Are GCC Countries Ready for Currency Union?

By

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April 2002

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ABSTRACT

Using formal and informal criteria, we test whether GCC is an optimum currency area (OCA). Based on the traditional OCA criteria, we find that GCC countries are yet to fulfill the necessary pre-conditions for the establishment of Currency Union (CU). The structure of their economies remains dominated by the oil sector, intra-regional trade is very limited and, unlike what many believe, there does not seem to be evidence of convergence in their main macroeconomic fundamentals nor synchronization of their business cycles. The more formal test based on the Generalized Purchasing Power Parity Theory (G-PPP), shows that real exchange rates in GCC are closely related and share the same stochastic trend and hence points to the readiness, although to different degrees, of the countries of the region for CU. We argue that the main factors that are favorable for the establishment of CU are the commitment by all GCC countries to fixed exchange rate arrangements and a strong political resolve to achieve economic integration. Despite the lack of diversification and actual weakness of intra-GCC inter-industry trade, CU, once established, can expand intra-industry trade among GCC if the proper steps are taken toward more specialization and sophistication of their respective industries. On the other hand, CU may result in more synchronized business cycles provided that GCC countries achieve convergence in their economic structure, policies and regulations. In order to achieve these potential benefits of CU, GCC countries need to accelerate economic integration and fulfill the requirements of the GCC common market through the lifting of all restrictions on the free movement of goods and factors, and the creation of supranational institutions that would subordinate national interest for the regional one. This would be possible only if individual countries are willing to surrender some of their national prerogatives in favor of the interest of the region as a whole.

1. Introduction

In May 25, 1981, the countries of the Arab Gulf region, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates, have ratified the charter establishing the Cooperation Council for the Arab States of the Gulf (GCC countries hereafter). In their second Supreme Council meeting held in November 1981, the GCC leaders have adopted an Economic Agreement (EA) setting the stage for a full economic integration. The agreement had set out broad lines for the realization of coordination, integration and cooperation in various aspects of economic affairs. The Council has taken the necessary steps toward realizing the different stages of a full economic integration namely, a free trade area, a customs union, a common market and economic union. The intensification of cooperation in the relevant areas has been achieved through the formation of various specialized committees whose goal has been to implement the guidelines of the main constituent bodies of the GCC (the Supreme Council, Ministerial Council and the Secretariat General).[1]

As a first step toward economic integration among the countries of the region, a Free Trade Zone was established in 1983. A decision to move ahead with the next phase of integration, through the establishment of a Customs Union, came at the Riyadh Summit of the Leaders of GCC countries in 1999. A timetable was approved to establish a Customs Union by the year 2005. Already in their Bahrain summit of the year 2000, the GCC leaders have agreed to adopt a common peg for the different currencies of the member states as a preliminary step toward adopting a single currency, considered a cornerstone for achieving full economic integration.

During the last GCC summit December 30-31, 2001 in Muscat, the six GCC countries have agreed to a joint customs tariff of five percent by the year 2003, two years earlier than originally planned, and voted to create a single currency by the year 2010. As an intermediate stage toward establishing a single currency, they have also agreed to have the American dollar as a common peg for their currencies before the end of the year 2002.

[1] See Peterson (1988, p. 149). Further details about the achievements and the official documents of GCC can be found in the GCC Secretariat General web-site at: http://www.gcc-sg.org.

In their desire to achieve monetary integration and a common currency, the GCC countries hold the common belief that the complete integration of product and factor markets requires the elimination of the transaction costs and uncertainties associated with the existence of separate currencies. However, the worthiness of establishing a common currency has been traditionally tested against several benchmarks established by the theory of Optimum Currency Areas (OCA) and developed by Mundell (1961), McKinnon (1963) and Kenen (1969). Many refinements of the theory of OCA and the development of more sophisticated formal verification of the optimality of many Currency Union (CU) experiences in the world, have allowed a deeper analysis and evaluation of such experiences.

From this perspective, we propose in this paper to develop a general framework to assess the preparedness of the GCC countries for CU. In section 2, we present a brief rationalization of CU and its costs and benefits. In section 3, we test the optimality criteria to assess the degree of preparedness of GCC countries for CU. More formal tests of optimality are presented in section 4. Section 5 discusses the potential impact of the GCC CU experience based on the characteristics of its member countries. Concluding remarks are provided in section 6.

2. Optimum Currency Area: Definition and Potential Benefits

First, it important to clarify some of the concepts often used in the literature of OCA. Broadly speaking "an OCA is a region for which it is optimal to have its own currency and its own monetary policy."[2] Therefore, OCA can interchangeably be called Monetary or Currency Union. It involves monetary integration, a single currency and a common central bank controlling the pool of foreign exchange reserves and administrating monetary policy for the union. Monetary integration, on the other hand, involves the irrevocable fixing of the exchange rates, full and complete convertibility of currencies, financial market integration (measures to liberalize capital transactions and harmonize national financial regulations and structures of institutions), the complete liberalization of current transactions and a common monetary policy.[3] In the present paper, we assume that CU is the arrangement that the GCC countries are trying to achieve by the year 2010. The

[2] Frankel and Rose (1996), p.14.
[3] We owe these definitions to Tavlas (1993), p. 665.

attempt of GCC at achieving a common peg before the end of the year 2002, can be considered a form of Exchange Rate Union.

Optimality of a CU is often measured by the realization of several criteria that determine a priori the likely success of an OCA. These criteria evolve around how integrated countries of the potential group are with one another in terms of trade and other economic relationships as well as the extent of correlation in their business cycles and similarity of shocks they are subject to.

An OCA is desirable to the extent that it allows exchange rates (ER) to be fixed and therefore reduces ER uncertainty that hampers trade and investment.[4] OCA is also desirable to the extent that it reduces transaction costs associated with multiple exchange rates. These costs relate to monitor ER fluctuations, cost of information to predict ER movements, the cost of currency conversion, and the cost associated with the need to keep and manage reserves for intra-regional trade. OCA also allows some economies of scale to take place in terms of freeing idle reserves, enhancing the role of money as a unit of account and as a means of payment. In addition, OCA may help reduce the ability of speculators to affect prices and disrupt the conduct of monetary policy and economize on reserves in case of offsetting payments imbalances.[5]

A further advantage of an OCA is that it may reinforce discipline and credibility of monetary policy especially in inflation-prone countries. The credibility of monetary policy can be enhanced by attaching the latter to a low-inflation anchor currency. This was for instance the case of the high inflation European countries of Italy, Spain and Portugal in the 1970's that wanted to tie their respective ER to that of Germany for its credibility for fighting inflation. Equivalently, countries adopt a common currency and fix its parity against a major currency as a way to attach credibility to a fixed-exchange rate regime by surrendering the power to alter ER.

The main disadvantages of an OCA is the loss of independence of monetary and exchange rate policies. Exchange rates are irrevocably fixed against one another, interest rates are tied to foreign interest rates, and any increase in money stock will

[4] This advantage is sometimes downplayed by the fact that empirical studies did not find overwhelming detrimental impact of ER variability and by the very existence of means of hedging against ER risk.

result in balance of payment deficits. The monetary and exchange rate instruments play an important role in economic adjustment as stabilizers. When countries are involved in hand-tying institutional arrangements such as the ones related to an OCA, they give up these important policy instruments resulting in important output and employment losses. However, this apparent cost is mitigated to the extent that shocks for all the countries in the region tend to be symmetric so as to justify a common response, or if there are mechanisms making the adjustment to such shocks occur more promptly. This would be the case if prices and wages are very flexible or if labor and capital are mobile across members of the OCA. The cost of policy autonomy could also be very high in countries relying on seigniorage revenues such as the case for countries with underdeveloped tax systems.[6]

Other costs not emphasized in the literature are those associated with coordinating policies and those associated with the possible break down of the currency union. The latter costs are often factored in the OCA agreement by making it difficult for countries to exit or to break the rules such as through imposing sanctions on violators. This is, for instance, the case of the European Monetary Union (EMU).

A relatively more recent strand of literature has emphasized that the main benefits of CU stem from the expansion of bilateral trade among the countries of the Union.[7] For instance, Rose (2000) has found that trade among the countries of a CU could triple after the start of the union. Some have argued that this might be too optimistic due to some inherent upward bias in the estimation due to the endogeneity of the decision to join a CU (Tenreyro (2001)), or to lumping together members of CU and countries commonly using the money of a larger country in the same sample (Yeyati (2001)).

Several factors have been identified in the literature for determining whether a country is ready to join an OCA. These factors are related to the characteristics that would make stable exchange rates and currency union more desirable. These are:

[5] Ishiyama (1975).
[6] Tavlas 1993, p. 673.
[7] See for instance, Frankel and Rose (1996), Rose (2000) and Rose and van Wincoop (2001).

i. Openness: A small country that is largely dependent on international trade is more likely to be affected by exchange rate fluctuations and uncertainty since a large portion of its goods is tradables. McKinnon (1969) argues that the ER in the case of a small open-economy becomes redundant as an instrument to correct balance of payments problems. In this case, the exchange rate is strongly linked to the price level in the economy to the extent that any variation in the ER is translated into variation in costs. Hence, the ER becomes an ineffective tool to improve competitiveness. In addition, Ishiyama (1975) argues for instance, that for a small open economy where a large part of consumed goods are imported and in the absence of domestic substitutes, the ER becomes an ineffective corrective tool given the inelastic demand for imports.[8] For all these reasons, it is easier for a small open economy to enter into a currency union.

ii. Factor Mobility: In case of a shock, if two countries are highly integrated in the sense that labor and capital can freely move from one country to another, there will be a lesser need for the country affected by the shock to use the ER as a corrective tool. From this perspective, factor mobility plays the role of a substitute to the ER, or monetary policy for that matter, as an adjustment mechanism should a shock occur. Therefore countries with more mobile factors of production are better candidates for currency union.

iii. Degree of Commodity Diversification: If an economy is more diversified, it is better insulated against terms of trade, and other, shocks, and hence is less prone to use the exchange rate to mitigate the impact of the shock.

[8] The GCC countries are a case in point.

Therefore, countries with diversified economies are better candidates for CU.

iv. Similarity of Production Structure: Countries that share common production structure are more likely to experience symmetric shocks and to exhibit high covariation in economic activities. They are less likely to use their exchange rates as an adjustment tool and hence are better candidates for CU. It should be noted that structural shocks could also be symmetric (or correlated), in addition to similarity of economic structure, because of dependence on common foreign shocks such as the fluctuation of the price of oil in international markets.

v. Price and Wage Flexibility: The flexibility of prices and wages obviates the need to alter the ER in case of shocks. Countries with flexible prices and wages are more inclined to engage into CU arrangements that would restrict the use of ER as an adjustment tool.

vi. Similarity of Inflation Rates: Similar inflation rates signal similarity in structure and in the conduct of economic policies. This would be desirable for countries that would like to coordinate their policies to achieve the requirements of a CU.

vii. Degree of Policy Integration: The similarity of policy attitudes is an important indicator for the potential success of policy coordination that will be required to achieve full monetary integration.

viii. Political Factors: The success of CU would depend to a great deal on the political will and resolve of member countries to achieve the goal of CU. Experience has shown that the political factors might be more important than the economic criteria.

In the next section, we test these optimality criteria to assess the degree of preparedness of GCC countries for CU.

3. GCC Countries and the Optimality Criteria for OCA

The purpose of this section is to verify whether the criteria mentioned above qualify the GCC countries for OCA.

i. Openness: The GCC countries are considered among the most open economies in the Arab region. Openness is traditionally measured by the ratio of trade to the Gross Domestic Product (GDP). Table 1 gives the openness measures for the GCC countries. These ratios varies from one country to the other. The high ratios observed for GCC countries reflect in part the nature of their factor endowment, being primarily oil-exporting countries. It also reflects the heavy reliance of these countries on imported consumer and capital goods owing to the limited availability of domestic substitutes. These factors combined limit the effectiveness of the ER as a tool to improve competitiveness or to reallocate resources among sectors.

Table 1

Openness of GCC Countries

YEARS	BAHRAIN	KUWAIT	OMAN	QATAR	S.ARABIA	UAE
1980	226.50	90.00	84.56	90.90	88.98	96.05
1985	169.03	75.63	77.14	68.86	52.66	69.30
1990	164.21	56.50	67.67	70.98	65.47	83.28
1995	131.97	77.46	68.67	84.53	61.13	85.40
1996	145.59	75.89	71.63	73.08	62.62	85.69
1997	130.98	74.53	71.77	62.97	61.06	89.17
1998	109.40	72.46	70.03	74.23	55.50	87.02
Average (1980-1998)	153.95	74.64	73.07	75.08	63.92	85.13

Source: World Bank, World Development Indicators CD-ROM 2000.

ii. Factor Mobility: Articles eight and nine of the Unified Economic Agreement between the GCC countries have allowed for the free movement of capital and individuals across GCC countries and the freedom to exercise economic activities. The work of many specialized committees has also forged the way toward concretizing the very principles established by the agreement. However, looking at the extent of joint venture and labor movement among GCC countries, it

is clear that factor mobility cannot be relied upon as an alternative adjustment mechanism to the ER. GCC still impose restrictions on ownership and type of activities that GCC nationals could exercise. On the other hand, labor market regulation and institutions are not very similar. This, in addition to factors related to welfare state, preclude labor from moving across GCC countries.

iii. Degree of Commodity Diversification: Despite many efforts at diversifying their economies, GCC countries remain heavily dependent on oil. On average oil represents more than 80 percent of export receipts and budget revenues, respectively. Table 2 gives the normalized Hirschman export concentration index for the GCC countries together with a group of comparator countries.[9] It shows the higher level of export concentration of GCC countries and hence the limited diversification and higher vulnerability of these countries to external shocks.

Table 2

Export Concentration Indices for GCC Countries

Country	1980	1995
Bahrain	0.790	0.629
Kuwait	0.732	0.940
Oman	0.922	0.765
Qatar	0.934	0.731
Saudi Arabia	0.942	0.743
United Arab Emirates	0.870	0.619
Brazil	0.148	0.088
Korea	0.085	0.148
Israel	0.264	0.274
Turkey	0.230	0.112

Source: UNCTAD (1999).

Even the non-oil sector in GCC is perceived as an enclave whose development depends to a large extent on the performance of the oil sector. Productive activities in the non-oil sector are very limited and a high share of the non-oil aggregate value added originates mainly from trade and

[9]These rates are taken from UNCTAD (1999). They were computed based on the 3-digit SITC classification, revision 2. A value of the index closer to zero means more export diversification and vice versa.

business services. As a consequence, the economies of the GCC remain vulnerable to the fluctuation of oil prices in international markets. However, despite being exposed to frequent terms of trade shocks, GCC countries adopt a common policy stance in which the ER is not considered as a policy instrument that can be adjusted in case of adverse oil shocks. In fact, the adjustment operates mainly through the Government expenditures instrument.

iv. Similarity of Production Structure: Broadly speaking GCC countries have the same production structure with a dominant oil-sector and a limited non-oil sector dominated by trade and financial and business services. The sectoral distribution of GDP presented in table 3 shows the degree of similarity in productive activities. Coupled with the dominance of oil, the similarity of production structure is likely to entail symmetric shocks that would eventually call for common policy reactions among these countries.

v. Price and wage flexibility: Prices and wages do not adjust systematically to accommodate frequent oil shocks. As mentioned earlier, Government expenditures are the main stabilizer of economic activities during recessionary oil markets. However, the limited role of prices and wages as

Table 3

Sectoral Composition of the GCC GDP

	Bahrain			Kuwait			Oman			Qatar			S. Arabia				U.A.E.	
	1992	1996	2000	1992	1996	2000	1992	1996	2000	1992	1996	2000	1992	1996	2000	1992	1996	2000
Agriculture, Hunting, Forestry and Fishing	1.2	1.2	1.0	0.4	0.5	0.5	2.9	3.1	3.3	1.3	1.2	0.6	7.6	7.5	8.3	2.4	3.0	3.7
Mining and Quarrying	21.4	22.6	23.6	43.0	55.5	46.0	50.9	52.3	48.3	48.5	51.2	61.4	46.8	47.1	40.8	47.3	37.1	30.2
Manufacturing	14.3	18.3	16.5	12.5	14.8	16.0	4.6	5.0	5.3	15.6	10.0	7.8	10.4	10.9	12.7	9.2	11.6	15.3
Electricity, Gas and Water	2.2	1.9	2.3	-1.8	-0.1	0.0	1.1	1.1	1.5	1.5	1.7	1.6	0.2	0.2	0.2	0.6	1.5	1.7
Construction	7.4	5.4	5.4	5.0	3.2	3.5	4.0	2.7	4.0	5.8	9.1	5.8	10.3	10.3	11.6	9.8	9.4	9.5
Wholesale and Retail Trade, Restaurants and Hotels	18.0	15.8	13.7	15.1	8.4	9.4	16.1	16.3	17.8	9.0	10.2	8.0	8.3	8.3	8.9	11.7	13.7	14.8
Transport, Storage and Communication	10.8	9.0	9.5	6.5	5.2	7.4	6.9	7.7	10.5	4.2	4.9	5.2	7.5	7.3	8.2	6.2	7.1	8.3
Financial Institutions and Insurance	24.2	24.7	26.0	4.1	4.1	7.8	3.1	3.9	6.5	15.5	13.7	11.1	6.9	6.5	7.4	4.9	6.4	7.0
Real Estate and Business Services	11.9	11.8	11.7	13.9	8.8	11.1	10.6	8.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0	7.2	10.9	10.0
Community Social and Personal Services	4.8	4.6	5.2	4.0	2.2	2.8	2.2	2.0	0.0	2.5	2.2	1.9	3.3	3.2	3.7	2.6	1.8	2.0
(Less) Imputed Bank Service	16.3	15.3	14.8	na	2.7	4.6	2.4	2.9	4.3	3.9	4.3	3.5	1.3	1.4	1.7	1.9	2.4	2.5
Total Industries	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Computed by authors based on data from the Statistical Yearbook of the ESCWA Region 2000, United Nations.

adjustment mechanism in GCC countries does not qualify the ER as an alternative mechanism to either prices, wages or Government expenditures. In other words, the limited flexibility of prices and wages in GCC countries does not affect the ability of these countries to qualify for currency union to the extent that the ER is eliminated as an option for adjustment.

vi. Similarity of inflation rates: GCC are not inflation-prone countries. However, inflation rates seem to be pro-cyclical picking up at periods of oil price hikes and decreasing during periods of oil price slumps. Inflation rates across GCC countries are not highly correlated despite a relative similarity in the conduct of macroeconomic policies namely, fiscal, monetary and ER policies. This might seem to suggest that inflation differentials among GCC countries reflect a difference in the microeconomic determinants of inflation (i.e. factors affecting the supply of and demand for goods and services) notably, the presence of price inertia.

vii. Degree of policy integration: Many efforts have been deployed by the GCC countries to reinforce commonalities and coordinate many facets of economic and social policies. Article 4 of the GCC charter stipulates, among other things, the formulation of similar regulations in the economic and financial affairs. The main policies that call for coordination in the context of CU have already common features in the countries of the region. For instance, monetary and exchange rate policies in the GCC countries are commonly centered around maintaining a wedge between domestic and foreign interest rates in order to stabilize the ER and stem capital outflows or portfolio reallocation in favor of foreign assets.

viii. Political factors: GCC leaders have shown a strong commitment to this regional grouping. This commitment stems from the many common traits shared by GCC countries notably the similarity in their political, social, demographic

> and cultural structures.[10] Despite the fact that the tempo of economic integration has incurred minor setbacks and decelerations, it did not affect the resolve of GCC leaders to reinforce cooperation and move ahead with economic and political integration. Even if integration is moving at a much slower pace than is generally hoped, GCC countries are often praised for taking a pragmatic approach consisting of progressively reinforcing commonalities rather than hastily imposing unrealistic conditions to achieve such integration.[11]

If we consider the above factors as informal tests or eligibility criteria for CU by the GCC countries, we could summarize the situation as follows:

Table 4

GCC Countries Eligibility Test for OCA

OCA Criterion	Favorable	Unfavorable
Openness	√	
Factor Mobility		√
Commodity Diversification		√
Production Structure	√	
Price and Wage Flexibility		√
Similarity of Inflation Rates	√	
Degree of Policy Integration	√	
Political Factors	√	

Judging by these optimum currency area criteria, the prior conditions are not all favorable for CU. Does this mean that GCC countries need to provide the necessary conditions to fulfill these eligibility criteria and to delay the process of CU until these conditions are met? The immediate answer is NO. Does this mean that by 2010 all the conditions mentioned above will necessarily be met and only then GCC countries could establish an OCA? The answer here again is NO.

[10] Peterson (1988, p. 106).
[11] Peterson op. cit.

As for the first question, the recent literature on OCA has clearly indicated that the so-called eligibility criteria are generally met ex post rather than ex ante. In fact, the EMU which is considered a historically unprecedented experience in monetary integration, has been carried through while few members did not fulfill the above criteria. In fact, Eichengreen (1990) shows for instance, that the European countries in the euro zone display less favorable conditions for CU than the different states of what is actually known as the United States of America before they became a federation of states.

More intra-regional trade could be generated and business cycles could become more aligned within the countries of the group after the launch of the OCA. But then the question needs to be raised differently: Will GCC OCA generate more intra-regional trade and more correlated business cycles among the countries of the group? The analysis in the next section will address this prospective question in more details.

Coming to the second question on whether GCC countries should wait for the year 2010 to establish OCA, the NO answer could be justified based on the experience of EMU.

i. The European Monetary Integration Experience in a Nutshell:

The idea of a single currency for Europe has been an objective ever since the creation of the European Common Market in the wake of the treaty of Rome in 1957. Based on their historical aversion to exchange rate fluctuation and during the Hague meeting in 1969, a committee headed by the prime minister of Luxembourg, Pierre Werner, presented a proposal in what has come to be known later as the Werner report, suggesting locking EU exchange rates and the establishment of a federated system of European Central Banks. The plan was postponed after the collapse of the Bretton Woods system. In 1979 the European community decided the creation of a network of mutually pegged exchange rates aimed at providing monetary stability for the region. The System has come to be known as the European Monetary System (EMS) or the Snake. The exchange rates were allowed to fluctuate within a band of $\pm 2.25\%$ relative to an assigned par value. Following many events such as the German unification and the higher capital mobility and fiscal expansion within Europe, there was a pressure on the Deutschmark to appreciate that was accompanied by a speculative attack on the EMS on September 1992. As a result, the fluctuation margins of the EMS were widened to up to $\pm 15\%$. The United Kingdom and Italy have chosen to exit EMS.

The frequent currency realignments operated after the EMS (11 realignments between 1979 and 1987) has led the EU, in 1988, to reconfirm their commitment to a European Monetary Union (EMU). In 1989 , a committee headed by Jacques Delors has set the objective of an economic and monetary union (EMU) whereby national currencies are to be replaced by a single currency managed by a centralized Central Bank (ECB). The road map for the project with an explicit plan and timetable were approved in the Maastricht Treaty in 1991. The treaty has set a three-stage plan to establish the euro:

- Stage 1: Removal of remaining restrictions on capital movements (July 1990).
- Stage 2: Establishing the European Monetary Institute (EMI) as a precursor of a European Central Bank and imposing fiscal discipline on the public sector (July 1, 1994).
- Stage 3: Irrevocably fixing bilateral exchange rates (January 1, 1999).

Convergence criteria to be fulfilled by potential candidates for EMU were set in terms of inflation rates, exchange rate stability, budget deficit, and Government debt. In January 1999, the euro was introduced as a scriptural (non-cash) money. The euro has been introduced as a one-for-one replacement of the European Currency Unit (ECU).[12] The bilateral central rates of the currencies of the countries of the euro zone against the ECU have been used as benchmarks to determine the irrevocable conversion rates at which the euro has been substituted for individual countries' currencies.[13] In January 2002 euro coins and banknotes were introduced. A transitional period for the co-existence of the euro and national currencies was allowed until February 28, 2002. The euro zone actually comprises the following countries:

•Belgium
• Germany
• Spain
• France
• Ireland
• Italy

[12] The ECU has been created as an international currency within the EMS. It consists of weighted averages of currencies of the European Community Countries. All countries participating in the EMS have agreed to limit variation of their currency parities with respect to the central rates defined in terms of ECU.
[13] See for instance, Temperton (1998) for further details about the creation of the euro.

• Luxembourg
• Netherlands
• Austria
• Portugal
• Finland
• Greece (from 1 January 2001)

The remaining three European Community member states namely, United Kingdom, Sweden and Denmark, have decided to opt out of the euro zone but may join in the future.

ii. Comparing the European and GCC Experiences:

At prima facie, the experience of the European monetary integration and that of the GCC countries are not strictly comparable from the premise that the former is at a more advanced stage than the latter. However, it is still useful to have a clear idea about where the more recent GCC experience could benefit from the European one.

EU and GCC have a very common attitude toward CU. Both hold the view that the complete integration of product markets requires the elimination of the transaction costs and uncertainties associated with the existence of separate currencies. The EU relies strongly on the argument that economic integration without monetary integration cannot provide a political equilibrium. On the other hand, it is widely believed that monetary integration requires political integration in order to lend credibility to Government's commitments to pursue fiscal policies that are consistent with price stability and preservation of the monetary integration.[14] GCC countries seem to follow the footsteps of the EU in that respect. However, the political integration is yet to be seen in the case of the GCC countries. In the EMU experience, the decision to create a European Parliament and a European Central Bank as supranational entities designed to safeguard monetary integration came ten years before the launching of the euro. There is no clear time table or a formal plan for the establishment of such entities in the case of GCC. Only the loose deadline of end of the year 2002 to finalize the procedures of a common peg to their respective countries, was set.

In addition, the EMU experience is based on Germany, and to a lesser extent France, as a driving force of the euro zone. Most of the countries in the euro zone have attached their currencies and monetary policies to Germany given its high credibility in fighting

[14] Eichengreen (1996).

inflation. This helps achieve convergence and coordination of policies between the partner countries. In the case of GCC countries, such a focal point for convergence simply does not exist.

More importantly, the European experience in achieving CU has focused on the Maastricht convergence criteria to impose the necessary fiscal discipline to preserve monetary integration. GCC countries are yet to establish such a mechanism.

An additional factor that made the birth of the euro less complicated is the legacy of EMS, which is a system of tying up currencies within a narrow band. The existence of a common denominator, ecu, consisting of a synthetic basket of European currencies made the transition to the euro a relatively easy operation. The euro was simply set as a one-to-one ratio with the ecu.

The GCC countries have relatively similar exchange rate arrangements. Up until December 31, 1999, Bahrain, Qatar, Saudi Arabia and UAE peg their respective currencies to the SDR; Oman to the U.S. dollar and Kuwait to a basket of currencies determined on the basis of the currencies of its major trade and financial partners. Recently Bahrain and Qatar switched the peg of their currencies from SDR to the dollar. In practice, all GCC countries' currencies hold a stable relationship to the dollar. This explains the recent decision of GCC countries to establish the dollar as the common currency their domestic currencies are to be pegged to. The implementation of this intermediate stage will be a step forward toward establishing the common GCC currency. This pre-commitment to fixed exchange rates may help demonstrate the resolve of GCC to financial discipline and achieve the necessary credibility for monetary integration.

4. Testing OCA for GCC: Generalized Purchasing Power Parity Approach

The Generalized Purchasing Power Parity Approach (G-PPP) for assessing the viability of forming a currency area was developed and tested by Enders and Hurn (1994). The main idea of the approach starts from the fact that real exchange rates of the countries potentially candidates for a currency union area are non-stationary. This is so because the fundamental macroeconomic variables (forcing variables) that determine real exchange rates are also non-stationary and follow different growth paths. For countries to qualify for a successful currency area, they should experience convergence and symmetrical shocks to their fundamentals. The latter should move together and be sufficiently interrelated so that the real

exchange rates will have common stochastic trends. Therefore, the theory advocates that the real exchange rates within a currency area should be co-integrated. This means that the bilateral real exchange rates of the countries of the currency area should have at least one linear combination that is stationary.

The G-PPP test consists of finding whether there are cointegrated vectors between the exchange rates of the CU. In other words, one should test whether an equilibrium relationship exists between the different bilateral real exchange rates such that:

$$RER_{12t} = \alpha_0 + \beta_{13} RER_{13t} + ... + \beta_{1n} RER_{1nt} + \varepsilon_t \qquad (1)$$

where RER_{1it} is the real exchange rate between the base country and country i in period t, α_0 is the constant term and β_{ij} are the parameters of the cointegrating vector and represent linkages among the economies of the currency area, and ε_t is a white noise disturbance term.

The real exchange rate series are constructed using two alternative base countries namely, Kingdom of Saudi Arabia (KSA) and the United States of America (USA). The choice of KSA as a base country is obvious given the economic importance of the Saudi economy in GCC, and may represent the dominant country in forming a successful currency area. However, the choice of the USA is also important given the tight relation of GCC currencies with the US dollar.

The real exchange rates that we use are defined as follows:

$$RER_t = \frac{S_t P_t^*}{P_t}$$

where S_t is the nominal exchange rate expressed as the number of national currency units for one unit of the currency of the base country. P_t^* and P_t are the consumer price index in the base and the home country, respectively. The resulting real exchange rates are plotted in Figure 1. The annual data form 1960 to 1999 on nominal exchange rates and consumer price indices for GCC and USA were obtained from the IFS CD ROM of the IMF (2002) and World Development Indicators CD ROM of the World Bank (2001). For computational purposes, we use the logarithm of the real exchange rates as defined above.

During the past two decades, GCC's currencies have fluctuated only moderately given their close relationship to the US dollar. There is also a striking similarity of the variation in the nominal dollar rates of GCC currencies. The coefficient of variation is almost the same for all GCC countries (0.11) except for the Omani Riyal which fluctuated less than the other GCC currencies (0.06). In fact, the Bahraini Dinar did not change from the rate of 0.377 BD to the dollar since 1981. The Omani Riyal was also fixed at the rate of 0.3845 riyal to the dollar since 1987, the UAE Dirham at 3.677 since 1981, the Saudi Riyal at 3.745 since 1987, and the Qatari Riyal at 3.64 since 1981. Only the Kuwaiti Dinar has fluctuated within a very narrow margin. Despite this apparent stability of GCC nominal exchange rates since the 1980s, the ADF stationarity test applied to a longer sample reveals that GCC nominal rates are in fact non-stationary.[15] This can be attributed to the fluctuation of the nominal exchange rates prior to the period 1980-1999. The GCC rates computed against the Saudi Riyal also reflect the same picture. However, the volatility of the GCC currencies with respect to the Saudi Riyal is less than that of the US dollar.

Real Exchange rates computed for both base countries (USA and KSA) exhibit higher volatility than nominal exchange rates. In fact, the coefficient of variation is almost double the coefficient of the nominal exchange rates. The ADF stationarity test shows that real exchange rates in GCC are not stationary.

[15] In fact, when the ADF test is applied to GCC data sample from 1980 to 1999, it turns out that nominal rates are stationary.

Figure 1

Real Dollar Exchange Rates of GCC 1960-1999

The first step in testing G-PPP is to see whether the real exchange rates in the GCC are in fact non-stationary. From the casual inspections of the graphs of such variables, it is apparent that the RERs are not stationary. This hypothesis is confirmed by the formal tests of Dickey Fuller (1979) and Phillips Peron (1988). The results of these tests and for the two base countries are given in Table 5. It is clear from the table that nominal and real exchange rates are not stationary. The null hypothesis that the data generation process contains a unit root in the exchange rate data cannot be rejected. However, the test is rejected at the 5%

level when applied to the first differences of nominal and real exchange rates. Therefore, both series are integrated of order one.

The second stage in testing the OCA consists of conducting cointegration analysis. The Johansen (1991, 1995) approach to the estimation and testing of cointegrated relationships is used. Both trace and maximum eigenvalues tests are used to determine the number of cointegrating equations. The trace statistic tests the null hypothesis of r cointegrating relations against the alternative of k cointegrating relations. The maximum eigenvalue statistic tests the null hypothesis of r cointegrating relations against the alternative of r+1 relations.

In order to estimate the parameters of the cointegrating relationships, we need to determine the lag length of the Vector Autoregressive (VAR) model underlying the long-run relationship given by equation (1), so that estimation is possible and error terms are approximately white noise. However, due to the small sample size and severe data unavailability, we could not experiment with high-order VAR models. In our case, VAR(1) seems to fit the data reasonably well and the errors terms of the model are fairly well behaved.

Table 6 gives the results of testing for the number of cointegrating vectors in terms of maximum Eigenvalue, $\lambda_{\max}$, trace, λ_{trace}, statistics, and the corresponding eigenvalues, λ.[16] As can be seen from the table, the trace test suggests the existence of up to three cointegrating vectors, while the $\lambda_{\max}$ suggests four. These tests were conducted at the 90 percent significance level. Since the results were not in perfect agreement and to minimize the risk of failing to reject an incorrect null hypothesis, we reconducted these tests using the 95 percent critical values given by Osterwald-Lenum (1992). The $\lambda_{\max}$ and λ_{trace} critical values for r=3 were 21.07 and 31.52, respectively. Hence, the hypothesis of the existence of three contegrating vectors or less is accepted. Upon further observation, the 95 percent significance level $\lambda_{\max}$ test accepts the null of r=2, since the 95 percent critical value was 27.14, higher than the computed value of 25.48.

[16] Given that no clear trend was detected in the data, intercepts were only included in the cointegrating relationships.

Table 5
ADF Stationarity Tests of GCC Exchange Rates

Country	Base Country = USA				**Base Country = KSA**			
	Nominal		Real		**Nominal**		**Real**	
	Level	**1st Differences**	**Level**	**1st Differences**	**Level**	**1st Differences**	**Level**	**1st Differences**
Bahrain (66-98)	-1.20	-3.69 *	-0.52	-2.61*	-0.40	-2.59*	-0.65	-4.09*
Kuwait (72-98)	-0.80	-4.16*	+0.87	-5.27*	+0.08	-5.30*	-0.60	-3.34*
Oman (60-99)	+0.119	-3.74*	-1.10	-3.23*	+1.27	-4.27*	-0.38	-7.00*
Qatar (79-99)	-1.30	-3.54*	0.78	-2.62*	-0.58	-2.35*	-1.89	-2.04*
SA (63-99)	-0.75	-3.66*	-0.122	-2.14*	-	-	-	-
UAE (73-99)	-1.32	-3.61*	1.36	-3.58*	-0.57	-3.15*	-0.53	-3.06*

Table 6

Testing for Cointegration

		Trace				λ_{max}		
H0	H1	Stat.	90% critical value	H0	H1	Stat.	90% critical value	λ
r = 0	r > 0	196.36	97.17	r = 0	r = 1	101.44	25.51	0.995
r ≤ 1	r > 1	94.92	71.66	r = 1	r = 2	39.63	21.74	0.876
r ≤ 2	r > 2	55.29	49.91	r = 2	r = 3	25.48	18.03	0.739
r ≤ 3	r > 3	29.80	31.88	r = 3	r = 4	16.29	14.09	0.576
r ≤ 4	r > 4	13.51	17.79	r = 4	r = 5	8.51	10.29	0.361
r ≤ 5	r > 5	5.00	7.50	r = 5	r = 6	5.00	7.50	0.231

Based on these results, we conclude that there are two cointegrating vectors. The estimates of the cointegrating vectors,β, and the associated adjustment coefficients vectors, α, are presented in table 7.

Table 7

Cointegrating and Adjustment Vectors *

	Constant	**Bahrain**	**Kuwait**	**Oman**	**Qatar**	**Saudi Arabia**	**U.A.E.**
β_1	-1.609	-0.458	-0.188	-0.019	1.302	1.000	-1.952
α_1	-	-0.280 (-7.733)	-0.166 (-2.281)	-0.006 (-0.024)	-0.119 (-4.243)	-0.419 (-13.350)	-0.058 (-1.124)
β_2	1.884	-0.307	1.566	-0.579	-0.645	1.000	-1.470
α_2	-	-0.057 (-1.826)	-0.047 (-0.760)	0.626 (3.121)	0.010 (0.397)	0.130 (4.837)	0.173 (3.881)

* The cointegrating vectors are normalized so that Saudi Arabia's exchange rate is the reference. T-values are in parentheses.

While the β coefficients may be interpreted as long-term elasticities, the α's are the adjustment coefficients indicating the speed of adjustment toward long-term equilibrium.

Overall, the presence of cointegrating relationships is a formal proof that G-PPP holds and that GCC meet the requirements of a CU. However, cointegration is a statistical concept and it is often very difficult to give sound economic interpretation to all cointegrating relationships. In our case, we favor the first cointegrating vector on the ground that all adjustment coefficients have the appropriate negative sign. The exchange rates of all GCC, except Oman, enter this cointegrating relationship significantly. The zero restriction Likelihood Ratio test for the Omani exchange rate could not be rejected at the 95 percent level. This may reflect the fact that Oman is the least favorable candidate for CU. This interpretation is compatible with the relatively low correlation between the macroeconomic fundamentals of Oman and those of the other GCC countries.[17] Furthermore, the α's coefficients for Oman and the UAE are very small and represent a slower adjustment process to the equilibrium equation in the sense that deviations from G-PPP can persist for a relatively long period of time. Differences in adjustment speed may also reflect differences in country circumstances that would call for different policy measures. From this perspective, Oman and UAE may be considered a less homogeneous subset than the rest of GCC countries for the constitution of a CU.

It should be noted that many G-PPP-based tests in the literature reject the OCA hypothesis despite stronger correlations between forcing variables than those observed in the case of GCC. Overall, we find that G-PPP holds for the case of GCC. This rather unconventional result can be rationalized, putting aside data limitations and modeling difficulties, by the fact that GCC represent a rare case where exchange rates are stable and anchored strongly to the US dollar and inflation rates are relatively similar.[18] This result, however, does not preclude forcing variables from drifting apart and should not be interpreted as a sign of convergence among the economies of GCC. The success of GCC monetary union requires that more policy coordination and synchronization be undertaken, and further steps to create a single market where all restrictions on the movement of goods and factors be removed.

[17] See table 11.

[18] To test the sensitivity of the results to sample limitations, the stationarity and cointegration analysis were carried out using monthly data for Kuwait, Bahrain, and KSA using more than 200 observations. We obtain the same results: the exchange rates for these countr ies were cointegrated.

5. Potential of GCC Currency Union

As argued earlier, the benefits of a currency union are long-term while its costs are immediate. In the long-run, the creation of a single currency may boost intra-regional trade and investment and may help, over time, to reduce country differences and achieve convergence with respect to economic policy. However, the fulfillment of these long-term gains relies on features and characteristics of the countries of the grouping.

Despite the signing of a free trade area, inter-GCC trade remains weak. The share of intra-GCC commodity exports in the total exports of each country remains very limited. The average for these shares during the period 1989-1999 are 21.3% for Bahrain, 1.6% for Kuwait, 17.1% for Oman, 6.3% for Qatar, 6.6% for Saudi Arabia and 4.6% for U.A.E. The stagnation of these shares rather than their weaknesses is the more alarming. The degree of intra-GCC trade integration, as shown in Table 8, is relatively weak in comparison with other economic blocs in the world.

As shown previously in table 2, the limited diversification of GCC exports offers very limited possibilities of expanding inter-industry trade. In addition and as argued by Peterson (1988), the existence of similar second industries in the different GCC countries "could generate long-term detrimental structural overlap" that would stifle efforts to develop regional trade.

We argue, however, that a single currency might reinforce intra-industry trade if the respective GCC countries achieve concerted efforts at increasing specialization and improving the technical sophistication of their industrial sectors even in the oil-derivatives industries.

Table 8
Regional Trade Blocs Exports within Bloc as
% of Total Exports of the Bloc

	1970	1980	1990	1999
EU	59.5	60.8	65.9	62.9
NAFIA	36.0	33.0	41.4	54.6
APEC	57.8	57.9	68.3	71.9
CEFTA	12.9	14.8	9.9	11.9
MERCOSUR	9.4	11.6	8.9	20.5
CEMAC	4.8	1.6	2.3	1.6
GCC	2.9	3.0	8.0	6.8
UMA	1.4	0.3	2.9	2.5

Source : WDI (2001)

Table 9 that follows gives the Intra-Industry Indices (IIT) in Manufactures for GCC and other comparator countries. The table reveals that GCC countries exhibit low levels of IIT despite the efforts of countries like Bahrain, Oman and Saudi Arabia, at expanding their industrial base. Unless, GCC countries put more efforts in intensifying industrial specialization, the competition in second industries would undermine the efforts at expanding intra-GCC trade.

With respect to capital movement, GCC countries still impose various forms of control on inward direct investment by GCC nationals. These controls vary from prior approval (Oman) to limited ownership of capital (Kuwait, Qatar and U.A.E.) and restrictions on types of activities GCC nationals could engage in (Kuwait, U.A.E.). The complete lifting of these restrictions will be an important step toward setting up the Gulf Common Market and the implementation of a pre-requisite for the realization of the benefits of Currency Union.

Table 9

IIT in Manufactures for GCC Countries

Country	1985	1997
Bahrain	0.21	0.31
Kuwait	0.12	0.08
Oman	0.12	0.24
Qatar	0.09	0.07
Saudi Arabia	0.09	0.19
United Arab Emirates	0.28	0.28
Brazil	0.51	0.54
Korea	0.41	0.61
Israel	0.59	0.66
Turkey	0.16	0.33

Source: Yeats and Ng (2000, p.22).

GCC have taken many measures aimed at mobilizing financial resources and facilitating the movement of people and capital. For instance, the Gulf Investment Corporation (GIC), established in 1982 with a capital of US$2.1 billion owned equally by all GCC countries, has for objective the mobilization of financial resources for the implementation of projects promoting the productive sectors in the respective GCC countries.

Recently, national banks were allowed to open branches in other GCC economies. The GCC also established the Gulf Network of the National Automated Teller Machines (ATM). Many of the achievements reported in GCC General Secretariat include "the practice of retail and wholesale trade, ownership of shares and real estates, engaging in different professions and economic activities such as agriculture, industry, contracting, animal resources, establishment of hotels and restaurants, establishment of training centres, and obtaining loans from industry development funds and banks in the GCC States."[19]

The establishment of a common GCC currency is expected to help advance economic integration by forcing member countries to deregulate their labor and product markets and eliminate any barriers to the free movement of capital. With a single currency, arbitrage

[19] Economic Achievements as described in the official documents of GCC Secretariat General. See web-site at: http://www.gcc-sg.org.

between countries with different market conditions become easier and countries with the less favorable conditions will be affected negatively.

Despite the apparent similarity among GCC countries and the previous efforts at reinforcing commonalities, their business cycles do not seem to be much synchronized. Tables 10 and 11 give the tests of mean and variance equality of the forcing variables of GCC and the crude measures of association between these variables, respectively.

Table 10
Tests of Equal Mean and Variance of GCC
Macroeconomic Fundamentals

	Mean	**Variance**
Inflation (CPI)	1.048	54.16*
Inflation (GDP)	0.368	78.60*
Per Capita GDP	81.498*	211.0150*
Real GDP	78.60*	339.02*
GDP Growth	2.567*	54.808*
Interest Rate (Deposit)	9.134*	20.193*
Real Exchange Rate (USA)	379.68*	300.1772*
Real Exchange Rate (KSA)	368.84*	600.26*
Money Growth	0.388	40.151*
Nominal Exchange Rate	1604.69*	429.07*
Interest Rate (lending)	19.270*	34.174*

* Significant at 5%

Table 10 summarizes the t-test of equality of mean and the variance of ten macro fundamental variables across GCC. The null hypothesis of equal mean and variance is strongly rejected for all the variables except for broad monetary growth and inflation. Table 11 gives the correlation matrices of these macro variables in GCC. It also reflects the dissimilarity in the behavior of the fundamental macroeconomic variables. The correlation coefficients of real GDP growth rates between GCC are not uniform and very disparate.

Table 11
Pairewise Correlation matrix

	Output						**Money growth**					
	Bahrain	**Kuwait**	**Oman**	*Qatar*	**KSA**	**UAE**	**Bahrain**	**Kuwait**	**Oman**	**Qatar**	**KSA**	**UAE**
Bahrain	1.00	0.46	-0.15	0.47	0.54	0.06	1.00	0.38	0.44	0.28	0.37	0.40
Kuwait		1.00	-0.018	-0.24	0.05	-0.08		1.00	0.69	0.70	0.67	0.51
Oman			1.00	-0.36	0.02	-0.04			1.00	0.63	0.62	0.84
Qatar				1.00	0.39	0.38				1.00	0.86	0.53
KSA					1.00	0.41					1.00	0.67
UAE						1.00						1.00
	Inflation						**Interest rate**					
	Bahrain	**Kuwait**	**Oman**	*Qatar*	**KSA**	**UAE**	**Bahrain**	**Kuwait**	**Oman**	**Qatar**	**KSA**	**UAE**
Bahrain	1.00	0.70	-0.12	0.55	0.78	0.51	1.00	0.44	0.78	0.44	0.90	0.71
Kuwait		1.00	0.70	0.56	0.51	0.92		1.00	0.20	-0.15	-0.26	0.77
Oman			1.00	0.16	0.38	0.95			1.00	0.73	0.75	-
Qatar				1.00	0.49	-				1.00	0.58	-
KSA					1.00	0.58					1.00	-
UAE						1.00						1.00
	Per Capital income						**Real Exchange Rate**					
	Bahrain	**Kuwait**	**Oman**	*Qatar*	**KSA**	**UAE**	**Bahrain**	**Kuwait**	**Oman**	**Qatar**	**KSA**	**UAE**
Bahrain	1.00	0.45	-0.92	0.92	0.84	0.86	1.00	0.69	0.93	0.90	0.82	0.58
Kuwait		1.00	-0.88	0.73	-0.54	0.56		1.00	0.43	0.82	0.91	0.32
Oman			1.00	-0.95	0.55	-0.95			1.00	0.91	0.70	0.87
Qatar				1.00	0.60	0.93				1.00	0.91	0.88
KSA					1.00	0.85					1.00	0.49
UAE						1.00						1.00

For instance, Oman's correlation coefficient with Kuwait and Bahrain are negative and very low. The same is true for UAE where growth correlation with other GCC is very weak. The lack of synchronization in economic activity despite the common dominance of the oil sector could be explained by the asymmetric reaction to the same oil shocks. In other words, oil price fluctuation has different impacts on the countries of the region. Some countries face more binding domestic constraints than others and have to adjust differently to the same shocks. For example, following the 1998 oil price decline, growth in the UAE declined from 2.1 % in 1997 to –5.6 % in 1998, while it declined only from 3.0% to 2.1 % in Bahrain.

In contrast, and as shown in table 12, economic activity in the countries of the euro zone seems to be more synchronized with higher correlation coefficients of real GDP. This shows that the European economies were more convergent before the launch of the euro than their GCC counterparts. Convergence in the case of the euro countries might reflect the longer experience of their region with the gradual integration of their markets and policies. GCC countries have done some mileage in that regard.[20] Nonetheless, convergence and synchronization of their business cycles will not be achieved unless goods and capital markets become more integrated. As argued by Bayoumi and Eichengreen (1996), while CU may help increase trade and hence economic integration, a common market increases the readiness for monetary integration.

On the other hand, as long as differences persist in the political economy determinants of adjustment and reform in the respective GCC countries, CU might not be stable if ever achieved. Individual countries might face different domestic conditions that call for specific measures not likely to be equally acceptable by other countries of the group. In this case, political unification through the establishment of a supranational entity that would subordinate national interest in favor of regional interest and surrender some of the national prerogatives, is a necessary step toward achieving both economic and monetary integration.[21]

[20] Among the achievements of GCC in terms of unification of policies are a Joint Agricultural Policy and common strategies for industrial development, population, and long-term development.

[21] Peterson (1988, p. 157) quotes the former GCC associate secretary general for economic affairs, Abdulla Al-Kuwaiz, in proposing that the Secretariat General become such a supranational entity with "more teeth from the Supreme Council".

Table 12
Correlation Matrix of Euro Zone's Real GDP (excluding Germany)
1970-1998

	Austria	*Belgium*	*Finland*	*France*	*Greece*	*Ireland*	*Italy*	*Luxembourg*	*Netherlands*	*Portugal*	*Spain*
Austria	1.000										
Belgium	0.998	1.000									
Finland	0.956	0.964	1.000								
France	0.996	0.998	0.972	1.000							
Greece	0.982	0.987	0.965	0.990	1.000						
Ireland	0.950	0.942	0.898	0.933	0.910	1.000					
Italy	0.988	0.991	0.974	0.996	0.990	0.907	1.000				
Luxembourg	0.961	0.951	0.891	0.943	0.902	0.973	0.921	1.000			
Netherlands	0.994	0.991	0.943	0.986	0.967	0.972	0.972	0.979	1.000		
Portugal	0.996	0.996	0.957	0.995	0.975	0.951	0.985	0.966	0.992	1.000	
Spain	0.994	0.995	0.956	0.992	0.973	0.948	0.981	0.965	0.993	0.995	1.000

Source: Computed by authors based on data from the World Bank Development Indicators CD-ROM 2000.

Historically, there seems to be ample evidence that political unification has preceded monetary unification. Eichengreen (1996) gives few cases in point from the U.S., Germany and Italy to demonstrate the importance of political integration. There needs to be a firm conviction about the importance of such entity for GCC countries, in order to confer credibility to the common currency project.

5. Concluding Remarks

In this paper, an attempt at evaluating the readiness of GCC countries at establishing a currency union is conducted using formal tests, based on G-PPP theory, and informal tests based on the OCA literature. Our analysis shows that despite progress achieved on many fronts, GCC countries are yet to fulfill the necessary pre-conditions for the establishment of CU. The structure of their economies remains dominated by the oil sector, intra-regional trade is very limited and, unlike what many believe, there does not seem to be evidence of convergence in their main macroeconomic fundamentals nor synchronization of their business cycles. The main factors that are favorable for the establishment of CU are the implicit commitment by all GCC to fixed exchange rate arrangements and a strong political resolve to achieve economic integration.

Starting from the premise, advanced by the recent strand in OCA literature, that countries are more likely to verify the optimality criteria of CU ex-post rather than ex-ante and that expansion of trade and more correlated business cycles are the outcome rather than the prerequisites of CU; we have attempted to analyze the potential impact of CU on GCC. We argue that despite the lack of diversification and actual weakness of intra-GCC inter-industry trade, CU can expand intra-industry trade among GCC if the proper steps are taken toward more specialization and sophistication of their respective industries. On the other hand, CU may result in more synchronized business cycles provided that GCC countries achieve convergence in their economic structure, policies and regulations.

One way to do that is to accelerate economic integration and achieve the requirements of the GCC common market through the lifting of all restrictions on the free movement of goods and factors. An additional means of achieving convergence is through political integration or the creation of supranational institutions that would subordinate national interest for the regional one. This will be possible only if individual countries are willing to surrender some of their political and policy prerogatives. The recent European experience as well as ample historical evidence points to the imperative of political unification as a predecessor for CU.

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