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Trade policy in a sovereign Palestinian State: what are the options in a final settlement?

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Abstract

The Palestinian economic relations with Israel are governed by the Paris Protocol, which was initially negotiated for a transitory period supposed to end in 1999. The protocol, due to the asymmetry of power between the negotiating parties, and its bad implementation, has over time hampered the growth of the Palestinian economy and caused a heavy dependency on Israel. Both economic and security conditions on the ground call for a re-negotiation of the terms of the Protocol and ultimately a final settlement of the conflict. There is a wide consensus that a final solution should provide for a Palestinian State with unambiguous borders, and full control over economic and monetary policies. In line with such a final solution, this paper provides an assessment of the impact of different trade policy options in order to inform the debate. The paper departs from previous studies, which examined the question in a descriptive way, by relying on a general equilibrium model that allows for a quantification of the outcomes. Three trade regimes are considered, all assuming an exit from the current customs envelope with Israel: i) a complete removal of tariffs with respect to all trade partners, ii) the introduction of low tariffs on imports from Israel, assuming the conclusion of a trade agreement between the two parties, and iii) the introduction of high tariffs on imports from Israel, assuming no trade agreement between the two parties. Finally, the paper addresses the question of the optimal currency-regime by examining the three trade regimes under two different economic environments: floating and fixed exchange rate regimes. The results show that a liberal and non-discriminatory trade regime improves economic performance and reduces unemployment significantly. Moreover, the choice of an exchange rate regime strongly affects the outcomes of the different trade regimes. Therefore, a full control over trade and monetary policy instruments will improve the capacity of the Palestinian National Authority to address the prevailing unemployment problem and the sluggish economic growth.

Key words: Trade, Unemployment, Monetary Policy, CGE, Palestine.

1. Introduction

1.1. Background

The course of economic development and trade performance in the Palestinian territories[2] has been shaped by the unusual links with the Israeli economy. After the 1967 war and the occupation of the Palestinian territories, Israel implemented a policy of economic integration between itself and the Palestinian territories (Missaglia and Valensisi, 2014). The *de facto* customs union consisted in a trade regime that was ostensibly free and without customs borders within the geographical area comprising Israel, the West Bank and Gaza (Arnon, 2007). However, this economic integration is widely acknowledged as asymmetric as all decisions were made by Israel, and predominantly served its own interests (Dessus, 2004). The development of productive capacity in the Palestinian economy was held back by restrictions and regulations of different sorts (Botta, 2010). Moreover, the Palestinian production for the domestic market was undercut by the economies of scale realized by the advanced Israeli manufacturers (Naqib, 2003). As a result, the Palestinian economy developed structural trade deficits and a high dependency on Israeli goods and labour markets (UNCTAD, 2016).

After the outbreak of the first Palestinian uprising (1987 – 1993), it became clear that the nature of the economic links between Israel and the Palestinian territories needed re-evaluation. Following a breakthrough in the political negotiations, an economic agreement also known as the Paris Protocol[3] was signed between the government of Israel and the Palestine Liberation Organization in 1994. This protocol was initially concluded for a transitional period of five years (1994 – 1999). During the negotiations, the architects of the Protocol avoided difficult issues of sovereignty, such as the creation of a Palestinian State with full control of external borders and ownership of fiscal and monetary policies, which were deferred to the final status negotiations. Instead, an interim agreement was designed in a way that the two economies would first coexist under Israeli-controlled external borders (Arnon and Weinblatt, 2001). This agreement promised the Palestinians high living standards through two channels: firstly through free access for Palestinian labour to the Israeli market, given that employment in Israel was an important source of income for the Palestinian households[4], and secondly through the immediate transfer of tax revenue collected by Israel to the Palestinian National Authority (PNA). This mechanism known as tax clearance aimed at providing the new Authority with an immediate source of revenue, while building the internal capacity to operate the institutions of a State (Aix Group, 2005; Frisch and Hofnung, 1997).

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[2] Palestinian territories refer to the West Bank and Gaza.

[3] The Paris protocol is referred to as „Protocol" in the remaining of this paper

[4] Before the first Palestinian uprising, Palestinian workers employed in Israel made up between 30% to 40% of total employment in the West Bank and Gaza. Labour income from Israel was 30% and 46% of GDP on average over the period 1989- 93 respectively in the West Bank and in Gaza (Arnon and Weinblatt, 2001).

The protocol was imperfect in many regards, in part due to its transitional nature and in part due to the asymmetry of power between the two parties (Missaglia and Valensisi, 2014). While many agreements on economic integration give more weight to the interests of the smaller parties than their relative economic power would suggest, the customs union between Israel and the Palestinian territories continued to reflect Israeli customs and was not bilaterally coordinated (Vaggi and Baroud, 2005). While it recognized that the two parties may have different interests and priorities, it only offered the Palestinians a limited policy space (World Bank, 2002). The PNA could only set tariffs on a limited number of imported goods and within certain limits (Kanafani, 2001). The Protocol provisions also granted Israel the right to amend the common tariff book, with the only restriction being to give the PNA prior notice of the change (UNCTAD, 2012). Subsequently, the Israeli fiscal and trade policies were imposed on the Palestinian economy, whereas the two economies were not in the same development stage, and may pursue different policy goals that cannot be achieved by the same fiscal policy.

Besides these inherent flaws, the Protocol also suffered from a selective application of its basic conditions (Elkhafif et al., 2014). Against the presupposed free movement of labour and goods, political and military reality imposed a different path. Following the 1991 Gulf war, Israel altered the condition of free movement of Palestinian labour by introducing a limited number of work permits for Palestinian workers in Israel (Etkes et al., 2012). Following a series of terrorist attacks in 1993, Israel started implementing a closure policy, which consists of roadblocks and curfews restricting the movement of goods, and people between Israel and the Palestinian territories, between the West Bank and the Gaza Strip, and within the West Bank (Eltalla and Hens, 2009). Closures were declared on short notice and for different length of time, hence disrupting Palestinian trade flows, increasing transaction costs and creating more uncertainty in the Palestinian economy (Ihle and Rubin, 2013). Against the initial idea of economic integration with no internal border between Israel and the Palestinian territories, the introduction of the closure policy, and the building of a physical barrier that began in September 2000 is an important change reflecting the move towards economic and physical separation (Del Sarto, 2014).

The closure policy not only disrupted Palestinian trade with Israel but also with the rest of the world. While the Protocol implied free access to Israeli port facilities for Palestinian trade, due to the closures, Palestinian access to the Israeli port of Ashdod was often disrupted (World Bank, 2004). While the Protocol provisions grant the PNA the possibility to enter into bilateral trade agreements with third countries, in addition to benefiting from the ones signed by Israel, the implementation of these agreements and the access to the world market is hampered by the internal and external closures, and the associated high transaction costs (World Bank, 2008). Subsequently, the Palestinian economy is isolated from global markets. A consequence of this isolation is trade diversion towards trading predominantly with Israel (Astrup and Dessus, 2005). The restrictions on labour movement introduced via both the closure policy and the work permit policy substantially reduced the supply of the Palestinian labour to the Israeli economy (Flaig et al., 2013). Subsequently, unemployment rose sharply in the Palestinian territories.

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The poor performance of the Palestinian economy following the signing of the Protocol is widely attributed to the unbalanced design of the Protocol and the lack of an effective monitoring body (Kanafani, 2001). This is a classic case of an imperfect contract, whereby a party can violate the agreement with no significant consequence. The unilateral imposition of frequent and stringent restrictions on the movement of labour and goods by Israel is an illustration of the asymmetry of power between the two parties (Fischer et al., 2001). Another violation of the Protocol's conditions is the frequent withholding of tax revenue collected by Israel on behalf of the PNA. Between 1997 and 2015, the Palestinian revenue withheld by Israel totalled more than USD 3 billion, and the withholding period lasted between one month and two years (UNCTAD, 2015). Withholding the clearance revenue, which accounts for 75% of the PNA's total revenue, weakens the fiscal position of the PNA and increases uncertainty in the economy, which is detrimental to investment and the overall economic activity (Fernández-Villaverde et al., 2015). Furthermore, the protocol did not provide for the transfer of taxes on indirect import from third countries via Israel, resulting in significant fiscal losses to the PNA (Fjeldstad and al-Zagha, 2004). The Protocol also failed to provide the newly created Palestinian Monetary Authority the power to issue an independent currency. The absence of its own currency deprives the PNA of seigniorage revenues and removes a policy tool that could be used to respond to the economy's specific needs and to external shocks (IMF, 2013).

In conclusion the Protocol failed to bear the desired fruit of rapid growth of the Palestinian economy (Astrup and Dessus, 2001). Although, it was designed for a temporary period of five years, it has been in place for more than two decades now and still governs the Palestinian trade relations with Israel and with the rest of the world (UNCTAD, 2016). Under the current situation, the Protocol is outdated and no longer addresses the challenges faced by the Palestinian economy. In this view, a final political settlement to generate a more balanced agreement for long-term healthier economic relations between Israel and a sovereign Palestinian State may contribute to improving the situation. Among scholars and observers, there is a wide consensus that the economic integration with no internal border largely failed (Arnon and Weinblatt, 2001). Consequently, final status negotiations need to entail the creation of economic borders and grant the Palestinians full control over economic and monetary policies (Malul et al., 2008). After exiting the *de facto* customs union with Israel, Palestinian Authorities could choose among several options for trade regimes. Conceding that the choice of a future trade regime for Palestine would not be determined by economic criteria alone and that political choices are likely to affect the range of possible options, this study provides a quantitative assessment, from a purely economic perspective of the potential impact of different trade options in order to inform the debate.

1.2. Literature review

Some previous studies examined the question of an optimal trade regime for a future Palestinian state, using mostly descriptive analyses. Arnon and Bamya (2007), Vaggi and Baroud (2005), and Elmusa and El-Jaafari (1995) recommended a free trade agreement

between Palestine and Israel, on the premise that clear borders are needed between the two economies but that Palestine would be better off if it secures free access to the Israeli market. The authors also argue that Palestine should independently set tax on trade with third countries. Another group of studies (e.g. Kanafani, 1996; Abed, 1996) favoured a better implementation of the customs union with Israel, arguing that the absence of customs borders, and a proper working customs union with Israel would secure a smoother flow of Palestinian trade and eliminate the need for rules of origins, which could have negative effects on Palestinian exports to Israel. A third group of studies (e.g. Fischer et al., 2001) suggested that the future Palestinian economy should open to trade and have a liberal and non-discriminatory trade regime.

Beside these descriptive studies, only a few estimates of the economy-wide impacts of different trade regimes have been produced for Palestine. Schiff (2002) used cost-benefit analysis to compare different trade options. While such analysis gives first insights into the effects of different trade regimes, it lacks the multiplier and economy-wide effects that trade policy may generate. Other estimates were produced by UNCTAD (2009) using a macro-econometric model. Whereas such a model is suitable to analyse the outcomes of policy change at the macroeconomic level, it lacks the micro-optimization dimension. A CGE framework, in contrast, can support economy-wide analysis of policy change based on microeconomic theory of utility and profit maximization. The first CGE model to address the question of trade policy change in Palestine was developed by Astrup and Dessus (2001, 2005). However, the model had some rigidities, such as the imbedded assumption of the economy being at full employment, which sits at odds with the observed level of unemployment in Palestine. Some of these rigidities were addressed by Missaglia and Valensisi (2014), who extended the previous model by incorporating several of the specificities of the Palestinian macroeconomic context. Nevertheless, the new model similar to the previous does not incorporate a detailed productive structure, as well as a differentiated labour and household accounts to enable a detailed analysis of the effects of different trade options.

A notable issue is the fact that most of the previous studies ignored the physical and economic separation of the Gaza territory from the West Bank since the beginning of the second Palestinian uprising in 2000. The economy in the two territories exhibit different characteristics (IMF, 2016). Moreover, since the blockade of Gaza in 2007, the economic relations between Israel and the PNA are limited to the West Bank (UNCTAD, 2015). To reflect the present economic reality, this paper focuses exclusively on the West Bank, which is currently the territory under the jurisdiction of the PNA. This paper examines the effects of three alternative trade regimes on the West Bank economy, as compared to the current *de facto* customs union with Israel. To this purpose, a Computable General Equilibrium (CGE) model is used and is calibrated to a Social Accounting Matrix (SAM) of the West Bank for the year 2011 (Agbahey et al., 2016). The SAM depicts in detail labour and household groups, and thus allows for a differentiated analysis of welfare and unemployment effects of the designated scenarios. It also provides a detailed representation of commodities and productive sectors within in the Palestinian economy, so that the effects of the scenarios on the domestic production capacity can be assessed in depth.

The next section presents the specifications of the model used and the distinctive features of the database that serves as benchmark for the model. Section 3 describes the trade options that are simulated, and section 4 presents the main results of the study. Finally, section 5 discusses the results and draws conclusions.

2. Methodology

2.1.Model

A CGE model is used to examine the economy-wide effects of different trade regimes on the economy of the West Bank. This type of models is based on microeconomic theory of utility and profit maximization as well as product and factor markets being in equilibrium. The STAGE-2 model (McDonald, 2015) used in this study belongs to a suite of single-country and SAM-based CGE models. The model uses a combination of linear and non-linear relationships governing the behaviour of the model's agents. Households maximize their utility subject to preferences represented by Stone-Geary functions. Production technologies are specified as nested constant elasticity of substitution (CES) or Leontief functions. Domestic output is distributed between domestic and export markets using constant elasticity of transformation (CET) functions. Imports and domestic output are assumed to be imperfect substitutes on the domestic market (Armington assumption). The model allows for multiple product activities with commodities differentiated by the activities that produce them. Thus, the numbers of commodity and activity accounts are not necessarily the same. A generalized treatment of trade relationships is applied for non-traded and traded commodities. Finally, the model allows for the relaxation of the Harberger convention of homogeneous labour by capturing labour in physical units. Subsequently, heterogeneous labour can be modelled with workers receiving different returns in different activities.

One of the main features of the STAGE-2 model is that it explicitly accounts for trade and transport margins (ttm) as a wedge between the supply price (PQS) and purchaser price (PQD), in addition to the sales taxes (TX) and excise taxes (TEX) (Figure 1. Import price module). This specification is especially relevant for the West Bank where transaction costs are high due to the closures. For this study, a setup has been developed to allow distinguishing different trade partners in order to capture Palestine's membership in different preferential trade agreements. Hence, seven foreign regions are identified: Israel, the USA, Europe (EU28 and EFTA zone[5]), Turkey, Jordan, the Greater Arab Free Trade Area (GAFTA) zone and the rest of the world. The small country assumption is applied, considering the West Bank a price taker. Therefore, the world market price (PWM) is fixed and is equal for all regions. PWM is converted into the domestic currency using the nominal exchange rate (ER), and augmented

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[5] EU28 refers to the 28 members of the European political and economic Union, while EFTA stands for the European Free Trade Association consisting of Iceland, Liechtenstein, Norway, and Switzerland.

with the tariff rates (TM) associated with each trade partner, to generate the domestic price of imports (PMR) from different origins (Figure 1). The price of total import, after aggregation over origins, (PM) is the weighted average of the PMR, where the volumes of import from the different origins serve as weights. Finally, the supply price (PQS) is the weighted average of PM and the consumer price of domestic supply (PD), where the volume of total import and domestic supply to the domestic market serve as weights.

The Armington elasticities (σ_1) between domestic and imported products are differentiated by commodity group and are selected based on the long-run values estimated by Gallaway et al. (2003). The substitution elasticities at the lower nest between imported products from different origins (σ_2) is assumed twice as large as those existing between import and domestic products. On the export side, the elasticity of transformation between products intended for the domestic and export markets are set at 2.0, while those between the different destinations of exported products are set to 4.0. This model-extension is integrated in a generic way, to allow for an easy expansion or adjustment to other regions, elasticities and tariff-schemes.
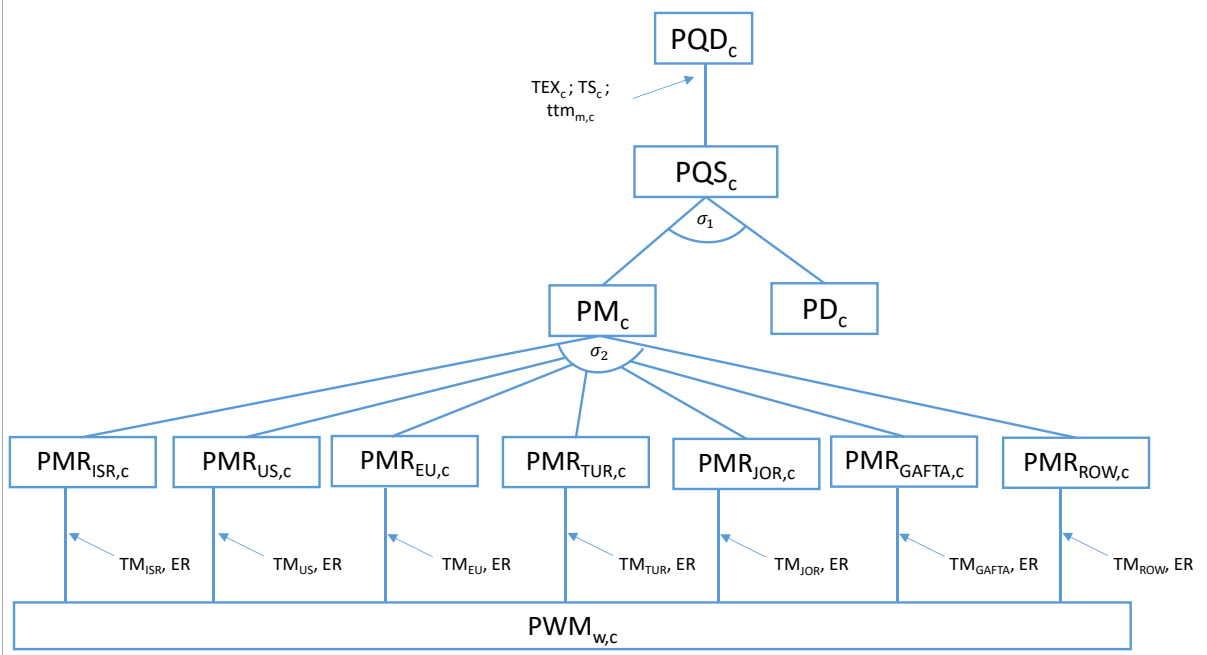

Figure 1. Import price module

Source. Authors' own illustration.

The production module has a three-level nesting structure. At the top level, aggregate intermediate inputs are combined with aggregate primary inputs using a CES specification (σ_x) to generate the outputs of activities. At the second level, aggregate intermediate inputs are composed using Leontief technology such that single commodities are demanded in fixed proportions relative to aggregate intermediate inputs of each activity. On the other branch of the second level, production factors are combined to form value added using CES technology (σ_{va}), with the optimal ratios of primary inputs being determined by their relative prices. At

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the lowest level, five labour groups classified by skill, gender and nationality are combined using a CES function (σ_{Lab}) to form the aggregate labour supply (Figure 2). Factors are assumed more substitutable at the lowest level of the nest than at the top level (σ_x= 0.5; σ_{va}= 0.8; and σ_{Lab}= 1.2).
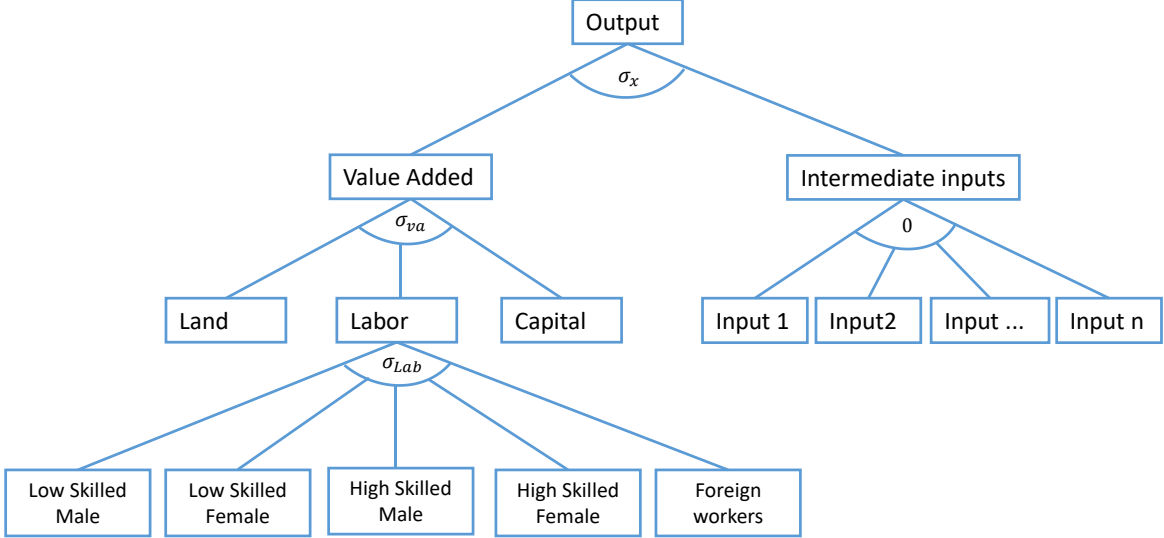

Figure 2. Production module

Source. Authors' own illustration.

2.2. Model closures

In the basic model closure, the full employment assumption of the standard neoclassical approach is relaxed for the domestic labour groups. Based on the numbers of workers and unemployed population in the West Bank in 2011 (PCBS, 2012), the supply of labour for the different labour categories is capped. This implies that activities can employ any number of workers at a fixed price, until all of the unemployed population moves into employment. From that point, wages increase as labour supply cannot be expanded any further. In contrast to domestic labour, foreign labour as well as capital and land are all assumed to be fully employed. The model has a long-term perspective with labour and capital assumed fully mobile across all sectors, while land is employed only in the agricultural sectors. A Palestinian national currency is assumed to have a floating exchange rate as this currency regime provides the greatest monetary policy autonomy (Yoshino et al., 2004). Government consumption is fixed as a proportion of final demand, while government savings are made exogenous, in order to avoid government deficit to increase as a result of the policy simulated. To achieve the government pre-determined net position, a tax rate should adjust endogenously. In this paper, the direct tax rate has been chosen to adjust, as in the Palestinian context, the effective income tax rate (0.1% estimated in Agbahey et al., 2016) is much lower than the announced rate for the lowest tax bracket, which is 5% (PIPA, 2017). Moreover, the income tax is a progressive tax. Hence its endogenous change in the model is expected to have a more pro-poor effect than what will

result from the choice of any indirect tax instrument to adjust. Finally, the model is investment-driven and the consumer price index serves as numeraire.

In addition to the described economic environment, this study employs two alternative closures. The first relaxes the assumption of fixed minimum wages. In fact, this assumption imposes rigidity on the model and hence the economy, which becomes prominent when the economy faces an exogenous shock. In circumstances where it might be more realistic for some workers to accept lower wages and stay in employment, this assumption allows no choice other than becoming unemployed. Therefore, the simulations were conducted under a closure with full employment of all production factors as well. This assumption, however, does not allow for any entry into the workforce despite the observed relatively high unemployment rates in the West Bank. Hence, the two economic environments are somehow extreme. In the second alternative closure, the floating exchange rate regime is replaced by a fixed exchange rate regime[6]. As argued by Rose and Van Wincoop (2001), a fixed exchange rate or currency peg can lead to improved welfare and increased trade volume when associated with lower trade barriers. Hence, this alternative exchange rate closure is also contemplated for the different trade regime scenarios considered for the West Bank.

2.3.Data

Few SAMs have been developed for the Palestinian territories. The first SAM for Palestine was developed by the World Bank for the year 1998 with a focus on trade (Astrup and Dessus, 2001). Its distinctive feature is the inclusion of four trade partners: Israel, the countries having a free trade agreement with Israel, the members of the Arab league, and the rest of the world. Besides this, it includes 31 activities/commodities, one household account and one government account. Another SAM was developed by Missaglia and Valensisi (2014) for the period 2006-2008, which considers two foreign partners (Israel and the rest of the world), a single production sector, two household groups and two factor types. A recent SAM for Palestine was compiled by Bayar (2013) for the reference year 2011. It comprises 16 activities and commodities, 2 production factors (labour and capital), 1 aggregated household and 1 account for government. Further, it includes 12 tax accounts and 2 trade partners.

The SAM used in this study (Agbahey et al., 2016) has several distinctive features over the previous ones. It is the first to focus exclusively on the West Bank economy. It is extensively disaggregated, and comprises 164 accounts. It has a multiple product activity setup, as it includes 38 commodity groups produced by 28 activities. Moreover, it features seven foreign regions building on the major trade agreements signed by the PNA. These include the

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[6] The model used provides for a domestic currency and one currency for all trade partners. Hence, fixing the exchange rate for the domestic currency is equivalent to a basket-peg. A basket-peg is widely seen as more desirable than a bilateral-peg for a small economy (see Schenk and Singleton, 2011; Yoshino et al., 2004 and Argy et al., 1989)

agreement with Israel, as well as the agreements with third countries having preferential access to the customs envelope formed by Israel and the Palestinian territories. The SAM includes 34 tax accounts, among which seven import tariffs and 7 export taxes associated with each trade partner. This detailed disaggregation of trade partners and import/export tax accounts allows for a thorough assessment of different trade options for the West Bank economy. Moreover, the SAM encompasses 17 production factor accounts and 30 household groups, allowing for the comprehensive assessment of the multiplier effects on factor markets and households' welfare. The SAM provides detailed information on transaction costs represented by three margin accounts for wholesale, retail trade and transport. The reference year for the SAM is 2011, which was chosen for being a relatively "normal year" with respect to political stability between Israel and Palestine, as well as for data availability reasons.

Table 1 presents the trade shares in the baseline for the seven regions involved in trade with the West bank. The predominance of Israel for both West Bank imports and exports is striking.

Table 1. Trade shares (in %) of foreign regions in Palestinian trade

	Import	*Export*
Israel	71.3	80.6
USA	0.8	1.4
EU28 + EFTA	8.3	9.5
Turkey	3.7	0.1
Jordan	5.4	2.9
GAFTA zone	3.8	2.5
Rest of the world	6.6	2.9

Source: Agbahey et al., 2016.

Imports play an important role in the West Bank, as they constitute 36% of the total commodity supply to the domestic market in the West Bank. For industrial products, the share of imports in the total supply makes up to 83% (Table 2). Exports are rather a small fraction of the domestic output. Nevertheless, more than half of the industrial products manufactured domestically are destined for the export market (Table 2).

Table 2. Shares of import in total supply and export in domestic output (in %)

	Import in total supply	*Export in domestic output*
Agricultural products	37.9	10.1
Food products	46.4	15.6
Industrial products	82.7	51.3
Services	12.2	3.2
All commodities	36.3	11.1

Source: Agbahey et al., 2016.

Table 3 presents the tariff rates for the different commodity groups (all commodities in the SAM grouped into three categories). Due to the current customs envelope, imports from Israel are free of tariff with the only exception being petroleum products, which are actually indirect imports since Israel is not an oil producer. According to an agreement between the PNA and Israel, tariffs collected by Israel on petroleum products that are re-exported to Palestine are transferred to the PNA (UNCTAD, 2012). Due to the preferential trade agreements, tariff rates on imports from the USA, Europe, Turkey, Jordan and the GAFTA zone are substantially lower than that on imports from the rest of the world, which are subject to the Most Favoured Nation (MFN) rates.

Table 3. Tariff rates (in %) by commodity groups and by trade partner in the baseline

	Agricultural products	Food products	Industrial products
Israel	0.0	0.0	21.0
USA	0.1	25.1	0.0
EU28 + EFTA	0.6	6.3	0.0
Turkey	0.0	32.3	0.0
Jordan	0.0	26.0	0.2
GAFTA zone	0.1	17.8	0.2
Rest of the world	37.3	58.8	65.4

Source: Agbahey et al., 2016.

The composition of household income in the baseline is worth mentioning as it drives the distributive effects in the model. Table 4 shows that all households aggregated by consumption quintiles derive most of their income from labour. While poorer households (quintile 1) derive relatively more income from labour than richer households do, the opposite holds for capital income. Inter-households transfers are a relatively higher share of the poorer households' income and the majority of these transfers (62%) are from the quintile 5 households to the others (Agbahey et al., 2016).

Table 4. Composition of household income (in %)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All households
Labour	77.7	77.1	74.8	63.5	47.8	64.0
Capital	7.2	11.2	15.7	25.6	33.8	22.4
Land	0.0	0.0	0.0	0.0	0.0	0.0
Inter-household transfers	1.3	0.8	0.8	0.7	0.7	0.8
Non-profit institutions serving households transfers	0.3	0.2	0.1	0.1	0.0	0.1
Government transfers	10.3	7.6	4.3	6.4	8.4	7.3
Remittances	3.3	3.2	4.3	3.8	9.2	5.5
Total	100	100	100	100	100	100

Source: Agbahey et al., 2016.

3. Simulations

The analysis compares the outcomes of the current policy framework (the *status quo* represented by a base scenario that is reflected by the data in the SAM) to three different trade policy scenarios, all assuming exiting[7] the customs envelope with Israel as follows:

1) Complete removal of tariffs on imports from all trade partners (*Full Lib* scenario): this scenario implies a Full Liberalization of Palestinian external trade.
2) Introduction of high tariffs on imports from Israel (*MFN* scenario): in this scenario, the West Bank exits the customs envelope and forms no other trade agreement with Israel. Israel is treated similar to other trade partners without trade agreement and falls under the MFN category. The tariff structure with respect to other trade partners is not altered.
3) Introduction of low tariffs on imports from Israel (*PTA* scenario): in this scenario, the West Bank reaches a preferential trade agreement with Israel. The weighted average of tariff rates of trade partners with a preferential trade agreements with Palestine are applied to Israel as well. As any preferential trade agreements implies the setup of rules of origins, it is assumed that the introduction of such rules will involve additional costs on both import and export from/to Israel. These additional costs are captured by increasing (decreasing) the domestic price of imports (exports) of goods from (to) Israel by 3%, based on an estimation by Astrup and Dessus (2001). Again, tariffs applied to imports from non-Israeli origins are not altered.

Table 5 presents the weighted tariff rates, where the weights are the volumes of imports for the respective commodities in the base situation, as well as the rates in the different scenarios.

Table 5. Weighted tariff rates (in %) in the base situation and the four scenarios for total commodity

	Base	Full Lib	MFN	PTA
Israel	15.3	0	55.5	18.1
USA	3.2	0	3.2	3.2
EU28 + EFTA	0.8	0	0.8	0.8
Turkey	5.9	0	5.9	5.9
Jordan	4.3	0	4.3	4.3
GAFTA zone	7.6	0	7.6	7.6
Rest of the world	62.7	0	62.7	62.7

Source: Authors' own calculations.

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[7] Exiting the current customs envelope with Israel is likely to be associated with more restricted access for Palestinians to the Israeli labour market, which is not captured in this paper for simplicity reasons. Similarly, the *ceteris paribus* assumption applies regarding potential changes in Israeli trade policy towards Palestine. A sovereign Palestinian State with full control over its territory is likely to be associated with reduced transaction costs related to removing the existing internal closures. Likewise, building and maintaining a customs administration at the borders involves costs. These different aspects are ignored in this study for simplicity reasons, and are assessed in other studies to isolate their respective effects on the West Bank economy.

4. Results

This section starts with a presentation of the effects of the three policy scenarios assuming unemployed domestic labour and floating exchange rate. Next, the sensitivity of the results to changes in the macroeconomic environment is analysed.

4.1. Effects on trade performance

In the *Full Lib* scenario, the removal of all tariffs causes the domestic price of imports (PMR) to fall for the rest of the world region by 14% (Figure 3). The increase of PMR for the other regions, despite the removal of the tariffs, is driven by the depreciation of the local currency by 8%. This differentiated effect of the scenario on PMR according to the origin of the import is due to the much heavier tariffs that are imposed in the baseline on import from the rest of the world region (see Table 3). Consequently, the effect of removing the tariffs outweighs the currency depreciation effect for the rest of the world, but not for the other regions. As a result of the price change, imports from the rest of the world more than quadruple (Figure 4). Imports from the other regions decrease, except for the GAFTA region, which carries the second-highest tariff in the baseline among the West Bank's trade partners, excluding Israel, for which tariffs are only imposed on a single commodity (petroleum products) as explained in section 2.3. (see Table 3).

The *MFN* and *PTA* scenarios only increase the PMR from Israel, for which tariffs are increased. The reduction in the PMR from the other regions reflects the appreciation of the local currency by 8% and 1% respectively in the *MFN* and the *PTA* scenarios. The higher the tariffs introduced on imports from Israel, the higher the domestic price of import from Israel and the lower the domestic price of imports from the other regions (Figure 3), implying trade diversion away from Israel (Figure 4Figure 4). Also the magnitude of trade diversion is determined by the height of the tariff introduced on imports from Israel.
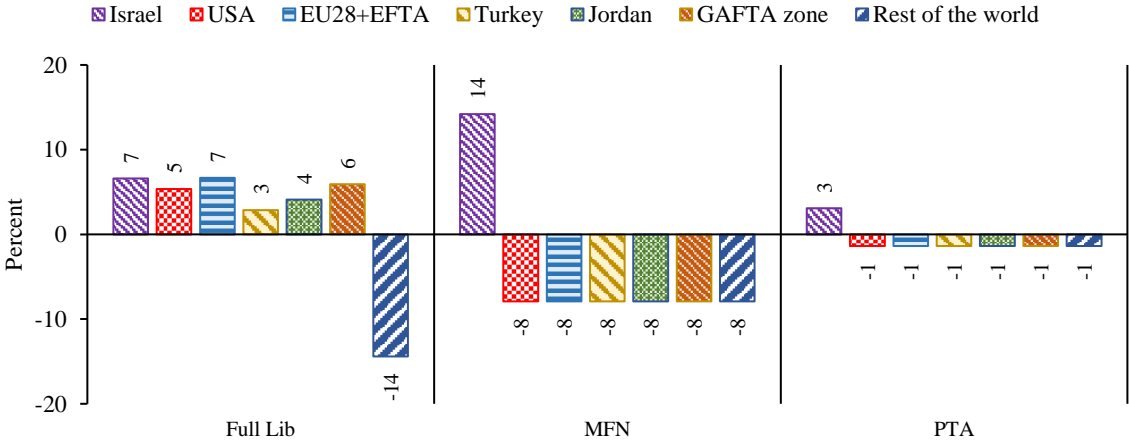

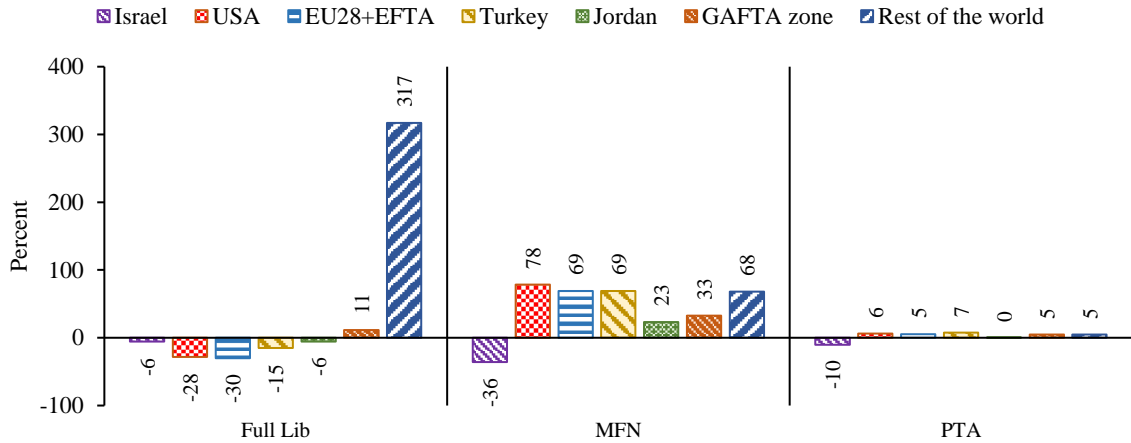**Figure 3. Change in import price by region**

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Figure 4. Change in import demand by region

In the *Full Lib* scenario, the price of total import (PM) increases by 2% on average for all commodities (Figure 5). This finding shows that the decrease of PMR for the rest of the world is at total import level overcompensated by the increase of PMR for the other regions, and especially for Israel. This result needs to be put into perspective with the trade shares for the different regions (see Table 1), with Israel having the largest share in Palestinian imports. However, this general finding hides a more differentiated result, when it comes to different groups of commodities as shown in Figure 5. For agricultural products and services, PM increases, while it decreases for food and industrial products. This stems from the differentiated tariff rates on different commodity groups in the base (see Table 3). While food and industrial products from all trade partners are heavily taxed, agricultural products face lower tariffs and services are not taxed at all. Hence, the effect of removing the tariffs outweighs the currency depreciation effect for food and industrial products, whereas for services and agricultural products the currency depreciation effect overweighs. Accordingly, the volume of total import demand increases in the *Full Lib* scenario especially for food and industrial goods (Figure 5).

In the *MFN* and *PTA* scenarios, the increase of the PMR from Israel outweighs its decrease for the other regions (Figure 5), due to the largest import share of Israel. As a result, PM increases on average for all commodities in the two scenarios. Across commodity groups, PM increases for goods (agricultural, food and manufactured products), because the two scenarios impose tariffs on imported goods only. PM increases much less for agricultural and industrial products than for food products in the *PTA* scenario as compared to the *MFN* scenario, because the preferential trade agreements lower the tariffs substantially more for agricultural and industrial products than for food products (see Table 3). The decline of PM for services in the two scenarios is exclusively the result of the currency appreciation. Consequently, the volume of total import demand decreases in general for goods in the two scenarios (Figure 5). The observed decrease in total import demand for services is the result of cross effects through lower overall demand in the economy.
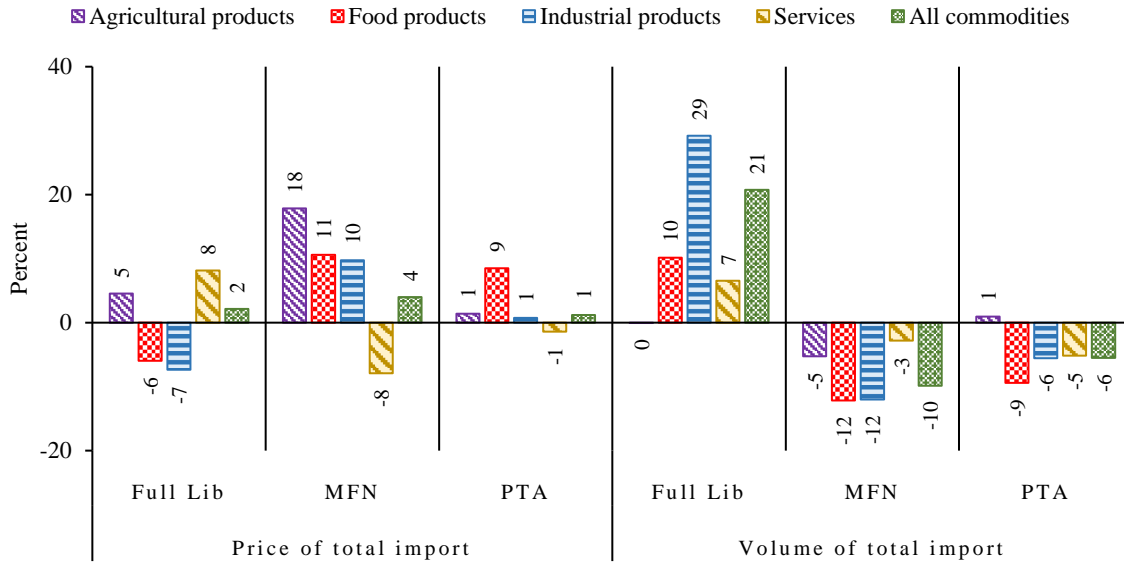
Figure 5. Change in price and volume of total import by commodity groups

The changes in the price of total export supply (Figure 6) mainly reflects the change in the exchange rate in the three scenarios, with price of total export increasing between 4% to 7% in the *Full Lib* scenario, while decreasing between 6% to 8%, and 1% to 4% respectively in the *MFN* and *PTA* scenarios. The changes in the volume of total export supply (Figure 6) reflect both the changes in the price of total export and changes in the domestic output (see section 4.2).
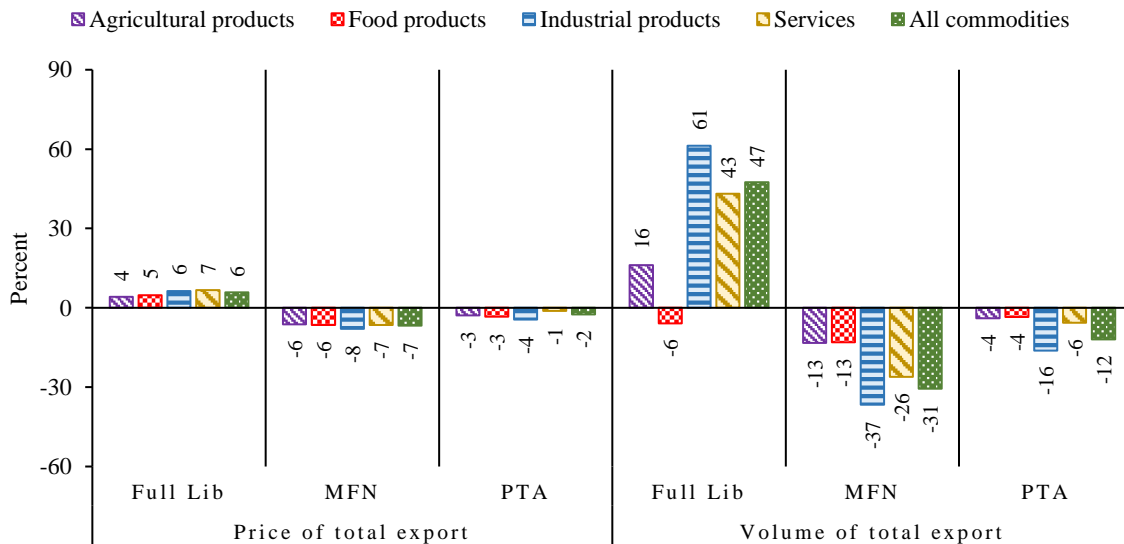

Figure 6. Change in price and volume of total export by commodity groups

4.2. Effects on domestic output and unemployment

In the *Full Lib* scenario, the depreciation of the local currency stimulates the domestic production, which increases overall by 16%. Across sectors, domestic output increases the most in the industrial sector (Figure 7). This differentiated effect needs to be put into perspective with the change in factor demand by the respective sectors. Labour demand increases in all sectors (Figure 8Figure 8), but it increases more strongly in the industrial sector, which is the most trade-oriented sector (see Table 2). Similarly, the industrial sector attracts the most the factor capital, which moves out of the other sectors (Figure 8). As a result of the increased factor demand in the economy, production cost increases in all sectors. As expected, cost of production increases less in the industrial sector, making this sector more attractive.

In the *MFN* and *PTA* scenarios, domestic output shrinks, and it shrinks more in the *MFN* scenario than in the *PTA* scenario (Figure 7). In both scenarios, output in the industrial sector is the most negatively affected. This result also stems from the change in factor use by the respective sectors. In both scenarios, the demand for labour experienced the sharpest drop in the industrial sector (Figure 8Figure 8). Factor capital moves out of the industrial sector into the other sectors (Figure 8). Due to the reduced economic activity, production cost decreases in general.
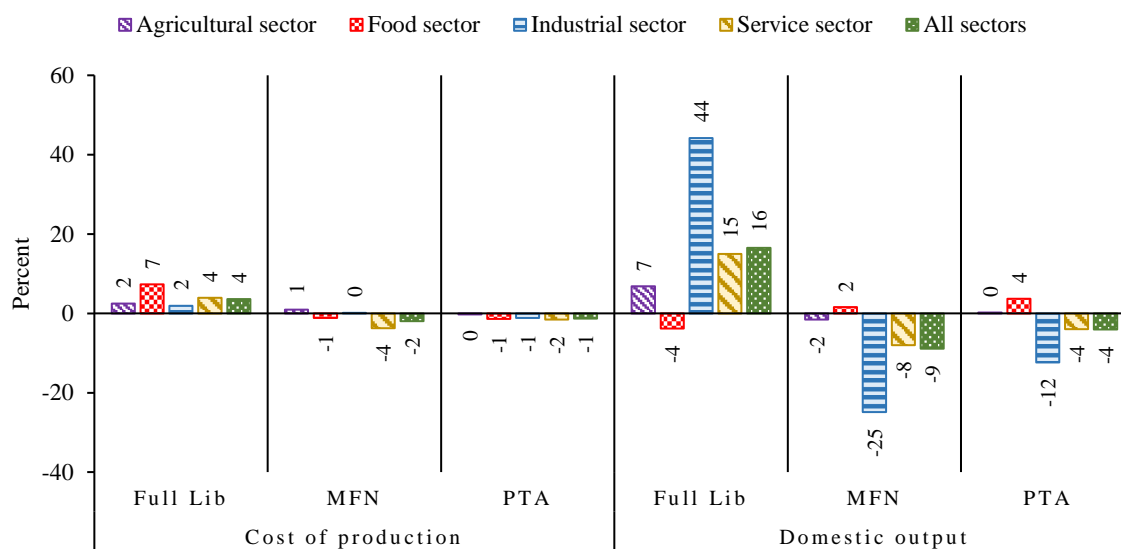

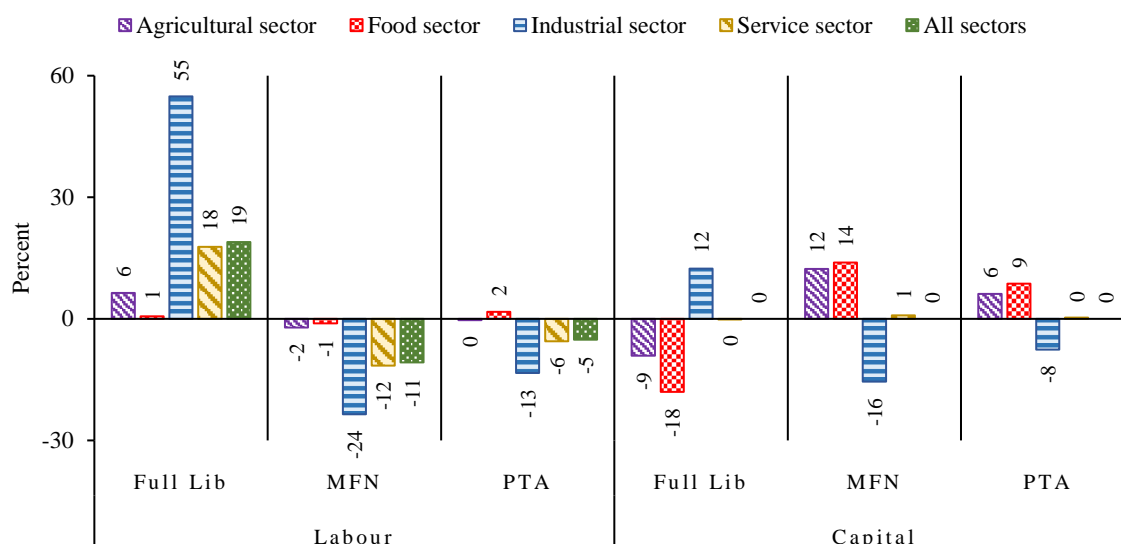**Figure 7. Change in production cost and domestic output by sectors**

Figure 8. Change in labour and capital demand by productive sectors

The change in labour demand has implications on the unemployment rate in the West Bank. In the *Full Lib* scenario, demand for labour increases in all domestic productive sectors. Due to the resulting extra demand for labour, unemployment in the West Bank decreases substantially from 19% in the base to 3%. Among labour categories, low-skilled females and high-skilled males reach full employment. For labour groups with higher unemployment rates in the base, unemployment persists although at a much lower rate (Table 6).

The unemployment rate increases substantially under the *MFN* scenario and somewhat less under the *PTA* scenario. The unemployment rate increases relatively more among the low-skilled females and the high-skilled males, which in the baseline face lower unemployment rates (Table 6Table 6).

Table 6. Unemployment rates (in %)

	Base	*Full Lib*	*MFN*	*PTA*
Low-skilled male	20.4	0.9	30.5	25.0
Low-skilled female	9.0	0.0	16.0	12.1
High-skilled male	11.8	0.0	21.6	16.8
High-skilled female	32.7	19.6	38.9	36.3
Total labour	19.1	3.1	28.2	23.5

4.3.Effects on total supply and final consumption

The change in the supply price (PQS) is influenced by the changes in the price of total import (PM) and changes in the production cost (PX). In the *Full Lib* scenario, PQS increases for agricultural products and services, but not for the industrial and food products (Figure 9). The

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increase in PQS for agricultural products and services stem from the increase in both PX (Figure 7) and PM (Figure 5) for these two commodity groups. For the industrial and food products, PM decreases, while PX in the domestic industrial and food sectors increases. The decrease in PQS for the industrial and food products shows that the effect of decreasing PM outweighs the increase in PX. This result should be put into perspective with the shares of import in the total supply (Table 2), which shows that for the two products, and especially for industrial products, import makes up a large share of the total supply. In the *MFN* and *PTA* scenarios, the changes in PX for the service sector and PM move in the same direction and decrease PQS for services. For goods, the effect of an increasing PM tend to dominate (Figure 9). In these two scenarios, tariffs are only introduced on imported goods, which explains the dominant effect of PM.

Similar to the composition of the change in the supply price, the change in the total supply (Figure 9) is influenced by the change in total import and the change in domestic output. In the *Full Lib* scenario, both domestic output and total import increase for industrial products and services and translate into the increase of the total supply for these two commodity groups. For food products, the increase in total supply reflects the dominating effect of the increasing aggregate import over the decreasing domestic output. For the agricultural products, while total import remains unchanged, domestic output increases and triggers an increase in the total supply. In the *MFN* and *PTA* scenarios, both domestic output and total import decrease for all commodities except food products and translate into the increase of the total supply. For food products, the decrease in total supply reflects the dominant effect of the decreasing total import over increasing domestic output.
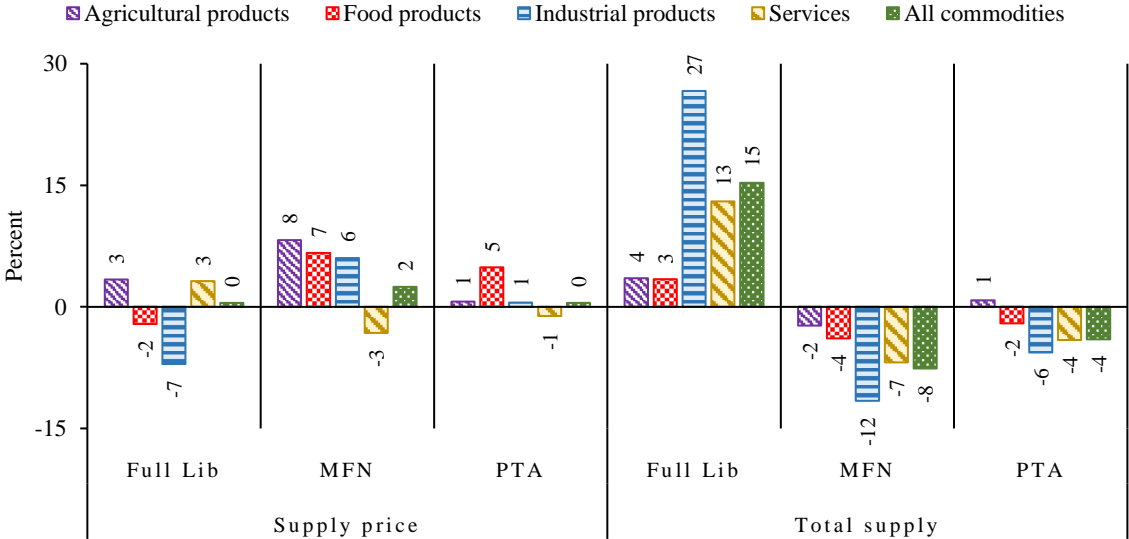

Figure 9. Change in supply price and total supply

The change in the purchaser price (PQD) is influenced by the change in the supply price (PQS) and the change in the price of trade and transport margins. In the *Full Lib* scenario, the price of trade and transport margins increases on average by 7%, while in the *MFN* and *PTA* scenario, it decreases by 9% and 3% respectively. The change in the price of trade and transport margins comes on top of the change in the supply price. As a result, the commodities for which PQS is increasing, PQD increases even further. The ones for which PQS is decreasing, PQD decreases less or even increases. Figure 10 shows that within the group of foods products, for which PQS was decreasing on average by 2%, while PQS was actually decreasing for three commodities out of five, PQD decreases only for one (processed fruits and vegetables). In the *MFN* and *PTA* scenarios, PQS increases for all goods and decreases for services. Because the price of margins decreases, PQD increases less for goods in the *MFN* scenario and becomes neutral for most of them in the *PTA* scenario (Figure 10). For services, in the two scenarios, PQD decreases further.

In the *Full Lib* scenario, final consumption increases for almost all the commodities, as the economy overall expands. Households' consumption increases the most for the industrial products for which the purchaser price decreases the most (Figure 10). By contrast, in the *MFN* and *PTA* scenarios, household consumption decreases for all commodities, as the economy shrinks. It decreases the most for industrial products and services, for which the demand is more income elastic.
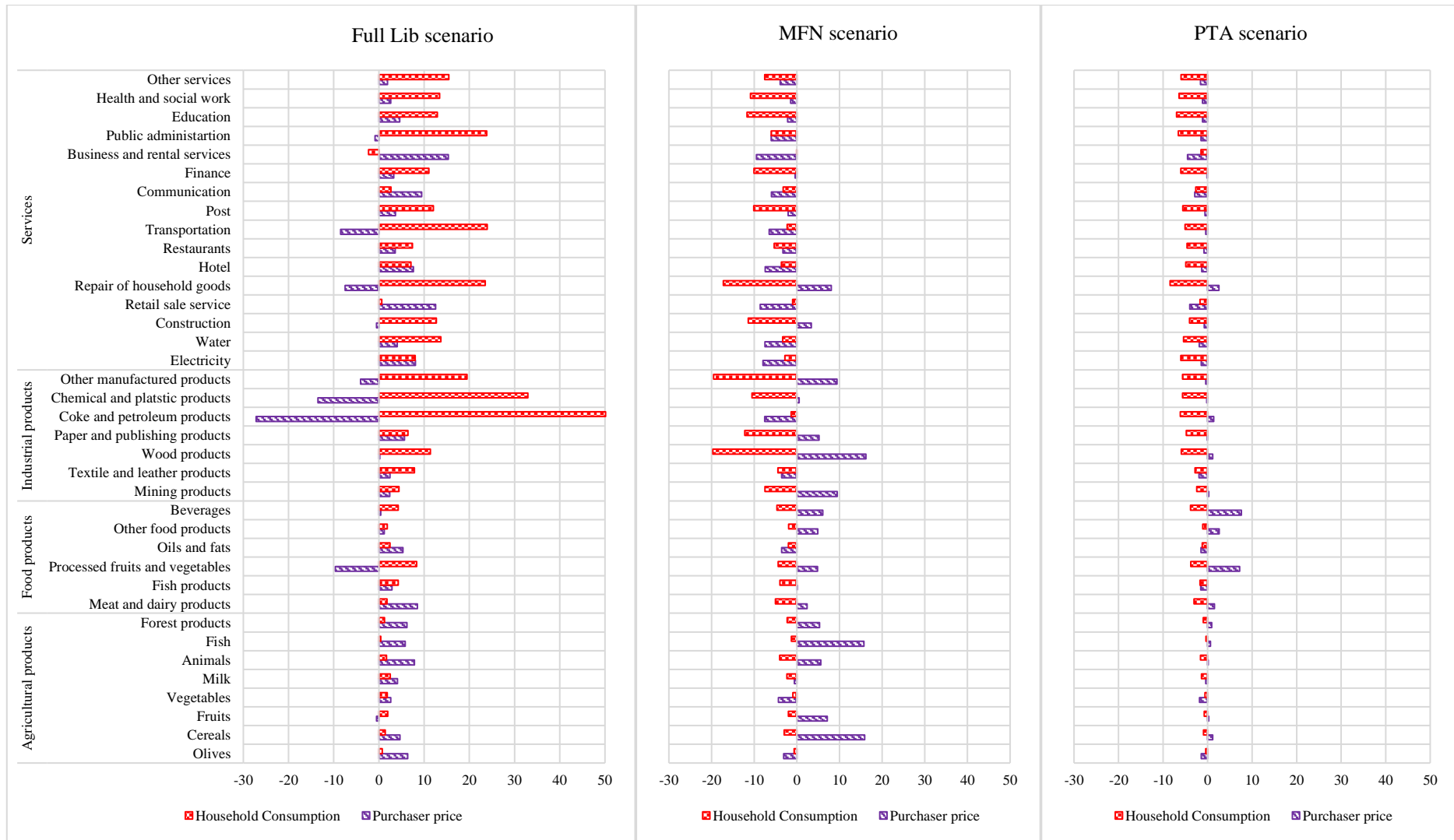
Figure 10. Change in purchaser price and household consumption

4.4.Effects on household income and expenditure

Households in the West Bank derive most of their income from labour earning and capital returns (see Table 4). In the *Full Lib* scenario, income to both labour and capital increases (Figure 11) leading household income to increase for all household quintiles. As capital income increases more than labour income, households deriving more income from capital (household quintiles 4 and 5) experience a slightly higher overall income increase than the other households (Figure 12). Similarly, in the *MFN* and *PTA* scenarios, capital income decreases more than labour income, hence, income to households in quintiles 4 and 5 followed suit.

Household expenditure follows the same trend as the change in household income, though the magnitude of the change is smaller (Figure 12). For households (aggregated across quintiles), income increases by 20% leading their expenditure to increases by 11% with the remaining in income saved and/or transferred domestically or abroad. The opposite holds true under the *MFN* and *PTA* scenarios, where total household income decreases by 11% and 5%, while expenditure decreases by 7% and 4% for the two scenarios, respectively. Another finding is that the magnitude of change in household expenditure for the top quintile is smaller than for the poorer household groups. This can be explained by changes in inter-households transfers, to which quintile five households contribute 62% of the total. In the *Full Lib* scenario, inter-household transfers increase by 12%. As these transfers are largely paid by households in the fifth quintile, they constitute a wedge between household income and household expenditure in addition to savings. Similarly, in the *MFN* and *PTA* scenarios, inter-households transfers decrease by 7% and 4%, respectively. A large part of the reduced payment of these transfers fall on households in the fifth quintile and dampen the effect of decreasing income.
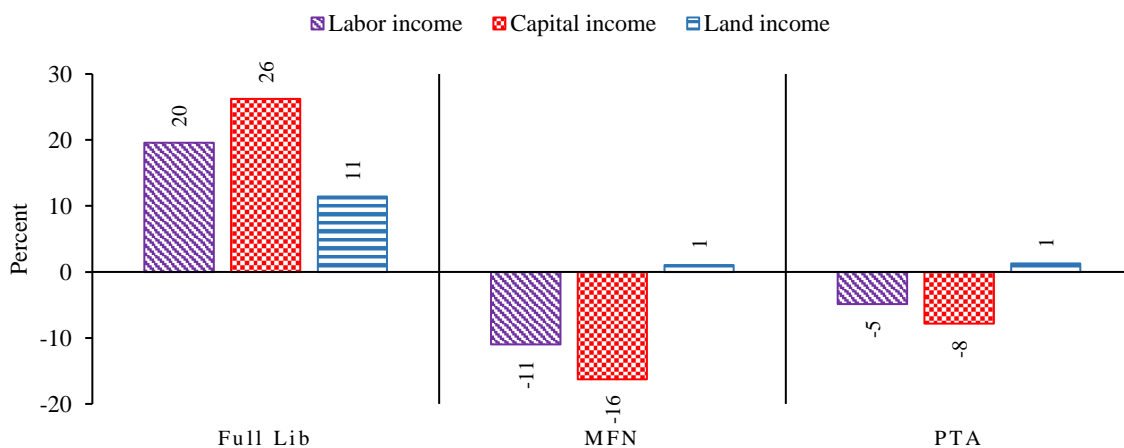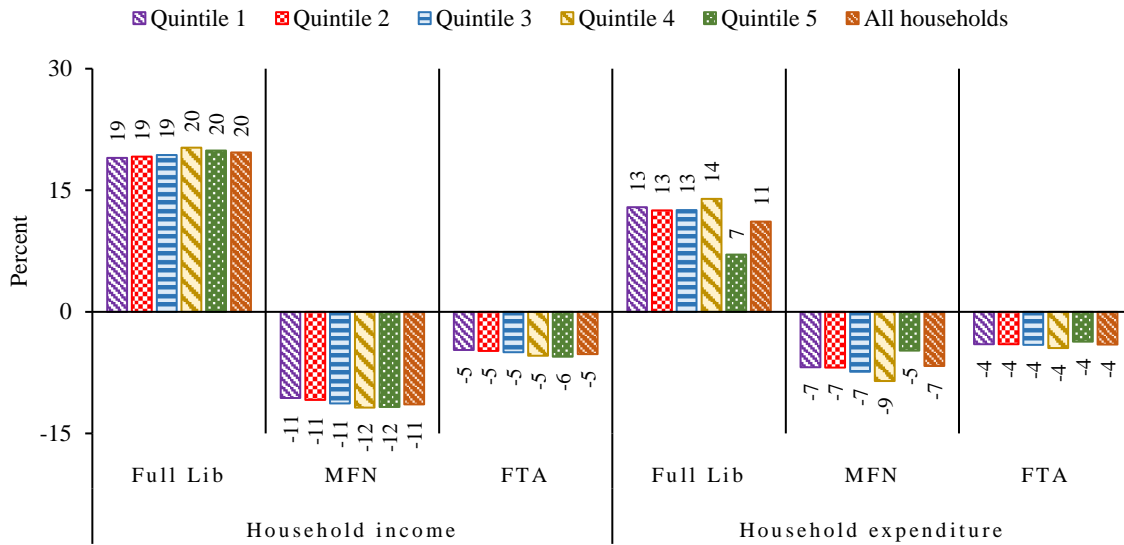

Figure 11. Change in factor income

Figure 12. Change in household income and expenditure

4.5. Change in Government revenue

Figure 13 shows that in the *Full Lib* scenario, government revenue improves by 10% although tariffs are completely abolished. In fact, the loss in tariff revenue is overcompensated by the increase in the revenue collected through the other tax instruments. The increased household consumption drives VAT revenue up, despite the VAT tax rate staying constant. Similarly, overall increase in final demand leads to increased excise tax revenue. Increased factor demand by productive sectors in this scenario brings a substantial part of the unemployed population into employment. As a result, factor use tax revenue increases. Finally, direct tax revenue experiences a tremendous increase partly because household income improves, and in another part because the direct tax rate is set flexible in the closures. The direct tax rate increases from 0.1% in the base to 8.0%.

In the *MFN* and *PTA* scenarios, government revenue decreases respectively by 6% and 3%. As expected, tariff revenue increases due to the increase in tariffs on import from Israel. However, the revenue from the other tax instruments decreases because of the contraction of the economy. As for direct tax, the tax burden on households and enterprises is overcompensated by government transfers.
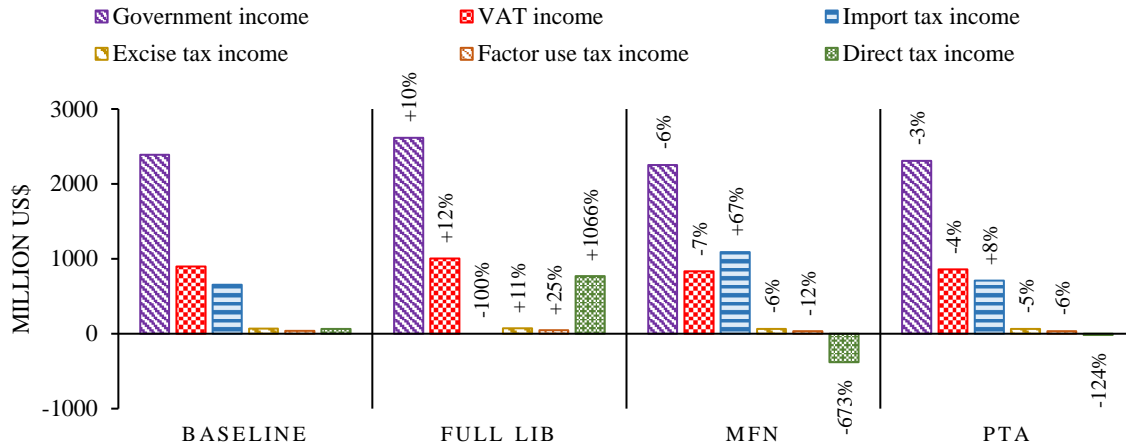
Figure 13. Change in government revenue and tax composition

4.6. Welfare and macro effects

Welfare effects measured as the change in the equivalent variation as a share of the household expenditure in the base shows that welfare improves in the *Full Lib* scenario, while it declines in the *MFN* and *PTA* scenarios (Figure 14). The higher the tariffs imposed on import from Israel, the higher the welfare loss. Across household quintiles, it is noteworthy that the change in welfare for the top quintile has in general a smaller magnitude than the changes affecting the other household groups. This finding reflects the effects of the payment of inter-household transfers that affect the expenditures for this household quintile as discussed in section 4.4. For the other household quintiles, it can be concluded that the richer the household the more its welfare improves in the *Full Lib* scenario, and it worsens in the *MFN* and *PTA* scenarios.
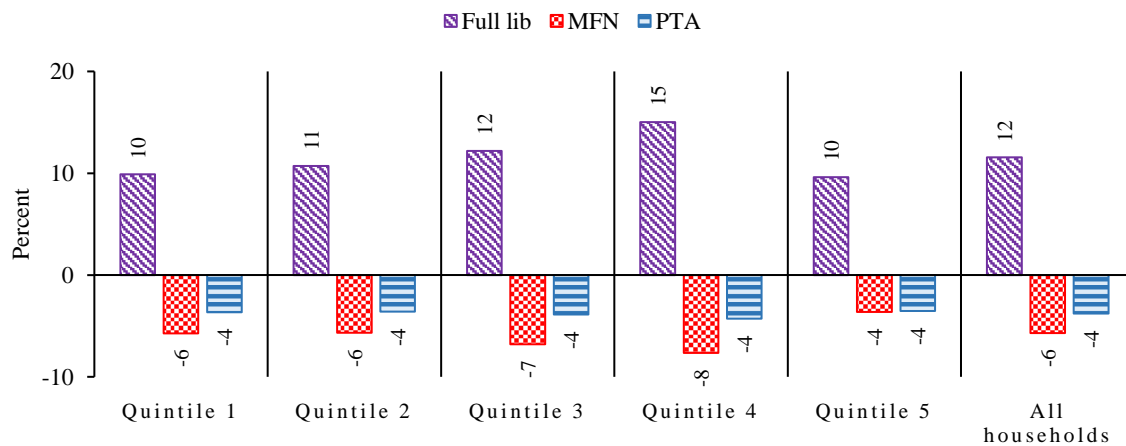

Figure 14. Change in household welfare (EV as % of household base expenditure)

At the macro level, real GDP increases by 10% in the *Full Lib* scenario, while it decreases by 7% and 3% respectively in the *MFN* and *PTA* scenarios. Table 7 shows that removing the tariffs on imports from all regions stimulates import demand that rises by 20%. Ultimately, final

demand increases by 12% with all its components (private consumption, government consumption and investment consumption) increasing by more than 10%. The increased demand stimulates the domestic production, which increases by 16%. To achieve this, domestic sectors consume 22% more intermediate inputs. Real export supply increases substantially by 47%. In the *MFN* and *PTA* scenarios, the economy shrinks, absorption decreases as well as domestic production. Real import demand and export supply decrease.

Table 7. Real changes of macroeconomic indicators (in %)

	Full Lib	*MFN*	*PTA*
Private consumption	11.5	-5.3	-3.7
Government consumption	10.7	-1.8	-2.7
Investment consumption	13.7	-12.0	-3.6
Absorption	11.7	-5.7	-3.5
Import demand	20.8	-9.8	-5.5
Export supply	47.5	-30.5	-11.9
Domestic production	16.5	-8.9	-4.1
Intermediate inputs	22.5	-10.4	-4.6
GDP	10.4	-6.9	-6.5

4.6.1. Sensitivity of the results to fixed exchange rate policy

Assuming that a fixed exchange rate policy is adopted, the effects of the scenarios are amplified (Figure 15). In the *Full Lib* scenario, PM decreases, as tariffs are removed and there is no currency depreciation like under the floating exchange rate assumption. In the *MFN* and *PTA* scenarios, the increase in PM, due to the introduction of new tariffs on import from Israel is higher than under the assumption of floating exchange rate as there is no currency appreciation. Subsequently, the volume of total import increases substantially more in the *Full Lib* scenario, while it decreases more in the *MFN* and *PTA* scenarios.
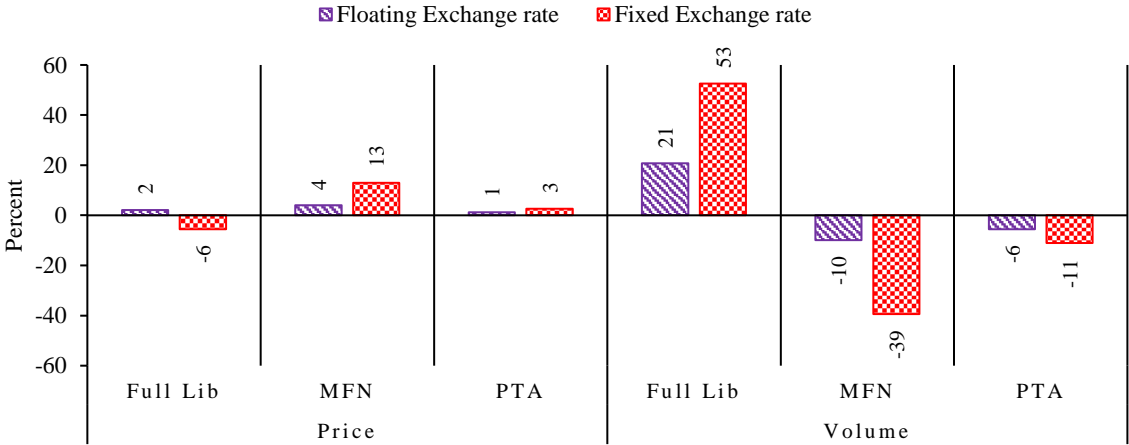

Figure 15. Change in price and volume of total import under fixed and flexible exchange rates

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The amplification trend observed for total import is also noted for the employment effects. Under the fixed exchange rate policy, in the *Full Lib* scenario, full employment is reached for all the labour groups, while in the *MFN* and the *PTA* scenarios unemployment rates increases more than under the floating exchange rate policy (Figure 16). At the macroeconomic level, the magnitude of the effects on GDP almost doubles in the *Full Lib* and *PTA* scenarios, while it almost quadruples in the *MFN* scenario.
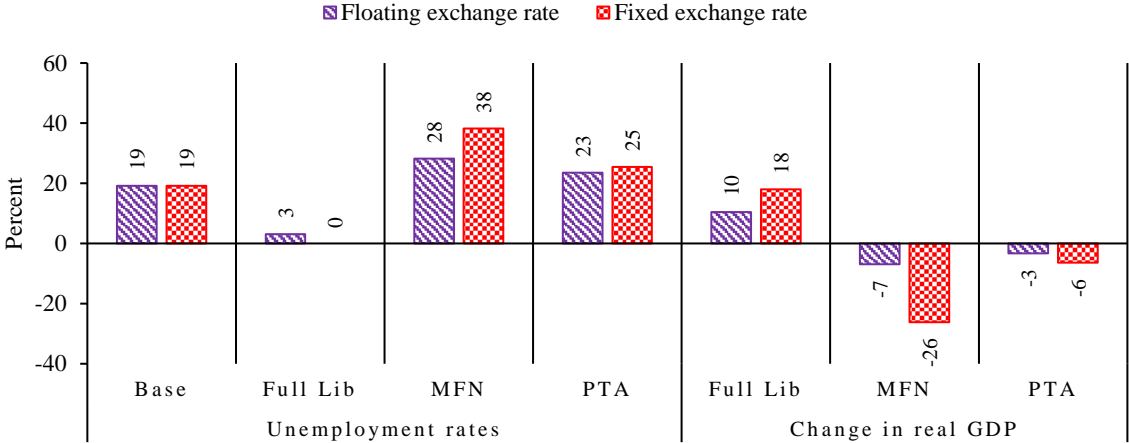

Figure 16. Change in unemployment rates and real GDP under floating and fixed exchange rates regimes

4.7. Sensitivity of the results to a full employment assumption

Assuming full employment of labour in the West Bank reduces the magnitude of the change in domestic output in the three scenarios (Figure 17). In the *Full Lib* scenario, because of the absence of movement from the unemployed population into the workforce, wages increase strongly by 12%, against 4% in the model with unemployment, in response to the shock. As factors become more expensive, cost of production increases and consequently domestic output increases less than when unemployment is accounted for in the model. In the *MFN* and *PTA* scenarios, because full employment is assumed, workers stay in employment but receive lower wages – wages decrease by 7% and 3% respectively in the *MFN* and *PTA* scenarios. As workers stay nonetheless in employment, the drop in domestic output observed in the model with unemployment is dampened. Ultimately, the effects of the scenarios on the macro indicators, as illustrated by the real GDP, are very small in the model with full employment as compared to the model with unemployment (Figure 17Figure 17).
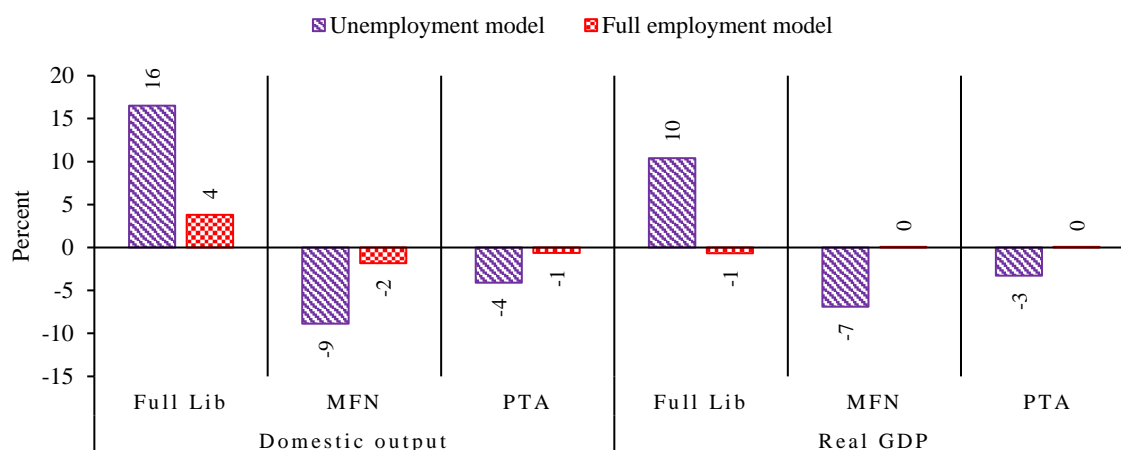
Figure 17. **Change in Domestic output and real GDP under full employment and unemployment models**

5. Summary and conclusions

The Paris Protocol, which governs the economic relations between Israel and the Palestinian territories, formalized the customs envelope between the two parties. This customs envelope is largely based on the Israeli rules. Due to the structural differences between the two economies, those rules are not favourable to the Palestinian economy. The Paris Protocol as a transitional agreement is supposed to pave the way for a final settlement, where a sovereign Palestinian State would eventually have full control over its trade and monetary policies. In the context of such a final settlement, this study simulates different possible trade regimes, in which the customs envelope with Israel is assumed to be removed and trade policy is solely determined by the PNA. The scenarios range from the elimination of tariffs on imports from all trade partners (*Full Lib* scenario) to the imposition of high tariffs on imports from Israel (*MFN* scenario). An intermediate scenario is also considered, assuming the conclusion of a preferential trade agreement with Israel (*PTA* scenario).

Total tariff elimination leads to increased import demand, especially for imports originating from countries not having a multilateral trade agreement with both Israel and Palestine, and which face the highest tariff rates in the base. This finding points to trade diversion forced on the West Bank by the customs envelope and currency union with Israel towards trading with Israel and its trade partners at the expense of other regions. Adopting a non-discriminatory trade policy such as the full trade liberalization with all trade partners, brings about diversification of Palestinian trade and removes the excessive dependency on Israel. The *Full Lib* scenario also stimulates the domestic production, which in return demands more factors, especially labour, and hence improves welfare in the West Bank. As a result of the increased labour demand, the unemployment rate falls substantially and even full employment is achieved for the high-skilled male and low-skilled female workers. This finding confirms the leverage that trade policy has on unemployment and hence endorses the results of UNCTAD (2009) suggesting that the PNA can achieve considerable reduction in unemployment should it be empowered with full control over its trade policy instruments.

Our results, in line with those of Carneiro and Arbache (2003), have shown that trade liberalization produces higher increases in labour demand, and ultimately higher domestic output, in the most trade-oriented sectors, which are the industrial sectors. Similarly, in the scenarios restricting trade by imposing tariffs on imports from Israel, the production factors in general move more out of the most trade-oriented sectors generating higher output drop in those sectors. Among the different trade regimes contemplated in this study, we found that full trade liberalization benefits the West Bank economy, leading to a growth of 10% in real GDP as compared to the *status quo* of continued customs envelope with Israel. These results confirm the predictions by Fischer et al. (2001) and Astrup and Dessus (2005), that a liberal and non-discriminatory trade regime as depicted by the *Full Lib* scenario is the most suitable for a sovereign Palestinian State. By contrast, the other two scenarios, where tariffs are introduced on imports from Israel generate a worse outcome for the West Bank economy than the *status quo*. Additionally, the higher the tariffs, the worse the outcomes for the West Bank economy. Hence, a preferential agreement with Israel is more desirable than no agreement leading to the imposition of the most favoured nation tariff rates on the imports from Israel. In an additional scenario we investigated whether a customs union with the Arab countries (GAFTA-countries including Jordan) would help to absorb the negative effect of exiting the customs envelope with Israel without concluding a preferential trade agreement. The results of that scenario show that the membership in a GAFTA customs union only slightly attenuates the negative effects of introducing high tariffs on import from Israel. The gains are small because Israel is likely to remain the major trade partner for the West Bank, as it is the largest economy in the region and the most natural outlet for the West Bank products (Arnon and Weinblatt, 2001). Consequently, a greater integration with other Arab countries is important, but it cannot be a substitute to the economic links with Israel.

Our finding highlight that government revenue will increase in the *Full Lib* scenario, despite the abolishment of tariff revenue. This result should be put into perspective with the long term horizon of the model. As argued by Bevan (1999), trade liberalization regimes deteriorate the government fiscal position in the short run, but can enhance it in the long-run. A particular discussion point is the substantial increase in the direct tax rate resulting from the endogenous adjustment of the model. As discussed in section 2.2. of this paper, the effective income tax rate in Palestine is much lower than the official rates, which are 5% for the lowest income bracket, 10% for the middle income bracket and 15% for the top income bracket (PIPA, 2017). Fjeldstad and al-Zagha (2004) show that income tax collection in Palestine is subject to negotiations in virtually all cases, and that the tax base is eroded by generous exemptions. Moreover, the tax administration suffers from insufficient resources allocation, and lack of human capital. Hence, the increase of the effective income tax rate from 0.1% in the base to 8.0% could practically be achieved by improving the tax collection.

The study shows that for a sovereign Palestinian State, the control over its currency and exchange rate is important and can affect the choice of the future trade regime. A trade regime lowering tariffs, such as *Full Lib* scenario, generates the highest benefit for the West Bank economy under a fixed exchange rate policy. By contrast, a floating exchange rate policy helps

to cushion adverse effects resulting from trade regimes that increase tariffs on imports from Israel, which lead to a decreased trade volume. This finding is in line with Rose and Van Wincoop (2001) and Argy et al. (1989)who found that a fixed exchange rate regime outperforms a floating exchange rate regime for a small economy only when associated with lower barriers to trade, like in the *Full Lib* scenario run in this study. The study also shows that the consideration of the unemployed population has strong implications for the magnitude of the results. The most realistic economic environment to assume for a sovereign Palestinian State will depend on whether Palestinian labour in a final settlement has free access to the Israeli market or not. In times the Palestinian labour has free access to the Israeli market, the domestic economy performs under conditions close to full employment, as unemployment rates are low (Miaari and Sauer, 2011). However, should free access to the Israeli labour be ruled out, consideration of the unemployed population in the model is necessary to analyse the economy-wide effects of policy changes.

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