DO EUROPEAN AND ARABIC MEDITERRANEAN (EAM) COUNTRIES ESTABLISH A GLOBAL INTEGRATED REGIONAL TRADE BLOCK (RTB)?

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This paper explores the benefits and weaknesses of a global regional trade block (RTB) where European and Arabic Mediterranean (EAM) countries can be integrated. It also examines issues faced by such countries involved in the light of the global marketplace. Trade regions may begin as political bodies for mutual security and support, but as development occurs and comparative advantages are formulated, the regions evolve into economic bodies. The increase in infrastructural development through tele-communications, information technology (IT) and free-trade practices enable countries of the zone to link together into an integrated trading block.

Determining an empirical framework of the trade gravity theory and using time series data, we examine the hypothesis in which a higher rate of intra-trade flows relations can lead substantially to a higher rate of integrated economic relations among some parts of EAM countries. This can also result in a higher rate of income convergence between partners in the region.

Overall, our findings obtained indicate that the potential members will be putting into place economic policies that set the stage for global integration if careful planning is implemented. Establishment of an integrated sub-block among these members, being evident specifically on developed members including France, Italy, Spain and Greece in the European side and Turkey in the developing side, is a good example. Our findings indicate that the smaller gap of per capita incomes between these trading partners, that is, more income convergence or similarity in both sides, a more plausible approximation to incentive to trade can be happened. Furthermore, as the trade flows between partners rise, the income convergence is achieved. However, there are income divergence and trade diversion for some other EAM members in accordance with implementing trade integration.

INTRODUCTION

The emergence of a new European Arabic Mediterranean regionalism EAM and other bilateral and multilateral free trade agreements (FTAs) requires not only debates on substance in policy and official statements at the ministe-
rial level, but also and more importantly, research on empirical foundation to support such economic integration developments. While the adoption of the Tinbergen-inspired gravity theory has been useful to cross-sectional studies on the growth of trade, the idea of an income gap or similarity may also be an important determinant of trade in EAM economies as elsewhere.

The paper adopts this new research approach and focus and constructs appropriate simultaneous-equation models of trade causation in flexible functional form in order to test the hypothesis of a possible global marketplace implementation between developed and developing members in EAM. This conductive integration can be affected by the main determinants of multilateral trade flows and income convergence.

Section 2 will discuss the necessity of regional trade blocks (RTBs), which are playing an important role in globalization, whereas Section 3 is concerned with current obstacles of this phenomenon, discussing its challenges and opportunities. Section 4 will look at the EAM as a practical sample of a regional trade block, which can be conductive to trade integration. To experience economic cooperation, a 2 simultaneous equation model based upon gravity theory is specified and then estimated results are analyzed in Section 5. Finally, concluding remarks are given in Section 6.

THE NECESSITY OF RTBS

Rapid progress in globalization has pushed mostly developing countries to improve legal systems, currency exchange and convertibility, accounting systems, educational exchanges, and other necessary policies, to be fully accepted and integrated into their implementing RTBs (Bryant and Massey 1999). More importantly, as these countries develop infrastructure to deal across borders with their regional trading partners, in many cases, they are also putting into place economic and regulatory policies that set the stage for global integration. In addition, multinational corporations, technology, and capital flows will accelerate national liberalization of trade and trans-border labor and capital exchanges. This indicates the importance of RTBs in the global marketplace and permits nations to develop global strategies.

Importance of RTBs in Global Marketplace

Integration moves gradually towards a global reality, so that all countries around the world are trying to remove or reduce trade ob-
obstacles in order to reach finally a global regionalization. GATT and now WTO are involved in conjunction with such activities. In fact, regionalization stands for liberalizing economic activities in such a way of trade, investment and financial flows among partners in a region.

Due to expansion of integration blocks and their contribution to the world economy, future developments in WTO and globalization should come from efforts of these blocks to assure development at all stages of RTB alliance to formulate both private and public policy initiatives that stimulate continued global networking and interdependence. In these circumstances, developing countries can be better positioned to ensure regional autonomy and success through smaller trading collectives, or regional trading blocks (Tayyebi and Googerdchian 2003).

Effect of RTBs Implementation on Economic Indicators

The theory of economic integration expresses that countries make efforts to combine trade liberalization strategies with protective policies, to minimize trade restrictions amongst themselves and to collaborate in financial activities. After integration, trade transactions followed by a decrease in costs and resource reallocation will result in an increase in products, trade and then economic welfare for members. In Shagi’s words (1987): “economic integration relies upon economic transaction promotion and unification of resources of two or several isolated systems that leads to a rise in the capability of the larger integration system”.

When a non-member country considers entry into a trading block, it faces a trade-off between increased competition and preferential access, so that it equilibrates the costs of opening up its own market to the RTB members and the gains from obtaining better access to the regional trade market by which it can remove losses from trade diversion.

OBSTACLES

As concerned sometimes in literature, there is no guarantee in which RTBs always benefit their member countries (Andriamananjara 2003). In fact, although they can create trade and improve terms of trade vis-à-vis non-members, they can also divert trade away from lower-cost producers in non-members countries. More importantly, RTBs can be harmful to the excluded countries by virtue of their discriminatory nature, in terms of both their exports to the regional market and their terms of trade, that is, they have to adapt themselves to changes in export prices in order to remain competitive in the market. This is
particularly relevant since many of the recent preferential trade initiatives leave out many of the world’s poorest countries.

Opportunities and Challenges

According to the strategy of regional integration, RTBs would continue to expand and to merge until one single RTB is left. Basically, the fear of being excluded from narrower deals can induce non-member countries to join the group or/and to accept a broader agreement. Thus, it is believed, for instance, that EAM preferences in the region market would encourage other countries to become part of an integrated trade area.

It is therefore very possible that outsider countries that initially had no interest in regionalism may become interested when the size of trade integrated block becomes large enough. Following the same logic, a sub-EAM would keep expanding until all countries in the region belong to one super-EAM, which is semi-global free trade.

However, developing countries are involved with threats arising from global political and economic matters, which are born normally by the globalization process. It is evident that many nations have experienced a sustained reduction in the some kinds of tax burden, like taxes-international trade, transactions, since recent decades. These reductions might reflect the policies followed by these countries rather than the general effects of globalization. The impact of globalization on taxation started to be felt more intensely in 1990s when capital markets were liberalized and economies became more integrated on a global scale (Tayyebi and Bakhshi 2003). Table (1) reports, for instance, changes in taxes for OECD countries classified into four groups for three recent decades. Figures reveal that there has been totally a diminishing rate in taxes on specific goods and services as percentage of GDP for all classified OECD groups.

Table (1): OECD taxes on specific goods and services as percentage of GDP

<table>
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<tr>
<td>OECD TOTAL</td>
<td>5.8</td>
<td>5.5</td>
<td>4.9</td>
<td>4.8</td>
<td>4.9</td>
<td>4.2</td>
<td>4.5</td>
<td>4.5</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>OECD AMERICA</td>
<td>4</td>
<td>3.7</td>
<td>3.6</td>
<td>4</td>
<td>4.9</td>
<td>3.9</td>
<td>3.9</td>
<td>3.9</td>
<td>3.8</td>
<td>3.4</td>
</tr>
<tr>
<td>OECD PACIFIC</td>
<td>4.7</td>
<td>4.5</td>
<td>4.9</td>
<td>5.1</td>
<td>4.9</td>
<td>3.8</td>
<td>3.6</td>
<td>3.6</td>
<td>3.6</td>
<td>3.3</td>
</tr>
<tr>
<td>OECD EUROPE</td>
<td>6.1</td>
<td>5.9</td>
<td>5</td>
<td>4.8</td>
<td>4.9</td>
<td>4.4</td>
<td>4.8</td>
<td>4.7</td>
<td>4.5</td>
<td>4.4</td>
</tr>
</tbody>
</table>

While the impact of globalization will make a challenge to present tax administrations, it may provide opportunities to use new technology and knowledge to raise tax revenue in innovative ways to continue to be able to finance the current high levels of public expenditure. It is conceivable that new taxes will be invented and used to extract more revenue from taxpayers. However, this possibility does not diminish the need to assess the ways in which current developments are likely to affect the existing tax systems.

In addition, liberalization in trade, capital and labor are also popular determinants of globalization, so that the decade of 1990s has experienced a drastic increase in international trade. Thus, this progress can be seen in volumes and values of both physical and modern transactions. Although growing internal trade in a country and/or international trade in the globe, it is evident that types of increasing exporting goods in both developed and developing economies are quite different. While developed countries increase exporting of final goods with a high rate of value added, developing countries make efforts to contribute effectively to the global economic activities, but by rising of primary exporting goods with a low rate of value added. As a consequence of global trading expansion, the current gap between these countries has been seriously deepening.

As discussed previously, globalization can result in countries to be admitted and integrated into their implementing regional trade blocks (RTBs) in order to benefit from trade expansion, economic growth and to contribute effectively to the globalization process. It is now an open question whether RTBs create more trade than they divert. The lowering of trade barriers among block members may expose developing economies to greater competitive pressures and open up larger markets for producers in member countries. Like other forms of trade liberalization, RTBs can increase competition in domestic industries, which can then spur productive efficiency gains among domestic producers and improve the quality/quantity of inputs and goods available in the economy (Dollar 1992, Sach and Warner 1995, Edwards 1998, and Wacziarg 2001). Producers can also benefit from the greater market size created through the RTBs, which can expand opportunities for exporting products and lead to enterprise and employment growth.

The main fear, however, is that RTBs may expand intra-block trade by diverting trade away from non-member economies [de Melo, et. al (1992), Bhagwati and Panagariya (1996), and Schiff (1997)]. These policy-diverted trade flows may lead to non-optimal patterns of specialization if the distribution of resources across members is not representative of the distribution of resources in the world. Complex and overlapping international and regional trading blocks may create overlapping regulations and commitments that are difficult to disentangle and make it difficult to proceed in broader trade liberalization (Bhagwati et al. 1996, Krueger 1997). However, working together in a RTB frame can
bring new opportunities to the members so that they may conduct appropriate PTA strategies to prevent trade diversion.

EAM: AS A SAMPLE

The formation and the expansion of a trading block require a “coincidence of wants” among all the interested parties members and non-members. On one hand, the non-members must want to join a trading block while, on the other, the members should be willing to accept new members. In the real world, PTA or RTB members can decide whether or not to allow a new member to accede to the block. As a matter of fact, given that Mexico already enjoys privileged access to the United States, it may no longer be interested in another expansion of NAFTA. Conceptually, when deciding whether to accept or to reject a new member, a representative PTA or RTB member compares market enlargement that indicates the gains from getting preferential access to the new member’s market; and preference dilution that relies on the losses of having to share its original preferential market with the new member (Andriamananjara 2003).

A regional trade block, thus, can register its members comprising of European and Arabic Mediterranean countries, named EAM. These members can be emerged geographically and potentially based on the degree of their increasing rate of trade flows. Although the existence of disparity in economic and social conditions, there would be the possibility of different PTAs in which countries are classified into a number of sub-RTBs of EAM. One group, EAM1, may include Spain, France, Italy, Greece, Turkey and two main North-African countries: Morocco and Egypt. The second one, EAM2, can consist of North African countries such as Morocco, Tunisia, Egypt, Algeria, and Libya and two Middle Eastern countries: Syria and Lebanon. To prevent trade diversion, EAM3 may be limited to the membership a few of European and Arabic countries in the region as they are the trade major partners of each other, for instance: Spain, France and Morocco.

As evidence, Tayyebi and Googerdchian (2003) have observed the conduction of trade integration on a number of selected European and North African countries, which has led somehow to trade diversion. The formation of an integrated sub-block among the countries, being explicit specifically on contiguity of members like France, Italy and Spain in the European side and Egypt, Tunisia and Morocco in the North African side, is a good example.

Consequently, the crucial implication of the current study is an important lesson that both developed and developing nations that exist in the zone are able to benefit from integrating economic activities, even though they are heterogeneous in their economic and social conditions. In principle, to secure their relations more strongly, they should understand and accomplish advantages of bilateral trade relations and the economies of scale.
EMPIRICAL EVIDENCE: AN APPLICATION OF A GRAVITY MODEL ON THE BILATERAL TRADE AND INCOME CONVERGENCE

A simple model of two simultaneous implicit functions is considered, which comprising and extending the basics of gravity theory linking trade and growth between two trading countries (Helpman and Krugman, 1985, and Baier and Bergstrand, 2001). In this model, trade flows (named TR) may be defined as exports, imports or openness (exports plus imports) and growth may be defined as GDP denoting YE for a sub-block’s (i.e. European developed countries in EAM; France, Spain, Italy and Greece) GDP and YT for trading partner’s GDP, which can be remaining developing members in EAM (Turkey, Morocco, Tunisia, Algeria, Lebanon, Libya, Egypt and Syria), or Turkey or Morocco. The two countries may be comprehensively all possible pairs of all EAM members or as pair-wise (bilateral) combinations of the European EAM members as a group and developing EAM members, Turkey or Morocco as another group separately. Thus, we have:

\[
F_1(a, TR, YE, YT, IG) = 0 \quad (1)
\]
\[
F_2(b, TR, YE, YT, IG, X, W) = 0 \quad (2)
\]

where \(F_1\) and \(F_2\) are two arbitrary functions, \(a\) and \(b\) are parameter vectors, \(IG, X\) and \(W\) denotes, respectively, income gap or convergence, other economic and non-economic variables. The economic variables include fiscal, monetary, trade and industry policy, and non-economic variables contain distance, area, size, policy shifts and external shocks), which are relevant to a group of countries’ growth or development. Data for variables identified here, during the period 1970-2001, are available in the web sit of the World Bank World Tables.

Taking the natural logarithm of both Equation (1) and Equation (2), the model of 2 endogenous variables of interest, namely TR and IG, in Equation (1) and Equation (2) can be explicit equations and written in stochastic forms and in terms of log linear of all the included exogenous and endogenous variables (YE, YT, TR, IG, X and W) as:

\[
LTR_t = a_1 + a_2 \text{L}YE_t + a_3 \text{L}YT_t + a_4 \text{L}IG_t + \epsilon_1 t \quad (3)
\]
\[
LIG_t = b_1 + b_2 \text{L}YE_t + b_3 \text{L}YT_t + b_4 LTR_t + b_5 LX_t + b_6 LW_t + \epsilon_2 t \quad (4)
\]

where \(L\) stands for the logarithm form of variables. Eq. (3) is the trade equation with income convergence as another determinant of trade (Helpman and Krugman, 1985) and Eq. (4) proxies a complicated process of production, consumption and trade between the two trading groups of the EAM members. LRT and LIG are only assumed to be as endogenous variables, while others are
exogenous. LIG, income convergence or similarity, is a type of Linder variable and is defined as the gap of per capita incomes between 2 trading partners. A smaller gap implies more income convergence or similarity and this seems a plausible approximation to incentive to trade. In their non-stochastic forms, these equations form the basis of applied or computable general equilibrium (CGE) models of the Johansen class in which all elasticities (necessary to model solutions) are usually assumed to be given or known a priori (Tran Van Hoa 2003). For inconsistent estimation by the OLS, as both of these equations are over-identified, Equation (3) and Equation (4) can be estimated by 2SLS (two stage least squares).

The equation (3) assumes that EAM’s trade (TR) is affected empirically by the GDP of an EAM sub-block (YE), implemented in the block including European developed countries (France, Spain, Italy and Greece) and trading partner’s GDP (YT), including developing members in EAM (Turkey, Morocco, Tunisia, Algeria, Lebanon, Libya, Egypt and Syria), or Turkey or Morocco, separately (the frictionless gravity theory model – see Baier and Bergstrøm, 2001). It is also affected by income convergence (defined above), IG, while the equation (4) postulates that income convergence can be affected by major determinants (YE, YT, and TR) related to income and trade strategies in EAM as well as a set of the other economic activities (X) and a set of non-economic factors. X includes policies and external or internal shocks (Coe and Helpman, 1993), containing fiscal policy (FP), monetary policy (MP), inflation (PT), exchange rate policy (ERP) -Rose (2000)- or industry structure (IS) -Otto et. al.(2002). W includes some major social factors like population (POP) as proxy to country size – Frankel and Romer (1999), or national or international crises (ST) – Johansen (1982).

Some relevant remarks about appropriate estimation of Equation (3) or Equation (4) should be made here. First, since one of the best known IV estimators, namely the 2SLS, has been demonstrated to be dominated in MSE by this method in identified structural equations of simultaneous-equation models such as Equation (3), the so-called IV impact of income convergence, for example, on EAM trade can be directly studied via the application of the 2SLS to Equations (3) and (4) (Tran Van Hoa 2003). Second, due to availability limitation of the required data in our studies, all original data are obtained only as annual and then transformed to logarithm. Since all data used here are necessarily annual and have a small sample size, the study outcomes are therefore finite-sample optimal. Finally, since the poor quality of economic data from the EAM developing is well known, one by-product of our study is that the findings are also optimal in errors-in-variables cases, where both OLS and 2SLS are applied here for estimation.

The results of our experimental study on the estimating performance of
the standard gravity theory using EAM data are analyzed here. Thus, a number of models based on the two simultaneous equations in (1) and (2) or their empirical implementation versions shown in (3) and (4) have been estimated and reported in Table (2). For plausibility analysis and efficiency comparison with results obtained, the two estimation methods used are the OLS and 2SLS.


<table>
<thead>
<tr>
<th>Equations</th>
<th>Explanatory Variables</th>
<th>Case A</th>
<th>Case B</th>
<th>Case C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(EAME + EAMET)</td>
<td>(EAMET + TUR)</td>
<td>(EAMET + MOR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OLS 2SLS</td>
<td>OLS 2SLS</td>
<td>OLS 2SLS</td>
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<tr>
<td>Eq. (3)</td>
<td>Constant</td>
<td>-6.391 (-3.547)</td>
<td>-17.53 (-4.471)</td>
<td>-0.224 (-0.222)</td>
</tr>
<tr>
<td>Dependent</td>
<td>LYE</td>
<td>0.502 (4.611)</td>
<td>0.579 (6.155)</td>
<td>0.622 (4.225)</td>
</tr>
<tr>
<td></td>
<td>LYT</td>
<td>0.585 (6.068)</td>
<td>0.124 (2.083)</td>
<td>0.582 (3.606)</td>
</tr>
<tr>
<td></td>
<td>LIG</td>
<td>0.620 (2.837)</td>
<td>-0.044 (-2.410)</td>
<td>0.046 (0.421)</td>
</tr>
<tr>
<td></td>
<td>R²</td>
<td>0.982</td>
<td>0.992</td>
<td>0.882</td>
</tr>
<tr>
<td></td>
<td>DW</td>
<td>1.923</td>
<td>1.730</td>
<td>1.923</td>
</tr>
<tr>
<td>Eq. (4)</td>
<td>Constant</td>
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<td>14.272 (3.911)</td>
<td>-0.224 (-0.222)</td>
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<tr>
<td>Dependent</td>
<td>LYE</td>
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<td>-</td>
<td>0.296 (0.791)</td>
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<tr>
<td></td>
<td>LYT</td>
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<td>-0.016 (-2.284)</td>
<td>-0.331 (-1.045)</td>
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<td></td>
<td>LTR</td>
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<td>-0.136 (-5.720)</td>
<td>0.853 (2.422)</td>
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<td></td>
<td>LPOPE</td>
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<td>-</td>
<td>0.853 (1.931)</td>
</tr>
<tr>
<td></td>
<td>LPOOPT</td>
<td>1.119 (3.139)</td>
<td>0.541 (4.462)</td>
<td>0.60 (0.889)</td>
</tr>
<tr>
<td></td>
<td>R²</td>
<td>0.972</td>
<td>0.950</td>
<td>0.627</td>
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<td></td>
<td>DW</td>
<td>2.104</td>
<td>2.301</td>
<td>1.931</td>
</tr>
</tbody>
</table>

Sources of data: World Bank World Tables.
Figures in the parentheses are values of t-Statistic.
This table summarizes information for three cases in which Case A points out trade integration between European members of EAM (EAME) and other developing members of EAM (EAMD) as trade partners, that is: EAME + EAMD. Case B and Case C stand for trade integration between EAMD and Turkey (EAMD + TUR) and between EAMD and Morocco (EAMD + MOR), as examples of implementing sub-blocks in EAM zone, respectively.

A total of 6 sets of empirical findings for the Equation (3) and Equation (4) are given in the table in the form of 3 aforementioned cases. Each case includes 2 simultaneous regressions estimated by OLS and 2SLS, while the first 3 set is for the trade flows in the each case. The second 3 set is also for the income convergence based on a simple frictionless gravity theory. Our experiments for these equations indicated that estimates obtained would overall produce either implausibly signed or statistically insignificant results. Thus, the use of some variables such as YE, FP, MP and POPE resulted in a misspecified form of the model so that they were omitted through estimating process.

From the results in Table (2), all 12 estimated models of the 3 cases of implementing sub-EAM have statistically significant and high modeling performance. More specifically, with the exception for the Case C, more than 90 percent of changes in dependent variables for both Cases A and B are explained significantly by the regressions as R2 reaches more than 90 per cent. According to the values of t-statistic, most estimated coefficients are significant at the 5 percent significance level, while the values of DW also show that all estimated models appear free from autocorrelation-induced inefficiency problems. Overall, estimation results obtained by 2SLS are more reliable than those obtained by OLS.

In all cases, where there are different scenarios of trade integration between two separate parts of European and developing members (EAME+EAMD), European countries and Turkey (EAME+TUR) and European countries and Morocco (EAME+MOR), total trade (exports + imports) is significantly affected by GDP of both sides, as expected. Although income inelastic, an increase in GDPs results significantly in a range of at least 0.12 up to about 0.97 percent increase in trade flows. It means that GDPs of the EAM members are of the most important determinants to the regional trade market expansion.

However, there are different results for revealing impact of income convergence (IG) on trade flows in all 3 cases. According to the Case A, results indicate that a 1 percent increase in IG (that is, as gap between income per capita of European members and developing members widens by 1 percent) total trade (exports + imports) of the zone rises by about 0.70 percent, as unexpected. It reveals the fact that income convergence for this type of block implementation (EAME+EAMD) has negative effect on the block’s trade expansion, so that a larger gap between incomes per capita of both parts can lead the block’s trade flows to fall significantly. Simultaneously, IG (income convergence), as an en-
dogenous variable, is also affected significantly but unexpectedly by the block’s trade flows (TR) so that a 1 percent increase in TR, the income gap becomes more widening. As discussed previously, this impact-diverted trade flows and income divergence might be as a result of non-optimal patterns of specialization if resources across members are not distributed efficiently in the region.

However, estimation results for Case B (EAME+TUR), where there can be established an integrating RTB between European members and Turkey that belong to EAM, indicate that there is a significant and an expected effect of income convergence on total trade of such members. The estimated elasticity coefficient of IG shows that a 1 percent decrease in this variable, total trade of the members will rise by about 0.05 percent (according to estimates obtained by applying both OLS and 2SLS). This implies that if these members make smaller their income per capita gap, they can benefit from trade creation. Estimation results for Equation (4) (in this case) endorse the fact that a higher degree of trade flows increases income convergence of these members, because a rise in trade flows of the EAME+TUR block can lead their income per capita gap to decline by about 0.18 percent.

There are different results for Case C in which the scenario of the EAME+MOR implementation is considered for trade integrating between European members and Morocco where it is one of the major Arabic countries in the Mediterranean zone. As results show, the coefficient of IG is not statistically significant in the Equation (3) implying there is no effect of income convergence on the trade flows (exports + imports) of these countries, whereas the statistically significant coefficient of TR in the Equation (4) implies the trade diversion of this block.

According to the estimated Equation (4) for all 3 cases, there is no sign of significant effect of European partners’ GDPs (YE) on income convergence, whereas the GDP of developing members (YT), except for Morocco, has statistically significant and expected effect on income convergence. This income effect is plausible (that is, negative) and has an elasticity less than unity. The implication is that the strategy of economic growth in Arabic Mediterranean countries or Turkey leads to a narrower gap between incomes per head in 2 trading countries, which can be conducive to their bilateral trade improvement.

Finally, a main factor of the standard gravity theory, namely the size of the trading countries, in which population is defined as its proxy (Frankel and Romer, 1999) does not seem statistically significant in all our models. In addition, while all estimated effect of EAM population on its trade is large but they are mixed with positive or negative signs in the estimated models. In particular, as population of developing members grows, the income gap becomes wider that has restrictive effect on trade integration.
CONCLUSIONS

As discussed in this paper, in the process of globalization, that many regional trade blocks (RTBs), free trade agreement (FTA) or preferential trade agreement (PTA) have been implemented, there have been advantages of economic growth, welfare and global marketplace establishment. However, this phenomenon has faced the globe somehow with trade diversion, income and investment divergence. Thus, the objectives of setting up a global RTB in EAM or its relevant sub-blocks are, in addition to better regional cooperation and stability, to enhance trade between its all members and to improve their economic convergence, while there has been some negative impacts on the region's economic conditions. These objectives necessarily require that a number of factors of gravity theory do in fact significantly affect the block trade flows and convergence.

In the present study, we have investigated that trade expansion in the EAM block is conductive under income effect, and also the significance of the convergence hypothesis and its transmission mechanism is extended by this gravity theory in EAM trade determination. We have also studied what are other fiscal, monetary and non-economic determinants of trade and how they have affected EAM's trade and convergence through the interaction of the various activities in the trading country partners. Our findings reported above lend ample support to the hypothesis that growth has impacted EAME + EAMD, EAME + TUR and EAME + MOR trade flows. More importantly, income convergence or similarity between EAME and EAMD (Case A) and between EAME and Morocco (Case C) does not help to increase bilateral trade but this impact is negative, at the same time, trade expansion has also negative effect on their income convergence. However, income convergence or similarity between EAME and Turkey (Case B) does affect positively and significantly their bilateral trade, while expanding trade between these members helps them to make their income gap narrower. It implies that there are possibilities of economic integration in the EAM region provided appropriate economic policies are mutually conducted.
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