Journal of Economic Cooperation and Development, **37**, 2 (2016), 35-50

The Economic Impact of Constructing a Gaza Seaport: Evidence from a Computable General Equilibrium model

Dr. Abdel Hakeem Ahmad Eltalla[1]

The role of infrastructure as a catalyst of economic development is accepted. Among the different types of transport infrastructure, seaports are considered as especially strategic due to the increasing importance of maritime transport in deciding transport costs and international trade in the age of globalization. We analyze the economic impacts of constructing a Gaza Seaport. We use a computable general equilibrium model of the Palestinian economy to simulate the effects on the Palestinian economy brought about by the planned construction of a Gaza Seaport. According to the model's estimates, GDP will increase by 3.90 percent, household income by 3.11 percent, private consumption by 7.73 percent, imports by 12.93 percent, and exports by 27.42 percent and labor income will increase by 3.19 percent.

Introduction

The role of infrastructure as a catalyst of economic development is accepted. Among the different types of transport infrastructure, seaports are considered as especially strategic due to the increasing importance of maritime transport in determining transport costs and international trade in the age of globalization. Improvement in transportation and communication has increased mobility of goods and services, and economies in the world are quickly integrated into one global economy as a result. The oceans and seas, as a main international trade route, offer low cost and important transport means. Maritime cargo, measured in tonnes grew to about 8.7 billion tonnes in 2011 according to UNCTAD, while only 43 million tonnes were transported by air in 2011 (Boeing, 2012). Maritime transport handles over 80 percent of international trade as measured in weight (UNCTAD, 2012). Seaports have a crucial role in integrating national economies into the international economy. Seaports have been designed to assist local

[1] Faculty of Business and Finance, Alaqsa University, Gaza, Palestine

www.manaraa.com

economic activities at early periods of industrialization. Heavy industries are dependent upon seaport services and low cost transportation means like shipping. Seaports and national economies have been dependent on each other. Seaports have been planned around industrial compounds, and industrial compound have been structured around seaports. Unconnected economies cannot ensure sustainable growth, thus, national economies are needed to integrate into the global economy for sustainable development. Seaports, as essential entranceway for international trade, are predicted to have positive effects on economic development. Export enterprises established near a seaport benefited from efficient logistics services of the seaport. Consequently, seaports have been considered to induce economic development in the cities where they are located. Seaports also have created substantial direct local employment and value added production effects (Jung, 2011).

The Palestinian economy has become increasingly connected to the Israeli economy since the beginning of Israel's occupation in 1967. The existing trade regime (Customs Union) between the Palestinian Authority and Israel, as agreed under the terms of the Paris Protocol has increased the dependence of the Palestinian economy on Israel. The Protocol stipulates the freedom of movement of goods between the West Bank, Gaza Strip and Israel. Economic viability through increase trade relations and export potentials is the best means to improve political stability and lower unemployment in the Palestinian society. Supported by suitable growth strategies, trade can assist the structural change and transformation of the Palestinian economy toward higher productivity, leading to positive impact on unemployment, growth in income and standard of living. Although there are many bilateral trade agreements with different countries, the Palestinian enterprises have not been able to make significant advances in the international trade arena, mostly due to the barriers placed on the execution of these agreements by Israel. Israeli restrictions on the movement of both labor and goods have affected the normal flow of Palestinian exports and imports, leading to distortions in the economy, including the loss of international markets, and increased transaction costs. Exporters and importers from Gaza Strip must use Israeli transport companies when goods are going to or leaving Gaza Strip through Israel. Furthermore, shipments have to be reloaded at the crossing points with Israel and are subjected to special screening procedures. This has diminished the competitiveness of Palestinian

www.manaraa.com

exports, establishing trade barriers of greater consequence than tariffs. Although Palestine has a seacoast of its own, it is effectively a land-locked economy. Palestinian enterprises are mainly dependent on Israeli seaports, and since 2000 Israel has been enforcing complex security measures. Israeli security measures at the main border crossings have undermined the ability of Palestinian industries. Israel's handling of Palestinian trade activities has been time consuming and expensive. The State of Palestine needs to have a seaport in Gaza in order to undo its forced landlocked economy status. Removing this forced status is essential for any real reduction in the high trade costs. The economic benefit of the Gaza seaport project in its regional context as a strategic project is the best option for the Palestinian State. The use of alternative maritime transport routes for Palestinian trade should not be considered as an alternative for the construction of a seaport in Gaza. The fact that land transport is the main cost part in the shipping of Palestinian trade from and to the rest of the world, and that more than 50 percent of the expenses related to this factor emerges from the Israeli closure policy and the security measures (UNCTD, 2006). Thus, a construction of a seaport in Gaza would be useful in restoring trade competitiveness and output growth level.

To evaluate the impact of the construction of a seaport in Gaza on the Palestinian economy, we constructed a general equilibrium model that depicts the economic conditions and features of the economy of Palestine, and we constructed a 2012 social accounting matrix for Palestine.

Literature Review

Economic impact studies of seaports assist to generate understanding into the contributions of seaport activity to the economic development. The transport economics literature had emphasized that seaports induce economic development and growth because they increase competition through expansion of the markets, thereby reduction of prices for consumers (Goss, 1990; Acosta et al, 2011). Dooms et al. (2011) presented a meta-analysis of economic effect studies for seaports, and found that there is variety in terms of measures of economic effects. Ferrari et al. (2010) reviewed seaport impact studies. Ferrari et al. (2010) evaluated the effect of port activity on local development in terms of employment in Italian provinces. Ferrari et al. (2010) applied a

www.manaraa.com

two-stage econometric process which individually estimates traffic and an employment equation. Ferrari et al. (2010) observed that the bigger the port, the greater it's direct, indirect and induced effects and recognizing the relevance of their output. Danielis and Gregori (2013) summarized the results of a research project intended to detecting the main economic characteristics of the Friuli Venezia Giulia Region seaport system in Italy and the part it plays inside the economy. Danielis and Gregori (2013) concluded that the Venezia Giulia Region seaport system plays a important macroeconomic function in the region. Bottasso et al. (2013) studied the effect of seaport on local employment by studying a sample of 560 areas in ten West European countries between 2000-2006. They found higher impact of port and regional employment is positively correlated to seaport. Deng, et al. (2013) examined the relationship between seaports and regional economy from a logistics perspective in China. That helps policy makers in their seaport decisions. They found that seaport supply had a positive impact on port demand and the value added activity in seaport had a positive effect on the development of regional economy. Wilson et al. (2003) used a gravity model to analyze the connection between trade facilitation, trade flows and economic growth in the Asia-Pacific area for the commodities sector. Seaport efficiency represented the quality of infrastructure of maritime. They found that enhanced seaport efficiency has positive impacts on trade.

Gaza Seaport

The Palestinian economy is a landlocked economy. In contrast to other land-locked economies, where access to world markets is delayed by the lack of a coast, Palestine's poor market access conditions are created by the prolonged delays in the building of a seaport in Gaza. Israeli control of the borders and transport routes made Palestinian trade completely reliant on political and security factors. Although participation in international trade is facilitated through Israeli seaport, high trade costs and complex procedures continue to diminish benefits derived from foreign trade and discourage investments in productive sectors. The State of Palestine needs to have a seaport in Gaza in order to undo its forced landlocked economy status. To remove this forced status is essential for any real lessening in the high trade costs. The economic benefit of the Gaza seaport project in its regional context as a strategic project is the best option for the Palestinian State. The use of alternative

www.manaraa.com

maritime transport routes for Palestinian trade should not be considered as an alternative for the construction of a seaport in Gaza. The land transport is the main cost factor in the transport of Palestinian trade, and that more than 50 percent of the expenses related to this factor emerges from the Israeli closure policy and the security measures (UNCTD, 2006). The use of alternative routes and the future operation of the Gaza seaport are required complements in integrating Gaza seaport into the regional ports system, and the Palestinian economy into the regional and world markets. The construction of Gaza seaport began in November 1999, and in April 2000 the Gaza Seaport Authority signed an agreement with the European Gaza Development Group 2000, to execute the project. Finance needed for Phase 1 was approximately $70 million, with financial support from the Dutch and French governments, and a loan from the European Investment Bank. The construction of the Gaza Seaport has suspended since the eruption of the conflict in September 2000. The Gaza seaport was assumed to be operational in 2004. The port of Gaza was considered as an important element needed for the economic strength of the Palestinian economy and for the economic growth. The Gaza seaport is also important for integrating the Palestinian economy to the rest of the world (UNCTD, 2004).

The deep-water Gaza seaport is planned to be built, around 200 kilometres west of Amman. The Gaza seaport will provide Palestinian traders and Jordanian traders with a substitute transport corridor to Europe and America. Future strategy consists of connecting its facilities with the areas ports of Port Said, Beirut and Cyprus. The Gaza seaport project has a strategic importance for the Palestinian economy; it will continue to be high on the priorities to construct the seaport of Gaza once conditions are allowed. The Gaza seaport will capitalize on the territory's location as a regional transit corridor, with plans to serve Jordan and establish links with neighbouring seaports in Egypt, Lebanon, Jordan and Cyprus. One important aspect of the corridor link between Gaza Strip and the West Bank will be the Gaza seaport (UNCTD, 2004).

Methodological Framework and Data

Computable general equilibrium models are an important tool of analysis in development economics. The computable general equilibrium methodology is a powerful methodological tool for

www.manaraa.com

examining the impacts across multiple markets of changes in policy variables or exogenous shocks, and an instrument for policy analysis. They are used for making predictions about the behaviour of economies in response to shocks and to different policies. Computable general equilibrium models are derived from economic theory. The competitive market equilibrium of supply and demand is determined by the demand functions of the consumers and the production functions of the firms. Computable general equilibrium models represent the direct and indirect interactions between all sectors of the economy. The computable general equilibrium framework provides a theoretical quantification that combines the general equilibrium arrangement organized by Arrow and Debreu with real economic data -provided by a social accounting matrix- to solve numerically for the quantities of supply, demand and price that preserve equilibrium across all markets. Markets respond to changes in prices. The general equilibrium happens when a set of prices make supply equal to demand in all markets at the same time (Shoven and Whalley, 1984). Computable general equilibrium models are a branch of economic models that work on actual economic data to evaluate the impacts of changes in policy, technology or external factors on the economy. They provide an economy-wide framework for policy analysis to assess a broad range of policy issues. This economy-wide, multi-market approach captures all sectorial and inter-sectorial price linkages simultaneously rather than analyzing each commodity market separately. The computable general equilibrium model that we use is neoclassical. Its framework is developed from the micro-economic foundations of optimization behaviour of rational economic agents. Consumers demand commodities and supply their endowments to maximize their utility, subject to their endowments. Producers (activities) demand inputs and supply outputs to maximize their profits, subject to production technologies. The optimizing assumptions emphasize the role of commodity and factor prices in affecting consumption and production decisions by households and producers. The model is formulated on a Walrasian system with the assumption of general equilibrium, which can be obtained when supply equals demand across all connected markets in the economy at a matrix of relative prices (Dervis et al., 1982). To undertake Computable general equilibrium analysis, a Palestinian Computable general equilibrium (CGE) model has built based on the standard model used by the International Food Policy Research Institute (IFPRI) (Lofgren et al.,

www.manaraa.com

2002). Lofgren et al. (2002) has a complete description of the IFPRI's standard model.

Social Accounting Matrix

A social accounting matrix is a comprehensive, economy wide data framework, representing the economy of a country. Social accounting matrix is a square matrix in which each account is represented by a row and a column. The elements of the matrix represent the payment from the account of a column to the account of a row. A social accounting matrix accounts for the economy-wide circular flow of incomes and payments in the economy. It represents the structure, internal and external links of the economy, and the roles of agents and sectors in the economy. The sources of data for the social accounting matrix are an input-output matrix, national income accounts, household income, and expenditure statistics. Thereby, it is wider than an input-output matrix and national accounts. These data are from different time periods, but they still provide a good indication of the structure of the economy and the interactions among social and economic entities (King, 1985; Roland-Holst, 2008). A social accounting matrix is built on a walrasian general equilibrium framework. Walras' law is the principle for organizing the information in the social accounting matrix. It is assumed that agents earn incomes from selling their initial endowments to other agents. The agents spend part of their incomes to buy commodities or primary factors in the markets. All exchanges occur, in which for each income formed must be a corresponding expenditure. The revenues are located in the row accounts and expenditures in the column accounts. Since revenues must be accounted for by expenditures, the total of rows and columns must be equal for a given account (double entry accounting). Thereby for a consistent social accounting matrix, the sum of rows (revenues) and columns (expenditures) of each account must balance. However, because the data are often inconsistent with each other, thus it is likely the data will lead to unbalanced social accounting matrix. Thus balancing the social accounting matrix is needed which done by using a GAMS code to equate the sum of rows and their correspondent columns (Robinson et al., 2001; Fofana et al., 2005).

A social accounting matrix contains most of the data required to implement a computable general equilibrium model analysis. The computable general equilibrium model has to be based on recent

www.manaraa.com

relevant available data to be credible for policy analysis. When historical data are used for policy analysis, it should be demonstrated that the structure of the economy has not substantially changed for the evaluation and analysis of policies to be credible and valuable. A 2012 social accounting matrix for Palestine is constructed. The 2012 social accounting matrix is used as the initial data for the calibration of the Palestinian computable general equilibrium model. See table 2: Macro 2012 social accounting matrix for Palestine million of dollars.

Why Computable General Equilibrium

Computable general equilibrium models are constructed to estimate the consequences of policy adjustment or exogenous shocks; their framework is more comprehensive and economy-wide than other models. Econometric models need reliable and lengthy time series data on economic variables for the evaluation of associations between economic variables. In contrast, computable general equilibrium models require fewer historical data. Most of the parameters for computable general equilibrium models are based on economic data (summarized in the social accounting matrix) of a benchmark year. The calibration process gives values to the parameters of the model equations using the base year social accounting matrix. Furthermore, the model has to be based on recent applicable existing data to be reliable for policy analysis. Therefore, when historical data are utilized, it should be verified that the structure of the economy has not considerably changed for the estimation and analysis of policies to be reliable and useful. This is not the case in Palestine. The environment of the West Bank and Gaza and their economic structure distorted dramatically after the Second Intifada in 2000. This is the reason we utilized computable general equilibrium model; it provides insights into the impacts of shocks even without time series data. The social accounting matrix of Palestine is a comprehensive, economy-wide data framework that provides a comprehensive representation of the socio-economic structure of Palestine.

Trade Costs in the Model

The notation principles make it possible to differentiate between variables (upper-case Latin letters) and parameters (lower-case Latin letters). The price system of the model assumes quality variations among

www.manaraa.com

commodities of various origins and destinations: imports, exports, and domestic outputs used nationally. Endogenous prices are related to other prices (endogenous or exogenous) and to non-price model variables. The trade costs enter in the following equations: the price of imports and the price of exports. A reduction of the trade costs affects the model through those equations. The import prices paid by domestic consumers for imported commodities include import tariffs and trade costs per import unit icm. The world price of imports (pwm) transforms to the import price (PM) by considering the exchange rate and import tariffs plus trade costs icm. The equation of the import price of good c is:

$$\mathrm{PM_c} = \mathrm{pwm_c}.(1 + \mathrm{tm_c}).\mathrm{EXR} + \sum \mathrm{PQ_c}.\mathrm{icm_{cc}}$$

Where c is a commodity, PM is the import price including trade costs, pwm is the world market import price, PQ is the composite price (the market price paid by domestic commodity consumers), tm is the import tariff rate, EXR is the exchange rate, and icm is the trade costs per imported unit. The import price (PM) is the price paid by domestic users for imported commodities. The import price is affected by the trade costs, which increase the price paid by the consumers. The export price (PE) is the price granted to domestic producers for their exports. The world price of exports (pwe) transforms to the export price (PE) by considering the trade costs and export tariffs plus exchange rate. The equation of the export price of good is:

$$\mathrm{PE_c} = \mathrm{pwe_c}.(1 - \mathrm{te_c}).\mathrm{EXR} + \sum \mathrm{PQ_c}.\mathrm{ice_{cc}}$$

Where PE is the export price, pwe is the world market export price, te is the export tax rate and ice is the trade costs per exported unit. The export price is the price received by domestic producers, which is affected by the export taxes (te), the trade costs and the exchange rate. The export price is affected by the trade costs, which reduce the price received by the domestic producers of exports (Lofgren et al., 2002).

Simulations and Empirical Results

We simulated a 25 percent reduction of trade costs. Possible reason for the reduction of trade costs is the construction of Gaza seaport. We used the General Algebraic Modelling System (GAMS) to perform the simulation. Table 1 shows the effects on selected variables of the

www.manaraa.com

Palestinian economy for a 25 percent decrease of trade costs. The base-year (benchmark) values correspond to the values found in the Palestinian social accounting matrix. The impact of a 25 percent decrease in overall trade costs is to increase GDP by about 3.90 percent, household income by 3.11 percent, private consumption by 7.73 percent, imports by 12.93 percent, and exports by 27.42 percent. Government revenue increases by 5.43 percent. Overall absorption increases by 5.05 percent. The income of capital increases by 3.50 percent and labor income increases by 3.19%. Effects of a 25 percent decrease in trade costs on spending and income:

Table 1: Effects of a 25 percent decrease in trade costs on spending and income

		millions USD		**As % of GDP**	
	Base line	**Change**	**% Change**	**Base line**	**Change**
Absorption	9794.700	10289.072	5.047	144.162	145.759
Private consumption	6394.380	6888.752	7.731	94.115	97.589
Gov. consumption	2302.570	2302.570	-	33.890	32.619
Investment	1097.750	1097.750	-	16.157	15.551
Exports	1091.460	1390.684	27.415	16.065	19.701
Imports	4091.930	4620.814	12.925	60.227	65.460
Net Taxes	1408.024	1485.175	5.429	17.291	21.040
GDP	6794.230	7058.942	3.896	100.000	100.000
GDP at factors cost	5386.206	5573.767	3.495	79.276	78.960
Trade Deficit	3000.470	3230.130	7.669	44.157	45.764

Source: Authors' calculations.

www.manaraa.com

المنارة للاستشارات

Table 2: The macro 2012 social accounting matrix of Palestine

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
1-Activities		10456.04							10456.04
2-Commodities	4886.99	1033.29		6394.38	2302.57	1097.75		1091.46	16806.44
3-Factors	5386.21								5386.21
4-Households			5671.96		371.43				6043.39
5-Government							1801.95	818.65	2626.60
6-Saving-Invest.				-750.92	-47.40			1896.07	1097.75
7-Taxes	182.84	1225.18		399.93					1801.95
8-Rest of the World		4091.93	-285.75						3806.18
Total	10456.04	16806.44	5386.21	6043.39	2626.60	1097.75	1801.95	3806.18	

Source: Authors' calculations.

www.manaraa.com

Conclusion

Palestine is in fact landlocked despite the long seacoast of the Gaza Strip, with total reliance on Israel transport facilities for participation in international trade. That makes Palestinian trade entirely reliant on political and security developments, which have lead to prohibitive transit transport costs and damage to the competitiveness of exports. The economy of Palestine is burdened by stifling trade costs resulting from the absence of a seaport, geographical fragmentation, frequent border closures, and checkpoint controls. Better political environment and construction of a seaport in Gaza may lower trade costs. We used a general equilibrium model to quantify the effect of a 25 percent reduction in trade costs. The effects are substantial. The simulation results show that GDP will increase by 4 %, import and export will increase by 12.93% and 27.41% respectively. Net taxes will increase by 5.43%. The level of private consumption will increase by 7.73 % from the base line and the labor income will increase by 3.19 %. Palestinian economic development policy framework requires identifying the circumstances of the Palestinian economy. Policies measures are necessary to assist evade instability and inefficiency, which consist of policies to promote exports, savings and investment. For the small and poor Palestinian economy, whose economic links were restricted for decades, establishing new trade links is vital for decreasing the reliance on trade with Israel; trade links between Israel and Palestine, which originated on the customs union under Paris Protocol, have intense political and economic consequences. The trade between Palestine and its partners should imitate the requirements of the Palestinian balance growth and development programme. A framework for Palestinian foreign trade that gives a level of independence to Palestinian trade flows to grant direct access to world markets and reduce the dependence on Israel which cannot be achieved beneath the current infrastructure. Basic facility for instance a seaport is necessary for creating normal trade links with the world. The simulation of the effects of a construction of Gaza seaport provides some policy lessons to the Palestinian Authority policymakers: there is real benefit from a construction of Gaza seaport on the economy. In addition, negotiating new trade agreements with various countries and facilitate broad trade by increasing investments in transportation infrastructure are essential measures to facilitate trade, development and balanced growth by creating links to the rest of the world. The results suggest that policies to lower trade costs (investment in infrastructure) have big benefits.

www.manaraa.com

References

Acosta, M., Coronado, D., & Cerban, M. (2011). The Economic Impact of the Port of Tarifa (Spain) in 2007 and the Forecast for 2015. *International Journal of Transport Economics*, *38*(3).

Boeing, (2012). World Air Cargo Forecast 2012-2013, September 2012, available at : www.boeing.com/commercial/cargo/wacf.pdf

Bottasso, A., Conti, M., Ferrari, C., Merk, O., & Tei, A. (2013). The impact of port throughput on local employment: Evidence from a panel of European regions. Transport Policy, 27, 32-38.

Danielis, R., & Gregori, T. (2013). An input-output-based methodology to estimate the economic role of a port: The case of the port system of the Friuli Venezia Giulia Region, Italy. Maritime Economics & Logistics, 15(2), 222-255.

Deng, P., Lu, S., & Xiao, H. (2013). Evaluation of the relevance measure between ports and regional economy using structural equation modeling. Transport Policy, 27, 123-133.

Dervis, K., de Melo, J. and Robinson, S. (1982). General Equilibrium Models for Development Policy. Cambridge: Cambridge University Press.

Dooms, M., Haezendonck, E., & Verbeke, A. (2011). Towards a toolkit for port related socio-economic impacts: a meta-analysis of socio-economic impact studies conducted for seaports. In European Conference on Shipping & Ports.

Eltalla, Hakeem, and Luc Hens (2009). The Impact of Trade Transaction Costs on Palestine. In International Trade and Finance Association Conference Papers (p. 4). bepress.

Eltalla, Hakeem, and Luc Hens (2010). The Economic Impact of Donor Aid to Reconstruct Gaza. GARNET Conference "The European Union in International Affairs", Brussels.

www.manaraa.com

Ferrari, C., Percoco, M. and Tedeschi, A. (2010). Ports and local development: Evidence from Italy. International Journal of Transport Economics 37(1): 9–28.

Fofana, I., Lemelin, A. and Cockburn, J. (2005). Balancing a Social Accounting Matrix. Inter-university Center on Risk, Economic Policies and Employment (CIRPEE).

Fox, A., Francois, J., and Londono Kent, P. (2003). Measuring Border Crossing Costs and their Impact on Trade Flows: The United States-Mexican Trucking Case. GTAP Resource no. 1282, Center for Global Trade Analysis. Purdue University.

Goss, R. O. (1990). Economic policies and seaports: The economic functions of seaports. Maritime Policy & Management, 17(3), 207-219.
JACOBS, W., & LAGENDIJK, A. (2014). Strategic coupling as capacity: how seaports connect to global flows of containerized transport. *Global Networks*, *14*(1), 44-62.

Jung, B. M. (2011). Economic contribution of ports to the local economies in Korea. The Asian Journal of Shipping and Logistics, 27(1), 1-30.

King, B. (1985). What is SAM? In Social Accounting Matrix: A Basis for Planning. Pyatt, G. and Round, J. (eds.). Washington D.C: The World Bank.

Liu, H. (2010). Analysis of the Impact of Globalization on the Palestinian Economy. International Journal of Business and Management, 5(7), P204.

Lofgren, H., Harris, R. and Robinson, S. (2002). A Standard Computable General Equilibrium (CGE) Model in GAMS. Trade and Macroeconomics, International Food Policy Research Institute, Washington, DC.

Pallis, A. A., & Vitsounis, T. K. Port Economics, Policy and Management–Content Classification and Survey. Transport Reviews, 31(4), 445-471.

www.manaraa.com

Reinert, K. A. and Roland-Holst, D. W. (1997). Social Accounting Matrices. In Applied Methods for Trade Policy Analysis: A Handbook, Francois, J. and Reinert, K., (eds.), pages 94-121. Cambridge (UK): Cambridge University Press.

Robinson, S., Cattaneo, A. and El-Said, M. (2001). Updating and estimating a social accounting matrix using cross entropy methods. Economic Systems Research, 13: 47-64.

Roland-Holst, D. (2008). Social Accounting Matrix for Pakistan, 2004-5. Berkeley: University of Berkeley.

Sarkar, K. (2014). The port system in India: an analysis of the hierarchical changes and port performance (1950-1995).

Shoven, J. and Whalley, J. (1972). A general equilibrium calculation of the effects of differential taxation of income from capital in the U.S. Journal of Public Economics, 1: 281-321.

Shoven, J. and Whalley, J. (1984). Applied general equilibrium models of taxation and international trade: an introduction and survey. Journal of Economic Literature, 22(3): 1007-1051.

Shoven, J. and Whalley, J. (1992). Applying general equilibrium. New York: Cambridge University Press.

UNCTAD (United Nations Conference on Trade and Development), (2012). The Review of Maritime Transport 2012, UNCTAD/RMT/2012, Geneva, December 2012, available at : http://unctad.org/en/pages/ PublicationWebflyer.aspx?publicationid=380

UNCTAD (2006). The Palestinian war-torn economy: aid, development and state formation. UNCTAD/GDS/APP/2006/1. New York and Geneva.

UNCTAD (2004). Transit and Maritime Transport Facilitation for the Rehabilitation and Development of the Palestinian Economy. UNCTAD/GDS/APP/2003/1. New York and Geneva.

Wilson, J. S., Mann, C. L., & Otsuki, T. (2003). Trade facilitation and economic development: A new approach to quantifying the impact. The World Bank Economic Review, 17(3), 367-389.

www.manaraa.com

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

www.manaraa.com