Jordan Economy under the EU Association Agreement Implementations

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Introduction:

There has been a shift in many countries since the early 1980s towards a greater reliance on the market mechanism. This of course reflects a recognition that interventionist politics are often not only inefficient, but also ineffective and counterproductive. A major policy issue facing many of the countries of the Mediterranean (Med) region is to follow the rest of the world in liberalizing, privatizing, and deregulating markets. Economic reform efforts undertaken by many countries of the region in the last decade have been gradual and piecemeal.

Jordan is no exception from these processes; it has been pursuing trade, since the late 1980s. The average level and dispersion of tariffs were reduced substantially, and most quantitative restrictions were eliminated . A recent major policy initiative in this connection is that the Jordan-EU Association Agreement. AA initially, aims at establish a Free Trade Area between Jordan and the EU countries by the year 2010. The decision to pursue free trade with member states of the EU provides unambiguous signal to investors that there is a strong commitment to opening the economy. The adjustment and stabilization efforts that have been pursued since the late 1980s in Jordan have led to good improvement in macroeconomic indicators in the late two years.

The aim of this study is to estimate the consequences of

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Jordan economy under the implementations of the AA; for that, this study has been organized as follows: Section one, discusses the related studies, which dealt with the impact of (AA) between the EU and Med countries on Med Arab countries. Section two, tries to estimate the possible impacts of Jordan- EU AA on Jordan, and identifies possible options that will improve the benefits of free trade with EU. To measure this impact, the *Effective Rate of Protection* (ERP) analysis will help in providing quantitative information on the change in tariffs regime that is caused by trade liberlisation. Furthermore,an ERP framework also is helpful in determining the relative sensitivity of industries to various types of domestic distortion.

Section One: EU-Med Economic Integration : Literature Survey

Economists wish to measure economic integration for three main purposes: (1) in order to compare the degree of economic integration found in one regional group with that in another, or the progress of integration in a particular grouping over time; (2) in order to quantify the aggregate effects of integration on trade and on other variables that influence the welfare of the group; (3) and in order to quantify the effects of integration on the distribution of the benefits of integration among the participating countries [Robson :1992, p.232]. At the same time, the major areas of empirical research in the field of economic integration deal with the effects of economic integration on three issues of GDP: manufacturing, agriculture, and the terms of trade. In spite of the fact that the services sector is now important area of economic activity in most nations, there have been no much major studies on it [El-Agraa: 1989,p.141].

This survey aims at evaluating the important issues of economic integration theory, the Free Trade Area (FTA) and its impact on member states. It focuses also on the studies, which dealt with the impact of (AA) between the EU and Med countries on Med Arab countries. Most of these association agreements have been signed to establish Free Trade Areas between the EU & Med Countries. Much theoretical estimation has focused on the

impact of the FTAs - after the Barcelona Declaration of 1995, and the Malta conference of 1997 - on the Med countries.

An early study by Rutherford (1997) using the growth accounting framework expected that the beneficial impact of the EU-AA stem from both higher total factor productivity and levels of investment. In the case of Tunisia the overall welfare gain for its economy was the equivalent of an additional 4.5 percent in annual GDP. These welfare gains include the traditional static efficiency gains of trade creation net of trade diversion (1.7 percent of GDP) which result from the reallocation of labor and capital to sectors of comparative advantage following the removal of protection induced distortions in the prices of traded goods. The total adjustment costs have thus been calculated at 4 percent of GDP, as workers who transfer to a different industry eventually comprise 8 percent of the labor force. Another study for Tunisia was conducted by Brown (1997), Brown's study, using a different computation general equilibrium model to estimate the net welfare gains for Tunisia, indicated that the net welfare gains should be slightly negative in the short term, but rise to the equivalent of 1.3 percent in GDP over the long term.

In the case of Morocco, Miejewski (1996) indicated that the agreement actually provided some widening of Morocco's preferential access for agricultural products between 1997 and 2000, but some restrictions are still there. The increased access comprises extension of the list of agricultural products for which preferential access is granted and increases in access for some quotas or beyond the quotas during certain periods of the year of up to 12 percent.

But in the case of Lebanon, the benefits of liberalization of commodity trade with EU are lower than in the case of Tunisia or Morocco. A study by Martin (1996) indicated that the losses from trade diversion were found to exceed the gains from trade creation, resulting in a net welfare loss of 0.3 percent of GDP. Trade diversion is larger because the share of Lebanon's imports originating from the EU is only about 50 percent. Trade creation is smaller because of the limited size of tradable goods production

relative to imports in Lebanon, as reflected in its large structural trade deficit.

Konan and Maskus (1997) calculated that free trade between Egypt and the EU – elimination of tariffs on the EU imports combined with an assumed one percent increase in the prices of Egyptian exports because of reduced incidence of testing and certification costs in the EU – as well as an 8 percent in exports prices of agricultural products produce and clothing owing to increased access, would result in welfare gain of only 0.2 in GDP.

Hoekman, B and Djankov, S (1997) investigated the possible impact of a EU-Med -AA on Egypt and Jordan. They focused on three factors: the modalities of tariff reduction strategy that will be pursued, the extent to which transaction costs may be reduced, and upgrading the quality and lowering the costs of intermediate services inputs through greater competition. They indicated that a free trade agreement with EU would give rise to greater competition in product markets and a more efficient allocation of productive resources. The extensive provisions in the EU-Med-AA for technical cooperation aiming at harmonization and mutual recognition of regulatory procedures will help reduce transaction costs associated with trade and improve the investment climate. The cost of trade diversion is substantial in the case of Jordan and Egypt, mainly because the EU accounts for only 32 and 45 percent respectively of imports.

The same conclusions are found by the work of Mansour, Y (1997) who investigated the potential effects of the Jordan-EU partnership agreement, and Jordan accession to the World Trade Organization (WTO). His study indicated that the EU agreement will have a stronger bending effect on Jordan, and will enable the closing of many loopholes that may usually exist in the WTO agreements. Thus, the EU may offset many of the WTOs weaknesses, and help overcome existing resistance to reform. The EU-AA provide assurances to investors that reform is eminent. Moreover, the costs are limited but the gains are greater.

Hoekman, and Djankov(1996) provided a deep analysis and evaluation of these arguments. They reached a number of inter-

esting conclusions and insights. Two of the conclusions reached by Hoekman and Djankov state that in the long run the EU-Med-AA are expected to be beneficial to all parties involved, and that in the short run these agreements are likely to be economically welfare reducing. **The first** conclusion supports facts like that the trade liberalization required by the agreements is expected to improve productive capacity and efficiency; and the agreements are likely to be very beneficial in inducing competition. **The second** conclusion is supported by arguments such as: the agreements are discriminatory by definition and may therefore involve significant trade-diversion; the transition path to free trade with the EU, and the gradual liberalization of the economies involved are likely to take a long time due to the absence of binding commitments in foreign direct investment, services and government procurement and safeguards abroad, the level of economic and financial cooperation between partners and the degree of manufactures tariffs.

Licari.J(1998) estimated the economic and financial aspects of the Euro-Med partnership. The study indicated that the emerging

hub and *spoke* structure would increase the EU's power to direct investment. The 12-years transaction envisaged is too short for the partners to implement the investment and reforms necessary to face unimpeded competition. He suggested that the area would be successful if the agreements' dynamic provisions come into effect (free trade in farm products some time after 2000, mutual recognition of standards, and freer trade in services).

The same conclusions have been reached by the study of Ghesquire, H (1998). This study concluded that the Med countries have no viable alternative but to integrate the EU agreements in a comprehensive development strategy. They should make full and early use of the 12-years transition period provided; but the 12 years may not be enough for these countries to fill the requested adjustments necessary to enhance the benefits from the association agreements and to develop their economies.

Nicola (1998) examined the structure of the FTA and analyzed possible future options. The study indicated that it is up to Europe to decide whether she simply wants to limit instability or

to promote real integration through increased financial aid and technical transfer. The partnership is a dramatic opportunity to enlarge European markets; Europe should use it also to increase her efficiency in production through cooperation, and integration with Med countries. Where Med countries need to liberalize their economies to integrate into global trade independently from the EU, and whether this effort will be beneficial for her, depends on Europe itself.

Boudhiaf, M(1999) investigated the advantages of an intra-Maghreb free trade area. The study, using the substitution hypotheses, considered three hypotheses: (a) zero substitution; it is assumed that products of differing origin are different but not substitutable. Thus the products from the rest of the world will continue to be imported from the rest of the world, in which case there is no trade diversion effect. (b) Perfect substitution; it is assumed that the products from the countries with the same level of development are homogenous and perfectly substitutable.(c)Intermediate substitution, this means that the products from the developed and developing countries are partially substitutable among themselves. They found that positive effects could arise from trade creation and from an increase in export prices provoked by the elimination of the duties on trade between member countries, while negative effects could originate from trade diversion.

Escribano,G and Jordan (1999) used the data of the ratio between predicted and actual values of intra North African Mediterranean countries (MENA) exports, intra -industry trade indices, intra-regional exports in the Maghreb and the Middle East, and the development of trade data flows in the Med basin. They indicated that the creation of a new Euro-Med reign in which to build a shared prosperity area requires existing North - South economic integration to be complemented by South - South trade liberalization. Trade links among the Southern and Eastern Med countries have remained at a very low level. There is opportunity for greater commercial integration, although the capacity for an increase in intra-regional trade volume is limited. Trade liberalization could lead to a relocation of resources according to comparative adva-

ntage, and to the growth of intra – industry trade.

In the same context Bacaria, J and Tovias, A (1999) predicted that the lack of industrial diversification of the non-EU Med countries is a real obstacle to the development of the Euro-Med free trade area. Even if there are some opportunities to increase horizontal trade between these countries, the potential could be exploited by making use of cooperative advantages in the agricultural and agribusiness sector. That should happen if the exchange were related to transfer of technology from the more developed to the less developed countries in the region. This new formalization could lead to new exchange rate policy, structural adjustment, and a macroeconomic policy of stabilization. The AA should help to prevent the more negative effects of stabilization polices and contribute to promoting the partnership process.

Tovias, A (2000), estimated the impact of free trade area between the EU and Med on the field of the trade and investment. After assessing the values that different key parameters take, it reviews the different integration effects mentioned in the theoretical literature, and considers how they apply in the case of partnership. It indicated that the plan for the progressive establishment of Euro-Med free trade area leaves aside key sectors such as agricultural and petrochemicals. So the partnership proposed refers to the (Classical Free Trade Areas)-Tariff and Quota Free Trade - and the new partnership will deepen the asymmetric trade interdependence between Med and the EU.

Section Two : Jordan Economy and the Implementations of EU Association Agreement

One notable development in the trade policy strategies in recent years has been the prominence of free trade agreements (FTAs) as means to pursue cooperation in the area of international trade relations. Nearly every country in the world is either a member of or seeking membership in one or more regional integration arrangements. Jordan is no exception to these attitudes, foreign initiative in Jordan most notably includes recent major attempts by the United States of America (USA) and the EU to forge stronger

50

links with Jordan, partly out of concern over potential instability in the region, partly for economic reasons. On the European front, one of these initiatives is the Euro-Med Association Agreement (AA) signed as a law ement May.2002.

This section tries to estimate the possible impact of Jordan-EU-AA on Jordan, and identifies possible options that will improve the benefits of free trade with EU.

Jordan's Trade Policy Reform:

Jordan since its inception as a state in the 1920s has suffered from chronic trade deficits and a narrow export base. This has partly been due to the scarcity of natural resources, but a long-term crisis in agriculture, a small manufacturing sector, and the restrictive polices of the government, among other factors, also help to explain the country's continuing trade imbalance. Because of these constraints, trade policy has traditionally tended to be mercantilist, and Jordan has depended on wide-range, high tariffs for revenue.

Jordan undertook a number of policy changes to rationalize the trade regime during 1989-1992. In this respect, import restriction and bans were reduced; price controls that had been imposed on a large number of items (and the essential consumption goods) were lifted. Direct controls over agricultural production have been removed and subsidies on food production and consumption reduced. These reforms have improved the trade regime and entailed increases in domestic export and investment. Jordan's international trade has been characterized by a number of prominent features; **first,** imports have been about three times larger than exports, imports have been growing faster than exports in the last five years, and as a result, the merchandise trade deficit has increased. **Second,** phosphates, potash and fertilizers exports to EU, and other industrialized countries are minimal, thus export rivalry in the major third market is insignificant. **Third,** the large merchandise trade deficits have been offset by remittances, official grants, and income from non-factor services, and recourse to external borrowing.[1]

By the mid-1990s, inputs for agricultural production and a large number of those required for local manufacturing had been

exempted from customs duties. Higher tariff rates for manufacturing underscore the benefits that the industrial sector reaps from the relatively low tariffs on raw materials and intermediate goods. In a move to boost exports, Jordan continues to reduce tariffs on a multiple range of raw materials and intermediate goods used in the production of export-oriented finished products. By the mid-1990s, inputs for agricultural production had also been exempted from customs duties.

Most of Jordan's imports come from EU countries, especially Germany, Italy, France, and the United Kingdom. Jordan has signed the AA with the EU that will further boost Jordanian-EU trade and create a EU-Med-FTA zone by the year 2010. Indeed, Jordan's joining the WTO has led to measures ensuring a more liberal and open foreign trade regime.[2]

Significant trade reforms have been undertaken in the last decade. Jordan has taken a number of measures to reduce the levels and variation in tariff rates, to simplify customs procedures, and to abolish quantitative restrictions on imports. As a result, Jordan now has six tariff bands (0, 5, 10, 20, 30, and 40 percent), and the maximum tariff rate is being set at 40 percent. Exceptions are manufactured tobacco and tobaccos substitutes (70-100 percent) and alcoholic drinks (180 percent). Tariff reductions have been complemented by efforts to apply a General Sales Tax (GST) to imports and domestically produced goods in order to maintain revenue.

Registration, Documentation, and Customs Procedures Import licensing requirements for all products other than those maintained for national security, health, safety, environmental, and religious reasons have been abolished. Registration, documentation, and customs procedures in Jordan have undergone streamlining and simplification through the introduction of computerization and decentralization away from customs headquarters in the capital. Nevertheless, customs procedures remain cumbersome and are time consuming because of the inefficiency of customs personnel[3].

In Jordan, tariff reforms have reduced the number of rates to five, but several surcharges, special taxes, and fees still apply. Although, the maximum tariff

rate is set 40 percent, in effect, duties range from 0 to 320 percent. Exemptions are widely applied, including generous incentives granted under the Investment Law and other discretionary exemptions. Petroleum imports are not subject to import duties, but to price markups of 10 to 15 percent implying an implicit tax of equal magnitude as a public authority controls domestic distribution. The tariff system remains poorly coordinated with the domestic tax system, particularly the GST. Beside the need for further liberalization, especially in Jordan, the limited inflow of Foreign Direct Investment (FDI) to the triad countries and relative to such fast-growing economies as Malaysia and Thailand.

However, more reforms are needed to make the business environment more hospitable to investment. Until such reforms are adopted, the merits of joining the triad to attract FDI are limited, in part because the size of the economies of the triad is relatively small[4].

The Impact of the Trade Liberalization with EU Potential benefits of AA:

The welfare effects on formation of a preferential trading area are frequently evaluated by investigating its likely trade effects. Years ago (Viner) argued that the tariff discrimination implied by creation of customs union would have two effects: first, the abolition of tariffs on intra-area trade would divert trade by causing members to import some products from partners country, rather than from cheaper suppliers located in non member countries: Second, trade would be created by substituting inefficient domestic production in each member country which purchases from lower cost producers located in other member countries. He claimed that trade diversion would lower welfare and that trade creation would raise it, and that a determination of which effects would be still widely used. The concepts of trade diversion and creation are inadequate measures of the welfare effects of regional integration efforts [Viner: 1950,pp13-51]. But we can note that the trade creation or diversion do not provide a clear guidance for empirical research, which should instead focus on the variable that really matter: the impact on the terms of trade and trade volumes .

53

Quantification of the impact of the AA on Jordan welfare is not straightforward, in part because many effects are not measurable, and in part because it depends greatly upon the extent to which regulatory regimes pattering to services and investment are affected. The economic impact of trade liberalization is conventionally broken down into two types, static and dynamic. The static impact is determined by the induced reallocation of existing resources; the dynamic effects takes into account the impact on the rate of capital accumulation. Various types of dynamic effects may arise; One is a consequences of the static allocate efficiency gain. For given initial shocks of labor and capital, the increase in income following liberalization increase per capita income, following liberalization increases per capita saving; A second effect consists of an increase in investment stimulated by decline in transaction costs and the improvement of the incentives regime- Both of these effects arise in the medium run-; The third impact relates to the long run effects on the rate of accumulation of factors of production [Baldwin: 1994,p.15].

Medium–run Dynamic Impact

Increased trade openness may affect growth through its impact on the incentives to invest in human and physical capital and through its effects on the rate at which firms innovate and improve their total factor productivity. So to what extent will AA change the incentives to locate production facilities in Jordan? AA with EU creates off setting incentive effects. On the one hand, the reduction in trade costs and enhancement of competition will make the economy more efficient, increasing the demand for goods and services, and providing firms invest in Jordan. Which will be greater opportunities to exploit geographical and other commercial advantages, in addition to political stability. On the other hand, the reduction in trade also reduces the incentives for inward FDI. As tariffs and other barriers to import are eliminated. European firms no longer have a policy-induced reason (tariff jumping) to produce locally. The greater the economies of scale in production in the EU location where a firm has accesses to many complementary service providers [Hoekman & Djankov: 1997,p.284].

The fact that AA is a bilateral free trade agreement worsens matters, as locating in the EU member *(hub)* gives duty-free trade agreements- virtually all its neighbors called, *(spokes)*. As Jordan has free trade agreement with other countries in the region or with others, firms that rely on imported inputs and export a significant part of their output confront a cost in locating in Jordan or other Med countries. Tariff in non-EU goods will continue to prevail, and goods of Arab origin will face tariff outside the EU. One implication of this is that it is very important that trade barriers be lowered with as many countries as possible, and with neighboring countries in particular. Another implication is that opening up the services sector to foreign investors is important. Most of services cannot be traded across frontiers: foreign providers that wish to sell services in Jordan will generally have to establish local offices. Encouraging such investment should be a priority, since efficient services are an important dimension of raising the productivity of the economy.

Improvements in total factor productivity (TFP) growth are another source of dynamic gains.

TFP growth may increase not only as a result of the adjustment of domestic enterprises to the opening of the economy, but the rate of the TFP growth may also increase [Page & Underwood: 1996,p15].

A Locative Efficiency Effects

The static welfare of trade liberalization is relatively small because the efficiency that result from bringing domestic prices closer into line with world precise is offset by the loss in the tariff revenue. The magnitude of such impact depends on numerous variables, including the structure of the domestic markets before opening of the economy, the extent of the competition, and the existences of economies of the scale in production. Much more depends on the type of trade barriers that are removed. AA should significantly reduce the average price of many tradable goods, giving industries to lower cost inputs and consumers to lower cost good. The average import - weighted tariff is currently 22% in Jordan. Although collected tariff revenue is substantially less than 15% due to exemption studies by the world bank of the trade regime

have concluded that cost raising administrative barriers are significant [World Bank: 2001,p.9].

In Mediterranean countries that enter into a FTA with the EU will lose the tariff revenue presently collected on imports of EU origin. Given that the EU accounts for 48 per cent of total imports into med countries this revenue loss is substantial. It implies a direct transfer from Med to EU exporters. The static benefits that arise to med countries of the FTA are unlikely to offset this loss. Benefits consist of locative efficiency gains, which will tend to be substantially smaller than the fall in tariff revenue. Of course, dynamic benefits (induced growth effects) may ensure that longer-term returns are positive. The point is that these benefits can also be attained through unilateral liberalization, without the associated losses [Hoekman, B: 1996,p.389].

Effective Rates of Protection: ERP

There are a number of options regarding the design of tariff reduction under the AA. One is the approach chosen by Tunisia, which gives priority to reduction of tariffs on capital goods and intermediate inputs, and delays the liberalization of consumer goods import. An advantage of the Tunisian approach is that it provides domestic industry with a breathing space. The problem is that it may increase the dispersion of protection across sectors, and thus create distorted investment incentives. Another option is to follow an across –the broad approach, cutting all tariffs uniformly by a certain percentage each year. A third option is so called concertina approach under which the highest tariff band is lowered first to the next highest band, followed by a reduction in this band to the next lowest, and so forth.

As mentioned in the literature survey that Hoekman (1997) has used Tunisian approach to estimate the impact of tariffs reduction on investment incentives in Jordan and Egypt in forecasting manner. It is assumed for illustrative purposes that Jordan pursue an approach identical to the Tunisian one. In fact, Jordan has followed some steps of Tunisian approach, but Jordan has designed a single approach to liberalize its tariffs with EU. That appears clearly in the negative list of some industrial goods orig-

inating in the EU and imported into Jordan, and also some reductions in the tariffs will start from the first, second, third, fourth and fifth years that the agreement comes into force. Indeed, the consequences of Jordanian economy to the implementation of the AA are different than Tunisian economy. A clear-cut example is that the liberalization of the agricultural sector for Tunisia is more sensitive than Jordan. The reason is that the Jordan's agricultures imports from the EU are not significant like the Tunisians agricultures imports.

The Basic Theory of Tariff Structure and Effective Protective Rate

The theory of tariff structure is concerned with the effects of tariffs and other taxes in a system with many related goods. It allows for the vertical relationships between products. Early contributions to the theory of tariffs structure, developing the idea of the effective productive rate with respect to the polices of particular countries, have come from Barber (1955) for Canada, Humphery (1962) for the United States, and Corden (1963) for Australia. The exposition by Johnson (1965) is the fullest available so far and explores many implications. Empirical contribution in which calculation of effective rates have been made on a large scale are given by Balassa (1965) and Basive(1966),[Corden: 1985,p.97].

The Effective Protective Rate

Ordinary nominal tariffs apply to commodities, but resources move between economic activities. Therefore, to discover the resources allocation effects of a tariffs structure one must calculate the protective rate for each activity, that is, the effective protective rate. This is the main massage of the new theory of tariff structures. The effective protective rate is the percentage increase in value added per unit in an economic activity, which is made possible by the tariff structure relative to the situation in the absence of tariffs but with the same exchange rate. It surely depends not only on the tariff on the commodity produced by the activity, but also on the input coefficients and tariffs on the inputs. Consider the simple case of an importable product j, which has only a single output, also an importable i.

There are no taxes and subsides affecting (j & i) other than the import tariffs. The formula for the effective productive rate for the activity producing has been written by (Corden: 1985) as the following:

Let

v_j = Value added per unite of j in activity j in absence of tariffs.

v_j^o = Value added per unite of j in activity j made possible by tariffs structure.

g_j = Effective productive rate for activity j.

p_j = Price of the unit of j in absence of tariffs.

a_{ij} = Share of i in cost of j in absence of tariffs.

t_j = Tariff rate on j.

t_i = Tariff rate on i.

Then
$$v_j = p_j(1-a_{ij}) \quad [1]$$
$$v_j^o = p_j[(1+t_j)-a_{ij}(1+t_i)] \quad [2]$$
$$g_j \equiv \frac{v_j^o - v_j}{v_j} \quad [3]$$

From these three equations,

$$g_j = \frac{t_j - a_{ij}t_i}{1-a_{ij}} \quad [4]$$

This is the key formula, the implication of which can really be summarized as follows:

If $t_j = t_i$ then $g_j = t_j = t_i$

If $t_j > t_i$ then $g_j > t_j > t_i$

If $t_j < t_i$ then $g_j < t_j < t_i$

If $t_j < a_i t_i$ then $g_j < 0$

If $t_j = 0$ then $g_j = -t_i\dfrac{a_{ij}}{1-a_{ij}}$

If $t_i = 0$ then $g_j = \dfrac{t_j}{1-a_{ij}}$

$$\frac{\partial g_j}{\partial t_j} = \frac{1}{1-a_{ij}}$$

$$\frac{\partial g_j}{\partial t_i} = -\frac{a_{ij}}{1-a_{ij}}$$

$$\frac{\partial g_j}{\partial a_{ij}} = -\frac{t_j - t_i}{(1-a_{ij})^2}$$

Furthermore, equation [4] can be rewritten as:

$$t_i = (1-a_{ij})g_j + a_{ij}t_i \quad [5]$$

This means that the nominal rate on the final good is a weighted average of its own effective rate and the tariff rate on its output. For many importable inputs into the jth product (inputs $1,2,3\ldots n$), but with no exportable or non-traded inputs, it can similarly be shown that

$$g_j = \frac{t_j - \sum_{i=1}^{n} a_{ij} t_i}{1 - \sum_{i=1}^{n} a_{ij}} \qquad [6]$$

The implications are the same as above, except that in place of the single input tariff t_i it is necessary to write the weighted average of inputs tariffs

$$\frac{\sum_{i=1}^{n} a_{ij} t_i}{\sum_{i=1}^{n} a_{ij}} \qquad [7]$$

So we can measure the EPR as follows:

Let Q_{EU} to be quantity of the EU imports into Jordan, Q_{Row} be the quantity of ROW imports, ε_{EU} is the own price elasticity of the demand for EU imports, and ε_{Row-EU} is the cross-price elasticity of ROW imports with respect to EU imports.

Suppose that due to the FTA tariffs towards EU imports have been reduced by $\Delta Q\%$. Then the change in the quantity of goods imported from the EU is:

$$\Delta Q_{EU} = Q_{EU} \Delta T \varepsilon_{EU} \qquad [1]$$

Similarly, the change in Row imports is

$$\Delta Q_{Row} = Q_{Row} \Delta T \varepsilon_{Row-EU} \qquad [2]$$

The new share of the EU imports in total imports is then:

$$SHARE_{EU} = \frac{Q_{EU} + \Delta Q_{EU}}{Q_{EU} + \Delta Q_{EU} + Q_{Row} + \Delta Q_{Row}} \qquad [3]$$

Or

$$SHARE_{EU} = \frac{Q_{EU}(1 + \Delta T_{EU})}{Q_{EU}(1 + \Delta \varepsilon_{EU}) + Q_{Row}(1 + \Delta T \varepsilon_{Row-EU})} \qquad [4]$$

Equation 4 can be expressed as function of the previous periods market share. Dividing the right hand side by the numerator and manipulating the ratio of import quantities.

1992 input-output tables for Jordan. This formula has been written by Hoekman, and Djank-ov.(1997) to measure the policy options for Egypt with impleme-ntatios of the AA between Egypt and EU. We can use this formula To investigate the implement ations of the AA between Jordan and EU .

$$SHARE_{EU}^{t+1} = \cfrac{1}{1+(\cfrac{1}{SHARE_{EU}}-1)\cfrac{1+\Delta\varepsilon_{RowEU}}{1+\Delta\varepsilon_{EU}}} \qquad [5]$$

The expression for the new weighted tariff becomes:

$$Tariff_{NEW}= Tariff_{EU}SHARE_{EU}+Tariff_{Row}(1-SHARE_{EU}) \qquad [6]$$

Which will be calculated for each sector:
Upon to the above the effective rate of protection is finally derived as follows:

This analysis depends on the data collected from Jordan's input-output tables for 1992, UN Comtarde and Jordan – EU AA Articles .

$$ERP_i=\frac{Tariff_{NEW}-\sum_{j\neq i}Tariff_{New}a_j}{1-\sum_{j\neq i}a_j} \qquad [7]$$

Where a_j is the input share of sector j in the production of good , i will be taken from the

We suppose that the tariffs will reduce 25% every three years, with four linear scenarios to

60

arrive at the end of the transition period (the twelfth year)to 0% . with a linear proportional analysis, we can guess the impact of the AA on Jordan's welfare, the *Econometric Views Program* will be helpful to evaluate our forcecastings.

Findings and Evaluation:

Jordan's nominal average tariff is 22%, the average of the ERP without considering any services inefficiencies is 53%. If a 10% tariff equivalent is assumed for services industries, the average ERP for manufacturing falls 37%.

At the end of the first three years after the implementation of the AA, this average falls 10%, when it has arrived at 27, which means a negative decline. For a number of agricultural and resources –based industries the effective rate is again negative: food processing, mining and quarrying, petroleum refining, phosphate, printing, and publishing, this appears clearly in table five in this section. Jordan's average manufacturing ERP falls steadily, six year after the initial implementation of the AA, the depression of ERP under a

proportional reduction declines from 50 to 41%, where some industries, including transport, equipment, potash, and other manufactures experience increases in the effective rate of production. By the end of the ninth year, the average rate has fallen to 8%. Moreover, at the end of the transition process, the average ERP falls to –8%.

This does not occur under the proportional reduction approach, under which all rates fall, although because of the proportionality of the cuts the decline for many sectors is quite limited in the first part of the transition. The relative changes in effective rates of protection are more important than the absolute level of protection in terms of factor market dynamics. Under this approach, large changes occur in the ERP over the transition path.

A comparison between the columns of table five shows the rapid loss of average protection in many sectors. The large decline may be noted in *Cement* sector, which is from 150 to –120 by the end of third year, and to reach 85 at the end of the sixth year, 40 in the ninth year, and to arrive -16 at the end of the process; the

Cosmetics will be declined from 117 to 64 in the third year, and to 12 in the sixth year. This sector will be affected by the implementation process, when its average will reach −71 at the end of the process; the *Transportation equipment* will be declined from 88 to 75, 59, 36 and 0 in the third, sixth, ninth and at the end of the liberalization process, respectively; and the *Glass* from 124 at current average to reach 90 at the end of the process. The other sectors will be fallen to reach a negative decline, but this rapid loss of protection in many sectors is with positive ERPs in year nine. This raises credibility concerns regarding the sustainability of Jordan's approach in liberalization process.

Several industries maintain high positive ERPs even after the implementation of the AA in its ninth year. This appears clearly in some sectors like; *Cement, Confectionary, leather, Printing and publishing, Rubber and Plastic, Other Minerals, Transportation equipment* and *Glass*. The reason for this is that the initial tariffs for these sectors are something high. This condition is going to be changed at the end of the AA implementations at the twelfth year. Where the average rate of protection will be negative in some of these sectors such as; *Cement, Confectionary, leather* and *Printing and publishing.*

Even if some of the pervious sectors will still have its high positive recognitions such as; *Glass, Other minerals, Rubber and Plastic* and *Potash,* but the average of ERP will decline to reach −8% at the end of the transition process. Which means a decline in Jordan's revenue.

This analysis suggests that the effective protection that occurs in some sectors in the transition process implies that the welfare losses will be incurred .

Table Five: Jordan's Trade Liberalization under AA*

Sector	Nominal Tariff	EU Share of Import	Current ERP, no Services Protection	Current	Year Three Linear	Year six Linear	Year Nine Linear	Year Twelve Linear
Cement	35	53	176	150	120	85	40	-16
Confectionary	41	79	104	94	70	45	17	-10
Cosmet-ics	17	75	174	117	64	12	-34	-71
Dairy Products	18	83	28	15	0	-14	-29	-41
Electrical Machinery	25	66	43	40	29	19	8	-3
Fabricated Metals	16	60	39	11	-3	-16	-31	-41
Fertilizes	11	69	23	11	4	-1	-6	-13
Food Processing	11	56	15	-8	-17	-24	-35	-41
Leather	47	49	54	49	40	29	15	-3
Meat Industry	22	48	78	8	34	19	0	-30
Metal Industry	17	47	14	47	5	3	0	-3
Mining Quarrying	4	74	-7	8	-44	-41	-39	-36
Non Electrical Machinery	16	79	5	-43	0	-1	-3	-3
Other Chemicals	12	65	0	2	-3	-2	-2	-2
Other food stuffs	14	62	13	-2	-1	-10	-21	-34
Other Man-ufactures	16	51	62	7	-4	-16	-32	-52
Other Minerals	43	43	107	8	90	77	56	15
Paint	14	79	18	99	5	0	-3	-6
Paper	18	38	5	12	1	1	0	-1
Petroleum Refining	6	46	-3	3	-6	-3	-2	-2
Pharmaceuticals	11	70	14	-5	1	-2	-7	-10

Phosphate	11	58	9	-4	-6	-7	-9	-12
Potash	14	5	40	15	-18	17	16	4
Glass	28	7	141	124	126	127	124	90
Printing and Publishing	12	27	48	-5	1	13	18	-5
Rubber and Plastics	29	45	65	59	51	42	27	3
Textiles	29	27	13	10	8	7	5	0
Transportation Equipment	31	42	102	88	75	59	36	0
Mean	22	51	53	37	27	20	8	-8
Standard Deviation	12	21	53	50	46	41	37	29

* Effective Rates of production over the Transition Period (constant 10% tariff equivalent for Services).
This data has been estimated based on Jordan's official tariff schedule & on the Jordan-EU AA Articles & UN COMTARDE
Source: Department of Statistics. (1992): Jordan Input-Output Tables for 1992.Amman.
EC Delegation. (1998): Jordan-EU Association Agreement, EC Delegation& Friedrich Naumann Foundation. Amman.

The liberalization of trade required under the AA should do much to induce firms to upgrade their production capacity and improve their efficiency. Although in long run the AA is likely to be beneficial to all of the countries involved, being a discriminatory arrangement the exercise may be economically welfare reducing in the short- to medium -run. Even if not, the opportunity costs associated with preferential trading arrangements can be large. The AA major potential advantage is that it provides a commitment mechanism, allowing a gradual reform path to more credible than otherwise. Credibility may be enhanced through the binding nature of the agreement, the implicit linkage that has been made between official financial transfers from the EU and implementation of the AA, and offer of wide-ranging technical assis-tance to help Jordan improve the administration to its regulatory regimes (costumes, certification of product standard).

The absence of binding committments in the areas of foreign

direct investment and supply of services, the exclusion of government procurement, and the maintenance of anti-dumping and broadly worded safeguard provisions implies that the AA dose not go significantly beyond existing multilateral WTO disciplines. The transition path of free trade with the EU is a long one, with liberalization of goods competing with domestic production only starting five years after the entry in force of the AA. This may well reduce the incentives to initiate rapid restructuring and may create problems in implementing tariff reductions in the future. The gradual liberlisation may also be too slow in terms of maintaining existing export markets and capturing new ones in the face of increased competition from former centrally-planned and Asian economies, driven by the liberalization achieved in the Uruguay Round, [Hoekman, B & Djankove, S: 1996,p.403].

By lowering tariffs on intermediates and capital goods first, domestic industries are granted some up front compensation for adjustment costs that must be incurred latter, and are given time in which to restructure. This strategy also ensures that tariff revenues will initially decline slowly, giving more time to create alternative sources of funds for the government. But possible downside of the strategy should be recognized. Very much clearly depends on the extent to which complementary actions are pursued to improve the functioning of the economy.

Important in this connection is the fact that the AA does little to ensure investors of national treatment or grant the general right of establishment. This is a significant difference with the Europe Agreements, where such establishment is permitted immediately for most activities, and a transition path is spelled out for the remainder. By signaling the fact that they are open to FDI and willing to lock this in, the Central and Eastern European countries increased the incentives for foreign firms to establish and transfer much needed know-how by reducing political risk.

FDI is especially important in the service area, where establishment often remains the best way to contest a market. Efficient services are crucial in terms of being able to participate in the global economy ;telecommunications, information technology, port services, financial intermediation,

and business support services are key elements underlying the ability to compete on world markets. By limiting commitments to those made in the GATS, the AA risks sending a signal that liberlisation is not immediate agenda.

However, much will depend on the value of the economic and financial cooperation that will flow from the EU to Jordan, and on the extent to which external barriers to trade are reduced concurrently with the implementation of the AA. A potential problem that may arise in this connection is the reliance on customs tariffs for government revenue. The higher the share of tariffs in total government revenues, the more difficult it may be to mobiles the alternative resources base needed to allow a reduction in MNF tariffs on top of the implementation of the AA.

Actions to reduce the role of the state are also so important. Privatization of the state-owned enterprises will generate revenue, create investment opportunities for foreign (and flight) capital, and limit possible claims on the budget as competitive pressures emerge. Although the AA may help to ensure that state firms

confront harder budget constraints over time- provisions on state aids to industry will start to bite after five years under the AA- such disciplines are relatively week.

In fact, there are important political economy issues in EU-Med AA. Many of Med countries have a significant stock of educated workers that are either employed directly by the government administration or by state-owned firms. Many also have large pools of unskilled, under employed labor. Implementation of the AA may not be politically feasible if increased job opportunities for the unskilled, and the educated unemployed do not materializes, or if job losses in the state sector become too large to be politically manageable.

The greater employment opportunities for unskilled could emerge through the creation of firms specializing in labor-intensive production, and by improving access for agricultural exports. The latter has been excluded; a necessary condition for the former is the existence of adequate infrastructure and the absence of red tape restricting export production. For many of the more highly educated poten-

...tial opportunities lie in the service sector. Realizing this potential requires fostering comp-etition in services activities and allowing establishment by foreign provi-ders. Even the, realism suggests that in countries where the existing labor force employed in services is already significant, net losses may will occur initially. FDI can do much to stimulate both labor-intensive and many skilled activities in services or manufacturing, but it will only material if the regulatory and institutional environment is con-ducive to private sector inve-stment.

Conclusion:

The free trade agreement with the EU will give rise to greater competition in product markets and a more efficient allocation of productive resou-rces. The extensive provisions in the AA for technical cooperation aiming at harmonization and mu-tual recognition of regulatory producers will help reduce tran-saction costs associated with tra-de, and improve the investment climate. Much clearly depends on the contents of the AA.

By lowering the tariffs on intermediates and capital goods first, the domestic industries will be granted some up-front comp-ensation for the adjustment costs that must be incurred latter, and are given time in which to the restructure. Such tariff liberlis-ation strategies also ensure that tariff revenues will initially decline slowly, giving more time to mobilize alternative tax basis. But the possible down side of the strategy is that the back loaded nature of the tariff reductions may fail to initiate rapid restruc-turing, and may create problems in implementing tariff reductions in the future, especially if the investment is induced in the sectors concerned.

The analysis suggests that the Jordanian approach will increase both the ERP for some sectors over a significant period of time and the dispersion of the ERP across sectors, thus causing welfare losses. The ERP analysis also suggests that benefits will be enhanced if complementary measures are pursued to improve the functioning of the economy. The quality and reducing the costs of services are particularly important in this connection. Indeed, foreign direct investment is so crucial and important in the services area, as local establ-ishment remains the best way to

contest a market in most services sectors. The benefits of the AA will be enhanced if trade and investment barriers are reduced in a nondiscriminatory manner.

Indeed, in the absence of improvements in the legal and regulatory framework, opening up to trade with the EU may result in greater competition from imports without much in the way of new investment. If so the political viability of the AA implementation will also decline. Much may depend in this connection on how EU financial assistance is used. A strong case can be made that there may be a high payoff for using the EU grants to fund worker compensation schemes to facilitate downsizing of the public sector.

However, the results of this analysis are similar to those arrived at by Hoekman (1997), and Hosoe (2001), and AL.Omari (2002) which gives a clear picture about the impact of the Jordan-EU AA on Jordan.

Notes :

1.For more details about Quantative Restriction, Price Controls and Subsidies in Jordan see:

World Bank Report(1994):**Trade Incentives Regime, in Jordan Consolidating Economic Adjustment and Establishing the Base for Sustinable Growth.** No.12645 JO, 1994,Pp.35-52.

2.Almost all countries in Middle East & North Africa (MENA) have been reforming and liberalizing their foreign trade regimes, for more details see: Al Khouri, Raid. (2000): **Trade Policies in Jordan , Lebanon, and Saudi Arabia,** in Hoekman, B & Kheir-El-Din,Hana,(eds): **Trade Policy Development in the Middle East and North Africa,**World Bank,N 20322 February 2000,Pp.141- 166.

3.Iraq remains Jordan's major trading partners, 35 percent of Jordan's exports go to Iraq for details see. Jordan Central Bank.(2002): **Annual Report,** www.cbj.com

4.The business environment in the Middle East is not attractable due to the security situation for more details see: -Galal, A.(2000): **Incentives for Economic Integration in the Middle East,** in Hoekman, B & Kheir-El-Din,Hana,(ed): **Trade Policy Development in the Middle East and North Africa,** World Bank, N,20322, February,2000 ,Pp.51-68. - Middle East & North Africa (MENA) have signed association Agreement with European Union (EU) namely, Israel, Jordan Morocco, Tunisia. The agreement with Algeria, Egypt, Lebanon and Syria are under discussion, for details about trade liberlisation in MENA countries, see: - Abed, Gorege.(2000): **Trade Liberalization and Tax Reform in the**

Southern Mediterranean Region, in Hoekman, B & Kheir-El-Din Hana,(eds): Trade Policy Development in the Middle East and North Africa, World Bank, N, 20322,February, 2000,Pp.181-212.

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