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**The Occupied Palestinian Territory:
Twin Deficits or an Imposed Resource Gap?**



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Executive summary

The security, military, political and economic measures implemented by Israel in the Occupied Palestinian Territory (the Gaza Strip and the West Bank, including East Jerusalem) since the onset of occupation in 1967 have significantly distorted and disoriented the Palestinian economy. The results are reflected in a huge resource gap, whereby domestic absorption (domestic consumption and investment, both public and private) exceeds domestic production by a substantial amount. This gap is manifested in three disequilibria, namely a trade deficit in the balance of payments, a savings deficit (national investment in excess of national savings) and a government budget deficit. In 2010–2014, the averages of the three deficits, as a percentage of the gross domestic product (GDP), were 40 per cent, 33 per cent and 8 per cent, respectively. Some international organizations and academic studies have focused almost entirely on the smallest of the three, the fiscal deficit, and portrayed it, without convincing evidence, as the main problem of the economy of the Occupied Palestinian Territory. This singling out of the fiscal deficit was given prominence and pre-eminence by a number of academic studies that presented it as the main problem in several Arab countries. Most of these studies were conducted within the framework of the twin deficits hypothesis, which proposes that a fiscal deficit drives a trade (or current account) deficit.

This study demonstrates, however, that the Palestinian trade deficit is not driven by the budget deficit, and that at no time in 1968–2014 did the trade deficit respond to changes in the budget deficit, as presumed under the twin deficits hypothesis. Furthermore, application of the Granger causality test disproves the hypothesis that changes in the trade deficit were caused by changes in the budget deficit.

Rather than reasoning in terms of one deficit causing the other, this study states that the two deficits have been cultivated, to become permanent features of the Palestinian economy, by the economic structure imposed by the occupying Power. In other words, the two deficits are two symptoms (and the savings deficit is a third symptom) of the same problem, namely the resource gap. This gap was developed and is maintained mainly by occupation-related practices that have created conditions that induce Palestinian workers to seek employment in Israel, where wages are higher than in the domestic economy. This has generated a substantial increase in Palestinian aggregate demand. Concomitantly, occupation has constrained the capacity of Palestinian firms to pursue profitable investment, particularly in the agricultural and manufacturing sectors. Thus, the rise in aggregate demand has not been matched by equivalent increases in domestic output.

The analysis suggests that addressing the Palestinian resource gap requires the following:

- (a) Rehabilitating Palestinian productive capacity and expanding the policy space to narrow the difference between the total income received by Palestinians and income generated by

domestic Palestinian production, that is the difference between gross national disposable income and GDP.

- (b) Narrowing the difference between the total number of the Palestinian labour force and the number of workers employed in the domestic economy, which is equal to the number of unemployed plus the number of those employed in Israel and in Israeli settlements in the Occupied Palestinian Territory.

Guided by this perspective, under the conditions created and reinforced by occupation, the following two outcomes are observed:

- (a) Attempts at reducing the resource gap by narrowing one of the two differences may not be effective. Historically speaking, under occupation, the income difference has narrowed while the labour difference has widened, and vice versa.
- (b) Within the existing economic constraints, the main impact of a reduction in the Palestinian budget deficit would be an increase in unemployment, not a reduction in the trade deficit.

Analytical and statistical evidence suggests that the resource gap cannot be closed through traditional policies used in other economies that are not occupied or in conflict or post-conflict situations. Given this context, this study proposes a two-pronged strategy of reform and growth to bridge the resource gap. Setting the economy on a path of sustainable development in the Palestinian context should be understood to be a radically different process from that in other countries operating in a normal or post-abnormal environment. A prerequisite for conventional reforms in the Palestinian context is a process of dismantling the economic structure imposed and maintained by occupation. This entails removing all deep-seated institutional barriers to progress and development in all activities of production and trade, as well as fully stemming the leakage of Palestinian fiscal resources to Israel.

Growth needs to be pursued by a well-defined strategy that features the following three elements:

- (a) Expanding the agricultural sector by adopting a revival programme that covers all aspects of the agricultural environment, including human resources, technical skills, land, water, infrastructure, institutional and legal frameworks and trade in agricultural inputs and outputs.
- (b) Expanding the manufacturing sector by adopting a strategy of structural transformation that starts with an import-substitution industrialization stage, followed by an export-promotion stage.
- (c) Adopting a national strategy of technological development featuring the following two stages: acquiring an independent technological learning capacity by cultivating a

domestic scientific establishment capable of understanding, processing, adopting and adapting imported technological knowledge; and establishing an independent technology-creating capacity to enable the domestic scientific community to conduct independent research and development and pursue advanced knowledge.

However, as long as occupation continues to prevent the Palestinian people's pursuit of meaningful development strategies, closure of the resource gap may not be expected. Therefore, the international community should assume its responsibility and obligations towards the Palestinian people by exerting political pressure on the occupying Power to allow the Palestinian people to acquire enough policy space to achieve the above strategy and by extending sufficient financial aid to fund the Palestinian resource gap. The Palestinian National Authority (PNA) should also exert all efforts to take full advantage of the minimal policy space and resources available to it under present conditions to achieve its national developmental objectives, while avoiding further deepening an aid-dependence trap.

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Abbreviations

CAB	current account balance
GDP	gross domestic product
NCT	net current transfers
NFI	net factor income
PNA	Palestinian National Authority

Chapter I

Introduction

For about five decades, the economy of the Occupied Palestinian Territory (the Gaza Strip and the West Bank, including East Jerusalem) has been under Israeli occupation. Since the start of the occupation in June 1967, the main feature of the Palestinian economy has continued to be a huge resource gap, whereby domestic absorption (public and private consumption and investment) exceeds domestic production by a substantial amount. This widening gap is manifested in three disequilibria, namely the trade deficit in the balance of payments, the savings-investment deficit (whereby national investment exceeds national savings) and the PNA budget deficit. According to the Palestinian Central Bureau of Statistics, the averages of these three deficits in 2010–2014, expressed as a percentage of GDP, were as follows: trade deficit, 40 per cent; savings deficit, 33 per cent; and fiscal deficit, 8 per cent.¹

Despite the importance of all three deficits, public and policy attention has been focused almost entirely on the fiscal deficit, the smallest of the three, which has often been portrayed as the main problem in the Palestinian economy. This misplaced emphasis is mainly due to three factors.

First, the chronic fiscal crisis is often associated with the repeated partial or complete suspension of the monthly payment of salaries of public sector employees. It is difficult to exaggerate the economic hardship set off by such frequent interruptions, which deprives almost one fourth of the population of their main source of income.²

Second, Palestinian clearance tax revenues are frequently withheld by Israel. These revenues from taxes on Palestinian imports are collected by Israel on behalf of PNA and then transferred to the Authority after an exaggerated 3 per cent collection and processing fee is levied. In 2014, clearance tax revenue accounted for 75 per cent of total Palestinian public revenue. This amount could cover the public wage bill or 50 per cent of the current expenditure of PNA. In the last two decades, Israel has withheld these revenues at least six times (UNCTAD, 2015a). This has left PNA exposed not only to the withholding of revenue by Israel, but also to a continuous threat of withholding, and has often

¹ According to the national account system, the sum of a savings-investment deficit and a budget deficit should always equal the trade deficit (see chapter II). There is a small discrepancy in the averages given above, due to the usual measurement error. Namely, the savings-investment deficit + fiscal deficit = 40.3 per cent, while the trade deficit = 40.1 per cent.

² The number of PNA employees is about 160,000. If each employee supports five dependents, then the suspension of salary payments impacts 800,000 people, almost one fourth of the Palestinian population.

aggravated the Palestinian fiscal situation and pushed it into a crisis course. The political pressure associated with revenue withholding episodes heightens the urgency of the fiscal problems of PNA.

Third, international organizations, which have a significant presence in the Occupied Palestinian Territory, often, in their reports, single out the budget deficit of PNA as the main source of the Palestinian economic predicament (see, for example, International Monetary Fund, 2014a, and World Bank, 2013). Such reports repeatedly emphasize the urgent need to reduce the budget deficit by pursuing a process of fiscal consolidation and by reducing government expenditure, while raising taxes. They suggest reducing expenditure by cutting subsidies and freezing employment in the public sector, and raising taxes by enhancing the efficiency of tax collection, instituting stronger punishment for tax avoidance, removing tax loopholes and modernizing tax collection processes. Moreover, the singling out of the fiscal deficit, not as a symptom, but as the key problem in the Palestinian economy has been promoted and given an academic dimension by many studies that assert that it is the main problem in several Arab countries. Most such studies have been conducted to analyse the budget deficit within the framework of the twin deficits hypothesis, to show that the fiscal deficit drives the trade (or current account) deficit. For example, a recent study stated that according to its statistical findings, in the Palestinian economy, an increase in the public budget deficit by \$1.00 million would increase the current account deficit by \$3.08 million (El-Namrouy and Saidam, 2015).

Bearing in mind such studies and reports and the policy prescriptions they entail, the purpose of this study is threefold.

First, to demonstrate that the Palestinian trade deficit is not driven by the budget deficit. This study shows that the two deficits in the Palestinian economy have been rooted in, and are currently permanent features of, the economic structure imposed under occupation. This structure has locked the Palestinian economy into a path of dependence and disequilibria characterized by domestic absorption that substantially exceeds domestic production.

Second, to show that the gap between spending and output by its very nature correlates with a level of imports greater than the level of exports, and a level of savings lower than the level of investment. In the Occupied Palestinian Territory, therefore, emphasizing the budget deficit and downplaying the trade deficit and savings deficit does not address the central problem of the Palestinian economy and can be misleading. In other words, reducing the budget deficit, or even eliminating it altogether, would not necessarily close the resource gap and may even exacerbate it. This study investigates the resource gap as a key Palestinian economic problem, with the budget deficit as no more than one of its symptoms.

Third, to distinguish between rationalizing public expenditure, within the context of institutional reform, which is pertinent and useful; and cutting public expenditure, as part of an

austerity programme, which can be harmful to economic growth and self-defeating, even in purely fiscal terms. A strategy that prioritizes economic growth over fiscal austerity would be more conducive to generating employment and bridging the resource gap. Such a strategy needs to be vigorously pursued on two fronts, namely implementing a comprehensive programme of structural transformation aimed at reviving the agricultural and manufacturing sectors and pursuing a rigorous programme of reform to eliminate waste; and, more importantly, dismantling the economic structure created and maintained by occupation.

Chapter II sets out the theoretical framework within which the twin deficits hypothesis may be analysed. Chapter III reviews some relevant empirical studies on the subject. Chapter IV presents the findings of the statistical analysis, which refute the notion that the fiscal deficit drives the trade deficit in the economy of the Occupied Palestinian Territory. With reference to the data analysis, the study emphasizes that the economic structure cultivated by occupation has forced the Palestinian economy into dependence on the income generated by Palestinians working in Israel and oil-exporting Arab countries. This dependence has generated and financed the trade deficit and the savings deficit, which became permanent features of the economy of the Occupied Palestinian Territory during the period of direct occupation (1967–1994), while the budget deficit emerged as an economic issue subsequent to the establishment of limited self-rule in 1994. Finally, chapter V aims to clarify policy formation with regard to austerity and reform and the difference between reform in post-conflict environments and reform in an environment of ongoing occupation and conflict.

Chapter II

Theoretical background

The twin deficits conceptual framework usually takes as a starting point the national accounts accounting framework and national income identity, as follows:

$$Y = C + I + G + X - M + \text{NFI} + \text{NCT} \quad (1)$$

Where Y represents gross national disposable income; C , total private consumption; I , national investment; G , government expenditure; X , exports; M , imports; NFI , net factor income including the incomes of workers in Israel; and NCT , net current transfers including donor support, foreign aid and remittances.

National savings may therefore be represented as follows:

$$S = Y - C - G$$

The current account balance (CAB) may be represented as follows:

$$\text{CAB} = X - M + \text{NFI} + \text{NCT}$$

CAB may also be represented as follows:

$$\text{CAB} = S - I \quad (2)$$

As national savings are the sum of private savings ($S_p = Y - C - T$) and public savings ($S_g = T - G$), where T represents taxes, identity (2) may be written as follows:

$$\text{CAB} = S_p + S_g - I \quad (3)$$

If a government runs a balanced budget ($S_g = T - G = 0$) and, at the same time, the economy does not generate enough private savings to finance national investment ($S_p - I < 0$), there arises a current account deficit ($\text{CAB} < 0$). In the twin deficits literature, this situation indicates that an internal imbalance causes an external imbalance. The internal imbalance may be reflected in unemployment, inflation or public debt, while the external imbalance manifests as a current account deficit and possibly as external debt. However, from an accounting point of view, disequilibria may also originate in the external sector. That is, a drop in exports, for whatever reason, may cause a deficit in the current account balance and, other things being equal, this may trigger an internal imbalance, whereby national savings may fall short of national investment.³

³ The analysis of internal and external imbalances is associated with T Swan and M Cordon and other Australian economists (see Metaxas and Weber, 2013).

If a government resorts to a policy of deficit financing, this is reflected in a decrease in government savings and an increase in the budget deficit ($S_g < 0$), and the logic of identity (3) implies that one or a combination of the following three alternatives should occur:

- (a) An increase in private savings
- (b) A decrease in national investment
- (c) A decrease in the current account balance

Such changes are directly derived from the national accounts accounting framework, subject to the assumption of constant GDP (normally) at a level of full employment. Considering economic incentives, however, economists have articulated a specific proposition for each of the alternatives. Modelled on the neoclassical paradigm (new classics and monetarism), these propositions are as follows:

- (a) Ricardian equivalence. This proposition maintains that the two methods by which a budget deficit is generated – a decrease in taxes or an increase in government expenditure through borrowing – have the same (equivalent) impact on an economy. In both cases, the proposition asserts, rational and forward-looking households realize that the government will have to raise taxes in the future to pay for the present budget deficit, and therefore reduce their current consumption (spending) and increase their savings, to be able to pay for any future increase in taxes. Thus, neither investment nor the current account balance is affected by a budget deficit and impacts are confined to increases in private savings.⁴
- (b) Crowding out. The title of this proposition refers to the notion that increased government spending financed by borrowing from financial markets results in a competition between the public and private sectors for a limited amount of savings, which crowds out the market for loanable funds and may raise the interest rate, which in turn reduces private investment. The impact of a budget deficit, therefore, is a decrease in national investment.
- (c) Twin deficits. This proposition is linked to that in (b) in that an increase in the interest rate attracts foreign investors. This leads to an inflow of capital, causing a surplus in the capital account, which brings about a deficit in the current account. The inflow of capital appreciates the real exchange rate, which in turn reduces exports and increases imports. This real exchange rate effect is reinforced by the fact that government spending is concentrated on non-tradable goods and, therefore, the increase in government expenditure drives up the relative prices of such goods.

⁴ The concept of Ricardian equivalence is attributed to nineteenth century economist D Ricardo, who proposed it as a theoretical possibility but did not believe that it had much practical significance. The concept was revitalized in the 1980s by R Barro and since then has assumed greater prominence in the new classical paradigm (see Barro, 1991).

The three propositions have one common point, namely a budget deficit, that is caused by an increase in government expenditure, automatically reduces national savings ($S = Y - C - G$). The economy may adjust to such a reduction in savings internally under the first two propositions, through a change in private savings in the first and investment levels in the second, and externally in the third, through a change in the real exchange rate and capital account, which in turn leads to a change in the current account. However, a reduction in national savings takes place only if GDP remains constant and does not respond to an increase in government spending. Thus, there is a fundamental implicit assumption underlying these three propositions, often overlooked in most treatments of this subject, namely that of constant GDP at a level of full employment.⁵ For economies functioning below a full employment level, it is possible to distinguish the following two propositions:

- (a) Keynesian twin deficits partial result. This proposition refers to a budget deficit that causes an expansion of economic activities through multiplier and accelerator processes, which result in an increase in national income. This in turn leads to an increase in imports and a deficit in the current account. The difference between this proposition and a deficit at full employment (as discussed above) is that the former is direct and occurs in the current account, while the latter is transmitted indirectly from the capital account to the current account.
- (b) Keynesian twin deficits in reverse partial result. This proposition refers to a situation where causality is in the opposite direction, from a current account deficit to a budget deficit. In this case, a drop in the level of exports, for any exogenous reason, will lead to a reduction in national income and tax revenue and, consequently, a deficit in the government budget. This result cannot occur in a full employment setting. This is because, if the economy is operating below the level of full employment, a drop in exports will cause a deficit in the current account and a surplus in the capital account. The capital inflow may then be used to increase investment towards the full employment level of output, and a budget deficit would not occur as national savings levels would not change.

In the following chapters, this theoretical discussion and the potential alternatives guide the assessment and interpretation of an empirical analysis of the current account deficit, savings-investment deficit and budget deficit.

⁵ The assumption of constant GDP at a level of full employment is explicitly stated in Barro's model of Ricardian equivalence (Barro, 1991). The assumption is implicit in the other two propositions, as the notion of government borrowing causing a rise in the interest rate is highly unlikely to take place in an economy with idle labour and capital.

Chapter III

Empirical tests of the twin deficits hypothesis

The economic recession in developed countries in the early 1980s, as well as the expansion of the budget deficit and current account deficit in the United States of America and the development of global economic events in the 1980s and 1990s, led to the evolution of the twin deficits proposition, to help develop an understanding of the expansion of the two deficits in the United States and other economies. Following the formalization of the theoretical framework of twin deficits, a number of empirical studies were conducted to test its validity. This chapter surveys a number of international, regional and Palestinian empirical studies.

A. International empirical assessments

In the United States in the early 1980s, the concept of twin deficits was studied by economists following events in the economies of Japan and the United States. In 1981–1982, the United States economy went into recession, during which both national savings and national investment plummeted. In 1983–1984, the economy grew, with an increase in the budget deficit as a result of tax cuts. National investment recovered, financed by huge capital inflows that sent the current account into a record deficit. Simultaneously, the current account of Japan registered a record surplus, accompanied by a shrinking budget deficit. The correspondence of foreign capital inflow to an increase in the United States budget deficit, and an alignment in the opposite direction in Japan, led some prominent economists to argue that changes in the budget balance in both countries had caused the observed changes in trade balances, namely that the budget deficit in the United States had caused a trade deficit and that the budget surplus in Japan had caused a trade surplus.

However, the trade deficit in the United States shrank in the late 1980s, as the budget deficit mounted. As shown in table 1, the twin deficits hypothesis is observed during the expansionary phase of the business cycle, which is characterized by tight money and a high interest rate. However, during the contraction phase, the two deficits may move in opposing directions; an increase in the budget deficit may be accompanied by a reduction in the trade deficit if an expansionary monetary policy reduces the interest rate, leading to a deficit in the capital account and a surplus in the current account.

Significantly, even when the data show evidence of twin deficits (in 1981–1983, 1984–1985, 1985–1986 and 1987–1988), they also show evidence of a crowding out effect displayed by a decline in investment. This decline in investment in the late 1980s and early 1990s was caused by a recessionary decline in aggregate demand. The 10-year period thus shows no evidence to support the Ricardian equivalence proposition since, in this period, private savings as a percentage of GDP,

declined from 19.1 to 12.8 per cent, while the Ricardian equivalence proposition requires an increase in private savings to help pay for future increases in taxes. In this period, a rational and forward-looking household would have been expected to raise savings levels as a result of the increase in the budget deficit from 1.0 to 3.0 per cent of GDP in the same period.

Table 1
Two deficits in the United States economy, 1981–1991
 (Percentage of gross national product)

	Current account balance	Budget deficit	Investment	Private savings
1981	0.2	1.0	18.2	19.1
1982	-0.4	3.4	15.8	19.4
1983	-1.2	4.1	15.9	18.7
1984	-2.6	2.9	18.9	19.5
1985	-3.0	3.1	17.6	18.2
1986	-3.4	3.4	16.8	16.9
1987	-3.6	2.5	16.5	16.1
1988	-2.6	2.0	16.2	16.4
1989	-1.9	1.5	16.0	15.8
1990	-1.6	2.5	14.5	15.4
1991	-0.1	3.0	12.8	12.8

Source: Krugman and Obstfeld, 1994.

As shown in table 1, an increase in the budget deficit is not necessarily associated with an increase in the trade deficit. In the early 1990s, the increase in the budget deficit in the United States was associated with a considerable decline in the trade deficit, indicating that the relationship between the two deficits was neither simple nor stable. This relationship is contingent upon many factors impacting economic activity, including monetary policy, whereby a tight monetary policy is more likely to be favourable to a crowding out rather than a twin deficits outcome.

The theoretical justification of these empirical findings is that, during a period of economic contraction, GDP is typically below potential, and a deficit-financed increase in government expenditure can therefore increase GDP. In such a situation, the assumption of constant GDP (as in the twin deficits hypothesis) is no longer valid.

Interest in the twin deficits hypothesis had waned by the onset of the recession in the early 1990s. A revival of interest emerged as one of the outcomes of the currency crisis in the 1990s, as well as growing global financial imbalances,⁶ as a large United States current account deficit developed in tandem with high savings rates in East Asia. Eichengreen (2006) suggested that the

⁶ The 1980s and 1990s savings and loans crisis in the United States, and the crises in Mexico in 1994, the Russian Federation in 1998 and Argentina in 1999.

United States current account deficit was unsustainable and that the situation would interrupt capital inflows, leading to sharp compression of the United States current account and, eventually, a global slowdown.

Many economists from various countries suggested that restoring order to global financial markets required the United States to curb its large current account deficits. Whether this task could be successfully accomplished by a reduction in United States government expenditure, as implied by the twin deficits hypothesis, became an important policy question. Other countries, considering whether to increase government expenditure to pull out of recessions, were also concerned that such an action might worsen their current account balances. Economists began to examine the relationship between budget deficits and current account or balance of trade deficits, and to investigate the direction of causality.

Numerous articles on this issue were published in professional journals at the end of the 1990s and in the early 2000s, some focusing on individual countries and others addressing the European Union or regions such as Asia, Latin America and the Middle East and North Africa. Generally, the findings of these studies on the relationship between the two deficits were inconclusive. Leachman and Francis (2002) and Piersanti (2002) found evidence supporting the twin deficits proposition, whereby a growing budget deficit increased the current account deficit. Winner (1993), Evans and Hasan (1994) and Kaufmann et al. (2002) found evidence supporting the Ricardian equivalence proposition, indicating that the full weight of deficit financing impacted consumption and savings, with no noticeable change in the trade balance. Nickel and Vansteenkiste (2008) studied 22 industrialized countries in 1981–2005, and found that countries with moderate debt (up to 90 per cent of GDP) exhibited a positive relationship between the two deficits, while countries with a high level of debt displayed a negative but insignificant relationship. In another study of industrialized economies, Bartolini and Lahiri (2006) found some support for the twin deficits hypothesis but emphasized that “the effects of fiscal policy on savings and the current account balance were too weak for deficit reductions in the United States to play a central role in correcting current account imbalances with the rest of the world”.

In addition, some studies supported the view that causality runs from a current account deficit to a budget deficit, that is in the opposite direction to that implied by the twin deficits hypothesis. Within the framework of what is known in the literature as current account targeting, Summers (1998) and Alkswani (2000) suggested that this relationship resulted when a fiscal authority deployed fiscal stances to target the current account. This may be clarified by rewriting identity (3) as follows:

$$CAB = (S_p - I) + (T - G) \quad (4)$$

Current account targeting means that Governments use their budgets ($T - G$) as an instrument to adjust the current account balance. In other words, Governments may balance their current

accounts by adjusting their budgets to the difference between private savings and investment. For example, if investment is greater than private savings, a Government must increase its savings by reducing its expenditure and/or by raising taxes. However, if private savings exceed investment, the Government must increase its budget deficit.

Finally, Hatemi and Shukur (2002) found evidence of bi-directional causality, whereby the two deficits could be mutually dependent.

The literature thus does not support a uniform causality regarding the twin deficits hypothesis. In general, there are two main reasons for this outcome, as follows:

- (a) There is no solid theoretical ground for the twin deficits hypothesis. As discussed in chapter II, twin deficits are only one possibility among five potential possibilities for an economy facing a growing public deficit induced by an increase in public expenditure. Furthermore, the economic environment within which twin deficits may occur is contingent on a national income constant at a certain level and an increase in public spending that has no impact on private savings or private investment. A different economic environment might alter the direction of causality between the two deficits or might weaken it.
- (b) There is no agreement among researchers regarding the proper way to measure a budget deficit. Some apply nominal figures for expenditure and taxes, while others correct for inflation and employ real figures, and some refer to the current budget deficit without correcting for business cycles, while others refer to a deficit at the level of full employment. Similarly, there is no consensus on what constitutes proof of causality. Some consider the statistical significance in regression results, with the trade deficit as the dependent variable and the public deficit as the independent variable, as proof of causality from the latter to the former variable, while others prescribe the Granger test for causality.

B. Regional empirical assessments

The unclear position of the literature on the direction of causality with regard to twin deficits also features in studies examining the relationship between the two deficits in Middle Eastern economies. The results of such studies are not only inconclusive but are at times contradictory. For example, Zamanzadeh and Mehrara (2011) found evidence supporting the twin deficits hypothesis in the Islamic Republic of Iran, while Merza et al. (2012) found evidence supporting the opposite in Kuwait, where the direction of causality was from the current account deficit to the budget deficit. Moreover, evidence from Saudi Arabia suggests a bi-directional causality between the two deficits (Alkswani, 2000). Each of these studies attributed their results to the unique features of oil-exporting economies.

A more general study examining the relationship between the two deficits in Egypt, the Islamic Republic of Iran, Jordan, Kuwait, Morocco, Oman, the Syrian Arab Republic, Turkey and Yemen found no systematic association between the two deficits (Hashemzadeh and Wilson, 2006). The study concluded that the association depended on various international and domestic factors that played an important role in a country's economic standing in regional and global settings. Such factors included the tax system, patterns of trade, exchange rate regimes and monetary policy.

C. Palestinian empirical assessments

With regard to the Palestinian economy, one study examined the relationship between the budget and trade deficits, and established a direct relationship between the two deficits, not related to any of the mechanisms discussed in chapter II but as a manifestation of the structural distortion and imbalances rooted in prolonged Israeli occupation (El-Jafari and Al-Ardah, 2002). The relationship between the two deficits, the study demonstrated, was based on the following three facts:

- (a) Approximately 60 per cent of total domestic government revenue was generated from tariffs
- (b) Approximately 60 per cent of total government current expenditure was allocated to salaries and wages
- (c) Approximately 60 per cent of wages and salaries were spent on consumption goods, of which two thirds were imported, primarily from Israel

These facts present a relationship between the two deficits that is entirely different from that implied by the twin deficits hypothesis. Namely, there is no increase in capital inflow and the associated appreciation of the real exchange rate that depresses exports and increases imports. Instead, two mechanisms work on and reinforce each other simultaneously, and both operate as a result of the increase in income created by wages earned by Palestinians working in Israel (NFI) and/or remittances and foreign aid (NCT). The first, direct response to such inflows is an increase in consumption, which leads to an increase in imports, not because imports are relatively cheaper but because domestic substitutes are not available as a result of the constraints imposed by occupation, which do not allow the domestic economy to respond to the increased demand for importable goods. The second, indirect response follows a process similar to that of Dutch disease, whereby an increase in income leads to an increase in demand, which raises the prices of non-tradable goods relative to the prices of tradable goods, causing an appreciation in the real exchange rate, which in turn increases imports and depresses exports. Consistent with this argument, El-Jafari and Al-Ardah (2002) did not recommend reducing government expenditure as an instrument to reduce the trade deficit. Instead, they stressed the urgent need to pursue a strategy that encouraged the domestic production of import substitutes, or importable goods.

Other studies, notably those by UNCTAD and by the Palestine Economic Policy Research Institute-MAS, examined various aspects of the budget deficit and the trade deficit, and recommended ways and means to reduce both within a framework for removing the distortions caused by occupation.

Recent research has moved away from the above-mentioned theoretical perspective and adopted the twin deficits framework. El-Namrouty and Saidam (2015) postulate two opposing theoretical propositions concerning the impact of the budget deficit on the current account and trade deficits, namely Ricardian equivalence, which does not allow for any impact, and the Keynesian view, which asserts a full impact, with causality running from the budget deficit to the current account and trade deficits. They conclude that the quarterly data for 1996–2012 support the latter, that is the twin deficits proposition, and that an increase in the public budget deficit would increase the current account deficit. This claim seems to be based on the work of Saidam (2014), in which equation 2 presents the result of regressing the current account (CA) as a variable dependent on total budget deficit (TBDF), government investment (IG) and private investment (IP), as follows:

$$CA = -3.529 + 3.086 * TBDF + 4.643 * IG - 5.996 * IP$$

El-Namrouty and Saidam (2015) determine that the positive sign associated with the budget deficit means that an increase in the budget deficit will increase the current account deficit. However, the authors did not consider the fact that total budget deficit and government investment are part of government expenditure, which is in turn part of the total budget deficit. Using these two variables as independent variables raises the concern of multicollinearity between the two variables and the confidence that could be assigned to the value of each estimated coefficient. It is also important to note two peculiar findings in El-Namrouty and Saidam (2015), as follows:

- (a) The budget deficit is not the variable with the strongest impact on the current account deficit. Rather, private investment has the strongest impact. The results indicate that an increase of \$1 million in private investment would lead to an increase of \$6 million in the current account deficit.
- (b) Despite the fact that the trade deficit is significantly larger than the current account deficit in every year of the period covered by the study (the average of the former is 53 per cent of GDP, while the average of the latter is 23.8 per cent), the effect of an increase in the budget deficit is much less. The regression result indicates that an increase of \$1 in the budget deficit leads to an increase of \$0.65 in the trade deficit and \$3.08 in the current account deficit.

However, the analysis in the appendix contradicts the findings in El-Namrouty and Saidam. The appendix reports on the results of Granger tests of the twin deficits hypothesis in the Palestinian

economy, which test for the direction of causality between the budget deficit and the trade deficit. The tests use only the available official data for the two variables, namely quarterly data for the period 2007:Q1–2014:Q4 and annual data for the period 1995–2014. As shown in table A.2, the results suggest no Granger causality between the two variables, and therefore do not support the evidence for the hypothesis that the budget deficit drives the trade deficit in the Occupied Palestinian Territory.

Chapter IV discusses evidence of the lack of relevance of the twin deficits hypothesis to the Palestinian economy and questions the econometric techniques used in support of the hypothesis. The chapter also addresses the resource gap in the economy of the Occupied Palestinian Territory and focuses on its three deficits, namely the trade deficit, savings-investment deficit and budget deficit.

Chapter IV

The resource gap as the root of the three deficits

The survey in chapter III shows that the twin deficits hypothesis lacks both a theoretical and an adequate empirical foundation, suggesting that applicability of the concept to Arab economies, and to the Palestinian economy in particular, is questionable, or at least that it is not applicable to all Arab economies. A clearer picture of the situation in the Palestinian economy is presented in this chapter.

A. Two deficits, 1967–1993

From June 1967 to May 1994, the Palestinian economy was controlled by the Civil Administration under the Defense Ministry of Israel, whose fiscal policy was similar to the budgetary policy of the British Mandate for Palestine in 1922–1948 (see Adam et al., 2004). A tight fiscal policy prevailed, whereby the budget was always balanced, as expenditure was not allowed to exceed tax revenue. The level of public expenditure was low, compared with that of neighbouring Arab countries and other countries with comparable per capita income. In 1987–1991, the average total expenditure in the Occupied Palestinian Territory, excluding on defence, was 23.6 per cent of GDP, compared with 37.2 per cent in Egypt, 36.8 per cent in Israel and 30.5 per cent in Jordan (World Bank, 1993a).

This fiscal stance was mainly due to the fact that around one third of tax revenue collected from Palestinians was transferred to Israel, including revenue from taxes and customs duties on imports from and through Israel, revenue from taxes on trade with Israel, revenue from value added tax, fuel tax and purchase tax and taxes on electricity. The World Bank (1993a) estimated that the revenue from such taxes in 1991 was equivalent to 8 per cent of the Palestinian GDP.⁷ Two aspects of this fiscal policy may be emphasized. First, considering the extra taxes collected from Palestinians and channelled to Israel, the balanced budget maintained by the Civil Administration of Israel in the Occupied Palestinian Territory was effectively a budget surplus, with a predictable adverse impact on economic growth via reduced aggregate demand. The ensuing suboptimal GDP growth rates were partly responsible for the chronic problem of unemployment.⁸ Second, given that the first priority of the Civil Administration of Israel was security, little attention was paid to and few resources spent on infrastructure and public services. This helps explain the poor quality of physical infrastructure, public services, education, health and provision of welfare services.⁹

⁷ Other studies made similar estimations of the Palestinian resources diverted to Israel and reached similar results regarding the magnitude of this transfer (see, for example, Naqib, 1996, and Dumas, 1999).

⁸In 1968–1994, unemployment was not as pronounced, as Palestinians were employed in Israel, but the level rose after Israel began to restrict the number of such workers.

⁹In the 1980s and 1990s, an estimated 80 per cent of health care and 50 per cent of education services were supplied outside the public sector (UNCTAD, 1996).

In addition to fiscal compression and underinvestment in the public sector, Israel adopted practices that led to changes in the structure of the Palestinian economy. All economic activities were screened by the Israeli military administration, and every economic initiative required approval. Plans by the Palestinian business community for new ventures or for upgrading existing ventures were often frustrated by delays in granting permits or by outright denial. Permits were required for all activities related to the acquisition of land, the construction of buildings and the transformation of goods, as well as for export and import activities.

Taxation of Palestinian business activity was also detrimental. Palestinian firms were required to pay value added tax on imports of raw materials through Israel. The delay in receiving refunds related to this tax caused firms significant cash flow problems and resulted in substantial annual losses relative to the value of their finished products (World Bank, 1993b). Investment was further stunted by underdevelopment and the lack of effective financial intermediation in the Palestinian economy. This was reflected in the fact that all Arab banks were closed at the beginning of occupation and only reopened on a small scale in the mid-1980s.

Another important constraint related to technological change and modernization; Palestinian firms were not permitted to import machines and tools incorporating the latest technology but were instead compelled to buy second-hand machines from Israel.

Furthermore, the trade arrangements imposed on the Occupied Palestinian Territory constituted an asymmetric trade regime, which allowed Israel's subsidized products free entry into Palestinian markets but prevented the entry of Palestinian products into Israel's markets, except on a selective and limited basis (Dessus and Bulmer, 2004, and Naqib, 2015). This asymmetric trade relationship, combined with complex administrative procedures that discouraged Palestinian exports to the rest of the world, made Palestinian trade completely dependent on Israel.

The cumulative impact of the restrictions on resource utilization, business activities and international trade substantially weakened productive sectors and, as a consequence, a major structural transformation took place in the economy of the Occupied Palestinian Territory. The economy had two persistent deficits that were a mirror image of each other, namely a trade deficit and a savings deficit. In other words, the Palestinian economy produced much less than its domestic consumption level, and saved substantially less than its investment level. This resource gap was financed by a flow of external income, which had two sources, namely the income of Palestinians working in Israel (NFI) and remittances from those working in oil-exporting Arab countries, as well as grants and aid from other countries (NCT). The following two important points with regard to the deficits may be highlighted (as shown in table 2):

- (a) Although there was always a budget surplus,¹⁰ the trade deficit was large, at close to 50 per cent of GDP
- (b) The flow of external income was substantial, compensating for the large trade deficit and resulting in a balanced current account or small current account deficit

Table 2

Two deficits in the Occupied Palestinian Territory, 1987–1991

(Percentage of gross domestic product)

	1987/88	1988/89	1989/90	1990/91
Budget deficit	-1.0	0.1	0.9	0.0
Trade deficit	-51	-43	-40	-47
External income: factor income plus current transfers	48	43	40	38
Current account balance	-3.0	0.0	0.0	-9.0
Private savings deficit	-52	-43	-44	-47

Source: UNCTAD secretariat calculations, based on World Bank, 1993a.

Note: Private savings deficit = $(IP - S_p) / GDP$. This equation must satisfy the following national accounting identity: $(IP - S_p) + (G - T) = (M - X)$. The identity is satisfied in the years shown except for 1989–1990, which features a discrepancy between the two sides of the identity, equal to about 2 per cent of GDP.

B. Three deficits, 1994–2014

Since the establishment of limited self-rule in parts of the Gaza Strip and West Bank in May 1994, there have been four different historical periods, each of which has had different political and economic features. This section summarizes the features that have had a direct bearing on Palestinian fiscal conditions.

The establishment of limited self-rule intended for an interim period resulted in a partial improvement in the economic situation. The transfer of power over some economic affairs from the Civil Administration of the Israeli military to PNA removed some direct restrictions on economic activities; Palestinian firms could now function with fewer debilitating effects from permits and licences previously required by the Civil Administration. However, other significant direct and indirect restrictions remained, as elaborated in numerous reports and studies by UNCTAD, and by the Palestinian research community. The asymmetric trade regime imposed on the Occupied Palestinian Territory changed in two directions under limited self-rule. First, many elements in the asymmetry were removed, as PNA obtained restricted space for independent trade and economic policies. Second, some elements of a free trade area were introduced under the provisions of the Paris

¹⁰ While the table shows a deficit for 1987–1988, if the taxes collected by Israel are considered, the year registers a surplus and the other years may have therefore registered higher surpluses than stated.

Protocol,¹¹ according to which PNA was given some space to choose its own tariff rates on three lists of goods, including goods that could be imported from or through Egypt and Jordan.

Under limited self-rule, resource transfers to Israel were intended to be reduced. According to the Paris Protocol, 75 per cent of income tax collected from Palestinians working in Israel and 100 per cent of income tax collected from those working in settlements were to be reimbursed to PNA. Israel was also required to transfer to PNA all value added tax revenue on goods imported from or through Israel by Palestinian firms. However, the new arrangement did not entirely eliminate the transfer of resources from the economy of the Occupied Palestinian Territory to Israel. There remain various channels through which the transfer continues to be active, such as the fiscal leakage elaborated by UNCTAD (2014). One example of such leakage is the customs duty paid on Palestinian imports from the rest of the world procured by traders in Israel, who commonly include Palestinian imports as part of imports destined to Israel and not to the Occupied Palestinian Territory, with the result that customs duty paid by Palestinians accrues to Israel and is not transferred to PNA as required. Several other leakages remain active and their total impact is estimated to be a substantial loss to the Palestinian economy (see UNCTAD, 2015a, and El-Hodhad, 2010).

PNA faced multiple fiscal challenges following its establishment. With regard to expenditure, there was an urgent need to increase the supply and/or production of public goods and services, to rectify decades of neglect under fiscal compression and underinvestment in the public sector, which had rendered the Palestinian economy deficient in all aspects of infrastructure and public services. Table 3 shows that the economy of the Occupied Palestinian Territory lagged behind in the provision of infrastructure, particularly electric power and sanitation, compared with neighbouring and comparable economies. However, revenue from taxes was also small and below potential. As a result, PNA commenced operations with a tax revenue as a percentage of GDP at a level less than half that of Jordan and one third that of Israel, as shown in table 4.

¹¹ Economic relations between the Palestinian economy and the Israeli economy during the interim period were governed by the agreement entitled “Protocol on Economic Relations between the Government of the State of Israel and the Palestine Liberation Organization, representing the Palestinian people” (known as the Paris Protocol), signed in 1994, which established the “contractual agreement that will govern the economic relations between the two sides and will cover the West Bank and the Gaza Strip during the interim period”. In 1995, the Israeli-Palestinian Interim Agreement on the West Bank and Gaza Strip (known as Oslo II) was signed, and in 1998, the Wye River Memorandum was signed.

Table 3
Infrastructure gap in the Occupied Palestinian Territory, 1992–1994

	Egypt	Jordan	Occupied Palestinian Territory	Lebanon	Syrian Arab Republic	Israel	Lower middle- income countries
Population (<i>millions</i>)	55.0	3.9	2.4	4.0	13.0	5.1	1 152.6
Per capita income (<i>dollars</i>)	650	1 120	1 450	2 500	2 800	13 500	1 620
Electricity supply (<i>kW per 100 people</i>)	21.0	25.0	13.0	32.0	30.0	82.0	21.5
Electric power system loss (<i>percentage</i>)	14.0	19.0	30.0	4.0	12.4
Households with sanitation (<i>percentage</i>)	50	100	25	..	63	100	..
Number of telephones (<i>per 100 people</i>)	4.3	7.0	3.1	9.3	4.1	37.1	7.9
Metres of paved road (<i>per 100 people</i>)	59	170	80	n/a	180	266	..

Source: Diwan and Shaban, 1999.

Table 4
Total tax revenue, selected countries and years
 (Percentage of gross domestic product)

Country	Year	Total tax revenue
Israel	1993	31.41
Jordan	1992	23.30
Egypt	1992	18.54
Occupied Palestinian Territory	1995	10.50
Average of developing countries	1987	18.10

Source: International Monetary Fund, 1994.

There were two general reasons for the low level of tax revenue. First, the tax system imposed by the Israeli authority was not suited to the Palestinian economy. Per capita income in Israel was 14 times higher than that of Palestinians, yet the tax rates on personal income and corporate profits were generally higher for Palestinians, and the value added tax rate was identical in both economies (Abed and Tazi, 1994). Second, PNA inherited a tax system associated in the minds of citizens with measures imposed during occupation and as an instrument of occupation. During the first Intifada

(1987–1991), the Israeli authority had imposed new, heavier taxes and levies and conducted widespread tax-collection campaigns (UNCTAD, 1988, UNCTAD, 1989, and UNCTAD, 1990).

In order to dismantle this legacy and transform the perception of taxes by the public, the newly established Palestinian Ministry of Finance needed to embark on a complete overhaul of the tax system. Yet this was not permitted under the Paris Protocol, according to which only changes in income taxes and tariffs on certain goods were allowed. Within this restricted policy space, the Palestinian Ministry of Finance successfully put the fiscal position of PNA on solid ground during its first five years, as shown in table 5, which presents the main features of the fiscal situation in 1995–2014. The recurrent budget deficit in 1995–2000 was low, at only 2.2 per cent of GDP. Furthermore, this five-year average should not obscure the fact that in 1996, the deficit was 5.4 per cent of GDP, but by 1999, had become a surplus of 1.3 per cent of GDP. Similarly, there was also a reduction in the overall budget of PNA, including capital expenditure, from 12.1 per cent of GDP in 1996 to 5.9 per cent in 1999. Most recurrent expenditure was financed by domestic tax revenue, while donor aid was mainly used to finance capital expenditure and development projects.¹²

Table 5
Three deficits in the Occupied Palestinian Territory, 1995–2014
(Percentage of gross domestic product)

	1995–2000	2001–2003	2004–2006	2007–2014
Budget deficit				
Recurrent	-2.2	-14.7	-2.3	-7.3
Total	-9.3	-19.0	-19.2	-16.7
Trade deficit	-56	-51	-59	-46
External income: factor income plus current transfers	26	30	29	33
Current account balance	-30	-21	-30	-14
Private savings deficit	-53	-36	-56	-39

Source: UNCTAD secretariat calculations, based on Palestinian Central Bureau of Statistics and Palestinian Ministry of Finance national accounts data.

Note: Each period represents a different political setting, as follows: 1995–2000, establishment of PNA; 2001–2003, second Intifada; 2004–2006, relief period; 2007–2014, recovery period.

As shown in table 5, there was a steady improvement in fiscal conditions in 2004–2014. Yet this improvement was not sufficient to re-establish the fiscal position of 1999. The data presented may be compared with that in table 2, to obtain a comparative view of the fiscal situation before and after the establishment of PNA, and the following may be observed:

¹² An international donor conference was held in Washington, D.C. following the signing of the Declaration of Principles on Interim Self-Government Arrangements in 1993, at which \$2.4 billion was pledged to finance Palestinian efforts for reconstruction and development.

- (a) The trade deficit continued to be huge, as it exceeded half of GDP (53 per cent in the period before compared with 50 per cent in the period after)
- (b) While there had been a budget surplus in preceding years,¹³ a budget deficit marked every year of the ensuing period, with the recurrent budget averaging 6.6 per cent of GDP and 15.1 per cent of the total budget deficit

The data presented in table 5 provide evidence to contradict the twin deficits hypothesis, notably in the fact that the second period (2001–2003) witnessed an increase in the recurrent budget deficit, compared with the first period (1995–2000). According to the twin deficits hypothesis, this necessitates an increase in the trade deficit. However, the opposite took place. Further contradictory evidence may be noted in the third (2004–2006) and fourth (2007–2014) periods.

Success in fiscal consolidation, however, was not associated with progress on the political front. The interim period (1994–1999) did not bring Palestinians and Israelis closer to conflict resolution. Occupation measures that had been implemented before the establishment of PNA continued unabated during the interim period. The construction of Israeli settlements and the expansion of existing settlements in Palestinian land, the confiscation of Palestinian land and the demolition of Palestinian houses and structures continued and in some instances was accelerated.¹⁴

The failure of the conference held in July 2000 at Camp David, United States, to reach an agreement heightened the sense of frustration of Palestinians. On 28 September 2000, the second popular uprising (Intifada) broke out. Consequently, Israel imposed a total closure on the Occupied Palestinian Territory that has caused a serious dislocation of the Palestinian economy and huge income losses.¹⁵ This long-term closure has dissected the Occupied Palestinian Territory into small isolated islands surrounded by the Israel Defense Forces and Israeli settlements and their infrastructure, and has hampered the movement of goods and factors of production and precipitated a drastic decline in economic activity. Per capita GDP in the Occupied Palestinian Territory fell by almost 40 per cent between 1999 and early 2003, and unemployment increased from 10 per cent of the labour force to 41 per cent in 2002, while the poverty rate rose from 20 per cent to over 50 per cent of the population. In Gaza, unemployment exceeded 46 per cent of the workforce, and the poverty level rose to 68 per cent. Private investment fell dramatically in 2001 and 2002 (World Bank,

¹³ See footnote 11.

¹⁴ Expansion of the construction of settlements acquired greater momentum following the establishment of limited self-rule in 1994.

¹⁵ Closures comprise two types. Under border closure, Palestinians are not allowed to enter Israel (including East Jerusalem) or travel to Egypt and Jordan, which effectively isolates them from the rest of the world. Under internal closure, Palestinians are not allowed to move between the West Bank and Gaza Strip or between urban centres within the West Bank or to and from surrounding villages.

2004a). In addition, between October 2000 and December 2002, material losses involving the destruction of infrastructure were estimated at upwards of \$1 billion (World Bank, 2004b).

This situation decimated hopes for a balanced budget and the devotion of all external aid to development expenditure, to rehabilitate infrastructure and build productive capacities. The deficit in recurrent expenditure increased from 2.2 per cent of GDP in 1995–1999 to 14.7 per cent in the three years following the second Intifada. Furthermore, in October 2001, Israel stopped transferring clearance tax revenue collected on behalf of PNA in accordance with the provisions of the Paris Protocol, denying PNA almost 60 per cent of its tax revenue.¹⁶ In this situation, most external aid was diverted to financing recurrent expenditure. While all donor aid was allocated to financing development projects in 1999, as shown in table 6, the situation steadily shifted, as the share of current expenditure in donor aid rose to 12 per cent in 2000, 61 per cent in 2001, 83 per cent in 2002 and 77 per cent in 2003.

Table 6
Donor commitments and disbursements, 1999–2003

	1999	2000	2001	2002	2003
Gross domestic product (millions of dollars)	4 063	3 686	3 486	3 127	3 518
Total commitments (percentage of GDP)	17.0	26.4	35.2	48.8	39.9
Development	17.0	23.1	13.6	8.3	9.3
Emergency and budget support	0	3.3	21.7	40.5	30.6
Total disbursements (millions of dollars)	482	549	929	1026	883
Percentage of gross domestic product	11.9	14.9	26.6	32.8	25.1

Source: Palestinian Ministry of Planning and Palestinian Central Bureau of Statistics data.

C. Two measures of the resource gap

The previous discussion suggests that the resource gap in the Occupied Palestinian Territory was engendered at the onset of occupation in June 1967, by policies that allow Palestinians to work in Israel, earning wages that are relatively higher than domestic wages, and thereby generating a substantial increase in aggregate demand. At the same time, such policies restrict the ability of Palestinian firms to pursue profitable investments, particularly in the agricultural and manufacturing sectors. The combined effects of such policies ensure that the increase in aggregate demand in the Occupied Palestinian Territory is not matched by a similar increase in domestic aggregate supply. As a result, a considerable gap between domestic production and income has been created in the

¹⁶ The tax clearances transferred by Israel to PNA consist of the following three flows: value added tax collected by Israel on goods imported from Israel into the Occupied Palestinian Territory; customs duties and purchase taxes collected by Israel on goods imported from the rest of the world through Israel and destined to the Occupied Palestinian Territory; and 75 per cent and 100 per cent of the income tax paid by Palestinians working in Israel and in settlements, respectively. In 1996–2000, the total of these taxes increased from 54 per cent to 63 per cent of the total revenue of PNA (see Adam et al., 2004).

Palestinian economy, whereby income has exceeded production by a substantial amount each year since 1968. The difference is comprised of two categories of resources, namely NFI (income received by Palestinians working in Israel) and NCT (remittances from Palestinians working in oil-exporting Arab countries and official international aid).

The combined effect of Israeli policies may also be discerned from the gap between the labour force and the level of employment in the domestic labour market. Significantly, in the Occupied Palestinian Territory, unlike in other economies, employment comprises not two, but three categories, as follows: employment in the domestic economy; employment in Israel and in settlements; and unemployment. Accordingly, the difference between the labour force and domestic employment in the Occupied Palestinian Territory is equal to the number of workers unemployed plus those employed in Israel and in settlements.

Therefore, there are two ways of perceiving the resource gap.

The first focuses on income, whereby the gap is equal to the difference between total Palestinian labour income and income generated by domestic production. The difference is equal to the sum of NFI and NCT, referred to in Palestinian national accounts as the difference between GDP and gross national disposable income, and referred to in this study as external income. The income gap is defined as external income as a percentage of GDP, as shown in table 7.

Table 7
Income measure of the resource gap, 1972–2014
 (Percentage)

Period	Income gap	Net current transfer/ Income gap
1972–1991	0.43	0.26
1995–2000	0.26	0.44
2001–2003	0.30	0.77
2004–2006	0.29	0.76
2007–2014	0.33	0.70

Source: UNCTAD secretariat calculations, based on Palestinian Central Bureau of Statistics national accounts data and World Bank, 1993a.

Note: The income gap is external income as a percentage of GDP, and net current transfer/income gap refers to NCT as a percentage of the income gap.

The second focuses on labour, whereby the gap is the difference between the Palestinian labour force and the number of workers employed in the domestic economy. The labour gap is measured as a ratio of this difference relative to total labour force. As shown in the first column of table 7, it is important to note that, contrary to some views, Palestinian dependence on foreign resources has not been at its highest in recent years, during which large budget deficits were financed

by foreign aid. Rather, the highest level of dependence on foreign support occurred during the years of direct occupation (1972–1991).

In the years that followed the establishment of PNA, and in recent years, while the scale of dependence on the Israeli economy has declined slightly, the reliance of the Palestinian economy on foreign aid has substantially increased. As shown in table 7, NCT constituted about one quarter of the income gap in 1972–1991 and increased steadily following establishment of PNA, to over three quarters of the income gap in recent years. This was a direct result of the decline in the number of Palestinians allowed to work in Israel, which began in 1990 when Israel started to use work permits as a political instrument. This was further intensified during the second Intifada (2001–2003), when some areas of the Occupied Palestinian Territory were subject to total closure for several weeks and some for several months at a time.

The second measure of the resource gap, the labour gap, presents a different view from that of the income measure. As shown in table 8, the highest gap occurred during and directly after the period of limited self-rule and not during the period of direct occupation.

The difference between the two measures is more pronounced when the period of limited self-rule is examined. During the Intifada and relief periods (2001–2006), all efforts had to be directed towards emergency relief for those who had lost their source of income and, therefore, most foreign aid was used to finance current expenditure. However, in the 1995–2000 and 2007–2014 periods, an inverse relationship existed between the two measures of the resource gap. This points to the following three important implications:

- (a) By their nature, the two measures of the gap may move together (positive correlation) or in opposite directions (negative correlation). The data for 1972–2014 indicate a negative correlation (-0.47, as shown in table 11). An increase in the labour gap may take place in the following three different ways: an increase in both the number of workers unemployed and the number working in Israel; an increase in the number of unemployed and a decrease in the number working in Israel; and a decrease in the number of unemployed and an increase in the number working in Israel. In each case, the change in income gap depends on the change in NCT, which is completely exogenous to the system. However, the fact that the correlation between the income gap and the labour gap was negative in 1972–2014 indicates that neither the increase in NFI nor the increase in NCT was large enough to compensate for an increase in unemployment.
- (b) It is misleading to describe the gap in terms of one measure. A complete understanding of the gap requires both the labour and income measures.

- (c) Since the establishment of PNA, any improvement in any of the three deficits has been achieved at the expense of increasing the distortion in the labour market, increasing the number of unemployed and/or the number of workers in Israel and in settlements. This is demonstrated by the fact that the period registering the smallest of each deficit was associated with a small income gap and a large labour gap, as shown in table 9.

Table 8
Labour measure of the resource gap, 1972–2014
(Percentage)

Period	Unemployment rate	Workers in Israel	Labour gap	Unemployment/labour gap
1972–1991	3.9	33.4	37.3	.10
1995–2000	27.7	13.5	41.2	.67
2001–2003	36.8	6.4	43.2	.85
2004–2006	30.4	6.0	36.4	.84
2007–2014	28.7	7.9	36.6	.78

Source: UNCTAD secretariat calculations based on Palestinian Central Bureau of Statistics and UNCTAD data.

Note: Workers in Israel refers to the number of Palestinian workers in Israel and in Settlements as a percentage of the labour force.

Table 9
Matrix of the two measures of the resource gap, 1995–2014

	Smallest	Largest
Income gap	1995–2000	2007–2014
Labour gap	2007–2014	1995–2000

Source: Tables 6 and 7.

Table 10
Three deficits and two measures of the resource gap

	Period in which associated deficit was lowest of four periods	Income gap	Labour gap
Budget deficit	1995–2000	Small	Large
Trade deficit	2007–2014	Small	Large
Private savings deficit	2001–2003	Small	Large

Source: Tables 5, 6 and 7.

Table 11 summarizes the contents of tables 7–10, and assists in highlighting some of the main findings in this chapter. Considering the correlation between the income gap and the labour gap, which is negative 0.47, implies an inverse relationship between the two measures of the resource gap. It is instructive to examine the implications of this result as it sheds some light on the working of the

Palestinian economy under present conditions. Consider a reduction in the income gap and the conditions under which this reduction leads to an increase in the labour gap – as implied by the negative correlation between the two. Given that the income gap is defined as the ratio of NFI and NCT to GDP $((NFI + NCT)/GDP)$, and the labour gap is defined as the unemployed and those who work in Israel as a ratio of the labour force $((u + WI)/LF)$,¹⁷ then a reduction in the income gap could take place as a result of either, or any combination of, a reduction in NFI, a reduction in NCT and/or an increase in GDP. Each of these three cases is examined in the following:

- (a) Reduction in NFI. At a given wage level, a reduction in the number of Palestinians working in Israel leads to a drop in NFI.¹⁸ This would set off two opposing changes in the labour gap. First, a reduction of the labour gap through a decline in the number of Palestinians working in Israel. Second, an increase in the number of unemployed in the domestic economy, whereby a decline in NFI reduces aggregate demand and in turn increases unemployment in the domestic economy. The latter change must be greater than the former, given the increase in the labour gap associated with the drop in income gap.¹⁹
- (b) Reduction in NCT. A reduction in foreign assistance and/or a reduction in remittances would reduce aggregate demand in the economy and might also negatively impact GDP on the supply side. This would, in turn, increase the number of unemployed and the labour gap.
- (c) Increase in GDP. This occurs when the two measures move together, that is an increase in GDP reduces both measures of the resource gap, reducing the income gap by rendering external income a relatively smaller part of an expanding GDP and reducing the labour gap by lowering the number of unemployed in the domestic economy. This did not take place during the period under consideration. The increase in GDP was associated with offsetting changes in NFI and/or NCT.

Table 11
Matrix of resource gap correlations, 1972–2014

	Income gap	Labour gap	Budget deficit
Income gap	1.00	-0.47	0.64
Labour gap	-0.47	1.00	-0.26
Budget deficit	0.64	-0.26	1.00

¹⁷ Where u denotes the number of people unemployed, U is the rate of unemployment (u/LF) and WI denotes the number of Palestinians working in Israel.

¹⁸ The income of Palestinian workers in Israel might also be reduced if the number of workers stayed the same while their wages declined. This possibility, however, was not observed in the period under consideration.

¹⁹ An increase in the number of unemployed in the domestic economy that exceeds the reduction in the number of Palestinians working in Israel would be due to the reduction in effective demand caused by the reduction in NFI.

To mitigate the Palestinian economy's exposure to economic and political external shocks, there is a need to reduce the absolute and relative size of the Palestinian workforce employed in Israel and in settlements. Similarly, there is a need to reduce the share in GDP of NFI and NCT by creating conditions for sustainable expansion in the domestic economy. The only strategy capable of simultaneously closing the two manifestations of the resource gap, as opposed to narrowing one while widening the other, is a strategy of growth. This argument is reinforced by the correlations between the budget deficit, income gap and labour gap. The correlation between the budget deficit and the income gap is positive, indicating that a reduction in the budget deficit is associated with a reduction in the income gap, as it emanates from a reduction in foreign assistance. The correlation between the budget deficit and the labour gap is negative, indicating that a reduction in the budget deficit is associated with an increase in the labour gap. This correlation corroborates the argument that an attempt to bridge the budget deficit by means of fiscal austerity raises the level of unemployment. These two correlations are another indicator of the trade-off that exists between policies that target only one feature of the gap and not both.

The findings, as shown in table 11 and in the appendix, indicating that there is no Granger causality between the budget deficit and the trade deficit, and the lack of any other statistical support for the proposition that the budget deficit drives the trade deficit, suggest that within the existing economic environment under occupation, the major impact of a reduction in the budget deficit of PNA would not be a reduction in the trade deficit but rather an economic slowdown and an increase in unemployment. Overall, there is no shortcut remedy to the complex economic problems and disequilibria in the Occupied Palestinian Territory. What is urgently needed is the alleviation of the distortions and constraints imposed by occupation and a well-defined strategy of growth, the outlines of which are provided in chapter V.

Chapter V

Growth-based structural transformation and fiscal reforms

In the aftermath of the global financial crisis of 2008, and the worldwide recession that followed, many policymakers and academics, particularly in Europe, suggested that financial reforms should be carried out in an environment of economic austerity. One study noted that prescribing such a mix to an ailing economy was, “in effect being told that if you want economic reform then you must also have, along with it, economic austerity, although there is absolutely no reason whatsoever why the two must be put together as a chemical compound”, and also noted that “it is as if a person had asked for an antibiotic [for] fever, and been given a mixed tablet with antibiotic and rat poison” (Sen, 2015). The study discussed the futility of austerity programmes in addressing recessions in all countries that had attempted to do so from the 1930s to the present. However, such a mix of austerity and reform is currently prescribed for the economy of the Occupied Palestinian Territory by some international organizations and some donors. This chapter presents a mix of reform involving expansion and growth as an alternative to a mix of reform involving austerity. Section A sketches some components of a proposed fiscal reform and section B outlines elements of structural transformation aimed at removing the resource gap.

A. Elements of fiscal reform

Reforms of the Palestinian economy require cognizance of certain unique features of and constraints on the Occupied Palestinian Territory. In this context, policymakers should recognize the inaccuracy of two potentially misleading propositions.

First, there is the view of some organizations that the Palestinian economy is an average developing economy with distortions similar to those observed in other developing countries. This view reduces the impact of the Israeli occupation to a lack of security and ignores the fact that the policies implemented by and under occupation have locked in a certain evolutionary path for the Palestinian economy. This path features a vicious circle of cumulative causation that fosters the enlargement of its resource gap and continuing dependence on external sources of income. Economic reforms launched without the recognition of this retarding evolutionary path will inevitably fail. For example, as detailed in this study, one of the legacies of occupation is the low level of income tax revenue. In 2004, PNA, supported by the International Monetary Fund and other international organizations, passed a new income tax law that lowered the tax rate, widened the tax base and reduced the number of income brackets. Ten amendments have been made since the adoption of the law, yet these successive attempts at reform have not succeeded in achieving significant improvements in tax revenue. Income tax revenue in the Occupied Palestinian Territory has never

exceeded 8 per cent of total public revenue, compared with 17 per cent in Jordan and 28 per cent in Egypt (Palestine Economic Policy Research Institute-MAS, 2015).

Second, there is the potential misleading implicit or explicit proposition that views the economy of the Occupied Palestinian Territory not as one in the midst of conflict, but as one in a post-conflict situation. The inadequacy of this view can be observed from the following facts:

- (a) The Gaza Strip is under a complete blockade and has endured three consecutive Israeli military operations in the last few years, in 2009, 2012 and 2014, during which thousands of lives were lost and tens of thousands of people were rendered homeless. The level of destruction of houses, schools, hospitals and roads was unprecedented.²⁰
- (b) Daily life in the West Bank is strained by conflicts related to occupation that result in the deaths of civilians and the demolition of houses and productive assets. Moreover, the construction of the separation barrier and installation of several hundred checkpoints by the occupying Power interrupt the movement of Palestinian people and goods and hinder production and trade.

Furthermore, recommendations for reductions in the expenditure of PNA are often made with reference to the fact that the level of such expenditure as a percentage of GDP is higher than in neighbouring countries (International Monetary Fund, 2014a). As shown in table 12, this is correct only with regard to current expenditure, not total government expenditure (current, capital and development expenditure). In fact, the total expenditure of PNA is low by regional standards and lower than the average for the Middle East. The total expenditure is mostly aimed at coping with the unfavourable environment of a costly conflict.

²⁰ With regard to the operations in 2014, UNCTAD (2015a) stated the following: “Entire neighbourhoods were affected and almost one third of Gaza’s population was displaced. According to the United Nations Office for the Coordination of Humanitarian Affairs and United Nations Relief and Works Agency for Palestine Refugees in the Near East, over 500,000 Palestinians were displaced during the operation, with some 100,000 continuing to be displaced by mid-2015.” The Office of the Quartet Representative (2014) compiled a partial list of damages incurred in Gaza during the operations in 2014. UNCTAD (2015a) noted that these damages included the following: “(a) 18,000 housing units destroyed or severely damaged and 44,300 units damaged; (b) 26 schools destroyed and 122 damaged; (c) 15 hospitals and 45 primary health centres damaged; (d) Gaza’s sole power plant affected by damage and lack of fuel and widespread damage to electricity lines; (e) 20–30 per cent of the water and sewage network damaged; (f) water desalination plant in Deir al-Balah damaged; (g) total damage to the agricultural sector at \$550 million; (h) 220 agricultural wells destroyed or badly damaged; (i) at least 40,000 people employed in the agricultural sector affected through damage to agricultural lands and the loss and/or death of productive animals; (j) 247 factories and 300 commercial establishments fully or partially destroyed; (k) damages to Gaza Industrial Estate estimated at \$5 million; (l) widespread damage to landline, mobile and Internet infrastructure, including destruction of switches, fixed-line networks, cellular stations, networks, cables and the headquarters of companies; (m) loss of existing contracts and partially approved future contracts of information and communications technology-related businesses and software outsourcing centres; (n) a number of tourist sites destroyed or damaged, including sites being considered for application for World Heritage status from the United Nations Educational, Scientific and Cultural Organization.”

Table 12
Government expenditure, selected economies
 (Percentage of gross domestic product)

Country/Region	2014	Total
Israel	32.4	40.8
Egypt	22.7	36.2
Jordan	21.6	35.2
Occupied Palestinian Territory	30.9	32.9
Middle East	..	34.2

Source: International Monetary Fund, 2014b.

Note: The total is an average of the three-year period 2012–2014.

The context of conflict and a relatively low total expenditure underscore the need to perceive fiscal reforms in the Occupied Palestinian Territory differently in comparison with other countries operating within a normal or post-conflict environment. Reform in the Occupied Palestinian Territory, therefore, first and foremost, requires a process of dismantling of the economic structure and policy framework founded and reinforced by occupation. Successful reform prerequisites include removing all barriers to socioeconomic development, production and trade. For example, one such barrier, with a direct bearing on the fiscal position of PNA, is the leakage of Palestinian fiscal resources to Israel, as elaborated by UNCTAD (2013, 2014 and 2015a), which identified the following nine sources of leakage:

- (a) Leakage of revenue from taxes levied by Israel on incomes of Palestinians working in Israel and in settlements (under the Paris Protocol, Israel is required to transfer social security and other tax revenue to PNA, but in practice, does not do so)
- (b) Seigniorage revenue loss due to lack of a Palestinian national currency and use of the new Israeli shekel in the Occupied Palestinian Territory
- (c) Revenue loss from underpricing of imported goods, owing to lack of Palestinian control over borders and access to proper trade-related data
- (d) Revenue loss related to lack of control over land and natural resources
- (e) Loss of financial resources related to goods and services imported through Palestinian public sector, such as petroleum, energy and water
- (f) Loss of customs revenue on goods finished in Israel but with less than 40 per cent Israeli content, as rules of origin established by the World Trade Organization are not applied
- (g) Fiscal loss as a result of the smaller tax base caused by decimation of the productive base and loss of natural resources under occupation
- (h) Revenue leakage caused by having the Israel Electric Corporation supply the bulk of electric power to the Occupied Palestinian Territory (88 per cent of total Palestinian electricity consumption) and the charging of monopolistic prices and fines

- (i) Revenue leakage from indirect imports, that is, goods imported from other countries through Israeli ports but destined to the Occupied Palestinian Territory. The loss in this case arises from the fact that Israel retains the customs revenue from such goods and does not transfer it to PNA, on the assumption that the goods are produced in Israel and not another country.

UNCTAD (2013) examined the leakage detailed in (i) and estimated its average in 2010–2011 as 3.6 per cent of GDP and 17.1 per cent of total Palestinian tax revenue. The magnitude of this single source of leakage suggests that total leakage amounts may be sufficiently large as to cover the entire budget deficit.

B. Elements of a structural transformation programme

The existence of a resource gap as a permanent feature for about five decades indicates a structural distortion in the economy of the Occupied Palestinian Territory. While development usually features a decline in the relative share of agriculture in GDP and an increase in the share of industry, Palestinian agriculture has declined while the industrial sector has stagnated.²¹ This distorted development is seen in the fact that agriculture and industry account for less than one fifth of GDP, compared with more than one third in neighbouring Arab countries.²² Overcoming this distortion requires reviving both the agricultural and industrial sectors. Rejuvenation of these employment-intensive sectors will narrow the resource gap by generating income and employment, lessening the social transfers of PNA and lessening dependence on imports, foreign aid and foreign savings.

1. Reviving the agricultural sector

The decline of the importance of the agricultural sector is related to two factors. First, the sector was not given a high priority in the reconstruction and development programme implemented by PNA in 1995–2000. At the beginning of the period of limited self-rule, influential PNA decision makers envisioned the future of the Palestinian economy as a regional centre for finance, trade and tourism. The examples of Singapore and Hong Kong (China) were often mentioned as models for Palestinian development. Second, policies of expanded settlements and the confiscation of Palestinian natural resources by the occupying Power created an environment inimical to agricultural development. Israeli restrictions on the Palestinian agricultural sector include denying farmers access

²¹ While the share of agriculture in GDP was above 28 per cent in 1975, it declined steadily until it reached 4.4 per cent in 2014 (UNCTAD, 2016). Measures taken by the occupying Power have consistently destroyed agricultural infrastructure and water resources (for a recent account of such measures see UNCTAD, 2015b). The manufacturing sector represented 20 per cent of GDP in 1995, but declined to 14 per cent in 2014.

²² In 2011, the contribution of agriculture and industry to GDP was 17.3 per cent, compared with 52.1 per cent in Egypt, 44.3 per cent in Syria and 35.3 per cent in Jordan.

to Palestinian water resources, confiscating lands, severing villages from cultivated plots through the separation barrier, destroying trees and crops, demolishing houses and productive assets and restricting the movement of Palestinian workers and goods through checkpoints, roadblocks and trenches (UNCTAD, 2015b).

Reviving the agricultural sector requires prioritizing the enhancement of the capacity of the sector and its ability to productively employ more Palestinian workers. Various suggestions for achieving this objective are included in a comprehensive strategy issued by the Ministry of Agriculture (2010), covering all related aspects, including human resources, technical skills, land, water, infrastructure, institutional and legal frameworks and agricultural trade.

2. Expanding the manufacturing sector: Stages of structural transformation

A starting point for reviving the manufacturing sector in the Palestinian context may be the expansion of import substitution through the promotion of the production of relatively simple, non-durable manufactured goods that were produced in the domestic economy before occupation. The United Nations Industrial Development Organization (1984) noted that, prior to occupation, 50 per cent of Palestinian imports from Israel were produced domestically, including, among others, most non-durable goods such as garments, footwear, leatherwear, soft drinks, furniture, construction materials and pharmaceutical drugs.

At the early stage of manufacturing structural transformation, an “easy import-substitution industrialization” approach could be applied, with regard to which two important points should be considered. First, this stage should be limited to mostly agro-industry products, which are labour intensive and allow for both a reduction in unemployment and the movement of labour from the agricultural sector to industrial production. Second, at present, most Palestinian agro-industry firms use imported inputs, weakening the linkage between industry and domestic agricultural production. This is because local inputs are produced by numerous small farmers, who have no cooperative arrangements and lack the capacity to supply firms with needed inputs in a timely fashion. The public sector should therefore play a leading role in strengthening linkages between agro-industry firms and domestic agriculture, to enhance growth in both sectors. This may be achieved through an institutional framework, whereby small farmers pool their resources and acquire the capacity to meet the demand from agro-industry firms. Areas of potential expansion include wine production and hide tanning, as well as dairy products, fresh juices and frozen vegetables (Ministry of Agriculture, 2010).

The stage of easy import-substitution industrialization has limits as an engine of growth and development. Once most of the potentially viable non-durable consumer goods imports have been replaced by domestically produced alternatives, the question arises of what may be done to ensure sustainable industrialization and growth. Experiences in various countries, dating from the early

1950s, suggest that the stage of easy import-substitution industrialization should not be extended to the production of durable goods (hard or secondary import-substitution industrialization). This is because doing so may create a balance of payments problem that retards growth and stunts development, due to the possibility that during this first stage, the composition of imports may change without altering their level, thereby reducing the share of consumer goods and increasing the share of capital and intermediate goods necessary to support import-substitution industrialization.

Deeper import-substitution industrialization implies an increase in total imports without an immediate increase in exports. This may create foreign exchange shortages and inefficient domestic industrialization, shielded by tariff walls and other measures of protection. Experiences in countries in East Asia show that a better strategy may be to transform easy import-substitution industrialization into easy export substitution.²³ This may be done by initiating an import-substitution phase with an announced time period of protection, after which firms must face foreign competition. This would allow those firms that survive competition from imported goods to expand production beyond the domestic market and export to foreign markets. The public sector has an important role in assisting such a process by adopting measures of export promotion, including international marketing assistance, sound monetary and exchange rate policies conducive to keeping prices stable and competitive, and education and research and development subsidies.

Given the small size of the Palestinian market, and the fact that there is a limited number of firms in each industry, acquiring the ability to compete in global markets requires early, determined efforts by PNA to assist in facilitating exports to foreign markets in order that economies of scale may be rapidly realized. The expansion of total exports in this manner would help finance a higher level of imported goods, a continued increase in employment, a movement of labour from agriculture to industry and the adoption of new and improved methods of production.

Another lesson learned from previous attempts at structural transformation is that the volume of exports is not the only relevant factor. A large volume of exports composed of goods with a low income elasticity of demand does not grow rapidly over time. However, an export mix that is sensitive to erratic changes in commodity prices renders the economy overly vulnerable to external shocks. Thus, upon exhausting the stage of exporting relatively simple, non-durable manufactured goods, policy strategies should begin to emphasize the quality of new exports rather than mandating an exclusive focus on volume. Attention should be directed to gaining competitive advantages in goods that promise more significant opportunities for greater earnings over time, including electronics products, computer software, biotechnology, robotics, machine tools and sports and recreational

²³ The term “easy export substitution” is narrower than the general term “export promotion” and implies the extension of the production of easy import-substitution industrialization goods to foreign markets.

equipment. The production of such goods requires neither the commitment of large quantities of capital nor the availability of natural resources. Instead, it requires the ability to accumulate human capital, the effective absorption of scientific innovations, the capacity to learn new techniques and the adoption of modern organizational methods of production. The potential for acquiring such knowledge requires the adaptation of a well-defined national strategy for technological development.

3. Adopting a national strategy for technological development

Both theoretical and empirical studies of growth have identified technological and human capital as fundamental complementary inputs affecting the level of per capita income and the rate of economic growth. This is one of the central messages of recent theories of endogenous growth, supported by empirical findings. Evenson and Westphal (1995), for example, stated that “no less developed country has to date achieved rapid economic growth without continued technological investment”. Dore (1984) identified two distinct stages needed for the successful introduction of technology into domestic production process, as follows: acquisition of an independent technological learning capacity by a domestic scientific establishment capable of understanding, processing, adopting and adapting foreign-produced technological knowledge, including machines and tools, to local conditions; and acquisition of an independent technology-creating capacity that enables the domestic scientific community to conduct its own research and design its own experiments to advance knowledge and the domestic technology base.

In the Palestinian context, it is imperative for the public sector to establish the foundations of the institutions required to build an independent technological learning capacity, to ensure the success of easy import-substitution industrialization and its evolution into export substitution. This entails a considerable increase in resources allocated for education, especially in science and engineering. Similarly, there should be a considerable increase in resources allocated to subsidizing private sector expenditure on research and development. Acquiring an independent technological learning capacity cannot be achieved without the institutional reforms needed in the Palestinian context, as such reforms – including of the legal and institutional framework – would create an incentive structure in which workers are induced to seek careers in the most productive fields instead of pursuing rent seeking. As Radhakrishna (1980) stated, people, not tools, “are the real agents of technology transfer and diffusion”. Talented people need an appropriate incentive and support system to pursue careers in the fields in which their talents can make the greatest contribution to development.

C. Concluding remarks

One major theme is apparent from the analysis in this study concerning the fundamental problem in the Palestinian economy, namely the existence of a substantial gap between income and production. This distortion is a direct result of occupation-related measures in 1967–1994, which

allowed Palestinian workers to earn income outside the Occupied Palestinian Territory, mainly by working in Israel, and curbed domestic production through the imposition of restrictive measures on domestic investment and production. Over the last two decades (1994–2014), PNA, due to political constraints, has been unable to improve the economic environment that locked the Palestinian economy into a path dependence trajectory in which increased expenditure, whether by households, firms or the Government, ended up achieving little more than increasing the level of imports from Israel. Analysis of the resource gap suggests the following conclusions:

- (a) The resource gap is related to the following three deficits: trade deficit; savings-investment deficit; and budget deficit
- (b) A descriptive statistical analysis using the Granger causality test provides no evidence to support the proposition that the budget deficit drives the trade deficit
- (c) There are two measures of the resource gap, as follows: an income measure, equal to the difference between gross national disposable income and GDP as a ratio of GDP; and a labour measure, equal to the difference between the available labour force and domestic employment as a ratio of the total labour force
- (d) The data indicate that under the present conditions of occupation, there is a negative correlation between the two measures, suggesting a trade-off between unemployment and dependence on external sources of income. A reduction in unemployment would therefore result in increasing dependence on external income and vice versa, implying that neither traditional policies of expenditure reduction nor of expenditure switching will have a substantial impact on the trade deficit. Significantly, the data also imply that traditional policies of fiscal consolidation will not be effective in reducing the budget deficit
- (e) The only practical way to bridge the resource gap is a comprehensive programme aimed at removing the myriad constraints on the Palestinian economy and ultimately bringing occupation to an end. Certain elements of such a programme, aimed at reviving the agricultural sector, expanding the manufacturing sector and preparing a national strategy for technological development, are explored in this study.

Appendix

Causality test of the twin deficits in the Occupied Palestinian Territory

This application of the Granger test of the twin deficits hypothesis in the Palestinian economy assesses the direction of causality between the budget deficit (BD) and the trade deficit (TD) using annual data for 1995–2014 and quarterly data for 2007:Q1–2014:Q4. The test is applied twice, once for each data set, with the following regression equations:

$$BD_t = \sum_{i=1}^n \alpha_i BD_{t-i} + \sum_{j=1}^n \beta_j TD_{j-t} + u_{1t} \quad (1)$$

$$TD_t = \sum_{j=1}^n \lambda_j TD_{j-t} + \sum_{j=1}^n \delta_j BD_{j-t} + u_{2t} \quad (2)$$

Based on the regression results, the F-test is as follows: $F = \left(\frac{RSS_R - RSS_{UR}}{RSS_{UR} / (n-k)} \right) / m$

where RSS_R stands for the restricted residual sum of squares and RSS_{UR} the unrestricted residual sum of squares,²⁴ m is equal to the number of lagged variables and k is the number of parameters estimated in the unrestricted regression.

This tests the following two null hypotheses:

H_{10} : BD does not Granger cause TD

H_{20} : TD does not Granger cause BD

The null hypothesis is rejected when the p-value in the F-test is below 5 per cent. The first null hypothesis is equivalent to testing $\sum \beta_{j=0}$, and the second equivalent to testing $\sum \delta_{j=0}$. Before performing the test, the two variables BD and TD are tested for stationarity.

Table A.1 shows that the annual series of BD and quarterly series of TD are non-stationary, while all of the first differences are stationary, as opposed to the level of the variables. Table A.2 shows that performing the Granger test on the two series (at the first difference) suggests not rejecting the two null hypotheses at the 5 per cent level of significance. Thus, the data suggest no Granger causality between the two variables.

²⁴ Unrestricted refers to an estimation with the normal procedure of least squares regression, and restricted refers to an estimation with a model containing any number of explanatory variables and one or more linear equality restriction.

Table A.1
Augmented Dickey-Fuller test
(P-value)

Null hypothesis	Quarterly data		Annual data	
	<i>Level</i>	<i>First difference</i>	<i>Level</i>	<i>First difference</i>
BD has unit root	0.0002	0.0000	0.05198	0.0014
TD has unit root	0.0630	0.0000	0.03643	0.0001

Note: Calculated using EViews 8. The null hypothesis is rejected when the p-value in the F-test is below 5 per cent.

Table A.2
Granger causality test
(P-value)

Null hypothesis	Quarterly data	Annual data
	(28) (4)	(18) (2)
BD does not Granger cause TD	0.1000	0.9578
TD does not Granger cause BD	0.8407	0.1672

Notes: Calculated using EViews 8. The null hypothesis is rejected when the p-value in the F-test is below 5 per cent. The numbers in parentheses refer to the number of observations and the number of lags, respectively.

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