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Rebuilding the Palestinian Tradable Goods Sector:
Towards Economic Recovery and State Formation

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Executive Summary

For almost two decades now the 1994 Protocol on Economic Relations between the Government of the State of Israel and the Palestine Liberation Organization (Paris Protocol), representing the Palestinian people, has set the parameters of the Palestinian economic policy framework. Under its terms, not only has the Palestinian economic malaise persisted, but the Palestinian and Israeli economies have continued to diverge, with the per capita income gap continuing to widen. The complex and multifaceted economic distortions in the occupied Palestinian territory have deepened Palestinian dependence on donor aid as the major source of public revenue.

Since the fourth quarter of 2000, macroeconomic imbalances in the occupied Palestinian territory have worsened, leading to a persistent trade deficit (mostly with Israel), a large and persistent public budget deficit and high unemployment rates. While these challenges are serious enough even in the most enabling policy space, they are compounded by the fact that the Paris Protocol does not allow the Palestinian Authority the policy space needed to implement relevant corrective measures. The Protocol has therefore evolved not only as the defining factor of the economic and trade relations between Israel and the occupied Palestinian territory, it has become a key constraint on the range of economic policies the Palestinian Authority can pursue. The centrality of the Protocol to Palestinian economic life is underscored by its evolution to what has become effectively a one-sided customs union. As a result, key Palestinian macroeconomic variables, such as interest rates, exchange rates, price levels and unemployment rates, have been divorced from domestic economic conditions and have become more reflective of Israeli economic policy orientation and political imperatives.

Against this backdrop, this paper provides a detailed account of Palestinian trade patterns based on trade data and offers policy recommendations for economic revitalization, employment generation and trade deficit reduction. Moreover, a gravity model is used to shed light on the determinants of Palestinian export supply and demand for imported goods. The analysis shows that Palestinian exports are less diversified than those of most Arab countries, while the relatively low technology content and high resource contents of exports indicate a potential for labour-intensive goods to be produced within the occupied Palestinian territory.

The study identifies a number of industries and products for export promotion and policy support. These products include pharmaceuticals, building stone, cement, cut flower, mineral fuels, as well as lubricants and related materials. The estimation of a gravity model reveals that there is significant scope for the domestic production of some goods currently imported from abroad in such categories as food, live animals, beverages, vegetables as well as some manufactured products and equipment. Moreover, a potential exists for expanding intra-industry trade in food, live animals, stone, marble, animal, vegetable oils (olive oil) and manufactured products.

A review of the bilateral trade arrangements signed by the Palestinian Authority, under the umbrella of the quasi-customs union with Israel, reveals that the Palestinian economy has not reaped the benefits expected of these agreements. In fact economic dependence on the Israeli economy continues unabated, despite a strong trade potential with countries such as Jordan and the Republic of Korea. Exports to Israel continue to hover around 90 per cent of total Palestinian exports, while imports from and through it are in the 80 per cent range. Accordingly, a relaxation of the pervasive restrictions imposed by Israel on Palestinian trade is bound to reshape its pattern by increasing exports to regional and global markets, other than Israel, by about 40 per cent and reducing the extreme dependency on the Israeli market of imports by 50 per cent. Energy and natural gas are among the key imports that can be obtained from other regional markets if the Israeli restrictions on Palestinian trade are removed. The overall trade deficit, as well as the bilateral trade deficit with Israel, is thus not the result of the policies pursued by the Palestinian Authority, but are mainly rooted in the range of the increasingly complex political and economic constraints that have been hampering Palestinian development since the beginning of occupation in 1967.

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Abbreviations

ECI	export concentration index
EDI	export diversification index
EFTA	European Free Trade Association
ESI	export specialization index
EU	European Union
GD	global demand
GDP	gross domestic product
GMS	global market share
GNDI	gross national disposable Income
HT	high technology
IIT	intra-industry trade index
ISIC	International Standard Industrial Classification of All Economic Activities
LT	low technology
MT	medium technology
n.e.s.	not elsewhere specified
NIS	new Israeli shekel
NTB	non-tariff barriers to trade
PCBS	Palestinian Central Bureau of Statistics
PCGNDI	per capita gross national disposable income
RB	resource-based
RCA	revealed comparative advantage
REX	real exchange rate
RGREI	relative growth rate of exports/imports index
SITC	Standard International Trade Classification
UN COMTRADE	United Nations Commodity Trade Statistics Database
UNIDO	United Nations Industrial Development Organization
XSI	export similarity index

Introduction

Over the past four decades, the economy of the occupied Palestinian territory has been dominated by that of Israel through a range of mechanisms designed to address the economic, commercial and political needs of the occupying power. These arrangements have meant that the performance of the Palestinian economy is disproportionately influenced by Israeli policy orientation, particularly the economic and strategic interests of Israel. Consequently, the level and trajectory of key macroeconomic variables in the occupied Palestinian territory – such as prices, wages, exports, imports, investment and employment – have been largely determined by Israeli political and economic forces. Since the early 1970s, the high levels of unemployment and the gap between Palestinian and Israeli wages have pushed a substantial proportion of the Palestinian labour force to seek employment in Israel.

The extent of the historical dependence on the Israeli labour market as an outlet for Palestinian surplus labour may be gauged from the fact that, in 1999 and 2000, remittances of Palestinian workers in Israel reached as high as 20 per cent of the gross national disposable income (GNDI). In addition, the high transaction costs to which Palestinian producers have been subjected by various Israeli measures has put them at a marked disadvantage in Palestinian markets compared with foreign competitors. Their trade competitors, mainly Israeli firms, stunted Palestinian economic development by pre-empting investments in productive sectors, thereby producing an adverse impact on the long-term learning effects that usually result from sustained production activities (UNCTAD, 2010). The output of food, farm products and final manufactured commodities has been on a declining trend as domestic production of those commodities has gradually been replaced by imports, mainly from Israel, rendered relatively cheap by the high production cost imposed on Palestinian producers and the subsidies granted to Israeli producers (El-Jafari, 2000).

Substantial labour outflows from the occupied Palestinian territory to Israel, until 2000, and the free inflow of merchandise and services from Israel into Palestinian markets have been salient features of the Israeli-Palestinian economic relationship. This has often been described as an imposed and selectively applied economic union with a quasi-customs union. The highly unequal nature of this relation prevented the realization of enhanced gross domestic product (GDP) growth, and efficiency gains or technological transfer to the Palestinian side. As a result, foreign aid and remittances have assumed ever-increasing importance to the Palestinian economy, with domestic production concentrated on non-tradable goods, mainly the services and construction sectors, at the expense of atrophied industrial and agricultural sectors.

It is therefore not surprising that the potential convergence of Palestinian per capita GDP towards that of Israel, which some observers expected to take place following the implementation of the Paris Protocol, has failed to materialize. On the contrary, the ratio of Palestinian per capita GDP to that of Israel declined in the post-Protocol period. Israel's closure policy, the destruction of much of the Palestinian productive base and the loss of economic and natural resources to occupation have set in motion a continuous divergence trend, and by 2000, the per capita GDP ratio was still below its pre-Oslo level and plunged, in 2009, to half its peak of 30 years ago (Khalidi and Taghdisi-Rad, 2009). The Protocol had thus failed to spur any positive transformation of the Palestinian economy and/or reshape the unequal economic and trade relations between Israel and the occupied Palestinian territory.

Following its establishment in 1994, the Palestinian Authority has become increasingly reliant on import taxes and aid to finance current expenditure and capital investments. In fact, the weak and often shrinking domestic tax base has forced the Palestinian Authority to use persistently high import volumes, supported by foreign aid and expatriate workers' remittances as a vehicle for raising public revenue to finance substantial part of its expenditure. As imports from or via Israel increased over

time,[1] import taxes collected and transferred by Israel to the Palestinian Authority have become a major source of Palestinian public revenue, alongside donor aid. As a result, fluctuations in these key elements of Palestinian public finance exert serious effects on fiscal policy, employment and the private sector at large. This fiscal dependence boils down to severe direct and indirect pressure to finance public and trade deficits.

Since the Second Intifada (September 2000), the Palestinian economy has experienced a huge public deficit, a high and persistent trade deficit and high rates of unemployment and poverty. However, the provisions of the Paris Protocol leave little policy space for the Palestinian Authority to implement stabilization policies capable of correcting the worsening macroeconomic imbalances. The Palestinian Authority's ability to respond adequately to the enormous challenges of reviving a war-torn economy in a uniquely unfavourable environment is compromised by the lack of the fiscal, monetary, exchange-rate, trade and labour policy instruments necessary to design and implement effective, coherent, and integrated policies to achieve sustainable and equitable economic development (UNCTAD, 2009a). Consequently, the levels of most Palestinian macroeconomic variables, such as interest rates, exchange rates[2] and price levels, have been wholly determined by Israeli economic policy. The key problems that the Palestinian economy, in general, and the tradable goods sector in particular, are facing are high interest rates, the non-existence of a national currency, fiscal dependence on imports, smuggling, a distorted labour market, a debilitated infrastructure, an eroded productive base and a deformed production structure.

High interest rates hamper badly needed investments to expand domestic production. Consequently, domestically produced agricultural and manufactured goods have been continuously replaced by cheaper imports; originating mainly from Israel. The number of workers employed in the farming, manufacturing, and construction sectors has thus declined significantly since 2000. Furthermore, Israel's role as is by far the dominant source of Palestinian imports implies that domestic inflation rates are largely determined by Israeli economic forces, that is to say, imported inflation (Palestinian Monetary Authority, 2005, 2007). Moreover, substantial inflows of relatively cheap imports and the use of three different currencies – the Jordanian dinar, the United States dollar and the Israeli shekel – all pre-empt corrective policy actions to stimulate the tradable goods sector.

The Palestinian Authority's fiscal dependence on imports as a main source of tax revenue has spurred the tacit encouragement of the import of goods from abroad at the cost of supporting domestic producers of importable goods and a large, persistent trade deficit. The tendency to bridge the chronic fiscal gap by tolerating large trade deficits, dominated by imports from Israel, has had many consequences, including undermining Palestinian competiveness.

The persistent fiscal deficit, together with recurrent humanitarian emergencies, has depressed development and capital expenditures and discouraged spending to rebuild basic infrastructures, including electricity, water and telecommunication. It has been documented that the quality of Palestinian infrastructure is well below "international standards", yet the cost of public utilities in the occupied Palestinian territory is high by regional standards (UNCTAD, 2004a). Furthermore, a high percentage of international aid has been allocated to the budget to pay public sector salaries and running costs. Thus, of the $2.4 billion of aid disbursed by donors in 2009, budget support accounted for $1.36 billion, covering 85 per cent of the recurrent budget deficit; while funding of development projects stood at a meagre $390 million, i.e. 16 per cent of total aid disbursements (World Bank, 2010).

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[1] It is hard to distinguish between direct and indirect imports from Israel. Recent evidence (see Sales by Israel to the Palestinian Authority, Bank of Israel, 4 October 2010) suggests that a high percentage of Palestinian imports "from Israel" are in fact produced in third countries and enter the Palestinian markets as imports from Israel. See also Raja Khalidi, *The Guardian*, 26 October 2010, available from
http://www.guardian.co.uk/commentisfree/2010/oct/26/bank-of-israel-economic-future-palestine .

[2] Three currencies are in circulation in the occupied Palestinian territory: the Israeli new shekel, the United States dollar and the Jordanian dinar.

Labour outflows to Israel and elsewhere took on key importance to the Palestinian economy and rendered overall welfare levels and economic performance sensitive to inflows of remittances by their effects on aggregate demand. Dependence on the Israeli market to absorb unemployed Palestinian workers, and subsequently the restrictions imposed on them and their replacement by workers from other parts of the world, have been especially damaging to Palestinian welfare. The damage has been amplified by the strong multiplier effects of workers' remittances and their role as key determinants of consumption expenditures, the level of imports and public revenues.

The Palestinian tradable goods sector continued to suffer from other serious problems such as smuggling. Government controls and inspection have not been adequate to eliminate smuggling – especially of food products – from Israel into the Palestinian markets. Lack of proper controls has also led to variations and discrepancies in compiled trade statistics and thus poses technical, analytical and political challenges to policymakers.

Since 1994, the Palestinian Authority has entered into several bilateral agreements with regional and other countries, including Israel. From the Palestinian point of view, the bilateral agreements were meant to expand Palestinian trade, increase public revenues and promote growth, productivity and employment. However, their actual benefits to the Palestinian economy are yet to be felt (UNCTAD, 2011; Abdulrazeq, 2002). Studies on Palestinian external trade have generally focused on analysing the effects of non-tariff barriers to trade (NTBs) and the restrictions imposed by Israel on the Palestinian economy and on external as well as internal trade. Most of the bilateral agreements, however, including the Paris Protocol with Israel, overlook some critical issues such as the fundamental need of the Palestinian people to access, use and manage their human and natural resources. UNCTAD (2004b, 2009b) assessed the impact of the inability of Palestinian producers to access their natural and economic resource base and the multiple channels through which this has stunted Palestinian development. As much as 30 per cent of Gaza's arable land has become inaccessible to farmers, and fishing activities off the coast of Gaza have been severely limited to three nautical miles, or 15 per cent of the area established under the Oslo Accords. In the West Bank, 40 per cent of the land has been lost to settlement and related infrastructure since 1967 (Office for the Coordination of Humanitarian Affairs, 2007).

Israel's disengagement from the Gaza Strip in 2005 has raised several questions and has introduced new challenges concerning Palestinian trade and economic performance. Some of these economic challenges are as follows:

(a) Israel's continued control over tariff and value-added tax revenues raised from Palestinian merchandise and services imports from or via Israel and collected by Israel on behalf of the Palestinian Authority;

(b) Restriction on the employment of Palestinian workers in the Israeli economy to a bare minimum. This has led to a steep decline in the absolute and relative size of Palestinian workers employed in Israel since 2000 and has thus aggravated the problem of unemployment;

(c) Control exerted over Palestinian trade flows with and via Israel by various means, especially the tight Israeli security checks, which made much of Palestinian export activities economically unviable, if possible at all;

(d) Deepening dependence on transfers from abroad in the form of aid and import taxes as the main sources of fiscal revenue to the Palestinian Authority. Aid and remittances have thus assumed greater importance in determining, economic growth performance and cushioning the impact of the various and too frequent economic, political and military shocks.

This study explores the prospects of Palestinian trade and economic relations with Israel and other relevant countries. First, the bilateral and multilateral trade agreements the Palestinian Authority signed with other countries and trade blocks will be summarized. Second, Palestinian trade patterns will be explored. Third, some Palestinian trade indicators will be constructed and analysed. Fourth, a gravity model will be estimated to identify the variables that play a central role in shaping Palestinian trade.

The goal of the study is to provide an empirical background for Palestinian trade policymaking and the formulation of sound and balanced trade relationships with the ultimate target of accelerating growth and employment creation. The study aims at identifying certain exports – as well as goods that can be competitively produced domestically – that could receive targeted support and policy intervention. This will contain and eventually reverse the extremely high and persistent trade deficit, and therefore reduce the need to export Palestinian labour by creating jobs in the domestic economy in ways that enhance growth and reduce poverty.

I.   Bilateral Trade Agreements

As mentioned earlier, there is a general understanding that the bilateral trade agreements (table 1) signed by the Palestine Liberation Organization have had no significant impact on the Palestinian economy (UNCTAD, 2011; El-Jafari, 2005; Abdulrazeq, 2002) and largely because Israeli occupation and restrictions on movement and access have pre-empted the realization of their potential positive effects on the output mix and the structure of the Palestinian economy. Over the last decade, Israeli security measures and related practices have sharply constrained the Palestinian economy, and continued to pre-empt effective international cooperation and forging global partnerships for Palestinian development. Recurrent military and political confrontations resulted in the destruction of the Palestinian economy's productive base and have deflected domestic resources as well as foreign aid away from development towards relief, aimed at mitigating the humanitarian cost of the recurrent damage to the Palestinian people's sources of livelihood. These adversarial measures have taken a significant toll and stunted the diversification of Palestinian exports and entrenched import dependency on and via Israel. Structural dependency upon the Israeli economy, large public and trade deficits, Israel's closure policy, market fragmentation, degraded infrastructure and high investment risk have become the major factors crippling the competitiveness of Palestinian producers.

Table 1. Palestinian trade agreements

Year	Trade agreements	Partner or country	Key provisions
1994	Protocol on Economic Relations	Israel	Customs union with Israel
1995	Trade agreement	Jordan	Customs exemptions for specific products
1996	Declaration of Free Trade	United States of America	Products originating in the occupied Palestinian territory are exempt from duties with Palestinian reciprocity
1997	Interim Association Agreement with the European Community	European Union (EU)	Free trade
1997	Trade agreement	Egypt	Customs exemptions for specific products
1998	Economic and trade cooperation	European Free Trade Association (EFTA)	Free trade agreement with EFTA
1998	Joint Canadian-Palestinian Framework for Economic Cooperation and Trade	Canada	Free trade
2000	Greater Arab Free Trade Area (GAFTA)	League of Arab States	Free trade with Arab countries which are members of GAFTA
2004	Free trade agreement	Turkey	Customs duties exemption for all industrial products

In addition, Israeli trade liberalization policies have had negative effects on the development of the Palestinian industrial base since the mid-1990s. Palestinian producers of labour-intensive goods could not withstand the stiff competition posed by cheaper imports from labour-abundant countries. The extremely high transaction cost Palestinian producers face have further impaired their ability to compete with firms operating under normal cost conditions and benefiting from supportive domestic policies of their governments. Since the 1990s, many Palestinian plants have closed down and output has declined in several manufacturing and industrial activities such as textiles, shoes, furniture and plastic products. The decline in labour-intensive activities has eliminated much of the demand for

unskilled and semi-skilled Palestinian labour and exacerbated the already daunting problems of unemployment and poverty.

Moreover, recurrent political crises have diverted international aid away from investment in infrastructure and capacity development to concentrate on emergency humanitarian relief and budget support to finance the high and persistent fiscal deficit. In this respect, even though the Palestinian public wage bill consumes more than 80 per cent of current expenditures, the Palestinian Authority has made some effort to support small and medium-sized enterprises with the aim of generating employment and reducing poverty. A case in point is the action plan signed in 2004 by the Palestinian Authority and the EU to establish mechanisms to implement the Interim Association Agreement aimed at promoting employment in the occupied Palestinian territory. However, the effectiveness of these attempts has been limited by the unfavourable investment conditions, including the closure policy imposed on the occupied Palestinian territory and fragmentation of the economy, and weak institutional capacities of the Palestinian Authority.

There are a number of prerequisites for the much vaunted integration of the Palestinian economy into the regional Arab and global trading system. First, as indicated above, there is a need to end the pervasive mobility restrictions on the people and goods in the West Bank and Gaza. These restrictions have fragmented the Palestinian economy into enclaves physically isolated from each other and from global markets and thus deepened its dependence on the Israeli market. They have also escalated transaction costs and deprived Palestinian producers of scale economies, lowered efficiency and pre-empted the move towards high value-added and employment-intensive activities. Palestinian exporters have suffered as they have to bear the cost of moving their goods inside the occupied Palestinian territory as well as the additional transaction costs associated with security-related measures at border crossing points with Israel. These costly restrictions have not only undermined the viability and competitiveness of existing Palestinian businesses to the extent of bankruptcy, but have also discouraged potential domestic and foreign investment.

While easing and ultimately lifting the closure policy in the occupied Palestinian territory requires the cooperation of Israel and the international community, other challenges could be tackled even under the existing restricted environment. There is a need to reconsider the customs union with Israel that is enshrined in the Paris Protocol, which has effectively become unilaterally and selectively applied in line with Israeli interests. A new economic strategy capable of responding to the immense present reconstruction challenges requires moving away from the policy framework based on the Protocol and integrating the Palestinian economy into the rules-based, multilateral trading system. Such a strategy can place the economy onto a higher growth and welfare trajectory by fostering economic stability, providing relative policy autonomy and contributing to improving investor confidence, all of which are indispensable to meet the ultimate goal of establishing an independent, viable Palestinian State, as called for by numerous United Nations resolutions. There is also an urgent need to invest in trade logistics, in export facilitation services and in the reconstruction and expansion of the eroded infrastructure and productive base in line with the overall reorientation of external trade strategy.

II. Palestinian Trade Patterns

To trace and assess the evolving structure and trade pattern of the Palestinian economy, this study uses Palestinian Central Bureau of Statistics (PCBS) data for the period 1996–2006 at Standard International Trade Classification (SITC) 5. Corresponding world data was obtained from the United Nations Commodity Trade Statistics (COMTRADE) Database.

Economic theory postulates that comparative and competitive advantages as well as a host of other economic and geographic variables determine a country's trade patterns. In theory, the real exchange rate, respective incomes and geographical proximity are key determinants of trade patterns. However, in the case of the occupied Palestinian territory, political factors have always shaped economic outcomes. Before the Israeli occupation in 1967, the West Bank was under Jordanian administration and traded mainly with and through Jordan, while the Gaza Strip was under Egyptian administration and traded with Egypt. Since 1967, trade with traditional markets has been diverted to Israel. The Declaration of Principles on Interim Self-Government Arrangements of 1993, also known as the Oslo Accords, divided the occupied Palestinian territory into three areas. Area A is under the rule of the Palestinian Authority, area B is subject to the joint rule of the Palestinian Authority and Israel, and area C is under Israeli control. In 2005, Israel unilaterally disengaged from the Gaza Strip, but maintained control of its borders, routinely closing them according to the political conditions. As a result, Gaza external trade and productive activities were stifled by mobility restrictions and soaring costs. In the West Bank, the construction of the Separation Barrier since 2002 has obstructed Palestinian trade with Israel and other countries; exacerbating transportation and transactions costs. Such political realities have been played a predominant role in shaping Palestinian external trade and overall economic life.

As can be seen in figure 1, Palestinian exports were fairly stable between 1996 and 2005, hovering in the range of $300–400 million, while imports have been more volatile. For the period under consideration, the merchandise trade deficit peaked in 1999 at $2.5 billion and was lowest in 2002 at $1.5 billion, owing to the tightening of the Israeli closure policy in that year. The closure policies affect the Palestinian current account balance in two ways: directly through physical restrictions on the movement of goods across the border and the loss of wage income resulting from restrictions on the employment of Palestinian workers in Israel.

Palestinian exports and imports often increase or decrease in tandem, with imports typically dominating the trade balance and showing greater variability because of their sensitivity to changes in the level of foreign aid. Changes in the Palestinian trade balance are therefore typically determined by variations in imports, with exports playing a minor role owing to their small size compared with imports.

Figure 1. Palestinian merchandise exports and imports, 1996–2005
(Millions of dollars)

As stated previously, three currencies are used in the Palestinian economy: the United States dollar, the Jordanian dinar and the new Israeli shekel. The dollar exchange rate of the Jordanian dinar is fixed, while that of the new Israeli shekel has been liberalized. El-Jafari and Daoud (2006) assessed the role of the exchange rate and concluded that the Palestinian trade balance shows sensitivity neither to changes in the nominal new Israeli shekel dollar exchange rate, nor to changes in the terms of trade. The simple correlation coefficient between exports and the new Israeli shekel/dollar exchange rate is 0.63 and for imports it is 0.14, showing a stronger tie to exports than imports. The tests of significance indicate stronger export elasticity with respect to the exchange rate than imports, even though a larger proportion, 90 per cent, of Palestinian exports goes to Israel. These results, however, do not imply the irrelevance of the exchange rate to trade flows, since the nominal exchange rate was used instead of the more appropriate real exchange rate.

Of greater importance to the trade balance is the intensity of Israeli closure policy, specifically the possibility, ease and cost of moving goods across the border. As illustrated in figure 2, the new Israeli shekel was on a depreciation trend for most of the period 1996–2005. However, political developments, which typically have far-reaching economic consequences, appear to be the key determinants of the level and composition of Palestinian exports and imports. As shown in figure 1, following the movement and access restriction policies imposed on Palestinian labour and goods in the post-1999 period, both imports and exports declined.

Figure 2. The new Israeli shekel/dollar exchange rate
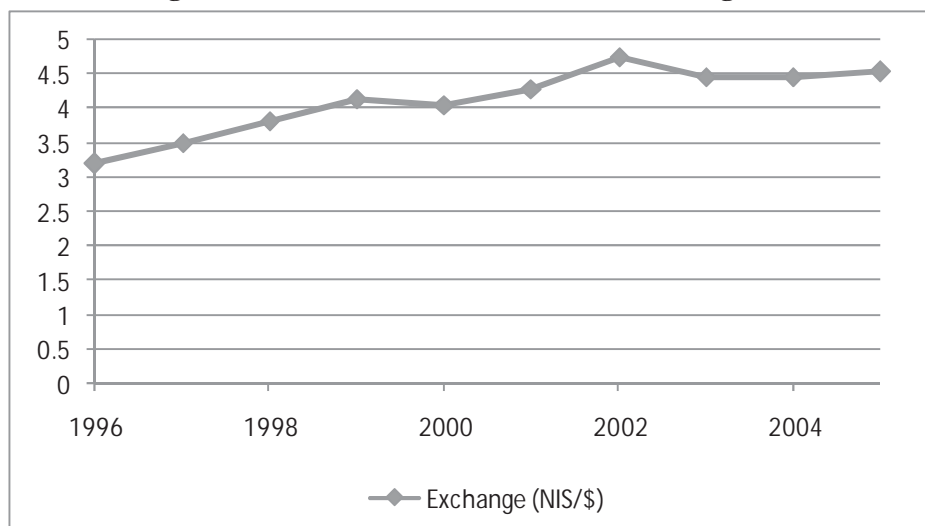
A. *Composition and trends of Palestinian imports*

The composition of Palestinian imports over the period 1996–2005 is shown in table 2. SITC groups 0 to 4 are labour-intensive primary products, while groups 5 to 9 are capital-intensive manufactured products. The table reveals that the share of food and live animals (SITC-0) ranks second among imports. The first and third ranked groups alternate between mineral fuels, lubricants and related materials (SITC-3) and manufactured goods (SITC-6), which ranked third and first, respectively, for up to 2001. Those categories switched ranks in the post-2001 period, reflecting a rise in the relative weight of essential imports (necessities) in total imports. This can be explained by the precipitous decline in absolute and per capita GDP following the outbreak of the Second Intifada and its aftermath.

Overall, the three SITC categories 0, 3 and 6 account for about 60 per cent of all Palestinian imports. A detailed examination at the individual goods level shows that there are 9 goods in SITC 3 that dominate imports in that group, the bulk of which is imported from or via Israel. This fact underscores the urgent need for Palestinian policymakers to re-evaluate the Paris Protocol and consider importing mineral fuels, lubricants and related materials from steady, reliable supply sources, such as oil-exporting Arab States, where the cost is lower and favourable terms can easily be negotiated.

Table 2. Composition of merchandise imports
(*Percentage*)

SITC groups	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0- Food and live animals	21.0	21.8	18.8	17.4	18.1	20.1	21.4	21.0	19.8	17.0
1- Beverages and tobacco	5.3	3.2	4.1	3.5	4.3	4.8	5.1	5.0	4.6	3.8
2- Crude materials, inedible, except fuels	3.4	3.4	2.8	2.4	2.6	2.1	2.3	2.2	2.0	2.3
3- Mineral fuels, lubricants and related materials	19.1	16.9	17.3	13.0	19.1	18.6	23.7	23.7	27.8	27.0
4- Animal and vegetable oils, fats	1.1	1.1	0.8	0.8	0.8	0.8	1.0	1.1	0.9	0.8
5- Chemicals and related products	7.8	7.6	8.0	7.5	9.7	8.0	9.2	9.0	8.5	8.3
6- Manufactured goods	23.0	26.3	23.8	23.8	21.9	24.5	19.2	19.5	18.9	18.4
7- Machinery and transport equipment	12.5	12.4	16.3	20.5	14.8	12.2	11.9	11.8	11.9	16.2
8- Miscellaneous manufactured articles	6.6	6.8	7.4	10.5	8.4	8.9	5.9	6.5	5.6	5.5
9- Unclassified commodities	0.2	0.7	0.6	0.5	0.4	0.1	0.1	0.2	0.0	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (millions of dollars)	*2,016*	*2,239*	*2,375*	*3,007*	*2,383*	*2,033*	*1,516*	*1,800*	*2,373*	*2,664*

Figure 3 shows that the number of electricity imports has surpassed gasoline fuel imports since 2001, while a sharp increase is also visible in the case of diesel fuel. It is worth noting that a significant proportion of this increase in the value of diesel imports reflects upward changes in diesel

prices. The consumer price per litre was NIS 1.80 ($ 0.43) in 2001. By the end of 2004, it had shot up to about NIS 3.00 ($ 0.67) and reached NIS 4.40 ($ 1.13) in 2009. An upward trend in natural gas imports is also noticeable as imports rose from $20.5 million in 1996 to $48.5 million in 2004, which is equivalent to an average annual growth rate of 17 per cent.

Figure 3. Import categories of selected minerals and fuels
(Thousands of dollars)
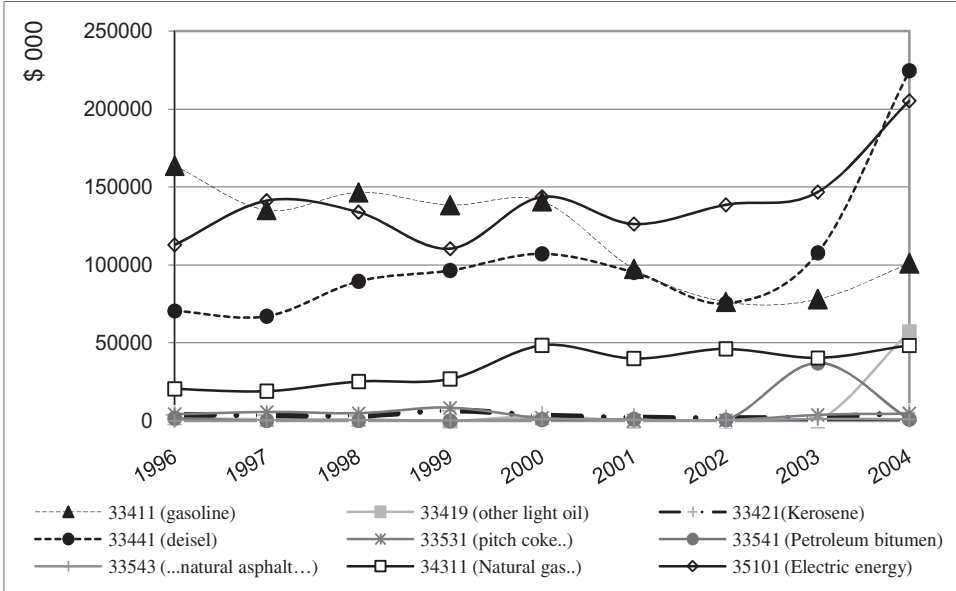
As for group 6 (manufactured goods), the largest drop in imports was in the building materials category (SITC 66000–66999). According to aggregated data, imports of this category dropped from a high of $250 million in 1999 to less than $100 million in 2002. In particular, imports of table glassware, building blocks, ceramic building bricks and marble from Israel all decreased in the post-2001 period. Next to that category is the SITC 67000 category (iron building materials) which reached a low level of $51 million in 2002 before rising again to $111 million in 2004, a rise that reflects, in part, higher prices. Finally, imports of textile products (SITC 65000), which rank third in group 6, declined more sharply compared with the categories mentioned above. Combined together, the three subgroups account for an average of 66 per cent of the overall category. The commodity non-monetary gold, unwrought or in semi-manufactured or powder form (SITC 97101) registered a surplus in 2002 and 2003 but slipped into a large deficit in 2005. Machinery and transport imports oscillated around $200 million per year except for 1999 when they jumped to $600 million. A significant increase in 1999 was related to the imports of engines and engine parts and AC (alternating current) generators. Palestinian external trade data shows that a large proportion of imports are consumer goods which, important as they may be in light of the recurrent humanitarian and domestic production crises, do not contribute to growth.

B. Composition and trends of Palestinian exports

As shown in table 3, manufactured goods (SITC-6) top the list of Palestinian exports, accounting for 40 per cent of total exports – about $136 million on average. Other main contributors are miscellaneous manufactured articles (SITC-8) and food and live animals (SITC-0). An examination of the trade balance of main groups shows that the trade balance is negative for every category with the exception of SITC-9 (unclassified commodities) category, which registered a surplus of $1.9 million in 2003 and $4,000 in 2004. This category also has had the lowest deficit for the remaining years in table 3.

Table 3. Commodity distribution of merchandise exports
(Percentage and millions of dollars)

SITC groups	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0- Food and live animals	14.3	15.0	15.7	16.4	21.1	11.7	11.2	12.2	11.5	10.8
1- Beverages and tobacco	4.5	5.2	6.5	3.9	3.4	4.6	5.7	4.6	5.5	4.3
2- Crude materials, inedible, except fuels	6.9	4.5	4.5	3.6	3.9	4.4	6.0	4.8	3.6	3.9
3- Mineral fuels, lubricants and related materials	2.4	1.6	1.8	1.3	0.9	0.7	1.0	1.4	3.4	3.6
4- Animal and vegetable oils, fats	2.6	2.1	1.4	1.1	1.4	2.0	2.4	2.6	3.2	3.7
5- Chemicals and related products	7.0	6.0	6.3	8.1	7.4	9.5	8.4	9.3	9.4	8.6
6- Manufactured goods	40.7	43.5	42.0	40.6	38.2	41.5	39.4	39.5	39.2	38.7
7- Machinery and transport equipment	11.5	10.3	9.9	10.5	9.7	13.4	16.2	13.9	12.5	11.6
8- Miscellaneous manufactured articles	15.3	14.9	16.4	19.2	17.6	19.5	20.7	18.2	19.5	19.9
9- Unclassified commodities	0.3	1.4	0.3	0.1	0.0	0.2	0.2	2.0	0.0	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (millions of dollars)	*340*	*380*	*393*	*372*	*401*	*290*	*241*	*280*	*313*	*335*

Although Palestinian exports are low compared with imports, the sector, according to most orthodox economic policy prescriptions, is frequently expected to generate additional jobs and contribute to the absorption of displaced workers. As the bulk of Palestinian exports is resource-based as will be shown later, it is highly unrealistic to expect the export sector to act as an engine of growth in its current state without policy support. This is in part due to the unfavourable terms of trade trend of the export mix and the lack of strong linkages and spillover effects of these exports. Examination of the data at the SITC five-digit level shows that between 1996 and 2004, building stone was the leading Palestinian export commodity. However, the value of building stone exports declined from $46 million in 1996 to $28 million in 2004. As a result, its share fell from 13.5 per cent to 9 per cent of total exports over the corresponding period. Other major exports followed a similar trend. The export value of the top 10 commodities fluctuated between 35 and 40 per cent of total exports during that period.

C. Palestinian trade concentration

As a group, the top 10 imported goods accounted for 25–35 per cent of total imports. The main groups, 3, 6, 1 and 0, (mineral fuels, lubricants and related materials; manufactured goods; beverages and tobacco; and food and live animals) have consistently been part of the top 10 imports list. Gasoline was the main imported commodity until 1999, with a total value ranging between $77 million and $170 million. By 2000, electric energy took over as the leading imported good, accounting for about 8.6 per cent of total imports. As for exports, the top 10 list always contains 6, 1, 2 and 8 (manufactured goods, beverages and tobacco, crude materials, inedible except fuels and miscellaneous manufactured articles).

Table 4. Top 10 Palestinian export and import commodities in 2000

Rank	Exports	Imports
1	Monumental or building stone (except slate) and articles thereof, n.e.s., simply cut or sawn	Electric energy
2	Marble, travertine and alabaster and articles thereof, simply cut or sawn	Motor spirit (gasoline), including aviation spirit
3	Fresh or chilled oranges	Fuel oil (diesel) n.e.s.
4	Fresh or chilled cucumber	Portland cement
5	Cigarettes	Natural gas liquefied
6	Medicaments n.e.s put up in measured doses	Preparations of fodder for mammals fatting
7	Iron/steel bars and rods twisted 60 containing by weight less than 0.6 per cent of carbon	Other catalysts and catalytic preparations
8	Fresh or chilled tomatoes	Other than pure-bred breeding animal
9	Sacks and bags of plastics	Mineral beverages (Pepsi and Coca-Cola)
10	Stones for concrete aggregates	Iron/steel bars and rods twisted 60 containing by weight less than 0.6 per cent of carbon

Figure 4. Share of the top 10 exports and imports
in total export and imports
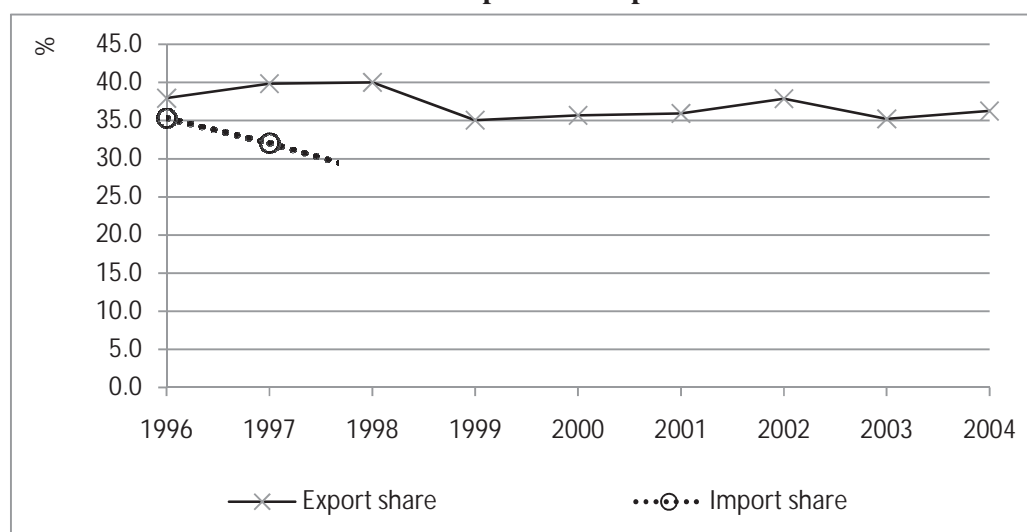
The top 10 lists (table 4), whether for imports or exports, are worthy of special attention because of their high share in total exports and imports and because they either originate from or via Israel or are destined to its markets. Since Israel and the occupied Palestinian territory use the same currency, the new Israeli shekel exchange rate is not likely to affect trade flows between them. Figure 4 suggests that political conditions have more profound effects on the trade flows between the two economies, with imports showing greater sensitivity to political developments in the occupied Palestinian territory, compared with exports. During the calm and stable 1996–1999 period, both exports and imports were rising, as was the trade deficit. But the shrinking share of the top 10 imports implies that they were not rising as fast as total imports. However, the opposite happened in the post-1999 period as Israel introduced tight restrictions on the movement of Palestinian people and goods. This finding is consistent with the nature of these imported goods as essential, hence the low-income elasticity of demand for them: when income rises, imports of such goods do not rise as fast as the rest, leading to a reduction in their share.

The free trade agreements that the Palestinian Authority entered into with many of its trading partners do not appear to have affected Palestinian trade flows, with the exception of a small improvement in exports to the EU starting in 2001. The critical and dominant role that political factors play in shaping economic outcomes in the occupied Palestinian territory is evident from the fact that despite the many free trade agreements signed by the Palestinian Authority, the Palestinian economy remains highly dependent on Israel as a market for exports. For the same reason, trade with Arab countries remains insignificant, despite the high potential for trade and integration of foreign direct investment with these countries.[3] This low level of exchange with Arab countries is limited to Jordan, the United Arab Emirates, Saudi Arabia and other Arab Gulf countries. Palestinian exports to the EU, however, have made a minor dent in the extremely high dependence on Israeli markets. On the import side, Israel, Arab Asian countries and EU countries account for almost all Palestinian imports, which are far less concentrated than exports. Tables 5 and 6 offer more details on the sources of Palestinian exports and imports.

Table 5. Distribution of Palestinian exports by destination

(Percentage)

Country groups	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Arab Asian	6	5	3	2	7	5	6	5	6	7
Other Asian, including Israel	94	94	97	97	92	94	90	92	91	87
Arab African	0	0	0	0	0	0	0	0	0	0
North American	0	0	0	0	0	0	0	0	0	1
EU	0	0	0	0	0	1	4	3	2	3
Total (millions of dollars)	*340*	*380*	*393*	*372*	*401*	*290*	*241*	*280*	*313*	*335*

Table 6. Distribution of Palestinian imports by source

(Percentage)

Country groups	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Arab Asian	0	1	2	2	1	1	1	1	1	1
Other Asian, including Israel	89	87	84	76	82	75	84	84	85	84
Arab African	1	1	1	1	1	1	1	1	1	1
Other African	0	0	0	0	0	0	0	0	0	0
North American	1	1	1	3	2	2	0	2	2	1
Central American	0	0	0	0	0	0	0	0	0	0
South American	0	0	0	0	0	0	0	1	1	0
EU	8	8	10	17	11	18	12	9	9	9
EFTA	0	0	1	0	0	0	0	0	0	0
East European	0	0	0	0	0	0	0	0	0	1
Other	0	0	0	0	1	1	1	1	0	0
Total (millions of dollars)	*2,016*	*2,239*	*2,375*	*3,007*	*2,383*	*2,033*	*1,516*	*1,800*	*2,373*	*2,664*

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[3] For further information, see Elkhafif et al., eds. (forthcoming), Trade policies, employment and poverty in Arab countries.

D. *Corrective trade policy measures*

Notwithstanding the unfavourable current political and business environment, the promotion of competitive advantage with regards to the domestic production of importable goods and exports ought to be the top priority for economic policy and research. The case for competitive advantages, which are based on cost and product quality, is developed in UNCTAD (2004b, 2009a). However, at present, the basic requirements for significant economies of scale by Palestinian firms are limited, due not only to the smallness of the Palestinian domestic market, but also to the fragmentation of internal markets and productive base, as well as isolation from global markets. In such an unfavourable environment, Palestinian firms' choice of goods to produce for both internal and external markets is no longer dictated solely by economic considerations because the additional cost related to the Israeli security measures must be taken into account. These constraints have resulted in an output mix altered towards lower value-added products, loss of economies of scale, pervasive inefficiency, impaired competitiveness in internal and external markets, constrained government ability to gear production towards strategic sectors and employment-intensive activities, a smaller tradable goods sector and pre-emption of the well-known advantages of participation in international trade. As suggested by UNCTAD (2009a), there is a need for far-reaching, remedial and reconstructive measures to free and rebuild the Palestinian tradable goods sector so that it can play a key role in the Palestinian economic recovery. A plausible form of policy intervention, which has significant potential, is a two-pronged strategy targeting the Palestinian tradable goods sector with both export promotion and corrective import substitution support measures. (See further details on corrective import substitution below).

The large size of imports in absolute terms and relative to GDP suggests a potential scope for the domestic production of some of the goods that have been hitherto imported. However, because of the eroded productive base, and therefore the weak capacity for domestic production, any injection of funds will lead to an increase in imports, thus worsening the trade deficit, rather than increasing domestic production.[4] If a range of appropriate policy measures is implemented by the Palestinian Authority to support the domestic production of importable goods, it would not be accurate to classify such policies as typical import substitution policies, since the current structure of domestic production and imports is not the result of the operation of market forces, but a direct result of over four decades of restrictive Israeli policies that have stunted the Palestinian tradable goods sector. For clarity, this study henceforth uses the term "corrective import substitution" to underscore that policy recommendations for this purpose are motivated by the need to correct the occupation-related distortions, and are not contrary to the principles of competition and free trade. The essence of the industrial policy proposed here is not to give producers of tradable goods advantages over foreign competitors, but to remove or partially compensate for the cumulative effects of the disadvantages to which they have been subjected for decades. That being said, the choice of importable goods that can potentially be targeted for domestic production and export promotion should ideally be based on the following criteria:

(a) **Size**. If a good is imported at a high total cost, it weighs heavily on the trade balance. Pressure on the balance of payments could be reduced if such good can be produced competitively. As far as exports are concerned a rising share of an export commodity maybe an indication of comparative advantage – if the occupied Palestinian territory has a large abundance of that commodity – and thus could suggest the possibility of support and nurturing. Although natural endowments play significant roles here, cost advantages can be achieved by enhancing the business environment, the quality and scope of research and development and product quality. With such considerations in mind, building stone stands out as a candidate for export promotion while electricity should be considered for import substitution.

(b) **Employment effect**. The extremely high ratio of Palestinian imports to GDP suggests that corrective import substitution can play a key role in reversing the prevalent and persistent high unemployment in the occupied Palestinian territory by targeting employment-intensive industries. Even though Israel is by far the occupied Palestinian territory's dominant source of

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[4] For further evidence of the lack of production potential in the occupied Palestinian territory, see UNCTAD (2010).

imports, its markets absorb only negligible amounts of Palestinian products, resulting in a Palestinian trade deficit with Israel that has been in the range of 39–47 per cent of GDP during the last few years. Moreover, Israel has minimized its reliance on Palestinian workers, thus aggravating the unemployment problem in the Palestinian economy. Corrective import substitution policies can play an important role for job creation. A related theme is the industrial relocation which has in recent years gained theoretical as well as empirical attention (Powers, 2004). With the right domestic policy, a favourable political environment and the removal of the constraints on Palestinian labour productivity, the occupied Palestinian territory could develop labour-intensive goods and a healthy productive base. Thus in the future, foreign firms in larger economies may relocate certain production activities to the occupied Palestinian territory to benefit from the lower wage level in the Palestinian economy. This alternative is especially attractive, as it not only improves the trade balance but accelerates technology transfer.

(c) **Level of local production**. In order for import substitution to be effective, production must be viable, cost effective and competitive. The promotion of the production of certain goods can be improved if trade policy encourages industrial development that takes advantage of and strengthens forward and backward linkages for Palestinian enterprises.

(d) **Size of government purchases**. The relatively large share of the Palestinian Government in aggregate expenditure indicates the presence of opportunities for public policy to directly target certain industries for promotion. Palestinian Law No. 9 (1998) states that government procurement should give priority to locally produced goods, provided that they meet quality standards. The quality condition, however, should be interpreted broadly to take into account the overall dynamic social benefits of favouring Palestinian producers in government procurement. However, all government policy measures aimed at promoting domestic Palestinian firms should come with adequate safeguards to ensure continuous improvements in quality and competitiveness. Valuable lessons can be learned from the experiences of developing countries to avoid the pitfalls of pursuing import substitution policies, which if not properly designed and implemented, can breed long-term inefficiencies, rent-seeking and dependence on the government. Aid donors can also contribute significantly to Palestinian economic development by favouring, whenever possible, Palestinian producers and supply sources when they purchase the various types of goods they use and distribute in the occupied Palestinian territory.

(e) **Strategic importance to the national economy.** The profound dependence upon the Israeli economy as a source of key imports has increased the vulnerability of the Palestinian society to Israeli policies in the course of the ongoing conflict. This dependence and Israel's control of Palestinian borders have resulted in supply bottlenecks and an unstable flow of essential goods, especially in times of political and security crises. Strategic goals may be pursued by encouraging the domestic production of certain goods, especially energy, specific inputs and food items.

Potentials for corrective import substitution

Harris et al (2005) points out that it is important to identify gaps and disconnects when implementing import substitution policies. Gaps exist when an industry uses an input that is not produced locally. Disconnects exist when a good is imported but also produced locally. To gauge import substitution opportunities, competitive and non-competitive imports should be identified. Potential candidates for corrective import substitution and export promotion are identified below, based on Makhool and Atyani (2004), who categorize some industries with high value added per dollar spent on wages.

(a) Between 1994 and 2001, the manufacture of tobacco products (International Standard Industrial Classification of All Economic Activities (ISIC) 16) showed a high ratio of 7:44 (measured in dollars) of value added for every dollar spent on labour. Trade data on cigarettes (SITC 12221) show disconnect in this category. Figure 5 shows that exports were

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in the $10 million range for most of the period. However, imports were around $40 million. The Israeli market absorbed all Palestinian cigarette exports but its share of Palestinian imports shrank from 73 per cent in 1996 to 35 per cent in 2004. France, the United States, Bulgaria, and the United Kingdom of Great Britain and Northern Ireland have all experienced increases in market shares following the Second Intifada. Consumer preference, prices and product quality are the reasons behind the disconnect in cigarette trade. The data indicate the presence of opportunities for targeted efforts at promoting cigarette production based on the high value added per dollar and the high import volumes.[5]

Figure 5. Cigarette trade with the rest of the world
(*Thousands of dollars*)
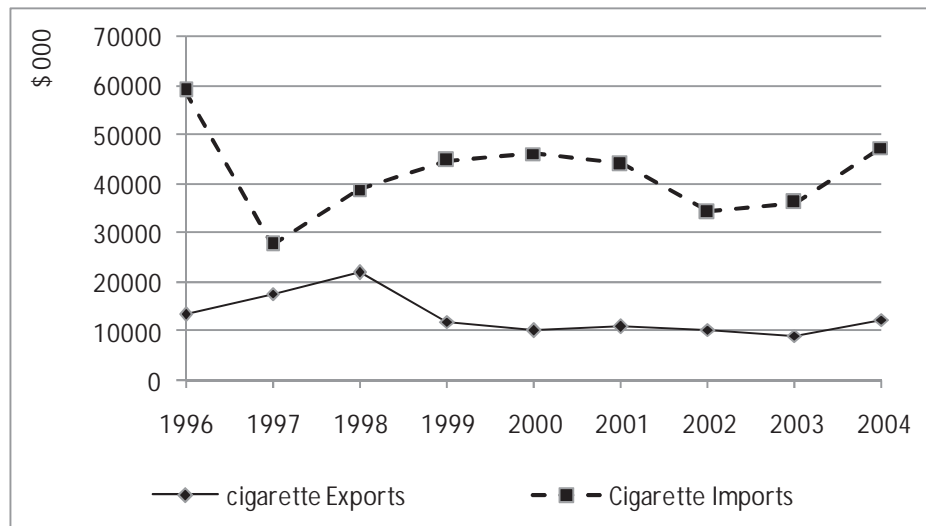
(b) The sale and repair of motor vehicles (ISIC 50) has a ratio of about 5, that is, for every dollar spent on wages in this industry, five dollars of value added are generated. Service trade with Israel was much larger prior to the Second Intifada but the construction of the Separation Barrier has greatly undermined the actual and potential benefits of services exports.

(c) Value added of electricity fluctuated between $2–10 for every dollar spent on labour. This category has a high potential for corrective import substitution because of its strategic importance as well as its increasing value relative to other imports. Electricity imports ranked at the top of the scale, with shares increasing from 3.7 per cent in 1999 to 9.5 per cent in 2004. To diversify energy sources, the Palestinian Authority signed two agreements with Egypt and Jordan to supply Rafah and Jericho with electricity and explored with international firms the possibility of generating concentrated solar power in Jericho. The development of solar and wind energy should be pursued because of its strong potential and the prospects of reducing the volume and cost of energy imports, which is in line with global energy trends and environmental concerns.

(d) Fuel represents a strategic imports category that cannot be produced locally at levels sufficient to satisfy the entire domestic demand. Even though the occupied Palestinian territory is destined to continue to import fuel, trade agreements should be revised to allow fuel imports from Arab countries where better prices and terms can be obtained than currently through Israel. An interesting exception in the fuel category is the natural gas found off the Gaza shores, but production levels do not meet total domestic demand. Further

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[5] This is not an endorsement of smoking, which has serious health implications. The goal here is to describe Palestinian trade as it actually is with a view of strengthening the tradable goods sector.

exploration and expansion of gas production can play a significant role in boosting the Palestinian economy once the siege of Gaza is lifted and sovereignty is restored in line with international law.

(e) Cement, typically imported from Israel and Jordan, has always figured among the top 10 imported goods, accounting for 2 to 3 per cent of total imports. There is a need to explore the viability of corrective import substitution in this category.

(f) Chemicals, including pharmaceuticals (ISIC 24), have a relatively high value-added wage ratio. The trade category that matches this industry is other pharmaceutical goods (SITC 54199). However, the share of this category is very small in total imports and exports. Between 1996 and 2005 the share of these products in total exports was around 0.02 per cent and their share in total imports was 0.06 per cent. The pharmaceutical industry is a good candidate for policy support in light of the successful penetration of Arab and European export markets and the occupied Palestinian territory's role as a net importer of pharmaceutical products.

Candidates for export promotion

With regard to exports, it should be emphasized that greater policy support is necessary because many of the industries are at a disadvantage owing to the high unit labour cost stemming from both low levels of productivity (Makhool and Atyani 2004), and relatively high wages compared with those in Jordan and Egypt. The weak competitiveness is mainly due to the lagging productivity that worsened with the destruction of the Palestinian productive base, a shrinking natural resources base and a weakened social and economic infrastructure. Although part of the weak competitiveness is attributable to occupation-related practices, purely domestic problems do exist and are important (El-Jafari, 2005; UNCTAD 2004a, 2004b, 2009a).

(a) The Palestinian pharmaceutical industry stands out among the Palestinian industries that are dubbed success stories. The industry contributed about 3 per cent of total value added in manufacturing while accounting for only 1 per cent of total employment. Recently, Palestinian pharmaceutical companies acquired the International Organization for Standardization standard, which promoted their exports to East European, Arab, and EU countries. Currently there are nine pharmaceutical companies, seven of which are in the West Bank. The total value of the industry's production, with 30–40 per cent idle capacity, was about $26 million, highlighting an urgent need to penetrate new markets. The problems that constrain the growth of this industry includes an array of Israeli practices that hampers the competitiveness of most Palestinian industries and the lack of specialization in certain products, as well as marketing and finance problems.

(b) A second promising sector is the cut flower industry (SITC 29271). The potential of this industry is underscored by its high profitability, with an estimated 50 per cent profit margin. The total value of exports rose from $0.3 million in 1996 to $8 million in 2005, a remarkable increase of 289 per cent. The main problem facing this industry is that it is entirely located in the Gaza Strip, which has been subjected to severe Israeli blockade during the last few years. Europe and the United States are the major markets for cut flower exports. Cut flowers require special shipment arrangements, the flowers must be shipped in refrigerated vehicles and via air freight and need to reach destinations fairly quickly. Shipment delays at Israeli check points and the back-to-back shipping arrangements almost entirely wiped out the production in 2006.

(c) Olive oil, leather and textiles are also strong candidates deserving promotion. The relevance of olive oil stems from its historical dimension and suitability to the Palestinian natural environment and labour market conditions. Olive growing has been a major source of

income for Palestinian households but its value transcends income and extends to the social and cultural fabric especially in rural areas. However, olive harvests have been highly volatile from year to year. For example, the value of output was 33,700 tons in 1992 and 525 tons a year later. On average, Palestinian consumption amounts to 15,000 tons per year, thus creating a potential for exporting significant quantities every year.

III. Trade Indicators and Indices

World trade indicators (World Bank, 2008) are used to benchmark policy and the performance of different regions of the world. The following analyses of trade indices and indicators can be used for a better understanding of a country's export patterns. Although there are many indicators that take into consideration institutional issues, ease of doing business and other policy indicators such as tariff barriers and NTBs, this study focuses on quantifiable indices for which data are available.

The following analysis of trade is based on 12 indicators covering various aspects of structure, evolution and patterns of Palestinian trade. Theses indices sketch a descriptive framework and will be followed by further analysis based on a gravity model to focus on the determinants of import demand and export supply. The following section focuses on the evolution of Palestinian trade patterns to identify the salient features of the structure and pattern of trade using PCBS data covering the period 1996–2005. The indices are aggregated at the SITC-3 level. The objective is to construct a set of quantitative indicators to identify constraints and explore possibilities for expanding Palestinian trade in ways that enhance economic growth and job creation.

A. Relative growth rates of exports and imports

The relative growth rate of export and import (RGREI) indices give the growth rates of exports and imports for broad classes of goods. RGREI can be used for comparison with the rest of the world or with a specific competitor.

$$\text{RGRE} = \left(\frac{X_{t+1}}{X_t} \right)^{(1/n-1)} *100$$

$$\text{RGRI} = \left(\frac{M_{t+1}}{M_t} \right)^{(1/n-1)} *100$$

where RGRE and RGRI are the relative growth rates of exports and imports; respectively, X, M, t, and n are exports, imports, time and number of periods, respectively. The growth rates of Palestinian exports and imports are provided in table 7 and figure 6. For comparison purposes, the growth rates of exports and imports of Arab and other countries are also reported.

The growth rates of total exports and imports over the period 1996–2005 show that, on average, the occupied Palestinian territory scored the lowest growth rates in exports and imports. Group 4 (animal and vegetable oil and fat) had a higher export growth rate than imports, which suggest that this group requires special consideration as a potential candidate for export promotion. The strongest growth was in group 9 (unclassified commodities). Saudi Arabia's export growth for this group was 236 per cent, which was the strongest, while Egypt's imports registered the highest growth rate of 208 per cent among the selected countries. The best performing country in export growth is Egypt, achieving the highest growth figure in four categories followed by Jordan, with three categories. Jordan and Saudi Arabia show the highest growth rates of imports in four categories.

Table 7. Relative growth rates of exports and imports, 1996–2005

Group	Occupied Palestinian territory		Jordan		Israel		Egypt		Saudi Arabia	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
0	-3.2	0.8	6.7	5.6	0.3	1.4	10.6	0.3	13.2	6.7
1	-0.8	-0.5	35.4	22.7	-4.2	7.3	9.2	0.4	23.6	12.6
2	-6.1	-1	3.7	6.6	0.8	3.1	10.3	2.6	5.7	9.2
3	4.4	7.2	37	20.6	-14.7	15.6	14	34.3	13.9	11.1
4	3.6	-1.3	-3	1.5	8.4	5.3	14.5	-1.4	14.2	6.8
5	2.2	3.8	12.8	10.8	9.3	6.1	13.1	3.7	12.3	9.2
6	-0.7	0.7	8.2	16.1	10.2	5	8.7	1.2	9.9	7.4
7	-1	6.2	13.1	11.7	3	1.9	25.7	1.2	17.1	11.8
8	2.8	1.2	41.9	18.9	3.5	3.2	-0.7	3.6	19.3	6
9	15.9	15.4	6.7	20.1	72.4	-7.7	181.1	207.6	236.3	-4.4

Note: Data for Jordan cover 1997–2005.

Figure 6. Average growth rates of total exports and imports, selected countries, 1996–2005
(Percentage)
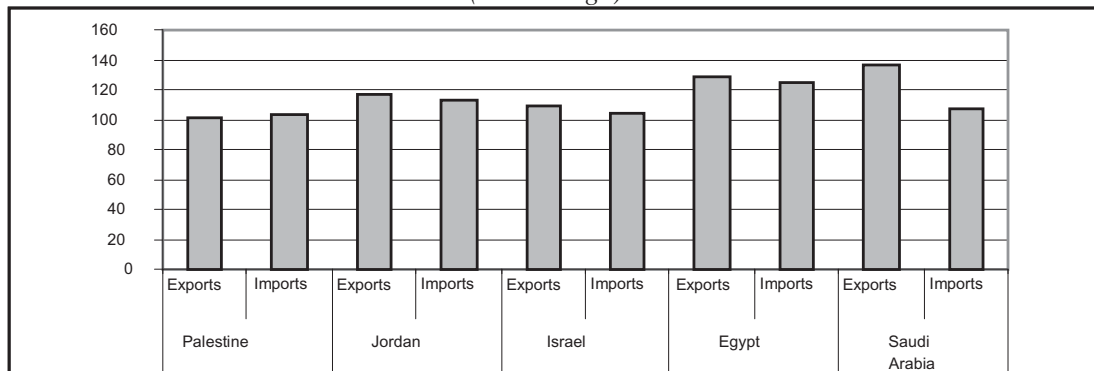
Note: Data for Jordan cover 1997–2005.

B. Trade intensity index

The trade intensity index, or TII, is defined as follows:

$$TII = \frac{X_{ij} / X_{it}}{X_{wj} / X_{wt}}, \quad (1)$$

where t denotes time. The numerator is the proportion of country i's exports that are destined to country j, and the denominator is the proportion of world (w) exports destined to country j. The index is a ratio of two export shares that indicates whether or not a country exports more, as a percentage, to a given country than the world does on average. Its value ranges between 0 and + ∞. If the index is larger than 1, then the importance of the export market, j, is greater for the country than for the world. If the value is 0, then trade intensity is nil. The results for the trade intensity index for the occupied Palestinian territory with respect to Israel, Jordan, Turkey and the Republic of Korea are provided in table 8.

Table 8. Trade intensity index with selected partners

Group	Israel		Jordan		Turkey		Republic of Korea		Egypt	
	2001	2004	2001	2004	2001	2004	2001	2004	2001	2004
0	105,080	56,181	146,149	26,818	.	.	.	.	165	.
1	76,274	327,258	674	176	.	.	.	.	.	.
2	18,893	9,331	1,163	193	74	74	.	.	.	.
3	5,322	24,171	10,457	1,555	.	.	.	.	.	.
4	19,196	93,017	778	2	.	.	.	.	.	.
5	428	148	292	127	4	4	.	.	35	.
6	9,359	16,283	439	614	.	.	0	0	7	41
7	343	284	178	165	1	1	.	.	21	.
8	4,365	2,417	48	38	0	0	.	.	13	11
9	15	1	9,765	.	.	.	.	.	0	.

As expected, the value of the index was found to be much larger than unity for all exports in all years with regard to Israel and Jordan, indicating high trade intensity with these two countries. The indicator reveals that the shares of Palestinian exports to Israel and Jordan of most groups are much higher than the exports of the rest of the world to these countries, on average. A review of the value of the index over time reveals that trade intensity with Israel decreased for some groups but increased for others (groups 1, 3, 4, 6). The group for which trade intensity with the largest trading partner decreased is worthy of attention. The decline has been the largest for food and live animals (group 0) and chemicals and related products (group 5). With Jordan, the relative export share declined for all groups between 2001 and 2004, except for manufactured goods (group 6). However, the case is less clear cut as far as Turkey is concerned; Palestinian trade with Turkey is limited compared with the other countries.

C. Intra-industry trade

The intra-industry trade index, or IIT, provides a measure of the relative importance of intra-industry trade in an economy's or a sector's trade profile. It is defined as:

$$IIT = 1 - \sum \frac{|X_{ijk} - M_{ijk}|}{(X_{ijk} + M_{ijk})} \qquad , \qquad (2)$$

where the numerator is the absolute value of the trade balance for product i between countries j and k, and the denominator is the sum of trade flows of that product between the two countries. The index can range between 0 when there is no intra-industry trade, and 1 when exports and imports for each industry are equal. The index was calculated for group 6, which is the closest to the manufacturing sector. Since trade data are classified by SITC, the intra-industry trade index should be analysed with reference to ISIC. It was not possible to map SITC onto ISIC; therefore, the index was calculated for group 6, manufactured goods classified chiefly by material.

A higher ratio of the index indicates greater intra-industry trade and greater export diversification and also suggests that economies of scale and other gains are realized. Table 9 shows the intra-industry trade index values. The results reveal that the extent of Palestinian intra-industry trade with Egypt is similar to that with Israel. However, the index is higher in the case of Jordan (about 60 per cent), implying greater benefits derived from intra-industry trade with Jordan compared with Egypt and Israel. Standard theory relates intra-industry trade to economies of scale and product differentiation. An element of comparative advantages may exist but it is not the major determinant of intra-industry trade patterns.

**Table 9. Average Palestinian intra-industry trade
index with Israel, Jordan and Egypt for SITC group 6**

	Israel	Jordan	Egypt
1996	0.339	0.661	----
1997	0.375	0.625	0.375
1998	0.382	0.618	0.382
1999	0.358	0.642	0.358
2000	0.387	0.613	0.387
2001	0.370	0.630	0.370
2002	0.400	0.600	0.400
2003	0.422	0.578	-----
2004	0.417	0.583	0.417
2005	0.245	0.755	0.245

D. Revealed comparative advantage

Revealed comparative advantage (RCA) takes the relative share of good j in country i's exports to that good's share in world (w) exports. The index is defined as:

$$RCA = \frac{X_{ij} / X_{it}}{X_{wj} / X_{wt}} , \qquad (3)$$

where t denotes time. The value of the index ranges from 0 to high positive numbers. Groups for which the index value is less than 1 reflects lack of comparative advantage. If it is greater than 1, there is evidence of a comparative advantage. Higher RCA indicates that the country has greater advantage in exporting the commodity to the country or region under consideration rather than exporting a commodity with lower RCA.

**Table 10. Palestinian revealed comparative advantage (world), selected
three-digit SITC groups**

	All food items	Agricultural raw material	Ores and metals	Fuels	Manufactured goods
1996	2.39	0.98	1.88	0.30	0.92
1997	2.62	0.65	1.40	0.20	0.92
1998	2.82	0.96	1.22	0.28	0.89
1999	2.76	0.75	1.23	0.18	0.94
2000	3.86	1.08	1.12	0.09	0.90
2001	2.55	1.21	1.04	0.08	1.00
2002	2.62	2.06	1.24	0.11	0.95
2003	2.74	1.50	0.84	0.11	1.00
2004	3.06	1.34	0.57	0.27	1.00

Table 10 indicates that RCA is strongest in the case of all food items as the share of this group is twice the world's average share for most years. Ores and metals have values greater than 1 until 2002, but its comparative advantage worsened over the last few years and fell below 1 from 2003 and thereafter. The lowest RCA figures are for fuels, followed by manufactured goods. While the RCA figure for manufactured goods is close to unity and was improving, this was not the case for fuels and ores or metals categories. Agricultural goods and raw materials exhibit a trend similar to that of

manufactured goods. The agricultural sector has typically absorbed workers who lost their jobs owing to the closedown and/or reduced production of firms associated with Israel's closure policy. This appears to have led to a relative increase in agricultural output and a larger exports share compared with the rest of the world. The lack of access to global inputs markets as well as the floor price for Palestinian tariffs set in the Paris Protocol have put Palestinian producers at a marked cost disadvantage compared with their regional and global competitors. At the same time, the use of the Israeli currency, whose exchange rate reflects the need of the much more advanced Israeli economy, severely undermines the competitiveness of the Palestinian economy. Overall, the Israeli closure policy and the lack of access to economies of scale due to fragmentation have raised the cost of doing business for Palestinian producers and limited the range and extent of the economy's RCA.

E. Export specialization index

The export specialization index, or ESI, measures good j's share in total exports (X) of country i in relation to that good's shares in market k imports (M) and t stands for time. This index is somehow similar to the RCA index; it gauges trade potential between the country in question and a group of countries. The index is calculated as:

$$ESI = \frac{X_{ij} / X_{it}}{M_{kj} / M_{kt}} \quad ,(4)$$

where the numerator is the share of good j in country i's exports and the denominator is that good's share in imports in a specific market k (a country or a group of countries); in our case, k is a selected sample of trading partners, some with high imports from the occupied Palestinian territory (Israel and Jordan), and others with low imports such as Turkey, the Republic of Korea and Lebanon.

Interpretation of the index is similar to the interpretation of the RCA index. A value above 1 represents specialization in this market and a value below unity indicates comparative disadvantage because the country or group of countries (markets) do not import large quantities of the commodity group in question. As can be seen in table 11, for the occupied Palestinian territory, in almost all cases the value of the export specialization index is less than 1 for groups 7 and 9 (except for the Republic of Korea). A review of this trend for all countries over time reveals the same trend, with minor deviations in some years.

Table 11. Median export specialization index, selected trade partners, 1996–2004

Group	Israel	Jordan	Turkey	Republic of Korea	Lebanon
0	24.86	3.99	276.23	22.71	1.73
1	8.59	6.11	38.99	20.55	3.81
2	11.55	12.36	7.98	5.21	10.36
3	1.06	15.91	2.48	0.86	1.22
4	12.43	1.96	2.39	15.70	2.17
5	1.20	1.02	1.11	2.24	0.82
6	4.17	10.28	10.40	6.41	3.49
7	0.26	0.28	0.20	0.42	0.32
8	2.42	2.85	3.96	5.20	1.42
9	0.53	0.13	0.03	9.35	0.06

F. Export diversification index

The export diversification index (EDI) is defined as:

$$EDI = \sum |h_{ij} - h_{iw}| / 2 , \qquad (5)$$

where h refers to the share of the good in the exports of country j and the world; and the subscripts i, j and w refer to the good, country, and world, respectively. This index sums the absolute value of the difference between the share of good i in the exports of country j and the share of that good in world exports. The lower the index, the less concentrated a country's exports, and countries with a small number of exports (i.e. less diversified) tend to have a high export diversification index.

Export diversification is important for developing countries because a high degree of dependence on a few export commodities increases vulnerability to external shocks stemming from changes in world prices (terms of trade) or global demand. Export diversification, especially with regard to manufactured goods, is highly beneficial to the economy in terms of more stable export earnings, growth and employment.

Table 12 and figure 7 show the degree of Palestinian export diversification. The value of the Palestinian index is typical by regional standards. Among the 16 Middle Eastern and North African countries, only 4 – Saudi Arabia, Oman, Libya, and Yemen – have an export diversification index of a magnitude equal to or greater than that of the occupied Palestinian territory when oil is included. If oil is excluded, only Algeria and Libya are equally diversified; the remaining countries are more diversified than the occupied Palestinian territory.

G. Export concentration index

The export concentration index (ECI) gives an indication of the degree of product concentration, that is, whether or not a country's exports are dominated by a small number of products. It is calculated as the square root of the sum of squared export shares of a country. The index is defined as:

$$ECI = \sqrt{\sum (X_i / X_t)^2} , \qquad (6)$$

where X_i is a country's exports of product i (at the three-digit SITC) and X_t is a country's total exports. The index values range between 0 and 1; the lower the index, the less concentrated the exports. A value of 1 implies the country exports only 1 good, that is, extreme export concentration. The more concentrated exports are, the more vulnerable the country is to demand and price shocks and the more volatile export revenues. The values of the export concentration and diversification indices are shown below in table 12 and figure 7. The figure shows no numerical improvement in the diversification of Palestinian exports except for 2001 and 2002, when the diversification index rose slightly, which could reflect the impact of the intensification of the Israeli movements and access restrictions in these two years.

Table 12. Palestinian export diversification and concentration indices

Index	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EDI	0.57	0.57	0.60	0.60	0.58	0.59	0.60	0.60	0.59	--
ECI	0.22	0.22	0.21	0.19	0.19	0.20	0.20	0.19	0.18	0.19

Figure 7. Palestinian export diversification and concentration indices
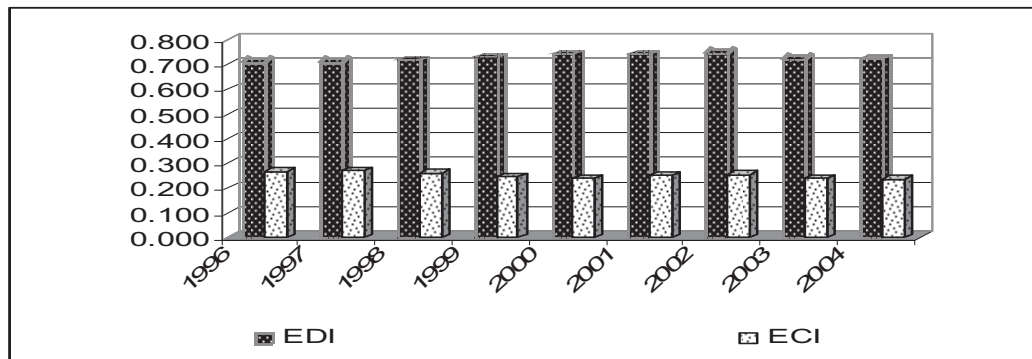
H. Export similarity index

The export similarity index (XSI) provides information on the distinctiveness of export patterns of one country compared with another. The index is defined as:

$$XSI = \sum Min(X_{ij}, X_{ik}) * 100 \qquad (7)$$

The export shares of industry i for country j and its counterpart for country k are used to calculate this index. The value of the index ranges between 0 and 100, with 0 indicating a complete dissimilarity of exports, and 100 representing identical export composition. Table 13 shows the Palestinian export similarity index with selected countries over the 1996–2005 period.

Table 13. Palestinian export similarity index, selected countries

| Year | Trade partners of the occupied Palestinian territory | | | | |
	Israel	Jordan	Egypt	Republic of Korea	Lebanon
1996	33.91		6.05	0.07	
1997	33.65	0.08	7.30	0.08	0.10
1998	31.73	0.06	7.20	0.07	0.09
1999	-	0.07	7.36	0.08	0.11
2000	34.12	0.10	6.31	0.09	0.13
2001	33.44	0.08	7.63	0.10	0.13
2002	37.54	0.07	10.80	0.09	0.14
2003	39.21	0.06	10.24	0.09	0.14
2004	31.99	0.06	14.95	0.08	0.16
2005	-	0.05	0.11	/	/

I. Changes in global demand

The index of global demand changes assumes a fixed market share to isolate the effects of change in global demand on export performance from the effects of changes in market share. It measures the pace of export growth relative to world trade if the country just maintains a specific market share. The projected effect of global demand change is calculated by the following equation, which first assumes a fixed market share "S_{i0}" for good i, in a base year 0, then it sums up the difference in the economy's exports between periods t and 0, the base year. A positive difference

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implies that global demand, expressed as GD in the equation below, has helped the country's exports (X) of that particular product (i).

$$GD = \sum S_{i0} (X_{it} - X_{i0})$$

(8)

The global demand index is calculated to assess whether global demand has helped Palestinian exports of a particular good during the period in question. Using 1996 as the base year, and assuming fixed market share, growth in global demand would presumably increase exports volume and revenue. However, if the market share falls during such a period, it dampens the benefits of global demand growth. The results in table 14 suggest that global demand has helped the exports of groups 3, 5, 7 and 8. Exports of the remaining groups, such as 0 and 1, and a subset of the sample span (2, 6, and 9) have declined for every year. The trend of falling trade barriers at the global levels creates a potential for a small open economy, such as the Palestinian economy, to achieve greater benefits from participation in the global trading system. However, the conflict with Israel has so far pre-empted the economic benefits that could have been realized from the trade agreements signed by the Palestinian Authority and the expansion of global trade.

Table 14. Global demand index and trends in international demand

Group	1997	1998	1999	2000	2001	2002	2003	2004
0	(226)	(1,181)	(2,504)	(3,919)	(1,520)	979	1,763	13,895
1	(674)	(1,426)	(2,724)	(2,823)	(3,334)	(2,787)	(5,882)	(4,639)
2	162	(1,381)	(1,504)	(86)	(228)	1,332	(2,471)	(4,768)
3	1,559	(375)	691	3,729	3,128	2,891	2,424	7,170
5	426	585	959	1,759	1,852	3,292	1,198	5,808
6	2,328	(5,316)	(5,647)	(6,205)	(3,521)	3,618	188,300	370,334
7	872	1,166	1,873	3,806	2,772	4,248	186	6,866
8	1,420	1,590	3,437	6,490	6,409	9,363	(2,826)	9,204
9	53	(149)	(101)	9	(61)	(107)	214	509

Note: Negative numbers are in parentheses.

J. Competitiveness or global market share index

Apart from global demand changes, changes in an economy's market share can impact the level and growth rate of exports. Export growth depends on the evolution of both global demand and a country's market shares. The competitiveness or global market share index (GMS) measures the change in a country's competitive position and whether it has improved or deteriorated as well as the magnitude of the associated change in the value of exports. The index is defined as:

$$GMS = (S_{it} - S_{i0}) M_{gt}$$ (9)

The index takes the difference between period t and the base period (0) in good i's global market share (S) of a country and multiplies that by global imports (M) of that good. If positive, it implies that that particular good has acquired new market shares, and the global market share value would be the change in export revenues from that group.

The competitiveness index is used to complement the insights gained from calculating the global demand index and overcome the limitations stemming from the assumption of a fixed market share. The index allows market shares to change between the base period and the current period. All other things being equal, an increase in market share has a positive effect on a country's export revenues. Table 15 shows that the change in market share is one of the most alarming indicators

related to Palestinian trade. Not a single group acquired new markets. Positive changes took place only during the 1998–2000 period. Losses around $69 million and $139.4 million were registered in 2001 and 2002, respectively, owing to declining market shares. However, the years 1998, 1999 and 2000 witnessed gains of $56 million, $34 million and $39 million, respectively, which were associated with positive changes in market shares.

Table 15. Competitiveness or global market share index

Group	1997	1998	1999	2000	2001	2002
0	(24,523)	17,642	18,317	44,045	(11,629)	(21,349)
1	3,006	10,185	(102)	(611)	(952)	(1,739)
2	(9,443)	(4,101)	(8,080)	(8,122)	(10,146)	(9,023)
3	(2,399)	657	(3,051)	(9,168)	(9,758)	(9,245)
4	(7,334)	(4,557)	(4,593)	(1,184)	(981)	(3,070)
5	(11,264)	(343)	4,635	1,756	(1,659)	(12,886)
6	(74,843)	27,836	14,662	5,548	(22,332)	(54,642)
7	(1,166)	(1,343)	(2,562)	(2,151)	(7,756)	(13,524)
8	(30,377)	9,616	15,160	9,638	(4,336)	(13,670)
9	1,781	373	(389)	(820)	(279)	(252)

Note: Negative numbers are in parentheses.

K. Technological content

The technological content index classifies goods according to their technological content. The classification of these groups used here follows that of the United Nations Industrial Development Organization (UNIDO, 2004). These groups are: high technology (HT), medium technology (MT), low technology (LT), and resource-based (RB).

Table 16 shows that Palestinian exports are primarily resource-based and of low technological content. The technological content of Palestinian exports is below the world average with regard to high- and medium-technology content but above the world average as far as resource-based and low-technology products are concerned. Low-technology exports are dominated by textile, garment and footwear, while medium technology exports are negligible. With the exception of the nascent pharmaceutical industry, there are practically no high-technology Palestinian exports.

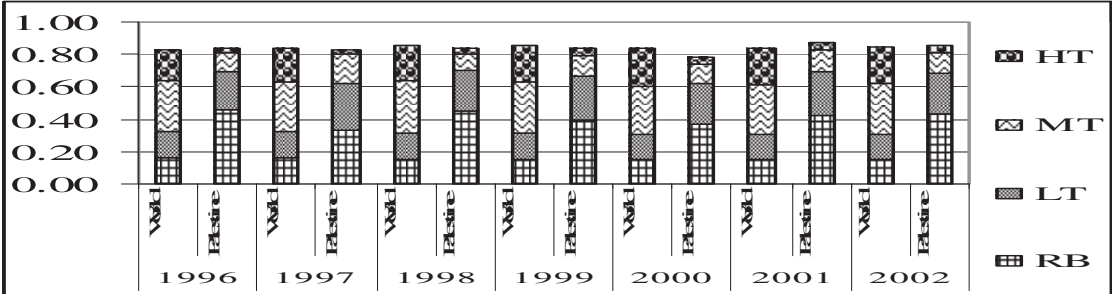**Figure 8. Technological content of Palestinian exports**

Table 16. Technological content of Palestinian exports

	World				Occupied Palestinian territory			
	HT	**MT**	**LT**	**RB**	**HT**	**MT**	**LT**	**RB**
1996	0.192	0.315	0.161	0.163	0.027	0.118	0.236	0.455
1997	0.202	0.312	0.162	0.159	0.016	0.091	0.149	0.172
1998	0.213	0.324	0.164	0.155	0.032	0.103	0.248	0.454
1999	0.225	0.315	0.158	0.154	0.048	0.122	0.274	0.395
2000	0.234	0.299	0.149	0.154	0.044	0.115	0.252	0.372
2001	0.226	0.306	0.152	0.155	0.045	0.137	0.265	0.428
2002	0.225	0.312	0.153	0.154	0.049	0.125	0.249	0.433
2003	0.2032	0.29	0.1439	0.1538	0.046	0.1375	0.2499	0.4136
2004	0.2042	0.2944	0.1431	0.1575	0.0546	0.1153	0.2842	0.4487

L. Customs tariff rates

Using quantities of imported goods and the customs revenues collected, the PCBS (2006) calculated average tariff rates and found that the overall average tariff rate was 13.2 per cent. The maximum rate, 350 per cent, was applied to electrical circuit and transmission parts, while the lowest tariff was 1 per cent, which was applied to telephone and wire systems. Tariff rates for selected products are reported in table 17. It is worth noting that to protect producers of food and beverage in primary form, the tariff rate for intermediate goods (code 111) is 29.1 per cent, which is substantially lower than the 48.6 per cent tariff on final consumption (code 112).

**Table 17. Average tariff rates by commodity classification
as primary intermediate, consumer and producer goods in 2003**

	Intermediate goods	Percentage
111	Food and beverages, primary, mainly for industry	29.1
121	Food and beverages, processed mainly for industry	3.8
210	Industrial supplies n.e.s primary	2.1
220	Industrial supplies n.e.s processed	0.9
310	Fuels and lubricants, primary	6.0
321	Fuels and lubricants, processed for motor spirit	8.0
420	Parts and accessories of capital goods, except transport equipment	12.4
530	Parts and accessories of all kinds of transport equipment	4.3
Subtotal		**10.2**
	Consumer goods	
112	Food and beverages, primary, mainly for household consumption	48.6
122	Food and beverages processed mainly for household consumption	21.6
522	Transport equipment non-industrial uses	7.0
610	Durable consumer goods n.e.s.	0.5
620	Semi-durable consumer goods n.e.s.	15.5
630	Non-durable consumer goods n.e.s.	9.8
Subtotal		**17.8**
	Productive goods	
410	Capital goods, except transport equipment	4.8
521	Transport equipment for industrial uses	7.0
Subtotal		**4.8**
All goods		**13.2**

IV. The Gravity Model

This section complements the previous section by offering a quantitative assessment and investigating the role played by the variables that affect the behaviour of exports and imports. For this purpose, a gravity trade model incorporating export supply and import demand is specified and estimated. Based on the empirical results, practical trade policy implications are discussed.

The term gravity model generally builds on the idea that the weight and the distance between two economies determine trade flow between them. The weightier, in terms of income and/or population, and the closer two countries are, the stronger the trade interaction between them. The gravity model has been used to assess the impact of drastic policy changes such as regime shift from central planning, or to estimate models of geography and trade which analyse firm localization or industrial concentration (Krugman, 1991, 1998). Further, it has become the main tool used to measure the ex-post trade effects of a currency union, as well as trade-creating and trade-diverting effects associated with preferential trading arrangements (Glick and Rose, 2002; Rose and Van Wincoop, 2001).

In this type of models, weight is supposed to have a positive impact on commercial activity between two countries and distance is expected to have a negative impact. In general, distance is considered to reflect everything that has an impact on trade facilitation (Carrère, 2006). Distance is usually measured by physical distance between political capital cities or between economical capital cities. However, as regards the occupied Palestinian territory, the distance variable is not included in the estimated gravity model because it is not always strongly correlated with transport costs due to differences in the quality of infrastructures and the Israeli closure policy, which weakened or severed Palestinian trade ties with its neighbouring Arab countries by an array of military, administrative and economic measures. Even in countries that do not suffer similar occupation-related trade distortion, it has become more common to see gravity models specified and estimated, depending mainly on the market size, capacity of national economy and real exchange rates (Head and Ries, 2001; Papell, 2002; Cheng and Wall, 2004; Mitze, 2010). It is also worth noting that the geographical distance between the occupied Palestinian territory and its two main trading partners, Israel and Jordan, is quite short.

The nature and potential of trade volume between the occupied Palestinian territory and Israel once occupation is ended, or at least when the occupied Palestinian territory achieves a significant degree of sovereignty, is a key and a strategic policy question that deserves serious discussion and understanding. In this study, the gravity model will be used to evaluate and forecast the impact on Palestinian trade of a hypothetical Israeli disengagement from the occupied Palestinian territory. The value and volume of trade for the period 2003–2005 will be used as a point of reference for the discussion of various economic and trade policies with Israel, Arab and other countries. It is imperative that all present and potential opportunities to balance the unequal trade and economic relationship with Israel should be fully utilized to remedy the distortions and free the Palestinian economy from the constraints limiting its development horizons. Here, the estimated gravity equations will be used to assess the potential results of moving away from the quasi-customs union with Israel, enshrined in the Paris Protocol, and to outline a set of alternative economic and trade policies that can be pursued. As such, the model will be used to estimate the potential merchandise trade flows between the occupied Palestinian territory and Israel in the post-disengagement period. In this regard, the empirical results can inform measures to improve the bilateral and multilateral trade agreements that have been signed or will be signed by the Palestinian Authority with other countries. Finally, the estimated equations will be used to assess the potential merchandise trade flows between the occupied Palestinian territory and countries other than Israel and Jordan.

A. Methodology and data sources

The gravity model consists of two equations, one for export supply and one for import demand. Both equations emphasize the role of trade, fiscal and monetary policies and NTBs on merchandise trade flows between the occupied Palestinian territory, Israel and Jordan. Where trade between

unequal partners (occupied Palestinian territory and Israel) is concerned, the estimated model may be used by Palestinian policymakers to negotiate appropriate trade relations with Israel.

Pooled time series and cross-section data for the period 1995–2005 are used to estimate the model. Data on bilateral trade flows with the two major trading partners, Israel and Jordan, were obtained from the foreign trade statistics published by PCBS, while GDP and PCGNDI data are obtained from national accounts statistics. Data on macroeconomic variables, such as GDP, population, nominal exchange rates and consumer price index for Jordan, Israel and the United States, were obtained from *International Financial Statistics,* an International Monetary Fund publication. The UNCTAD *Handbook of International Trade Statistics* for the period 1995–2005 and the United Nations COMTRADE Database provided data on 0 to five-digit SITC commodity groups for the following countries: Israel, Jordan, Taiwan Province of China, Malaysia and Turkey.

Model specification

The theoretical foundations of the gravity model inform the specification of the export supply and import demand functions. Sohn (2005) and Areethamsirikul (2006) show that gravity equations can be derived for differentiated products. Evenett and Keller (2002) have shown that the empirical results from estimated gravity equations have been successfully employed to examine potential trade between neighbouring economies, as well as trade between regions in different areas of the world. The gravity trade of the export supply and import demand can be presented as follows:

$$X_{ijkt} = a_0 + a_{1*}(GDP_i/GDP_j)_t + a_2 * (PCGNDI_i/PCGNDI_j)_t + a_3 * PX_{ijkt}$$
$$+ a_{4*}REX_{ijt} + a_{5*}D_{jt} + a_6 * NTBs_{jt} + a_7 * T_{ijkt} + U_{ijkt} \qquad (10)$$

$$M_{ijkt} = \qquad b_0 + b_1 * (GDP_i/GDP_j)_t + b_2 * (PCGNDI_i/PCGNDI_j)_t + b_{3*}PM_{ijkt}$$
$$+ b_4 * REX_{ijt} + b_5 * D_j + b_6 * NTBs_{jt} + b_7 * T_{ijkt} + V_{ijkt} \qquad (11),$$

where:

X_{ijkt}	value of commodity k exported by country i to country j in period t, where t = 1994, 1995 … 2005, i = 1 for the occupied Palestinian territory, J = 1 for Israel and 2 for Jordan;
M_{ijkt}	value of commodity k imported by country i from country j in period t;
GDP_{it}	gross domestic product of country i in period t;
$PCGNDI_{it}$	per capita gross national disposable income of country i in period t;
REX_{jt}	real value of the United States dollar in terms of country j's currency in period t;
PX_{ijkt}	export price index of commodity k exported from country i to country j in period t;
PM_{ijkt}	import price index of commodity k imported by country i from country j in period t;
D_{jt}	dummy variable equal to 1 in the case of Israel and 0 otherwise;
$NTBs_{jt}$	non-tariff barriers imposed by Israel on Palestinian trade = 1 for the period 1995–2000 and 0 otherwise;
T_{ijkt}	trade conformity index capturing the similarity of exports of commodity k from country i and imported by country j in period t;
U_{ijkt}	disturbance term of commodity k exported by country i and imported by country j in period t;
V_{ijkt}	disturbance term of commodity k imported by country i from country j in period t.

Equation (10), which represents the export supply, states that merchandise trade flows of commodity k from country i to country j in year t are determined by a set of macroeconomic variables, monetary variables and NTBs. Commodity k refers to a zero-digit commodity classified under SITC, such as food and live animals, beverages and tobacco, crude materials, fuels, animal and vegetable oil, chemicals, final manufactured goods, and machinery and transport equipment. It is expected that

exports of commodity k will be positively associated with the GDP_i and negatively with the GDP_j. Therefore, an increase in the proportion of GDPi/GDPj will increase the possibilities of merchandise trade flows from country i to country j since this variable is a measure of the capacity of country i relative to that of country j. Therefore, the estimated coefficient a_1 is expected to have a positive sign. The variable could also be used to examine the intra-industry trade between the exporting country and the importing country.

The variable $PCGNDI_i/PCGNDI_j$ reflects the welfare ratio between the importing and exporting country. An increase in the per capita income of the importing country with respect to that of the exporting country is expected to stimulate merchandise trade flows from the exporting to the importing country. In contrast, the increase in the per capita income of the exporting country is expected to increase its imports.

The real exchange rate (REX_{ijt}) captures the impact of monetary and exchange rate policies of Israel and Jordan and their impact on trade with the occupied Palestinian territory. Since the Jordanian dinar and new Israeli shekel are the two major currencies circulating in the Palestinian economy, any devaluation of the Jordanian dinar or depreciation or appreciation of the new Israeli shekel with respect to the United States dollar is expected to affect Palestinian merchandise exports and imports to and from those markets.

The real exchange rates are calculated as follows:

$$REX_{ijt} = NEX_{ijt} * CPI_{ust}/CPI_{jt,} \qquad (12)$$

where NEX_{ijt} is the nominal exchange rate of the dollar in terms of country j's currency, CPI_{ust} and CPI_{jt} are the United States and country j consumer price indices in period t, respectively.

The trade conformity index $T_{ijkt,}$ included in the model, captures the effect of the bilateral trade structure between country i and country j in period t. It is calculated as follows:

$$T_{ijkt} = [x_{ikt} * m_{jkt}] / [x^2_{ikt} * m^2_{jkt}]^{0.5}, \qquad (13)$$

where x_{ikt} is the share of the two-digit commodity in the Kth commodity group exported by country i in period t, and m_{jkt} is the share of the two-digit commodity in the Kth commodity group imported by country j in period t. The value of the index ranges between 0 and 1. When the index approaches 0, it indicates that a perfectly competitive trade structure exists between the two countries. In contrast, when the export shares of country i are identical to the import shares of country j, the value of the index approaches 1. This indicates a perfectly complementary trade structure, since the export shares of country i are identical to the import shares of country j. The index thus measures the fit between the structure of exports and imports of bilateral trade partners. Moreover, T_{ijkt} can serve as an indicator of the existence of intra-industry trade and/or inter-industry trade between countries. When the coefficients a_7 and/or b_7 are greater than 0, T_{ijkt} reflects inter-industry trade. However, if the two coefficients are less than 0, intra-industry trade exists between the exporting and importing countries.

A dummy variable for $NTBs_{ijt}$ is included in the model to estimate the impact of the restriction and adversarial practices imposed by Israel on Palestinian trade, particularly between 2001 and 2006. These Israeli measures are an extreme form of NTBs that are unique to the Palestinian economy. The level of Palestinian trade between 1995 and 2000 was greater than that of the 1970–1994 and 2001–2006 periods. The value of the $NTBs_{ijt}$ is set equal to 1 for the period 1995–2000 and 0 otherwise.

B. Empirical results

This section presents the empirical results of the gravity equations of the export supply. The model performs well with the estimated coefficients have the expected signs. Most of the coefficients are highly significant and R^2 ranges between 0.65 and 0.98. Because of the multicollinearity problem, particularly between GDPi/GDPj and PCGNDIi/PCGNDIj, these variables have been dropped from

the import equations. Furthermore, variables that appear to be insignificant are not presented among the final results.

Gravity equation of export supply

Table 18 presents the results of the Palestinian exports of five SITC commodity groups at the zero-digit level. The exports of groups 0, 2, 5, 6 7 and 8 (food and live animals, crude materials, chemical products, manufactured products, machinery and equipment, and miscellaneous manufactured products) account for more than 90 per cent of Palestinian merchandise exports. It is worth mentioning that the exports of group 0 and 6 alone account for approximately 60 per cent of total merchandise exports.

The empirical results indicate that Palestinian exports of food and live animals and manufactured products are highly sensitive to the capacity of the Palestinian economy, as measured by relative GDP. The GDP ratio coefficients suggest that enhancing the capacity of the Palestinian economy will promote merchandise exports to the Israeli markets. In contrast, the coefficients of the relative per capita income that were smaller and have no significant effects on some export groups were therefore dropped from the regression. Interestingly, lifting the restrictions –NTBs– on Palestinian trade imposed by Israel will increase exports of group 0 and 6 by as much as $70 million on average.

Table 18. Estimation of the export supply equations

Dependent variables: SITC group coefficient	0 Food and live animals	2 Crude materials	5 Chemical products	6 Manufactured products	7 Machinery and equipment	8 Miscellaneous manufactured products
Constants	-35.11 (-1.69)	-106.83 (-2.33)	58.63 (5.5)	-532.611 (-2.18)	-86.59 (-1.65)	-0.029 (-1.29)
GDP_i/GDP_j	20.54 (-2.97)	5.99 (-2.65)	0.86 (-1.2)	33.07 (-2.51)	9.22 (-3.18)	0.51 (-45.41)
$PCGNDI_j/PCGNDI_i$		-0.64 (-2.31)	-1.366 (-3.8)			
REX_{ijt}		80.25 (2.406)	31.01 (4.5)	450.5.6 (2.56)	65.88 (1.74)	
D_{jt}	23.79 (3.47)	108.77 (3.077)		789.24 (3.76)	86.8 (1.95)	
$NTBs_{ijt}$	-33.16 (-7.35)			-32.26 (-4.11)	-4.6 (-2.8)	-0.332 (-62.03)
T_{ijkt}	74.99 (2.61)			-251.45 (-2.95)		-0.31 (-45.91)
F	74.48	75.03	27	196.07	95.52	143.91
R^2	0.95	0.95	0.84	0.98	0.96	0.99

Note: t- statistics are in parentheses.

While the food and live animal group includes mainly fresh fruits and vegetables, processed products and manufactured products include labour-intensive products such as textiles and clothes, shoes and furniture products. Commodity groups at the three-digit level are included to identify products that are potentially marketable in Arab, regional and international markets. Machinery and equipment exports have been largely determined by the GDP of the occupied Palestinian territory and Israel.

Trade partners' dummies show that the Palestinian exports of manufactured goods to the Israeli market have been greater than those channelled to Jordanian markets. As expected, the real exchange rates appear to be key determinants of merchandise trade flows between the occupied Palestinian territory, on the one hand, and the Jordanian and Israeli markets, on the other. In previous sections it has been found that Palestinian trade is not sensitive to changes in the nominal exchange rate, which is not surprising because the relevant variable as far as competitiveness is concerned is the real exchange rate, not the nominal one. The results imply that an increase in the real value of the United States dollar with respect to the Israeli and Jordanian currencies increases Palestinian merchandise exports to Israel and Jordan. Since Palestinian exporters are paid in Israeli and Jordanian currencies, a rise in the real value of the dollar over the Jordanian dinar and/or the new Israeli shekel makes Palestinian exports to these markets relatively cheaper compared with other sources. The exchange rate effect in this case replicates the improved compositeness of domestic producers in response to a real devaluation in normal single-country, single-currency cases.

This finding corroborates that of UNCTAD (2009a), which shows that the use of the monetary and exchange rate policies of the more advanced and structurally different Israeli economy has been costly to the Palestinian economy, as it denies the Palestinian Authority the option of setting and changing the exchange rate of a national currency at an appropriate level conducive to greater compositeness of the domestic economy. The UNCTAD study demonstrates that a real devaluation of a hypothetical Palestinian currency – that is, an exchange rate below that of the new Israeli shekel – improves the trade balance, private investment and GDP growth, and leads to higher employment and a stronger tradable goods sector with growing agricultural and manufacturing sectors. The UNCTAD study recommends that prior to the introduction of a Palestinian national currency, the benefits of competitive real exchange rate could be achieved by taxing imports and using the tax revenue to subsidize exports. Such a scheme is not akin to a typical case of trade management, but is a compensatory corrective action designed to counter the distortion and impaired competitiveness caused by having to use the strong new Israeli shekel.

Empirical results related to the trade conformity index of Palestinian exports indicate that although 70 to 90 per cent of the Palestinian exports are channelled to Israel, trade in crude materials, such as stone and marble, is classified as inter-industry-trade. However, Palestinian exports of manufactured products to Israel are grouped as intra-industry-trade. Most of the Palestinian exports of manufactured products are classified as labour-intensive. Palestinian exports of manufactured products averaged 40 per cent of total merchandise exports, while crude material accounted for only 5 per cent.

Gravity equation of import demand

Table 19 reports estimation results of the import demand equations. Most estimated coefficients have the expected sign. The implication is that any relative capacity improvement in the Palestinian economy enhances the competitiveness of domestic producers of importable goods. These results suggest that many imported goods can be produced domestically if the debilitated Palestinian productive base and infrastructure are rebuilt and the Israeli closure and blockade policies are lifted.

Table 19. Estimation results of the import demand equations

Dependent variables: SITC group coefficient	0 Food and live animals	1 Beverage and tobacco	2 Crude materials	3 Mineral fuels	4 Animal and vegetable oil	5 Chemical products	6 Manufactured products	7 Machinery and equipment	8 Miscellaneous manufactured products
Constant	493.84 (1.85)	137.21 (2.91)	76.02 (2.43)	-112.6 (-0.35)	13.64 (0.58)	247.57 (2.80)	633.2 (3.81)	102.11 (1.05)	158.5 (3.64)
GDP_i/GDP_j	-281.48 (-4.25)	-20.45 (-2.39)	-38.9 (-5.16)	-573.35 (-4.46)	-10.31 (-2.35)	-75.88 (-3.69)	-131.9 (-2.81)	-176.11 (-6.6)	-26.5 (-1.5)
PM_{ijk}	-5.55 (-2.13)	-0.78 (-2.54)	-0.29 (-2.58)	-0.57 (-0.17)	-0.14 (-1.42)	-1.47 (-1.58)	-7.83 (-3.87)	-1.82 (-1.12)	-0.65 (-1.58)
REX_{iji}							-154.91 (3.34)		-37.37 (2.64)
$NTBs_{ijt}$	205.736 (3.58)	-1.65 (-1.58)	22.26 (3.13)	292.5 (2.3)	7.45 (1.83)	59.87 (2.81)	89.34 (2.17)	116.63 (4.6)	44.75 (4.15)
T_{ijkt}	-957.27 (-3.59)	-44.78 (-2.78)	-22.5 (-1.92)	163.8 (-1.2)	-19.69 (-1.84)		-0.14 (-1.25)	68.91 (-1.13)	-40.34 (-1.25)
F	22.37	15.44	29.45	10.33	30.58	15.6	38.54	33.81	42.81
R^2	0.85	0.75	0.88	0.69	0.94	0.79	0.92	0.90	0.93

Note: t- statistics are in parentheses.

The closure policy and movement and access restrictions imposed on the occupied Palestinian territory are captured by the dummy variable of NTBs. For all SITC groups, except for beverage and tobacco, it has a positive and significant coefficient. This clearly shows that it has the effect of increasing the flow of merchandise imports into Palestinian markets. This is partly because the Israeli restrictions on consumer goods imports have not been as onerous as restrictions on exports and imports of intermediate goods. As domestic capacity to produce importable goods was decimated, imports rose, financed by sizeable donor aid and remittances.

The real exchange rate of the Jordanian dinar and of the new Israeli shekel affects Palestinian imports, as the devaluations of these currencies make it cheaper to import from Israel and Jordan, compared with importing from other countries. The impact of the real exchange rates appears to be significant for all import groups. A 10 per cent increase in the real exchange rates is associated with a 10 per cent increase in imports of manufactured goods and a 2 per cent increase in miscellaneous manufactured products.

Import prices appear to be negatively associated with imports of beverages and tobacco, mineral fuels and animal and vegetable oils. Own-import price elasticities appear to be less than 1 in absolute value for mineral fuels and beverages and tobacco. It is important to note that higher prices in this case lead to increased expenditure on those goods, putting additional pressure on the trade balance.

The estimated coefficient on the T_{ijkt} of Palestinian imports is positive for mineral fuels and machinery and equipment, but negative for animal and vegetable oil. This implies that inter-industry trade prevails in the first two, and intra-industry trade prevails in the latter category. Only 30 per cent of the Palestinian imports are classified as differentiated products from those commodities exported from Israel. Although Israel is a net oil importer, it has competitive advantages in oil products and has successfully strengthened the capacity of its oil industry and has become the only the supplier of oil products to Israeli producers and the Palestinian market. In many industries, Israel built production lines capable of meeting demand in the occupied Palestinian territory, including the demand for fuel, cement and dairy products. It is thus hardly surprising that NTBs imposed by Israel limited Palestinian exports to Israel while enlarging imports. However, under free and rather equal and normal trade

conditions, Palestinian imports from Israel may fall by up to 50 per cent, while Palestinian exports may increase by about 30 per cent.

The computed T_{ijkt} values presented in table 20 show an average below 0.5. The calculated T_{ijkt} is 0.18 for minerals and fuels, where Israel is a large net importer of fuel, and Palestinian fuels imports originate mainly in Israel, where they account for more than 30 per cent of total Palestinian merchandise imports.

Palestinian imports of food and live animals, vegetable oils, crude materials and manufactured products are cases of intra-industry trade. Israel imports these commodities and also exports them to Palestinian markets.

Table 20. Palestinian trade conformity index: exports and imports

SITC group indicators	0 Food and live animals	1 Beverage and tobacco	2 Crude materials	3 Mineral fuels	4 Animal and vegetable oil	5 Chemical products	6 Manufactured products	7 Machinery and equipment	8 Miscellaneous manufactured products
Palestinian exports – Israeli and Jordanian imports									
$C(T_{ij}, X_{ij})$	-0.23	0.45	-0.75*	-0.31	0.31		0.95*	0.42	0.18
T_{ij}	0.23	0.86	0.37*	0.90	0.99		0.64*	0.86	0.35
$X_{ij} =$ b0+b1 T_{ij}: b1^=	-61.2	0.32	-18.0*	-6.5	404.8		190.7*	66.7	91.0
Palestinian imports - Israeli and Jordanian exports									
$C(T_{ij}, M_{ij})$	-0.73*	-0.76*	-0.63*	0.42	-0.32	0.28	-0.26	-0.707*	0.2
T_{ij}	0.38*	0.25*	0.65*	0.18	0.2	0.32	0.45	0.64*	0.78
$M_{ij} =$ b0+b1 T_{ij}: b1^=	-1876.2*	-73.02*	-105.99*	253.2	-11.5	0.14	-0.22	-249.7*	89.9

Notes: * = significant at the 0.05 level; other coefficients are not significant.

C(T, X): simple correlation coefficient

T_{ijk}: Trade conformity index between countries i and j for the Kth SITC group

X_{ijk}: Merchandise export of the Kth commodity from country i to country j

M_{ijk}: Merchandise import of the Kth commodity by country i from country j

In conclusion, the fundamental fact regarding Palestinian trade with Israel and all other trading partners is that it remains controlled by Israel and subject to Israeli economic and security imperatives, which largely shape the outcomes and the way market and economic forces operate. The findings of this study are consistent with previous empirical findings (El-Jafari, 2000), namely that under free trade conditions, Palestinian merchandise imports from Israel may not exceed 50 per cent of their current value and volume in aggregate. At the sectored level, food and live animals, crude materials and manufactured products are the main imports, accounting for more than 60 per cent of total merchandise imports. However, under freer trade and more equal conditions, these imports may fall by 50 per cent of their current levels, as the Israeli sources will be replaced by other regional and international suppliers. With more policy space than currently available, Palestinian policymakers may apply certain corrective policies to build the productive capacity of the economy and stimulate growth. Such corrective measures and policies are bound to reduce the dependence of the Palestinian economy on the Israeli market.

Finally, this study identifies key sectors that can be strengthened in order to produce inside the occupied Palestinian territory commodities currently imported from Israel as well as imports from Israel that can be advantageously imported from other sources. The findings and detailed results of this study may thus be used to guide policy interventions to foster the optimal allocation of resources and strengthen productive capacities in certain sectors that promise higher social rates of return.

V.   Conclusions: Aspects of trade policy for State formation

Over the past four decades, trade between the occupied Palestinian territory and Israel has been an extreme case of trade between unequal partners. Israeli policies based on its own national economic and security interests have dominated and shaped the exchange between the two economies with little regard to Palestinian interests. More often than not, Israeli policies have been antithetical to Palestinian economic development needs. Investigating the nature of Palestinian trade with Israel and estimating its potential under freer conditions, on the one hand, and investigating the nature of Palestinian trade with the regional and global markets, on the other, remains a key research topic that calls for urgent attention. Even before the Israeli withdrawal from the Gaza Strip in 2005 and its momentous aftermath, reshaping trade between the occupied Palestinian territory and Israel has been viewed as a prerequisite for restructuring and reviving the morbid Palestinian economy. Below are some of the conclusions that follow from the analysis and empirical investigations contained in this study.

The bulk of Palestinian trade is with Israel, where 80 per cent of imports either originate in Israel or are re-exported to Palestinian markets through it. The Israeli market absorbs 70 to 90 per cent of Palestinian exports. In the Middle East and North Africa region, only four countries – Saudi Arabia, Oman, Libya and Yemen – have an export diversification index (where oil is included) greater or equal to that of the occupied Palestinian territory. When oil is not included, only the Algerian and Libyan economies are nearly as undiversified as the Palestinian economy.

The export concentration index shows no visible improvement in the diversification of Palestinian exports, except for 2001 and 2002, when diversification improved slightly. The obvious implication is that no export diversification can take place as long as the Israeli closure policy and movement restrictions are in force. External-market and non-market factors have thus played a decisive role in hindering export diversification and have stunted the ability and potential of the export sector to contribute to Palestinian economic recovery and growth. The export similarity index indicates the presence of a strong trade potential with countries other than Israel, such as Jordan and the Republic of Korea. Global demand changes have helped Palestinian exports of SITC groups 3, 5, 7 and 8. As far as the remaining groups – 0, 1, 2, 6 and 9 – are concerned, exports have declined either every year or for part of the sample period 1996–2005.

Empirical results indicate that intra-industry trade exists mainly in food and live animals and manufactured products, while inter-industry trade exists in other sectors. Trade in these sectors suggest that Palestinian producers and policymakers need to explore new markets in neighbouring countries and markets in developed countries. Israeli monetary and exchange rate policies, which control the Palestinian economy, represent a key constraint on Palestinian competitiveness with a deleterious impact on the development of the tradable goods sector with regard to both exportable and importable goods. However, domestic Palestinian policy has not always been optimal or sufficiently conducive to enhancing the productivity and competitiveness of the Palestinian tradable goods sector.

The most obvious goods that can be imported from markets other than Israel's are electric energy and natural gas. This is hardly surprising since Israel is a large net importer of crude materials, including oil and gas, mainly from Egypt. Palestinian policymakers can explore the development of joint ventures with Jordan to supply the West Bank with fuel, electricity and natural gas, and with Egypt to supply the Gaza Strip with these products. Relaxation of NTBs imposed by Israel on Palestinian trade will reduce the economy's dependence on Israel, as it will promote Palestinian exports to regional and foreign markets and reduce imports from Israel. Since Palestinian exports of high- and medium-technology products are well below the world average, and above it with regard to resource-based and low-technology categories, it is clear that foreign firms producing a range of labour-intensive goods can be encouraged to relocate to the occupied Palestinian territory the production of goods such as food products, livestock products, beverages and tobacco, and vegetable oil.

Analyses of gaps and disconnects reveal that pharmaceuticals, building stone and cement are good candidates for promotion and policy support (introduction and initiation with regard to cement). Cut flowers were a promising industry until the Israeli blockade of Gaza wiped it out. The erosion of productive capacity and the decimation of the private sector were especially harmful to Gaza's export-oriented firms. For instance in 2007, as a result of closure, Gaza's carnation farmers were able to export only one fifth of the 45 million flowers they produced. The remainder was used as animal feed; no improvements have taken place since then (UNCTAD, 2009b). Growth performance suggests that SITC group 1 (beverages and tobacco), 3 (mineral fuels), and 9 (unclassified commodities) have been performing well and may be selected as major export promotion candidates.

The empirical results also indicate that a number of measures that can be used to restructure Palestinian trade in ways that are conducive to better economic growth and development performance, as described below.

Rebuilding the Palestinian productive base and strengthening its capacity are essential to correct the distorted, unequal trade with Israel. Supporting the production of food and live animals and manufactured products, for instance, can play a role in enhancing exports and GDP growth. The empirical analysis suggests that certain imports can be produced domestically in an efficient manner. These include food and live animals, beverages and tobacco, crude materials, animal and vegetable and manufactured products, and machinery and equipment. Intra-industry trade can play a role in diversifying and enhancing the performance of the Palestinian economy. Over the last two decades, part of the increase in trade between the developed and developing economies has been in the form of intra-industry trade. In this regard, the Palestinian economy may specialize in producing and exporting certain products of food and live animals, crude materials (stone and marble), animal and vegetable oils (olive oil) and manufactured products. At the same time, it appears that the Palestinian economy will continue to import differentiated food products, animal and vegetable oil, and manufacture products from Israel and other markets.

Removing the constraints imposed by Israel on Palestinian trade would increase Palestinian merchandise exports by about 40 per cent. Until a sovereign Palestinian State is established with own trade infrastructures, there is large scope for facilitating Palestinian trade flows and reducing the excessive transaction cost to which Palestinian businesses are subjected. Removing all NTBs imposed by Israel will allow the realization of the significant Palestinian trade potential and would thus stimulate economic growth and employment. In a normal environment, Palestinian exports to Israel may not exceed 70 per cent of their current level, and trade with markets other than Israel's will expand; especially in food and live animals, beverages and tobacco, crude materials, animal and vegetable oils and manufactured products. Intra-industry trade between the occupied Palestinian territory and Israel may take place in food and live animals and manufactured products.

Under free trade conditions, Palestinian direct and indirect imports from Israel may decline by about 50 per cent below current levels. The drop will be especially large in import groups such as beverages and tobacco, crude materials, chemical products, and machinery and equipment. For such groups, the removal of these barriers will improve the Palestinian trade balance by increasing merchandise exports and reducing imports. It is clear that the barriers imposed by Israel on Palestinian exports are directly and primarily responsible for the large Palestinian trade deficit, Palestinian dependence on Israel as a source of imports, a weak, uncompetitive tradable goods sector and the aid dependence they entail and deepen.

Policy measures by the Palestinian Authority, Israel and the international community are urgently needed to correct this distortion. Removal of these constraints on Palestinian trade will certainly lead to a significant increase in exports combined with a reduction in merchandise imports, part of which will be replaced by domestically produced substitutes. Such benefits will be amplified by the multiplier effect and will place the Palestinian economy on a higher growth, employment and welfare trajectory, especially if they are accompanied by sound and consistent domestic policy measures.

In other words, improving the Palestinian trade conditions, trade logistic and infrastructure are the appropriate mechanism for effecting a structural transformation of the Palestinian economy from a deformed transfer economy into a productive and balanced one. Expanding merchandise trade flows in the occupied Palestinian territory will reduce the dependency on foreign aid and labour outflow to cope with the inability of the Palestinian economy to absorb the growing and increasingly deskilled workforce. While aid can help the Palestinian people survive the ongoing stifling of their economy, ending the occupation and integrating the future sovereign Palestinian State into the global trading system are vital prerequisites to effective economic development.

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