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Original Research Article

The Possibility of Unifying the Currency between Algeria, Tunisia and Morocco

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The integration of the Maghreb has become a vital economic necessity, especially at a time when regional blocks are facing intense competition. Without this integration, economies of the region could sustain big losses and would have trouble meeting challenges already on the agenda (tariff dismantling, eastward expansion of the EU, global liberalization of the textile sector, and vulnerability to shocks from extreme demand). Integration will undoubtedly be the driving force behind the consistent economic growth and solid trade among countries of the region, thereby enabling them to secure a firm foothold in the global economy. In view of the importance of the Maghreb integration and the vital need for closer economic ties between countries of the region, we will try through this study to determine the possibility of achieving economic integration and the possibility of currency unification between Maghreb countries: Algeria, Tunisia and Morocco.

Keywords: Economic Integration, Maghreb Integration, Monetary Integration, Panel Data.

INTRODUCTION

In the beginning of the twentieth century, it has been the growth of a new phenomenon on the level of international economic relations, which is known as " The economic integration", in the light of growing changes, the country bears integrated economic bloc in less risk.

In the face of this situation, it is necessary for Maghreb countries to establish economic clout among themselves. The idea of Maghreb integration has existed since Morocco and Tunisia gained independence from France in the 1950s. However, what was foreseen was a political union, and little attention was paid to economics. Political differences and international disputes kept the Maghreb countries from even normalizing their relations until 1988. It was only in that year that the region's two largest nations, Morocco and Algeria, established diplomatic relations after decades of conflict over the former Spanish Sahara (Western Sahara).

Relations between Tunisia and Libya also improved in 1988. The purpose of economic integration was that the individual Maghreb countries were suffering at the time from economic crises of their own, which could be overcome only through integration.

PROBLEMATIC

"What is the possibility of unifying the currency in each of *Algeria, Tunisia, and Morrocco*?". From the answering of problematic, we use in this study The Standard Statistical Method to show up the relation between the foreign business links and the economic activity in Maghreb countries for using Panel method.

ECONOMIC INTEGRATION

The economic integration knows a process and status, when we describe them as a process. It includes procedures and measures which lead to cancelling the discrimination between units belonging to different nation-states, and if we look to him as a case, it's possible to represent in various images of separation between the economic nationalism[1].

The economic integration is" the entry of a group of countries linked by the convergence of economic relations, social, political geography of the economic union, so that, the agreement between these countries on the application of trade and economic policies abide by all member states"[2].

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DEFINITION OF MONETARY INTEGRATION

F. Machlup defined monetary integration as: "A set of measures aimed at simplifying international payments through the establishment of a common currency to replace the national currencies of the member states in the region through complementary arrangements"[3].

MAGHREB INTEGRATION

The Declaration for the creation of the Maghreb Union (UMA) was signed on February 17th, 1989. It was ratified by Libya, Tunisia, Algeria, Mauritania and Morocco with the following aims[4]:

- Consolidating fraternity ties between member states as well as their people.
- Promoting prosperity and safeguarding the rights of societies of member states.
- Contributing to the preservation of peace based on justice and equity.
- Pursuing common policies in various domains.
- Working towards the free circulation of people, services, goods and capital.

Maghreb countries have the following elements of economic integration:

- Maghreb accounts for a variety of natural resources.
- Maghreb society includes a large segment of young people capable of work and production.
- The massive oil revenues for the Arab Maghreb countries producing oil should be utilized in the development of the region.
- Signed a distinctive southern Mediterranean, and overlooking the Atlantic ocean and the location is enormous itself and an enormous wealth.

Maghreb countries have tremendous human capital.

Potential Gains of Trade Integration in the Maghreb[5]

Hufbauer et. al. (2008) estimated some of the gains of the Arab Maghreb Union (AMU) by comparing selected indicators of economic performance between 1989—the year of the AMU's inception—and 2007. Their findings include:

- a reduction in inflation rates.
- a 30 percent increase in real per-capita GDP.
- an increase in the share of total merchandise in GDP from 41.7 percent in 1989 to 72.5 percent in 2007
- an increase in inward FDI stock as a share of GDP by more than 100 percent between 1990 and 2006.

Casero and Seshan, authors of a 2006 World Bank study on Maghreb economic integration, estimate the potential implications of regional integration under different scenarios for overall GDP growth over a ten-year period (2005–2015.) Their findings suggest that countries in the Arab Maghreb Union (AMU) would reap substantial economic benefits from deeper and wider integration among themselves and with the EU.

SCENARIO 1

Under the status quo, per-capita GDP is estimated to grow by 30, 27, and 41 percent, respectively, in Algeria, Morocco, and Tunisia between 2005 and 2015.

SCENARIO 2

If tariff barriers to intra-Maghreb trade are assumed to be removed, the results are similar to those of the status quo scenario. But if Maghreb countries were to sign trade arrangements with the EU, either unilaterally or as a bloc, the gains would be greater. Under unilateral arrangements, per-capita GDP growth would be expected to increase by an additional 15 percent in Algeria, 16 percent in Morocco, and 14 percent in Tunisia relative to the status quo. Implementation of a trade agreement between the Maghreb as a bloc and the EU would yield additional growth of 27, 16, and 22 percent, respectively.

SCENARIO 3

If reforms in each Maghreb country were to achieve complete service liberalization and an investment climate aligned with international best practice, real per-capita GDP would be expected to rise an additional 34 percent in Algeria, 27 percent in Morocco, and 24 percent in Tunisia between 2005 and 2015. This would boost FDI, raising stock levels by 8.8 percent of GDP in Algeria, 8.5 percent in Morocco, and 9.2 percent in Tunisia.

SCENARIO 4

This scenario combines deeper and wider integration through the creation of a trading bloc with the EU, liberalization of services, and investment climate reforms. The results estimate that per-capita real GDP would rise by an additional 57, 51, and 38 percent, respectively in Algeria, Morocco, and Tunisia, as compared with Scenario 1.

STEPS OF ECONOMETRIC STUDY

For a standard study on the possibility of currency between Algeria, Tunisia, and Morocco, we have:

- Collected Statistical data relating to each of Algeria, Tunisia, and Morocco. These countries represent the dimension tomography of data Panell: Intra-exports of each country for the rest of the two states, Intra-imports of each country for the rest of the two states, and the gross domestic product of each country.
- The period of study extends from 1990 to 2014, this period represents the time dimension of data Panell.
- The study relied on the use of standard analysis program Eviews 7.
- Calculate intraregional export intensity, intraregional import intensity, and the intensity of total intraregional trade.
- Dump the results by Excel program to EViews 7 program.
- The dependent variable: (PIB) The gross domestic product (GDP).
- The independent variables:

Table 1. Stages of integration of the Maghreb countries

Phase	Period	Purpose
First	1926-1995	Establish a free trade zone exemption from customs rights and phasing out tariff barriers.
Second	1996-1999	The establishment of customs union in which to develop a common external tariff.
Third	Start from 2000	The establishment of an economic union

Source: Prepared by the researcher depending on data

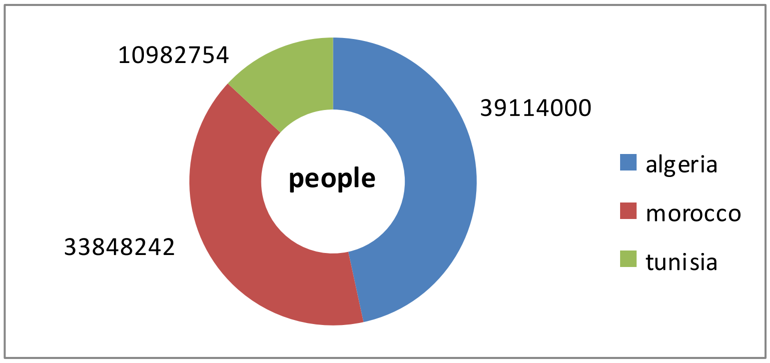

Figure 1. The population of the Maghreb[5]

SELECTION BETWEEN MODEL, FIXED, AND RANDOM SYNTHESIS

LM Tests

Table 2. Test (LM) model for intra-density exports to gross domestic product.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	15.844564	(2,71)	0.0000
Cross-section Chi-square	27.676978	2	0.0000

Source: Eviews 7

Table 3. Test (LM) model for intra-density imports to gross domestic product

Effects Test	Statistic	d.f.	Prob.
Cross-section F	22.544607	(2,71)	0.0000
Cross-section Chi-square	36.875933	2	0.0000

Source: Eviews 7

Table 4. Test(LM) model for intensity of total intraregional trade to GDP

Effects Test	Statistic	d.f.	Prob.
Cross-section F	16.399841	(2,71)	0.0000
Cross-section Chi-square	28.483727	2	0.0000

Source: Eviews 7

HAUSMAN TESTS

Table 5. Hausman test for the intensity of intra-exports to GDP

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.060892	1	0.8051

Source: Eviews 7

Table 6. Hausman test of the intensity of intra-imports to GDP

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.304834	1	0.1290

Source: Eviews 7

Table 7. Hausman test for the intensity of total intraregional trade to GDP

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.003600	1	0.3164

Source: Eviews 7

Table 8. Model of The impact of Intraregional export intensity on GDP

Regression model		**Fixed**	**Coefficient**	R- Square (R^2)	Adjusted R - Square	F-Statistic	Prob (F-S)
Fixed effects FEM)(	**Coefficient**	19030.85	4586073	0.536902	0.517335	27.43843	0.0000
	Prob	0.0345	0.0000				
Randam effects (REM)	**Coefficient**	18812.76	4609306	0.295695	0.286047	30.64831	0.0000
	Prob	0.4147	0.0000				

Source: Prepared by the researcher depending on the results of Hausman test

Table 9. Model of the impact of Density interfaces imports on GDP

Regression model		**Fixed**	**Coeficient**	**R- Square (R^2)**	**Adjusted R- Square**	**F-Statistic**	**Prob (F-S)**
Fixed effects)FEM(	**Coefficient**	36752.35	2692487	0.388416	0.362574	15.03064	0.0000
	Prob	0.0032	0.0262				
Randam effects (REM)	**Coefficient**	38670.81	2488544	0.056662	0.043739	4.384742	0.03973
	Prob	0.0668	0.0381				

Source: prepared by the researcher depending on the results of Hausman

Table 10. Model of the effects of The intensity of total intra-regional trade on GDP

Regression model		Fixed	coeficient	R- Square (R^2)	Adjusted R – Square	F-Statistic	Prob (F-S)
Regression model	Coefficient	-509.4508	9893039	0.574115	0.556120	31.90395	0.0000
	Prob	0.9624	0.0000				
Regression model	Coefficient	-1355.168	10026715	0.352168	0.343294	39.68355	0.0000
	Prob	0.9420	0.0000				

Source: prepared by the researcher depending on the results of Hausman

Intraregional export intensity is calculated as follows:

$$\mathbf{X}_{i,jt} = x_{i,jt} / (x_{it} + x_{jt}).$$

Where:
Xi,jt: Intraregional export intensity / xi,jt: Intra-exports between the countries i and j

Intraregional imports intensity is calculated as follows:

$$M_{i,jt} = m_{i,jt} / (m_{it} + m_{jt}).$$

Where:
$M_{i,jt}$: Density interfaces imports / $m_{i,jt:}$ Imports interfaces between countries i and j

The intensity of total intraregional trade is calculated as follows:

$$TOT_{i,jt} = (x_{i,jt} + m_{i,jt}) / (x_{it} + x_{jt} + m_{it} + m_{jt}).$$

Where:
TOTi,jt : The intensity of total intra-regional trade.

Note:

- GDP of the three countries has been taken from: http://www.sesrtcic.org
- Data on exports and imports interfaces of the three countries was taken from: http:// www.trademap.org

Interpretation of the results of the Econometric Study

- Seen through the test of Agranj (LM) that the statistical value of the LM test is moral through value, it was in three models 0.000 on this basis, and according to the results of the test LM, the random sample is better than the synthesis sample.
- It's clear through Hausman test that the latter is not significant at the level of 0.0005, in which reaching reaching in the previous three models order 0.8, 0.12, 0.31, which means accepting the old hypothesis which states that the random sample is better than the fixed sample.
- Through the most appropriate data for the study sample test results, and then find out that the random effects model is the most appropriate to study the effects of intraregional trade links on the gross domestic product.

- Finally, the equation of each model becomes as follows:

1. Model of the impact of intraregional exports intensity on the gross domestic product:

GDP=18812.76 + 4609306 X

2. Model of the impact of intraregional imports intensity on the GDP:

GDP=38670.81 + 2488544 M

3. The effects of the intensity of total intraregional trade on GDP:

GDP=-1355.168 + 10026715 Total

The coefficient of determination R^2

The obtained value of the coefficient of determination is estimated in the models respectively 29%, 5%, 35%**.**

Fisher test (F): this test aims to measure the moral as a whole, through the obtained results, as value F Prop was estimated in previous models respectively 0.000, 0.03, 0.000, all these values were less than 0.05, which means that these samples have a statistically significant.

Interpretation of study results in economic terms

Standard study showed that the effect of the density of each of intra-imports and extra-imports and the total intra-regional trade to gross domestic product in Algeria, Tunisia, and Morocco almost non-existent.

This is explained in economic terms in the lack of intensity and the free movement of factors of production between Algeria, Tunisia, and Morocco. This also explains the impossibility of unification of the currency and economic and monetary integration between these three countries in the current circumstances, especially in the absence of:

- Exploit the available opportunities of trade exchanges between these countries.
- The removal of tariff barriers to goods.
- The existence of protection for local production from foreign competition.

- Exploitation the available financial resources, especially in Algeria in the establishment of local development projects.
- The establishment of a free Maghreb trade area
- Provide a common trade policy.
- There is freedom of exchange between these countries.

However, the political decision-making in these countries is the main thing that stops him the future of the merger rate policy and currency union between Algeria, Tunisia, and Morocco.

CONCLUSION

Economic integration is a strategic choice for growth and provide the economics of the countries involved, and it contributes to the movement of intra-trade, along with the available resources and exploit the mobilization.

RESULTS

- The weakness of intra-trade exchanges between Maghreb countries as it doesn't exceed 3% between Maghreb Union
- Lack of currency unification between Algeria, Tunisia, and Morocco under the current economic conditions which is characterized by weakness and depending on the economic structure of these countries.

SUGGESTIONS

The ultimate economic goals of integration include the adoption of common customs legislation, common financial legislation, and a degree of coordinated economic planning. For the AMU, common customs legislation would involve the removal of internal customs duties and the imposition of a common customs tariff for goods from countries outside the union. Common financial legislation would involve creating:

- a Maghrebi Financial Zone.
- a Maghreb currency.
- an independent Maghrebi Fund for Development to coordinate investment and float loans.
- a regional budget to fund certain projects, which would be financed through a regional tax.

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