fall in the quarter following an attack by more than 20%, and reduces the number of Palestinians working in Israel by 6.7% percent relative to its mean. Importantly, these effects are persistent and last for at least six months after the attack. In another research Benmelech, Berrebi and Klor (2010) find that high levels of unemployment enable terror organizations to recruit more educated, mature and experienced suicide terrorists, who in turn attack more important Israeli targets. This is because economic conditions may lead more able, better-educated individuals to participate in terror attacks, allowing terror organizations to send better-qualified terrorists to more complex, higher-impact, terror missions.

In Figures 1 and 2 below we can find the relation between the ISR-WBG-II 1968 and terrorism fatalities in Israel. The peak (2002) in Figure 1 in the number of terrorism fatalities in Israel during the “Second Intifada”, and the peak (2015) in Figure 2 during the so-called “Intifada of the Individuals” are negatively related to the level of integration according to the indices constructed.

**Figure 49 - ISR-WBG-II 1968 and terrorism fatalities**

**Figure 50- ISR-WBG-II 2010 and terrorism fatalities**

In Figure 3 below we can find the relation between the ISR-WBG-II 1968 and unemployment rate in the WBG. Again, it will not be a surprise to find some negative correlation among them.

**Figure 51 - ISR-WBG-II 1968 and unemployment rate in the WBG**

**Granger causality tests**

We use the Granger causality test for determining whether terrorism Granger causes the level of economic integration (i.e. offers useful information in forecasting), or vice versa, the level of integration Granger causes terrorism. Similarly, we implement the same test on unemployment rate in the WBG and the level of economic integration and unemployment rate and terrorism.

We used the Akaike information criterion (AIC) method to compare different possible models and determine which one is the best fit for the data[[54]](#footnote-55).

Dependent variables:

TERROR - the number of terrorism fatalities in Israel

UNE – unemployment rate in the WBG

INTEG – the level of economic integration according to ISR-WBG-II 1968

Null hypothesis:

1. Economic integration level fails to Granger-cause terrorism;
2. Economic integration level fails to Granger-causes the unemployment rate;
3. Unemployment rate fails to Granger-causes terrorism;
4. Unemployment rate fails to Granger causes the economic integration;
5. Terrorism fails to Granger-causes the economic integration level;
6. Terrorism fails to Granger-causes unemployment rate.

Results

**Table 7: Granger causality Wald tests (model with 2 lags)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Equation** | **Excluded** | **F** | **df** | **df\_r** | **Prob > F** |
|  | | | | | |
| TERROR | INTEG | 4.0677 | 2 | 45 | 0.0238 |
| UNE | INTEG | 1.9485 | 2 | 45 | 0.1543 |
|  | | | | | |
| TERROR | UNE | 2.2567 | 2 | 45 | 0.1164 |
| INTEG | UNE | 4.9229 | 2 | 45 | 0.0117 |
|  | | | | | |
| INTEG | TERROR | .19603 | 2 | 45 | 0.8227 |
| UNE | TERROR | 1.1612 | 2 | 45 | 0.3223 |

The results in our model suggest that we:

* Reject the null hypothesis that the economic integration level fails to Granger-cause terrorism at the 5% level.
* Cannot reject the null hypothesis that the economic integration level fails to Granger-causes the unemployment rate.
* Cannot reject the null hypothesis that the unemployment rate fails to Granger-causes terrorism.
* Reject the null hypothesis that the unemployment rate fails to Granger causes the economic integration level at the 5% level.
* Cannot reject the null hypothesis that terrorism fails to Granger-causes the economic integration level.
* Cannot reject the null hypothesis that terrorism fails to Granger-causes unemployment rate.

Summary and discussion of the main results

We found that the level of economic integration Granger causes terrorism, but terrorism does not Granger causes the level of integration. This finding supports the work by Krueger and Maleckova (2003) which argue that terrorism is a response to political conditions and long-standing feelings of indignity and frustration that have little to do with economics and low market opportunities or ignorance. For example, the years preceding the 1987 uprising had been marked by growing frustration on the part of the Palestinians. The ISR-WBG-II 1968 confirms that before the “First Intifada” the level of economic integration was the highest which was reflected in the fact that the unemployment rate was at an all-time low and the relative standard of living was at its peak. Also before the “Second Intifada” we can see a rise in the integration level and reduction in unemployment rates in the WBG.

We also found that unemployment rate in the WBG Granger causes the level of economic integration, but the level of economic integration does not Granger causes unemployment rate in the WBG. This finding could be linked to the Israeli policy toward the territories, that when there is a fear of a significant decrease in the standard of living in the WBG caused by, among other things, a high unemployment rate, Israel allows for more economic activity with the PA, for example the movement of workers without permits to work in Israel and also increase in quota of working permits in Israel.

1. **Chapter 7 : Conclusions**
2. **References**

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**Appendix I -ISR-WBG-II Indicators**

1. **Trade, employment, and taxes**

* **Palestinian exports of goods and services to Israel out of total Palestinian exports –**

Measures the value of the goods and services that PA has exported to Israel or through Israel abroad as a percentage of total Palestinian exports.

|  |  |
| --- | --- |
| Data source | |
| 1968 - 1987 | National Accounts of Judea, Samaria and the Gaza area, 1968-1993, Registered goods only, Publication No. 1012, Israeli Central Bureau of Statistics |
| 1988 - 1991 | World bank Report, September 1993, Developing the Occupied territories |
| 1992-1994 | Missing data - supplemented by the average of the years before and after |
| 1995 - 1999 | Palestinian Central Bureau of Statistics, Registered goods only, Foreign Trade Statistics |
| 2000 - 2019 | Palestinian Central Bureau of Statistics, foreign trade and balance of payments |

* **Palestinian imports of goods and services from Israel out of total Palestinian imports –**

Measures the value of the goods and services the Palestinians have imported from Israel or through Israel as a percentage of total Palestinian imports.

|  |  |
| --- | --- |
| Data source | |
| 1968 - 1987 | National Accounts of Judea, Samaria and the Gaza area, 1968-1993, Registered goods only, Publication No. 1012, Israeli Central Bureau of Statistics |
| 1988 - 1991 | World bank Report, September 1993, Developing the Occupied territories |
| 1992-1994 | Missing data - supplemented by the average of the years before and after |
| 1995 - 1999 | Palestinian Central Bureau of Statistics, Registered goods only, Foreign Trade Statistics |
| 2000 - 2019 | Palestinian Central Bureau of Statistics, foreign trade and balance of payments |

* **Share of Gross clearance revenues out of Total PA net revenues and grants –**

Measures the value of clearance revenues collected by Israel and transferred to the PA out of total PA net revenues and grants.

|  |  |
| --- | --- |
| Data source | |
| 1998-2019 | Palestine Monetary Authority, Annual Statistics, Time Series Data, Public Finance, Revenues, expenditures and financing sources of PNA fiscal operations (cash basis) |

* **Palestinians employed in Israel out of total Palestinian employed Individuals –**

Measures the number pf Palestinians employed in Israel and the settlements out of total Palestinian employed Individuals.

|  |  |
| --- | --- |
| Data source | |
| 1968, 1969 ,1994 | Missing data - supplemented by the average of the years before and after |
| 1970 - 1993 | National Accounts of Judea, Samaria and the Gaza area, 1968-1993, Publication No. 1012, Israeli Central Bureau of Statistics |
| 1995 - 2019 | Palestinian Central Bureau of Statistics, *Labor Force Survey* |

* **Remittances of Palestinians workers in Israel out of WBG GNI –**

Measures the value of Palestinians workers’ salaries in Israel and the settlements out of total WBG gross national income.

|  |  |
| --- | --- |
| Data source | |
| 1968-1994 | Sharbel Shoukair (2013), The Impact of Foreign Aid and Donations to Palestine on Development of its Economy under Alternative Israeli- Palestinian Economic Interaction Regimes, Salaries of residents from abroad and net income from abroad |
| 1995 -2019 | Palestinian Central Bureau of Statistics, National accounts and Balance of Payments, Fifth Edition. Compensation of employees from balance of payment out of GNI in current prices |

**Figure XX - Trade, Employment and Taxes**

**Table XX – Raw data - Trade, Employment and Taxes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Palestinian exports of goods and services to Israel out of total Palestinian exports** | **Palestinian imports of goods and services from Israel out of total Palestinian imports** | **Share of Gross clearance revenues out of Total PA net revenues and grants** | **Palestinians employed in Israel out of total Palestinian employed Individuals** | **Remittances of Palestinians workers in Israel out of WBG GNI** |
| 1968 | 43.1% | 76.5% |  | 12% | 1% |
| 1969 | 36.6% | 80.2% |  | 12% | 6% |
| 1970 | 46.2% | 83.6% |  | 12% | 11% |
| 1971 | 44.6% | 81.7% |  | 19% | 16% |
| 1972 | 48.9% | 85.0% |  | 28% | 23% |
| 1973 | 66.1% | 90.1% |  | 32% | 24% |
| 1974 | 67.0% | 89.2% |  | 33% | 21% |
| 1975 | 63.9% | 91.2% |  | 33% | 24% |
| 1976 | 63.0% | 90.3% |  | 32% | 21% |
| 1977 | 60.4% | 91.4% |  | 31% | 22% |
| 1978 | 60.0% | 88.6% |  | 32% | 22% |
| 1979 | 62.2% | 86.8% |  | 35% | 25% |
| 1980 | 65.4% | 87.6% |  | 35% | 21% |
| 1981 | 71.6% | 90.1% |  | 35% | 24% |
| 1982 | 66.2% | 89.0% |  | 36% | 26% |
| 1983 | 74.7% | 90.8% |  | 38% | 28% |
| 1984 | 64.1% | 90.3% |  | 38% | 25% |
| 1985 | 66.6% | 89.5% |  | 37% | 24% |
| 1986 | 72.3% | 89.6% |  | 36% | 25% |
| 1987 | 78.8% | 91.4% |  | 39% | 30% |
| 1988 | 70.8% | 88.2% |  | 39% | 27% |
| 1989 | 69.6% | 81.6% |  | 38% | 27% |
| 1990 | 79.5% | 84.2% |  | 36% | 26% |
| 1991 | 77.6% | 86.2% |  | 34% | 26% |
| 1992 | 85.0% | 87.1% |  | 36% | 26% |
| 1993 | 85.0% | 87.1% |  | 27% | 18% |
| 1994 | 85.0% | 87.1% |  | 21% | 12% |
| 1995 | 92.4% | 88.1% |  | 16% | 13% |
| 1996 | 94.0% | 86.5% | 38% | 14% | 12% |
| 1997 | 93.7% | 82.7% | 44% | 17% | 12% |
| 1998 | 96.1% | 77.2% | 49% | 22% | 17% |
| 1999 | 96.9% | 61.6% | 49% | 23% | 17% |
| 2000 | 95.5% | 73.8% | 41% | 19% | 9% |
| 2001 | 96.8% | 68.4% | 0% | 13% | 4% |
| 2002 | 94.0% | 76.3% | 7% | 9% | 3% |
| 2003 | 94.1% | 76.6% | 35% | 9% | 4% |
| 2004 | 93.2% | 77.0% | 51% | 8% | 3% |
| 2005 | 92.8% | 75.5% | 45% | 9% | 4% |
| 2006 | 94.2% | 77.4% | 20% | 9% | 5% |
| 2007 | 93.8% | 77.6% | 45% | 9% | 5% |
| 2008 | 93.7% | 83.4% | 30% | 10% | 6% |
| 2009 | 93.0% | 78.0% | 37% | 10% | 5% |
| 2010 | 90.7% | 75.3% | 40% | 10% | 5% |
| 2011 | 91.6% | 74.1% | 47% | 10% | 6% |
| 2012 | 88.9% | 75.0% | 50% | 10% | 6% |
| 2013 | 91.7% | 75.6% | 46% | 11% | 7% |
| 2014 | 90.6% | 73.2% | 51% | 12% | 9% |
| 2015 | 91.5% | 65.5% | 55% | 12% | 11% |
| 2016 | 91.6% | 66.0% | 54% | 12% | 11% |
| 2017 | 91.1% | 63.0% | 57% | 13% | 11% |
| 2018 | 90.8% | 60.6% | 55% | 13% | 14% |
| 2019 | 89.4% | 60.2% | 59% | 13% | 14.61% |

1. **Movement of people**

* **Percentage of Israeli cars entering the WB -**

Measures the number of Israeli cars (mainly Israeli Arab) entering the WB through the Gilboa crossing point out of total Israeli Arab population. The index reflects aspects of private consumption of Israeli Arabs in the WB.

|  |  |
| --- | --- |
| Data source | |
| 2010 | Missing data – equal to year 2011 |
| 2011-2019 | The Ministry of Defense Crossing Points Authority (C.P.A.) and the Israeli Central Bureau of Statistics |

* **Movement of people between Israel and the WB –**

Measures the number of people passing through the crossings between Israel and the West Bank to the total average population of Israel and the West Bank

|  |  |
| --- | --- |
| Data source | |
| 2010 | Missing data – equal to year 2011 |
| 2011-2019 | The Ministry of Defense Crossing Points Authority (C.P.A.), Palestinian Central Bureau of Statistics, Israeli Central Bureau of Statistics |

* **Percentage of Palestinians entering Israel for medical treatment –**

Measures the number of applications approved by the Coordination of Government Activities in the Territories in favor of the entry of Palestinians into Israel for the purpose of receiving medical treatment out of total Palestinian population.

|  |  |
| --- | --- |
| Data source | |
| 2010 | Missing data – equal to year 2011 |
| 2011 - 2014 | Israeli Knesset, Data on providing medical care to Palestinians  In hospitals in Israel, 2017  <https://fs.knesset.gov.il/globaldocs/MMM/302ae8cf-a7b3-e511-80d0-00155d0acb9e/2_302ae8cf-a7b3-e511-80d0-00155d0acb9e_11_10394.pdf>  Missing data for Gaza strip for the years 2011-2012 - equal to year 2013 |
| 2015-2019 | Specific request - Coordinator of government activities in the territories, Palestinian Central Bureau of Statistics |

* **Percentage of Israeli guests’ nights in WB Hotels –**

Measures the number of guest Nights in Hotels in the West Bank by Israeli nationality to total number of guest nights.

|  |  |
| --- | --- |
| Data source | |
| 1996-2019 | Palestinian Central Bureau of Statistics, Hotel Activities |

* **Percentage of Palestinian households that conducted Outbound Trips to Israel–**

Measures the number of Palestinian households that conducted Outbound Trips to Israel out of total Palestinian households who conducted a trip.

|  |  |
| --- | --- |
| Data source | |
| 2009-2019 | Palestinian Central Bureau of Statistics, traveled Households on Outbound Trips by Destination Country and year, the data are published with a frequency of two years and therefore an average is made in the missing years (2011,2013,2015,2017, 2019) |

**Figure XX - Movement of people**

**Table XX - Raw data - Movement of people**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Percentage of Israeli cars entered the WB** | **Movement of people between Israel and the WB** | **Percentage of Palestinians entered to Israel for medical treatment** | **Percentage of Palestinian households that conducted Outbound Trips to Israel** | **Percentage of Israeli guests’ nights in WB Hotels** |
| 1996 |  |  |  |  | 2.70% |
| 1997 |  |  |  |  | 3.20% |
| 1998 |  |  |  |  | 5.00% |
| 1999 |  |  |  |  | 9.70% |
| 2000 |  |  |  |  | 9.30% |
| 2001 |  |  |  |  | 5.30% |
| 2002 |  |  |  |  | 4.30% |
| 2003 |  |  |  |  | 8.40% |
| 2004 |  |  |  |  | 8.70% |
| 2005 |  |  |  |  | 8.70% |
| 2006 |  |  |  |  | 11.60% |
| 2007 |  |  |  |  | 10.00% |
| 2008 |  |  |  |  | 4.20% |
| 2009 |  |  |  | 9.80% | 7.70% |
| 2010 | 54% | 46.71% | 2.75% | 15.80% | 6.00% |
| 2011 | 54% | 47% | 2.75% | 12.80% | 5.90% |
| 2012 | 67% | 56% | 2.93% | 9.80% | 8.40% |
| 2013 | 75% | 67% | 2.64% | 11.10% | 9.60% |
| 2014 | 77% | 80% | 2.93% | 12.40% | 8.90% |
| 2015 | 89% | 104% | 2.53% | 19.65% | 2.90% |
| 2016 | 101% | 118% | 2.46% | 26.90% | 11.50% |
| 2017 | 102% | 134% | 2.49% | 24.10% | 8.80% |
| 2018 | 99% | 149% | 2.62% | 21.30% | 7.60% |
| 2019 | 94% | 157% | 2.53% | 21.30% | 6.50% |

1. **Resources and infrastructure[[55]](#footnote-56)**

* **Mobile cellular subscriptions ratio –**

The indicator measures the ratio of Mobile cellular subscriptions (per 100 people) in WBG relative to Israel. Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network (PSTN) using cellular technology.

Mobile communications have a particularly important impact in rural areas. The mobility, ease of use, flexible deployment, and relatively low and declining rollout costs of wireless technologies enable them to reach rural populations with low levels of income and literacy.  In 2015, an agreement was signed between the Palestinian Ministry of Communications and the Ministry of Communications in Israel that enables the establishment of infrastructure for a 3G cellular network for the Palestinian population in the WB to help the development of the cellular field and increase the number of Palestinians employed in Palestinian telecommunications companies.

|  |  |
| --- | --- |
| Data source | |
| 2000-2019 | World bank, World Development Indicators, ID: IT.CEL.SETS.P2  <https://data.worldbank.org/indicator/IT.CEL.SETS.P2?locations=IL-PS> |

* **Individuals using the Internet ratio –**

The indicator measures the ratio of Individuals using the Internet (% of population)in the WBG to Israel. Internet users are individuals who have used the Internet (from any location) in the last 3 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc. New information and communications technologies (ICT) offer vast opportunities for progress in all walks of life in all countries - opportunities for economic growth, improved health, better service delivery, learning through distance education, and social and cultural advances.

|  |  |
| --- | --- |
| Data source | |
| 2000-2019 | World bank, World Development Indicators, ID: IT.NET.USER.ZS  <https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=IL-PS> |

* **Fixed broadband subscriptions ratio –**

The indicator measures fixed broadband subscriptions (per 100 people) in the WBG to Israel. Fixed broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s. This includes cable modem, DSL, fiber-to-the-home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband.

|  |  |
| --- | --- |
| Data source | |
| 2010 | Missing data – equal to year 2011, ID: IT.NET.BBND.P2 |
| 2011-2019 | World bank, World Development Indicators  <https://data.worldbank.org/indicator/IT.NET.BBND.P2?locations=IL-PS> |

* **Electricity imported from Israel out of total available electricity in the WBG –**

The indicator measures the quantity of electricity Imported from Israeli Electricity

Company to total available electricity in the WBG. It reflects the dependency of the WBG on Israeli electricity infrastructure.

|  |  |
| --- | --- |
| Data source | |
| 2004-2019 | Palestinian Central Bureau of Statistics, Energy Tables and Energy Balance |

* **Water Purchased from Israel out of available water quantity in the WBG –**

Annual quantity of water purchased from Israeli Water Company (Mekorot) out of total annual available water quantity in the WBG

|  |  |
| --- | --- |
| Data source | |
| 2000-2019 | Palestinian Central Bureau of Statistics, Selected Indicators for Water Statistics |

**Figure XX - Resources and networks**

**Table XX - Raw data - Resources and networks**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Mobile cellular subscriptions ratio** | **Individuals using the Internet ratio** | **Fixed broadband subscriptions ratio** | **Electricity imported from Israel out of total available electricity in the WBG** | **Water Purchased from Israel out of available water quantity in the WBG** |
| 2000 | 0% | 5% |  |  | 13.74% |
| 2001 | 6% | 11% |  |  | 15.17% |
| 2002 | 7% | 17% |  |  | 13.72% |
| 2003 | 7% | 21% |  |  | 14.05% |
| 2004 | 11% | 19% |  | 87% | 14.39% |
| 2005 | 13% | 64% |  | 85% | 13.38% |
| 2006 | 18% | 66% |  | 90% | 13.76% |
| 2007 | 21% | 44% |  | 85% | 14.74% |
| 2008 | 27% | 41% |  | 86% | 17.11% |
| 2009 | 36% | 51% |  | 84% | 16.93% |
| 2010 | 52% | 55% | 14.98% | 86% | 18.21% |
| 2011 | 57% | 60% | 15% | 85% | 17.60% |
| 2012 | 61% | 61% | 17% | 88% | 16.21% |
| 2013 | 60% | 66% | 19% | 85% | 17.31% |
| 2014 | 60% | 72% | 20% | 89% | 18.53% |
| 2015 | 59% | 74% | 22% | 87% | 19.22% |
| 2016 | 61% | 77% | 25% | 88% | 21.75% |
| 2017 | 66% | 80% | 27% | 89% | 22.17% |
| 2018 | 70% | 77% | 26% | 91% | 22.00% |
| 2019 | 63% | 81% | 25% | 87% | 20.15% |

1. **Banking and money**

* **Share of NIS deposits in the Palestinian banking system –**

Measures the amount of NIS deposits in the Palestinian banking system out of total amount of deposits.

|  |  |
| --- | --- |
| Data source | |
| 2006 - 2019 | Palestine Monetary Authority, Annual Statistics, Time Series Data, Deposits |

* **Share of NIS credit in the Palestinian banking system –**

Measures the amount of NIS gross credit facilities out of total amount of gross credit facilities in the Palestinian banking system

|  |  |
| --- | --- |
| Data source | |
| 1996-2019 | Palestine Monetary Authority, Annual Statistics, Time Series Data, Credit Facilities |

* **Share of NIS checks presented for clearing in the Palestinian banking system –**

Measures the value of NIS checks presented for clearing out of total value of checks presented for clearing in the Palestinian banking system.

|  |  |
| --- | --- |
| Data source | |
| 1998-2019 | Palestine Monetary Authority, Annual Statistics, Time Series Data, Clearance Data |

* **Excess NIS cash deposited in Israel out of total NIS circulation -**

Measures the amount of excess NIS cash of the Palestinian banking system deposited in Israel out of total NIS circulation.

|  |  |
| --- | --- |
| Data source | |
| 2010 -2019 | Palestine Monetary Authority, annual reports |

* **Checks and Money transfers volume out of WBG GNI -**

Measures the amount of NIS Checks & Money transfers on the correspondent banking relation of Israeli banks and the Palestinian banks out of WBG gross national income.

|  |  |
| --- | --- |
| Data source | |
| 2010 - 2019 | Palestine Monetary Authority and Palestinian Central Bureau of Statistics |

**Figure XX - Banking and money**

**Table XX - Raw data - Banking and money**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Share of NIS deposits in the Palestinian banking system** | **Share of NIS credit in the Palestinian banking system** | **Excess NIS cash deposited in Israel out of total NIS circulation** | **Checks and Money transfers volume out of WBG GNI** | **Share of NIS checks presented for clearing in the Palestinian banking system** |
| 1996 |  | 30% |  |  |  |
| 1997 |  | 31% |  |  |  |
| 1998 |  | 25% |  |  | 57% |
| 1999 |  | 21% |  |  | 67% |
| 2000 |  | 23% |  |  | 66% |
| 2001 |  | 19% |  |  | 66% |
| 2002 |  | 18% |  |  | 63% |
| 2003 |  | 23% |  |  | 62% |
| 2004 |  | 28% |  |  | 65% |
| 2005 |  | 17% |  |  | 61% |
| 2006 | 14% | 17% |  |  | 65% |
| 2007 | 18% | 20% |  |  | 66% |
| 2008 | 22% | 26% |  |  | 70% |
| 2009 | 23% | 26% |  |  | 69% |
| 2010 | 25% | 30% | 10% | 87% | 70% |
| 2011 | 30% | 24% | 11% | 61% | 67% |
| 2012 | 31% | 33% | 11% | 65% | 73% |
| 2013 | 29% | 34% | 17% | 66% | 73% |
| 2014 | 31% | 29% | 14% | 64% | 74% |
| 2015 | 33% | 34% | 12% | 60% | 74% |
| 2016 | 33% | 36% | 16% | 67% | 73% |
| 2017 | 34% | 40% | 15% | 68% | 75% |
| 2018 | 36% | 37% | 17% | 54% | 78% |
| 2019 | 36% | 40% | 20% | 58% | 80% |

1. **Wealth and Standard of living**

* **GDP per Capita Ratio –**

Measures the ratio of GDP per capita of the WBG to Israel. GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.

|  |  |
| --- | --- |
| Data source | |
| 1968-1993 | SCHEIN, A. (2013). Growth in Per Capita GDP in the West Bank and Gaza 1950–2005, Per capita GDP in WBG in 1990 international dollars, Middle Eastern Studies, 49(6), 973-989. Retrieved April 25, 2021, from http://www.jstor.org/stable/24585955 |
| 1994-2019 | World bank, World Development Indicators, GDP per capita (constant 2010 US$) |

* **Price level ratio –**

Measure the differences in price levels between the WBG and Israel.

Price level ratio is the ratio of a purchasing power parity (PPP) conversion factor to an exchange rate. It provides a measure of the differences in price levels between countries by indicating the number of units of the common currency needed to buy the same volume of the aggregation level in each country. At the level of GDP, they provide a measure of the differences in the general price levels of countries.

|  |  |
| --- | --- |
| Data source | |
| 1994-2019 | World bank, World Development Indicators, Price level ratio of PPP conversion factor (GDP) to market exchange rate,  PA.NUS.PPPC.RF |

* **Market capitalization Ratio –**

Measures the ratio of market value for listed domestic companies on Palestine Exchange (PEX) and the Tel Aviv Stock Exchange (TASE).

Market capitalization (also known as market value) is the share price times the number of shares outstanding (including their several classes) for listed domestic companies. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies are excluded.

|  |  |
| --- | --- |
| Data source | |
| 2000-2019 | World bank, World Development Indicators, Market capitalization of listed domestic companies (current US$) - Israel, West Bank and Gaza,  [CM.MKT.LCAP.CD](http://cm.mkt.lcap.cd/) |

* **Daily Wage Ratio –**

Measures the average wage of Palestinian employees working in Palestine to average wage of Palestinian employees working in Israel.

|  |  |
| --- | --- |
| Data source | |
| 1968, 1969 ,1991 - 1994 | Missing information - supplemented by the average of the years before and after |
| 1970 - 1990 | National Accounts of Judea, Samaria and the Gaza area, 1968-1993, Pubilication No. 1012, Israeli Central Bureau of Statistics |
| 1995 - 2019 | Palestinian Central Bureau of Statistics, *Labour Force Survey* |

**Figure XX - Wealth and Standard of living**

**Table XX - Raw data - Wealth and Standard of living**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **GDP per Capita Ratio** | **Price level ratio** | **Market capitilazation Ratio** | **Daily Wage Ratio** |
| 1968 | 5.06% |  |  | 55% |
| 1969 | 5.10% |  |  | 55% |
| 1970 | 5.73% |  |  | 55% |
| 1971 | 5.92% |  |  | 61% |
| 1972 | 6.20% |  |  | 64% |
| 1973 | 5.61% |  |  | 67% |
| 1974 | 6.53% |  |  | 72% |
| 1975 | 6.33% |  |  | 81% |
| 1976 | 7.37% |  |  | 87% |
| 1977 | 7.24% |  |  | 90% |
| 1978 | 7.76% |  |  | 88% |
| 1979 | 7.45% |  |  | 79% |
| 1980 | 8.55% |  |  | 90% |
| 1981 | 7.62% |  |  | 91% |
| 1982 | 7.99% |  |  | 91% |
| 1983 | 7.34% |  |  | 91% |
| 1984 | 7.52% |  |  | 111% |
| 1985 | 7.07% |  |  | 109% |
| 1986 | 7.97% |  |  | 92% |
| 1987 | 7.13% |  |  | 84% |
| 1988 | 6.82% |  |  | 77% |
| 1989 | 6.75% |  |  | 68% |
| 1990 | 7.49% |  |  | 71% |
| 1991 | 6.61% |  |  | 75% |
| 1992 | 7.47% |  |  | 73% |
| 1993 | 7.79% |  |  | 75% |
| 1994 | 8.04% | 67.14% |  | 69% |
| 1995 | 7.64% | 66.35% |  | 62.09% |
| 1996 | 7.23% | 65.27% |  | 54.42% |
| 1997 | 7.82% | 62.64% |  | 53.88% |
| 1998 | 8.58% | 61.10% |  | 53.40% |
| 1999 | 9.01% | 60.76% | 0.92% | 57.28% |
| 2000 | 7.67% | 65.83% | 0.68% | 57.56% |
| 2001 | 6.93% | 68.29% | 0.89% | 60.09% |
| 2002 | 6.04% | 76.07% | 0.99% | 55.95% |
| 2003 | 6.77% | 67.05% | 0.66% | 52.52% |
| 2004 | 7.86% | 62.71% | 0.85% | 53.31% |
| 2005 | 8.35% | 57.99% | 2.58% | 54.78% |
| 2006 | 7.77% | 57.79% | 1.20% | 56.78% |
| 2007 | 7.56% | 55.28% | 0.75% | 56.31% |
| 2008 | 7.81% | 53.38% | 1.69% | 55.24% |
| 2009 | 8.38% | 57.68% | 1.26% | 53.81% |
| 2010 | 8.33% | 61.12% | 1.08% | 49.30% |
| 2011 | 8.66% | 60.96% | 1.77% | 47.97% |
| 2012 | 8.92% | 59.66% | 1.77% | 48.63% |
| 2013 | 8.92% | 60.86% | 1.60% | 45.92% |
| 2014 | 8.55% | 55.24% | 1.59% | 44.52% |
| 2015 | 8.64% | 54.43% | 1.37% | 41.82% |
| 2016 | 9.02% | 56.71% | 1.58% | 39.21% |
| 2017 | 8.83% | 54.26% | 1.68% | 38.44% |
| 2018 | 8.59% | 53.26% | 1.99% | 38.99% |
| 2019 | 8.33% | 54.06% | 1.58% | 39.70% |

**Appendix II - Empirical results: PCA and weightings ISR-WBG-II 2010-2019**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Eigenvalues and eigenvectors** | | | | | | | **Loadings** | | | | **Weights** | **KMO** |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** | **Component 2** | Component 1 | Component 2 | Commun | Specific |
| Component 1 | 3.66 | 73% | 73% | PT Exports of goods and services to Israel out of total Exports | 0.04 | -0.98 | 0.08 | -0.99 | 99% | 1% | 21% | 15% |
| Component 2 | 1.02 | 20% | 94% | PT Imports of goods and services from Israel out of total imports | 0.51 | 0.03 | 0.97 | 0.03 | 95% | 5% | 20% | 91% |
| Component 3 | 0.23 | 5% | 98% | Share of Gross clearance revenues of Total PA net revenues and grants | -0.48 | 0.10 | -0.92 | 0.11 | 86% | 14% | 18% | 76% |
| Component 4 | 0.07 | 1% | 100% | Palestinians employed in Israel out of total PT of employed Individuals | -0.49 | -0.14 | -0.94 | -0.14 | 90% | 10% | 19% | 69% |
| Component 5 | 0.02 | 0% | 100% | Remittances of Palestinians workers in Israel out of GNI | -0.52 | -0.01 | -0.99 | -0.01 | 98% | 2% | 21% | 69% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** | **Component 2** | **Component 1** | **Component 2** | **Commun** | **Specific** | **Weights** | **KMO** |
| Component 1 | 2.81 | 56% | 56% | Number of Israeli cars entered the WB out of Israeli arab population | 0.56 | -0.21 | 0.94 | -0.24 | 94% | 6% | 23% | 61% |
| Component 2 | 1.31 | 26% | 82% | Movement of people of WBG population to Israel out of total PT population | 0.56 | -0.07 | 0.93 | -0.08 | 88% | 12% | 21% | 66% |
| Component 3 | 0.74 | 15% | 97% | Number of permits to palestinian for medical treatment out of total PT population | -0.20 | -0.70 | -0.34 | -0.80 | 76% | 24% | 18% | 30% |
| Component 4 | 0.09 | 2% | 99% | Percentage of palestinians Households traveled on Outbound Trips to Israel | 0.56 | 0.17 | 0.94 | 0.20 | 93% | 7% | 23% | 64% |
| Component 5 | 0.05 | 1% | 100% | Percentage of israeli Guests in PT Hotels (left) | 0.12 | -0.66 | 0.21 | -0.75 | 61% | 39% | 15% | 27% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** |  | **Component 1** |  | **Commun** | **Specific** | **Weights** | **KMO** |
| Component 1 | 4.12 | 82% | 82% | Mobile cellular subscriptions (per 100 people) ratio | 0.44 |  | 89% |  | 79% | 21% | 19% | 67% |
| Component 2 | 0.47 | 9% | 92% | Individuals using the Internet (% of population) ratio | 0.46 |  | 92% |  | 85% | 15% | 21% | 69% |
| Component 3 | 0.28 | 6% | 97% | Fixed broadband subscriptions (per 100 people) ratio | 0.48 |  | 97% |  | 94% | 6% | 23% | 63% |
| Component 4 | 0.11 | 2% | 100% | Electricity Imported from israel out of total Available Electricity in the PT | 0.42 |  | 86% |  | 74% | 26% | 18% | 76% |
| Component 5 | 0.02 | 0% | 100% | Quantity of Water Purchased from Israeli Water Company (Mekorot) out of Available Water Quantity in the PT | 0.44 |  | 89% |  | 80% | 20% | 19% | 66% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** | **Component 2** | **Component 1** | **Component 2** | **Commun** | **Specific** | **Weights** | **KMO** |
| Component 1 | 3.64 | 73% | 73% | Share of NIS deposits in the Palestinian banking system | 0.48 | -0.32 | 0.91 | -0.31 | 93% | 7% | 20% | 63% |
| Component 2 | 0.92 | 18% | 91% | Share of NIS gross credit in the Palestinian banking system | 0.45 | 0.48 | 0.85 | 0.46 | 93% | 7% | 20% | 56% |
| Component 3 | 0.30 | 6% | 97% | WBG excess NIS cash deposited in Israel banking system ou of total NIS circulation | 0.45 | 0.24 | 0.86 | 0.23 | 79% | 21% | 17% | 85% |
| Component 4 | 0.10 | 2% | 99% | Checks & Money transfer Volume between WBG & Israel out of WBG GNI | -0.36 | 0.75 | -0.68 | 0.72 | 98% | 2% | 22% | 44% |
| Component 5 | 0.04 | 1% | 100% | Share of NIS checks (Value) presented for clearing in the Palestinian banking system | 0.49 | 0.21 | 0.94 | 0.20 | 93% | 7% | 20% | 82% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** | **Component 2** | **Component 1** | **Component 2** | **Commun** | **Specific** | **Weights** | **KMO** |
| Component 1 | 2.06 | 52% | 52% | GDP per Capita Ratio (2015 prices) | 0.11 | 0.78 | 0.15 | 0.89 | 82% | 18% | 24% | 19% |
| Component 2 | 1.31 | 33% | 84% | Price level ratio of PPP conversion factor (GDP) to market exchange rate ratio | -0.63 | 0.33 | -0.91 | 0.37 | 96% | 4% | 28% | 42% |
| Component 3 | 0.54 | 14% | 98% | Market capitilazation Ratio (right) | 0.41 | 0.52 | 0.59 | 0.60 | 70% | 30% | 21% | 54% |
| Component 4 | 0.08 | 2% | 100% | Daily Wage Ratio- average wage of Palestinian employees workingin in Palestine to average wage of Palestinian employees working in Israel | -0.65 | 0.14 | -0.94 | 0.16 | 90% | 10% | 27% | 45% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component** | **eValue** | **Proportion** | **Cumulative** | **Indicator** | **Component 1** |  | **Component 1** |  | **Commun** | **Specific** | **Weights** | **KMO** |
| Component 1 | 4.14 | 83% | 83% | Trade, Employment and taxes | 0.43 |  | 0.87 |  | 75% | 25% | 18% | 89% |
| Component 2 | 0.35 | 7% | 90% | Movement of people and Services | 0.47 |  | 0.96 |  | 93% | 7% | 22% | 76% |
| Component 3 | 0.35 | 7% | 97% | Resources and infrastructure | 0.47 |  | 0.96 |  | 92% | 8% | 22% | 82% |
| Component 4 | 0.12 | 2% | 99% | Banking and money | 0.45 |  | 0.91 |  | 82% | 18% | 20% | 84% |
| Component 5 | 0.04 | 1% | 100% | Wealth and Standard of living | -0.42 |  | -0.84 |  | 71% | 29% | 17% | 89% |

**Appendix III – Contribution of indicators**

**Contribution of each indicator to its dimension ISR-WBG-II 2010-2019**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Indicator** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** |
| Palestinian exports of goods and services to Israel out of total Palestinian exports | 8% | 11% | 0% | 8% | 5% | 8% | 6% | 5% | 4% | 1% |
| Palestinian imports of goods and services from Israel out of total Palestinian imports | 12% | 10% | 8% | 8% | 6% | 3% | 2% | 1% | 0% | 0% |
| Share of Gross clearance revenues out of Total PA net revenues and grants | 0% | 4% | 4% | 2% | 4% | 6% | 4% | 4% | 4% | 6% |
| Palestinians employed in Israel out of total Palestinian employed Individuals | 3% | 1% | 0% | 3% | 4% | 4% | 3% | 5% | 5% | 6% |
| Remittances of Palestinians workers in Israel out of WBG GNI | 0% | 1% | 1% | 2% | 3% | 5% | 4% | 4% | 5% | 6% |
| Number of Israeli cars entering the WB | 0% | 0% | 3% | 4% | 4% | 7% | 6% | 6% | 6% | 6% |
| Movement of people between Israel and the WB | 0% | 0% | 1% | 2% | 3% | 5% | 4% | 5% | 6% | 7% |
| Percentage of Palestinians entering Israel for medical treatment | 8% | 7% | 9% | 3% | 8% | 1% | 0% | 0% | 2% | 1% |
| Percentage of Palestinian households that conducted Outbound Trips to Israel | 5% | 2% | 0% | 1% | 1% | 5% | 6% | 5% | 4% | 5% |
| Percentage of Israeli guests’ nights in WB Hotels | 6% | 5% | 7% | 7% | 7% | 0% | 7% | 5% | 4% | 3% |
| Mobile cellular subscriptions (ratio) | 0% | 3% | 5% | 4% | 4% | 4% | 4% | 5% | 7% | 4% |
| Individuals using the Internet (ratio) | 0% | 2% | 3% | 4% | 6% | 8% | 6% | 7% | 6% | 8% |
| Fixed broadband subscriptions (ratio) | 0% | 0% | 2% | 4% | 4% | 7% | 7% | 8% | 7% | 8% |
| Electricity imported from Israel out of total available electricity in the WBG | 1% | 0% | 4% | 0% | 5% | 3% | 3% | 4% | 6% | 2% |
| Water Purchased from Israel out of available water quantity in the WBG | 5% | 3% | 0% | 2% | 4% | 5% | 6% | 7% | 6% | 5% |
| Share of NIS deposits in the Palestinian banking system | 0% | 6% | 5% | 3% | 4% | 7% | 4% | 5% | 6% | 7% |
| Share of NIS credit in the Palestinian banking system | 5% | 0% | 5% | 5% | 3% | 5% | 5% | 6% | 5% | 7% |
| Excess NIS cash deposited in Israel out of total NIS circulation | 0% | 1% | 0% | 5% | 3% | 1% | 4% | 3% | 4% | 6% |
| Checks and Money transfers volume out of WBG GNI | 14% | 3% | 3% | 3% | 3% | 2% | 3% | 3% | 0% | 1% |
| Share of NIS checks presented for clearing in the Palestinian banking system | 3% | 0% | 5% | 4% | 4% | 5% | 3% | 4% | 5% | 7% |
| GDP per Capita (ratio) | 0% | 6% | 8% | 7% | 3% | 4% | 6% | 5% | 2% | 0% |
| Price level (ratio) | 16% | 14% | 9% | 10% | 3% | 2% | 3% | 1% | 0% | 1% |
| Market capitilazation (ratio) | 0% | 8% | 6% | 4% | 4% | 2% | 3% | 4% | 5% | 3% |
| Daily Wage (ratio) | 15% | 12% | 10% | 6% | 5% | 3% | 1% | 0% | 0% | 1% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |

**Appendix IV – Indices results**

**Table XX - Indices results**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **ISR-WBG-II 1968** | **ISR-WBG-II 1996** | **ISR-WBG-II 2000** | **ISR-WBG-II 2010** |
| 1968 | 17.60% |  |  |  |
| 1969 | 20.50% |  |  |  |
| 1970 | 30.24% |  |  |  |
| 1971 | 38.08% |  |  |  |
| 1972 | 50.82% |  |  |  |
| 1973 | 59.15% |  |  |  |
| 1974 | 62.84% |  |  |  |
| 1975 | 65.59% |  |  |  |
| 1976 | 68.76% |  |  |  |
| 1977 | 68.39% |  |  |  |
| 1978 | 69.64% |  |  |  |
| 1979 | 69.17% |  |  |  |
| 1980 | 75.35% |  |  |  |
| 1981 | 76.28% |  |  |  |
| 1982 | 77.56% |  |  |  |
| 1983 | 80.23% |  |  |  |
| 1984 | 80.59% |  |  |  |
| 1985 | 77.17% |  |  |  |
| 1986 | 79.02% |  |  |  |
| 1987 | 80.93% |  |  |  |
| 1988 | 72.32% |  |  |  |
| 1989 | 65.86% |  |  |  |
| 1990 | 72.66% |  |  |  |
| 1991 | 67.60% |  |  |  |
| 1992 | 74.36% |  |  |  |
| 1993 | 66.15% |  |  |  |
| 1994 | 60.10% |  |  |  |
| 1995 | 58.24% |  |  |  |
| 1996 | 52.56% | 57% |  |  |
| 1997 | 55.06% | 61% |  |  |
| 1998 | 61.65% | 69% |  |  |
| 1999 | 57.80% | 72% |  |  |
| 2000 | 49.42% | 61% | 47.49% |  |
| 2001 | 38.12% | 39% | 33.73% |  |
| 2002 | 33.09% | 34% | 28.10% |  |
| 2003 | 35.72% | 43% | 33.86% |  |
| 2004 | 39.81% | 49% | 39.66% |  |
| 2005 | 40.77% | 42% | 42.30% |  |
| 2006 | 40.51% | 42% | 40.64% |  |
| 2007 | 40.74% | 44% | 40.34% |  |
| 2008 | 45.41% | 41% | 44.96% |  |
| 2009 | 43.45% | 45% | 47.19% |  |
| 2010 | 41.32% | 43% | 48.28% | 30% |
| 2011 | 41.84% | 43% | 49.67% | 32% |
| 2012 | 42.15% | 47% | 53.82% | 43% |
| 2013 | 44.85% | 54% | 59.53% | 48% |
| 2014 | 42.56% | 46% | 56.12% | 47% |
| 2015 | 37.80% | 38% | 50.22% | 44% |
| 2016 | 38.94% | 49% | 60.80% | 63% |
| 2017 | 37.38% | 46% | 60.59% | 64% |
| 2018 | 38.26% | 45% | 62.04% | 66% |
| 2019 | 37.04% | 45% | 59.33% | 60% |

**Appendix V – WB and GS indices**

**Table XX – WB and GS - indices results**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **ISR-WBG-II** | **ISR-WB-II** | **ISR-GS-II** |
| 2008 | 34% | 35% | 39% |
| 2009 | 32% | 32% | 45% |
| 2010 | 34% | 35% | 44% |
| 2011 | 33% | 34% | 40% |
| 2012 | 42% | 39% | 35% |
| 2013 | 45% | 53% | 34% |
| 2014 | 50% | 55% | 37% |
| 2015 | 46% | 50% | 48% |
| 2016 | 52% | 53% | 62% |
| 2017 | 57% | 61% | 46% |
| 2018 | 65% | 62% | 62% |
| 2019 | 57% | 61% | 51% |

**Table XX - WB and GS - Trade and employment dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| Year | WB | GS | WBG |
| 2008 | 60% | 48% | 54% |
| 2009 | 44% | 50% | 41% |
| 2010 | 34% | 38% | 35% |
| 2011 | 37% | 45% | 35% |
| 2012 | 23% | 39% | 20% |
| 2013 | 56% | 37% | 51% |
| 2014 | 49% | 25% | 47% |
| 2015 | 42% | 40% | 39% |
| 2016 | 39% | 45% | 40% |
| 2017 | 45% | 53% | 44% |
| 2018 | 56% | 58% | 55% |
| 2019 | 47% | 47% | 49% |

**Table XX - WB and GS - Movement of people and services dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **WB** | **GS** | **WBG** |
| 2008 | 30% | 27% | 31% |
| 2009 | 30% | 27% | 31% |
| 2010 | 30% | 27% | 31% |
| 2011 | 30% | 27% | 31% |
| 2012 | 54% | 13% | 54% |
| 2013 | 30% | 0% | 28% |
| 2014 | 64% | 51% | 64% |
| 2015 | 34% | 93% | 34% |
| 2016 | 32% | 86% | 32% |
| 2017 | 47% | 10% | 43% |
| 2018 | 65% | 63% | 64% |
| 2019 | 62% | 54% | 57% |

**Table XX - WB and GS - Resources and infrastructure dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **WB** | **GS** | **WBG** |
| 2008 | 6% | 13% | 17% |
| 2009 | 11% | 60% | 6% |
| 2010 | 48% | 26% | 26% |
| 2011 | 39% | 4% | 18% |
| 2012 | 11% | 13% | 23% |
| 2013 | 67% | 5% | 15% |
| 2014 | 79% | 14% | 51% |
| 2015 | 60% | 21% | 47% |
| 2016 | 86% | 51% | 75% |
| 2017 | 93% | 42% | 84% |
| 2018 | 53% | 80% | 99% |
| 2019 | 54% | 55% | 53% |

**Table XX - WB and GS - Banking and money dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **WB** | **GS** | **WBG** |
| 2008 | 12% | 28% | 9% |
| 2009 | 12% | 20% | 9% |
| 2010 | 24% | 55% | 26% |
| 2011 | 19% | 43% | 19% |
| 2012 | 57% | 25% | 53% |
| 2013 | 56% | 40% | 50% |
| 2014 | 50% | 51% | 47% |
| 2015 | 67% | 54% | 64% |
| 2016 | 63% | 89% | 65% |
| 2017 | 78% | 83% | 78% |
| 2018 | 85% | 87% | 85% |
| 2019 | 98% | 85% | 98% |

**Table XX - WB and GS - Wealth and Standard of living dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **WB** | **GS** | **WBG** |
| 2008 | 50% | 79% | 50% |
| 2009 | 62% | 79% | 74% |
| 2010 | 42% | 71% | 58% |
| 2011 | 52% | 78% | 67% |
| 2012 | 54% | 86% | 80% |
| 2013 | 51% | 82% | 70% |
| 2014 | 43% | 50% | 45% |
| 2015 | 46% | 33% | 42% |
| 2016 | 51% | 38% | 51% |
| 2017 | 48% | 18% | 35% |
| 2018 | 43% | 9% | 23% |
| 2019 | 41% | 0% | 13% |

1. According to the Israeli Ministry of Foreign Affairs. [↑](#footnote-ref-2)
2. The name "Palestine" chosen for this Mandate was based on "Palestina" a name was given to the country by the Roman Empire in the second century CE. [↑](#footnote-ref-3)
3. The Mandate for Palestine July 24, 1922, Article 2: “The Mandatory shall be responsible for placing the country under such political, administrative and economic conditions as will secure the establishment of the Jewish national home, as laid down in the preamble, and the development of self -governing institutions, and also for safeguarding the civil and religious rights of all the inhabitants of Palestine, irrespective of race and religion”. [↑](#footnote-ref-4)
4. The Currency Board was dissolved in May 1948, with the end of the British Mandate, but the Palestinian pound continued in circulation for transitional periods. [↑](#footnote-ref-5)
5. <https://www.nli.org.il/en/newspapers/plb/1928/12/10/01/article/4/?e=-------en-20--1--img-txIN%7ctxTI--------------1> [↑](#footnote-ref-6)
6. For further reading - Segev (2000), Kramer (2008) Kelly (2017). [↑](#footnote-ref-7)
7. The main factors in fostering rapid economic growth of the Jewish sector were: Jewish population increased mainly through immigration and capital inflows and investment. [↑](#footnote-ref-8)
8. [https://web.archive.org/web/20120524094913/http://domino.un.org/unispal.nsf/0/7f0af2bd897689b785256c330061d253](https://web.archive.org/web/20120524094913/http:/domino.un.org/unispal.nsf/0/7f0af2bd897689b785256c330061d253)

   [↑](#footnote-ref-9)
9. During the Sinai Campaign (1956), the Gaza strip was temporarily occupied by Israel. The Sinai Campaign was fought to put an end to the terrorist incursions into Israel and to remove the Egyptian blockade of Eilat.​ [↑](#footnote-ref-10)
10. Israeli Ministry of Foreign Affairs. [↑](#footnote-ref-11)
11. The last agreement was signed on 23 October 1998, and is known as the “Wye River Memorandum”. [↑](#footnote-ref-12)
12. Israel Ministry of Foreign Affairs. [↑](#footnote-ref-13)
13. It was incorporated with minor amendments into the Oslo II Accord of September 1995 [↑](#footnote-ref-14)
14. https://mfa.gov.il/MFA/ForeignPolicy/MFADocuments/Yearbook9/Pages/181%20Israel-PLO%20Economic%20Agreement-%20Paris-%2029%20April.aspx**.** [↑](#footnote-ref-15)
15. The clearance mechanism was specified as follows: at the end of each month a reconciliation session is held for the revenues of the previous month which will be received in cash at the beginning of the month following the session. [↑](#footnote-ref-16)
16. The summit held between the United States President, Israeli Prime Minister and Palestinian Authority Chairman. [↑](#footnote-ref-17)
17. <https://www.mfa.gov.il/mfa/foreignpolicy/peace/guide/pages/israels%20disengagement%20plan-%20renewing%20the%20peace%20process%20apr%202005.aspx> [↑](#footnote-ref-18)
18. <https://mfa.gov.il/mfa/foreignpolicy/terrorism/palestinian/pages/the%20hamas%20terror%20organization%20-%20%202006%20update%2015-mar-2007.aspx> [↑](#footnote-ref-19)
19. <https://mfa.gov.il/MFA/ForeignPolicy/Issues/Pages/Gaza%20designated%20a%20%E2%80%9CHostile%20Territory%E2%80%9D%2024-Sep-2007.aspx#:~:text=Due%20to%20continued%20terrorist%20attacks,supplies%20which%20go%20beyond%20that>. [↑](#footnote-ref-20)
20. <https://mfa.gov.il/MFA/AboutIsrael/Maps/Pages/Operation-Cast-Lead.aspx> [↑](#footnote-ref-21)
21. <https://www.idf.il/en/minisites/wars-and-operations/operation-pillar-of-defence/operation-pillar-of-defense/> [↑](#footnote-ref-22)
22. <https://www.gov.il/en/Departments/General/operation-protective-edge-full-report> [↑](#footnote-ref-23)
23. <https://www.idf.il/en/minisites/wars-and-operations/operation-guardian-of-the-walls/operation-guardian-of-the-walls-1/> [↑](#footnote-ref-24)
24. <https://www.globes.co.il/news/article.aspx?did=1001272325> [↑](#footnote-ref-25)
25. <https://www.timesofisrael.com/in-first-government-approves-small-quota-of-tech-work-permits-for-palestinians/> [↑](#footnote-ref-26)
26. <https://www.gov.il/en/departments/news/1standards> [↑](#footnote-ref-27)
27. <https://www.gov.il/en/departments/news/exportingfoodmanufacturedfromthegazastripheb> [↑](#footnote-ref-28)
28. <https://www.timesofisrael.com/israel-authorizes-3000-additional-entry-permits-for-gaza-workers/> [↑](#footnote-ref-29)
29. BOI website. [↑](#footnote-ref-30)
30. PMA Annual Reports. [↑](#footnote-ref-31)
31. PMA annual reports. [↑](#footnote-ref-32)
32. <mailto:https://www.imf.org/en/Publications/Policy-Papers/Issues/2017/04/21/recent-trends-in-correspondent-banking-relationships-further-considerations> [↑](#footnote-ref-33)
33. <https://www.imf.org/en/Countries/ResRep/WBG/News-Archive> [↑](#footnote-ref-34)
34. <https://www.gov.il/ar/departments/news/onlinepayment> [↑](#footnote-ref-35)
35. <mailto:http://www.fatf-gafi.org/media/fatf/documents/reports/Guidance-Correspondent-Banking-Services.pdf> [↑](#footnote-ref-36)
36. Recent Trends in Correspondent Banking Relations—Further Considerations, IMF, March 16, 2017. [↑](#footnote-ref-37)
37. AHLC Report, IMF, April 2016 page 6. [↑](#footnote-ref-38)
38. <mailto:https://www.globes.co.il/news/article.aspx?did=1001236634>; <mailto:https://www.haaretz.co.il/news/politics/1.3425881> [↑](#footnote-ref-39)
39. <mailto:https://www.gov.il/he/departments/policies/dec4207_2018> [↑](#footnote-ref-40)
40. [Governor of the Monetary Authority: Establishing the Palestinian Correspondent Company to facilitate the implementation of financial transactions](mailto:https://www.pma.ps/ar/%D8%A7%D9%84%D8%A5%D8%B9%D9%84%D8%A7%D9%85/%D8%A8%D9%8A%D8%A7%D9%86%D8%A7%D8%AA-%D8%B5%D8%AD%D9%81%D9%8A%D8%A9/%D9%85%D8%AD%D8%A7%D9%81%D8%B8-%D8%B3%D9%84%D8%B7%D8%A9-%D8%A7%D9%84%D9%86%D9%82%D8%AF-%D8%A5%D9%86%D8%B4%D8%A7%D8%A1-%D8%A7%D9%84%D8%B4%D8%B1%D9%83%D8%A9-%D8%A7%D9%84%D9%81%D9%84%D8%B3%D8%B7%D9%8A%D9%86%D9%8A%D8%A9-%D8%A7%D9%84%D9%85%D8%B1%D8%A7%D8%B3%D9%84%D8%A9-%D9%84%D8%AA%D8%B3%D9%87%D9%8A%D9%84-%D8%AA%D9%86%D9%81%D9%8A%D8%B0-%D8%A7%D9%84%D9%85%D8%B9%D8%A7%D9%85%D9%84%D8%A7%D8%AA-%D8%A7%D9%84%D9%85%D8%A7%D9%84%D9%8A%D8%A9) [↑](#footnote-ref-41)
41. where for Jordan + = DD, and for Israel + = DD: since the data is only for total holdings of currency in both Jordan (Israel) and PA territories they take the ratio of this amount to total demand deposits in both Jordan (Israel) and PA territories. [↑](#footnote-ref-42)
42. Estimation of euro currency in circulation outside the euro area, ECB 6 April 2017. [↑](#footnote-ref-43)
43. According to the ECB, anecdotal evidence, for example, indicates that euro area travellers or migrant workers take a significant quantity of euro banknotes with them when travelling to non-euro area countries. [↑](#footnote-ref-44)
44. See G.A.F. Seber, The Estimation of Animal Abundance and Related Parameters, 2d ed. (Macmillan, 1982). [↑](#footnote-ref-45)
45. <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html> [↑](#footnote-ref-46)
46. <http://www.eu-index.uni-goettingen.de/?lang=en> [↑](#footnote-ref-47)
47. <https://www.integrate-africa.org/> [↑](#footnote-ref-48)
48. <https://aric.adb.org/integrationindicators> [↑](#footnote-ref-49)
49. Numerous normalization methods are available at Organization for Economic Co-operation and Development (OECD), 2008, Handbook on Constructing Composite Indicators: Methodology and User Guide, European Commission. [↑](#footnote-ref-50)
50. Detailed information about the technique can be found in methodologies notes of both Asia-Pacific Regional Cooperation and Integration Index and Africa Regional Integration Index. [↑](#footnote-ref-51)
51. Due to data limitations, we calculated the share of exports to Israel using the data we obtained from the “Coordinator of Government Operations in the Occupied Territories” and “Gisha” on the number of trucks exiting Gaza by geographical area (Israel, West Bank and the rest of the world). In addition, this figure was used to calculate the share of export of the West Bank to Israel by subtracting the amount exported from Gaza (the rate of trucks in Israel multiplied by the total Gaza exports - official figure) from the total Palestinian exports to Israel (official figure). [↑](#footnote-ref-52)
52. According to Gisha (Israeli not-for-profit organization), Gaza residents’ ability to cross the Erez crossing point was gradually limited over the years. Since 1991, residents have been required to obtain exit permits, and the number of permits given gradually declined. In 1993, a general closure was declared on the Palestinian territory; it was enforced in Gaza especially starting in 1995, when an electronic fence and concrete wall were built around the Strip. When the Second Intifada broke out in September 2000, Israel cancelled many existing exit permits and reduced the number of new permits it issued. The restrictions led to a drop of tens of percentage points in the number of Palestinian residents of the Gaza Strip who were able to travel to and through Israel daily, from more than 26,000 in the summer of 2000, on the eve of the intifada, to less than 900 after it broke out later that year.After Hamas took control of the Strip, Israel tightened movement restrictions to the point of full closure on Gaza, only allowing travel according to a narrow list of criteria, determined by Israel. Though Israel has implemented slight changes to the criteria over the years, travel from Gaza to Israel and the West Bank remained extremely limited, and beyond the reach of most Palestinians. In recent years, Israel permitted Palestinian residents to apply to cross Erez in specific circumstances: for business and trade, medical treatment unavailable in the Strip, and other “humanitarian exceptions,” that is, visiting a dying first-degree relative, or attending a wedding or a funeral of a first-degree relative. [↑](#footnote-ref-53)
53. To explain this, for example, consider the low rate in the Gaza Strip in the use of NIS relative to the West Bank, but with a gradual increase in both areas. This phenomenon may have the same expression after normalization. [↑](#footnote-ref-54)
54. Given a collection of models for the data, AIC estimates the quality of each model, relative to each of the other models. Thus, AIC provides a means for model selection. [↑](#footnote-ref-55)
55. The Communications and Postal Services Office (in Coordinator of government activities in the territories) is responsible for regulating the activity of Israeli telecommunications and postal service companies, authorizing use of frequencies in the entire region, granting approvals to place telecommunications infrastructure, and establishing communications facilities in Area C. The office is also responsible for granting approvals for the transfer of telecommunications equipment into Judea and Samaria and maintaining working relationships with its Palestinian counterparts in all areas of telecommunications and postal services.  [↑](#footnote-ref-56)