

Common Currency Unit for Gulf Cooperation Council: Is It Feasible?

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Abstract: Starting from the work of John Stuart Mill in 1894, more than a century ago, the debate on the creation of a common currency continued until the debut of *Euro* for the European economic zone in 1999. Robert Mundell's classic work (1961) gave the final push for *Euro* forty years later. Since the birth of *Euro*, and Gulf Cooperation Council (GCC) has become a nesting place for another common currency unit ever since 2005. This work attempts to examine the feasibility of creating such a common currency unit for GCC (called as CCGCC) members. The paper analyzes furthermore some misgivings that came into being in the existing literature in the intervening period.

Keywords: Gulf Cooperation Council (GCC); Common currency unit

JEL Classifications: F15, F31, O24, P43

1. Introduction

Common currency has been the common cry for over a century. John Stuart Mill (1994) has championed a single currency unit for the entire world in his call for a common monetary unit. Mills went as far as stating "...so much of barbarism, however, still remains in the transactions of most civilized nations, that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbors, a peculiar currency of their own." Contrary to that view, came James Meade (1951), who contended against the creation of a single currency unit over any region of the world with independent sovereign nations. Tibor Scitovsky (1958) immediately argued for a common currency in view of the fact that it would induce higher capital mobility. Further and final inspiration came from the work of Robert Mundell (1961), who laid the foundation for the creation of the *Euro*. Now, economists, internationalists, and national leaders of many zones are reflecting on the creation of a common currency for their own spheres of

economic and financial operations, and yet maintaining their national sovereignties. Gulf Cooperation Council (GCC), consisting of six Middle Eastern nations (Saudi Arabia, United Arab Emirates, Qatar, Kuwait, Oman, and Bahrain) is one such economic zone of cooperation and integration. The question is: is a common currency unit feasible and functionally meaningful? This paper examines the feasibility and profitability of that outcome.

As we know now, *Euro* is the common currency unit for the Eurozone comprised of 20 European countries (originally, 11 nations) such as Germany, France, Belgium, and so on since January 1, 1999. Ever since the end of World War II, there have been various efforts to induce and create integration of Europe, following the establishment of International Monetary Fund (IMF) and International Bank for Reconstruction and Development (IBRD). Much cooperative organization such as the European Coal and Steel Community (ECSC), the Organization for European Economic Cooperation (OEEC), then the European Economic Community (EEC) came into being over a few years. Winston Churchill's dream of the United States of Europe in 1955 culminated in the *Treaty of Rome* in 1957, and thus the creation of the Common Market came into being. Many attempts were made to create single currency such as European Currency Unit (ECU), European Monetary Unit (EMU) with alignment structure of adjustments like SNAKE and SUPERSNAKE (see Klinghoffer, A.J, *et al.*, 1984), but all failed until the *Euro* came into being. Finally, came the *Treaty of Maastricht* (1992, fostering and highlighting the development of the European Union (1993-1996) and the new enlargement to the "Europe of the Fifteen" (1995).

It should, however, be noted that common currency existed long before *Euro*. Many currencies were tied to the British pound sterling in the same way as a dime is tied to the dollar until the US dollar substituted the British pound since 1934. Note the US dollar is a common currency for the United States of America, and many sovereign nations such as Ecuador, East Timor, El Salvador, Marshall Islands, Micronesia, Palau, Turks and Caicos, British Virgin Islands and Zimbabwe. It is the most widely-used currency in the world, with many countries employing it as an accepted alternative to their own currency. But some have simply adopted the US dollar currency as their own, notes and all, in what is known as "dollarization." They do not have control over the currency—only the Federal Reserve in Washington sets monetary policy. Both Ecuador and El Salvador adopted the US dollar in 2000, following the creation of free-trade blocs like NAFTA and the EU and the debut of the euro, making even the notion of a single currency for the hemisphere more plausible and attractive. Within its own contours, the United States with sovereignty over all 50 states have virtually many regions of significantly different economic strengths and standards. The State of Alabama and the State of California or the State of Connecticut use the same dollar, although they have very different economic power and very different GDP per capita. Therefore, it is obvious that physical size and economic power do not come as roadblock to dollar as the single currency.

There has been a surge of interest in the creation of a common currency unit. Kenen (1969), and thereafter many economists have explored the issue quite extensively, e.g. Alesina *et al.* (1994), Teneyro (2002), Bayoumi *et al.* (1997); Bayoumi (1994); Kempa (2002). Ojo (2005) studied the problems, lessons and prospects of a common currency unit in the environment of western Africa. De Grauwe and Ji (2013) and De Grauwe (2018) have further looked more recently to the empirical issues on common currency and the political reality. More theoretical structure was introduced by Ghosh (2018; 1993). In view of all these newer studies, it is worthwhile to focus on the Gulf Cooperation Council (GCC), established in 1981. All these countries share a common language and common religion, and five out of the six countries are in fixed exchange regime with US dollar

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(USD). As the Table 1 notes, Kuwaiti dinar is in flexible exchange. But a closer look at the volatility of Kuwaiti dinar signifies marginal fluctuations, almost anchored around USD. In almost all aspects, they are inter-connected. Especially more so, since the creation of the oil cartel known as the Organization of the Petroleum Exporting Countries (OPEC).

Table 1. GCC economic indices (2010-2017)

Saudi Arabia								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	528.21	671.23	735.97	746.65	756.35	654.27	644.94	683.83
Exchange Rate	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Inflation Rate	5.34	5.84	2.89	3.51	2.68	2.18	3.49	(0.24)

United Arab Emirate								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	289.79	350.67	374.59	390.11	403.14	358.14	357.05	382.57
Exchange Rate	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
Inflation Rate	0.88	0.88	0.66	1.10	2.35	4.07	1.62	1.97

Qatar								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	125.12	167.78	186.83	198.73	206.23	164.64	125.45	167.60
Exchange Rate	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
Inflation Rate	(0.24)	1.14	2.32	3.21	3.35	1.61	2.87	0.39

Kuwait								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	115.42	154.03	174.07	174.16	162.63	114.57	110.91	120.12
Exchange Rate	0.29	0.28	0.28	0.28	0.29	0.30	0.30	0.30
Inflation Rate	4.50	4.84	3.26	2.68	2.91	3.27	3.20	2.17

Oman								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	58.64	67.94	76.69	78.94	81.08	68.91	66.82	72.64
Exchange Rate	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Inflation Rate	3.20	4.04	2.95	1.05	1.02	0.07	1.11	1.60

Bahrain								
Year	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion \$)	25.71	28.78	30.75	32.54	33.39	31.13	32.15	35.31
Exchange Rate	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Inflation Rate	1.96	(0.40)	2.76	3.30	2.65	1.84	2.80	1.39

(<https://data.worldbank.org>)

In 1982, the GCC formally laid down the objectives for an economic agreement during the *Summit of Muscat*. In 1983, the GCC established a free trade zone as a first step in this direction. During the following years, the process of economic integration stagnated repeatedly, before it was given new impulses in the late nineties. The next phase of integration (see Klinghoffer *et al.*, 1984) was introduced after the *Summit of Muscat* in 1999, when the GCC planned to introduce a customs union in 2005. Finally, during the *Summit of Muscat* in December of 2001, the GCC agreed in a

new economic agreement to bring the customs union forward to the year 2003 and to accomplish the completion of a common market. Note the economic realities in the GCC alongside the EU and common market of Europe. In the year 2010, a common currency of GCC (call it CCGCC - a nice palindrome!) was supposed to be introduced as a characteristic feature of a complete economic integration. In preparation for that end, the individual national currencies were supposed to be officially pegged to the US dollar and a number of convergence criteria should be set up for the member states to fulfill until the introduction of the new currency. If the GCC's intentions had been implemented, the GCC currency union would have been, regardless of population and GDP, the second most important supranational currency union behind the European Currency Union. Below is the table reflecting the economic statistics for the GCC (taken from World Bank and ranked accordingly to the GDP for each country.

2. Theoretical Underpinning

2.1 GCC currencies and USD

Note that currencies in the GCC are virtually pegged to USD with the minor exception is Kuwaiti dinar (KWD). But on a closer look, it varies nominally, and in all practicality is anchored to the tightest band with dollar (and thus virtually is fixed). Some vital information are still missing in our examination of these countries, which are money supply, price index and interest rate. Under Shariah law, these countries cannot have interest rate, even though in effective terms they do exist. Even without those missing data, we can ascertain a veritable fact from basic purchasing power parity and the Fisherian relation in the open-economy:

$$E = P_U/P_i \quad (1)$$

$$P_U = M_U V_U / Q_U \quad \text{and} \quad P_i = M_i V_i / Q_i \quad (2)$$

Here E , P_U , and P_i stand, respectively, for exchange rate of i-th currency in terms of US dollar, US price, and i-th country price. M_U , M_i , V_U , and V_i respectively stand for money supply levels of the US and the i-th country, and their respective velocities of circulation of monies. Q_U and Q_i stand for the GDPs. When taking (1) and (2) together, the results can be as follows:

$$E = \frac{M_U V_U}{M_i V_i} \cdot \frac{Q_i}{Q_U} \quad (3)$$

Upon logarithmic differentiation

$$\frac{dE}{E} = \left(\frac{dM_U}{M_U} - \frac{dM_i}{M_i} \right) + \left(\frac{dV_U}{V_U} - \frac{dV_i}{V_i} \right) + \left(\frac{dQ_i}{Q_i} - \frac{dQ_U}{Q_U} \right) \quad (4)$$

Since i-th country is in the fixed exchange regime with US dollar, $\frac{dE}{E} = 0$ and hence all terms in the right-hand side must adjust to be able to sustain the fixed exchange structure. Now, let us go further into the economic structure in theoretical terms.

2.2 A common currency unit in GCC

What is a common currency unit? How to construct a common currency? A common currency like *Euro* is the single monetary unit for all the independent sovereign countries. All the nations must use the same money as all states in the United States use dollar. Let C be the common currency unit comprised on n different money units, and then this common currency unit is defined as follows:

$$C = w_1 C_1 + w_2 C_2 + w_3 C_3 + \dots + w_n C_n \quad (5)$$

where C_1, C_2, C_3, \dots and C_n are the n different currencies, and w_1, w_2, w_3, \dots , and w_n are weights of each of these n currencies composing the common currency, C . Here, of course,

$w_1 + w_2 + w_3 + \dots + w_n = 1$. Now, upon total differentiation of equation (5), we obtain the following:

$$dC = (w_1 dC_1 + w_2 dC_2 + \dots + w_n dC_n) + (C_1 dw_1 + C_2 dw_2 + \dots + C_n dw_n) \quad (6)$$

With minor algebraic operations, one can get the following expression:

$$\frac{dC}{C} = \left(\theta_1 \frac{dC_1}{C_1} + \theta_2 \frac{dC_2}{C_2} + \theta_3 \frac{dC_3}{C_3} + \dots + \theta_n \frac{dC_n}{C_n} \right) + \left(\theta_1 \frac{dw_1}{w_1} + \theta_2 \frac{dw_2}{w_2} + \theta_3 \frac{dw_3}{w_3} + \dots + \theta_n \frac{dw_n}{w_n} \right) \quad (7)$$

Note that $\frac{dC}{C}$ is the percentage change in C , and so are $\frac{dC_i}{C_i}$ and $\frac{dw_i}{w_i}$ (that is, percentage changes in C_i and w_i , respectively, and θ_i is the share of i -th currency (C_i) in the common currency unit (C) for ($1 \leq i \leq n$). Obviously, if w_1, w_2, w_3, \dots , and w_n are all fixed as in the composition of Euro, second part of equation (2) and equation (3) will be zero, that is,

$$C_1 dw_1 + C_2 dw_2 + \dots + C_n dw_n = 0, \text{ and}$$

$$\theta_1 \frac{dw_1}{w_1} + \theta_2 \frac{dw_2}{w_2} + \theta_3 \frac{dw_3}{w_3} + \dots + \theta_n \frac{dw_n}{w_n} = 0.$$

In the situation of fixed weights (as in the case of Euro), one can easily understand that the depreciation (or appreciation) of the common currency (in terms of outside currency, say, Euro or yen) will make countries, in the common currency, experience the depreciation (or appreciation). Within the common currency, area trade will remain unaffected among the member countries, but experiences of different member countries with outside countries will be very dissimilar. External balances will be in disequilibria. Members of the Gulf Cooperation Council pegged their currencies to the US dollar, except Kuwait, which has a flexible exchange situation with the US dollar, and as a result, common currency (C) will be exactly like Euro. It will be in fixed exchange regime with US dollar, but in flexible exchange regime with Euro, British pound sterling, Japanese yen, and other similar currencies, not pegged to U.S. dollar.

Consider any country i within GCC with the noted exception of Kuwait at this stage (before the common currency comes into being). It is obvious that once it is in common currency zone, it cannot have monetary policy, but it will have full fiscal instruments in case there is an internal imbalance between common currency area country or between the i -th country and an outside country, B (like U.K or Japan), for instance. Two internal balances can be put in equilibrium by government spending adjustments, as exhibited by Figure 1A and Figure 1B.

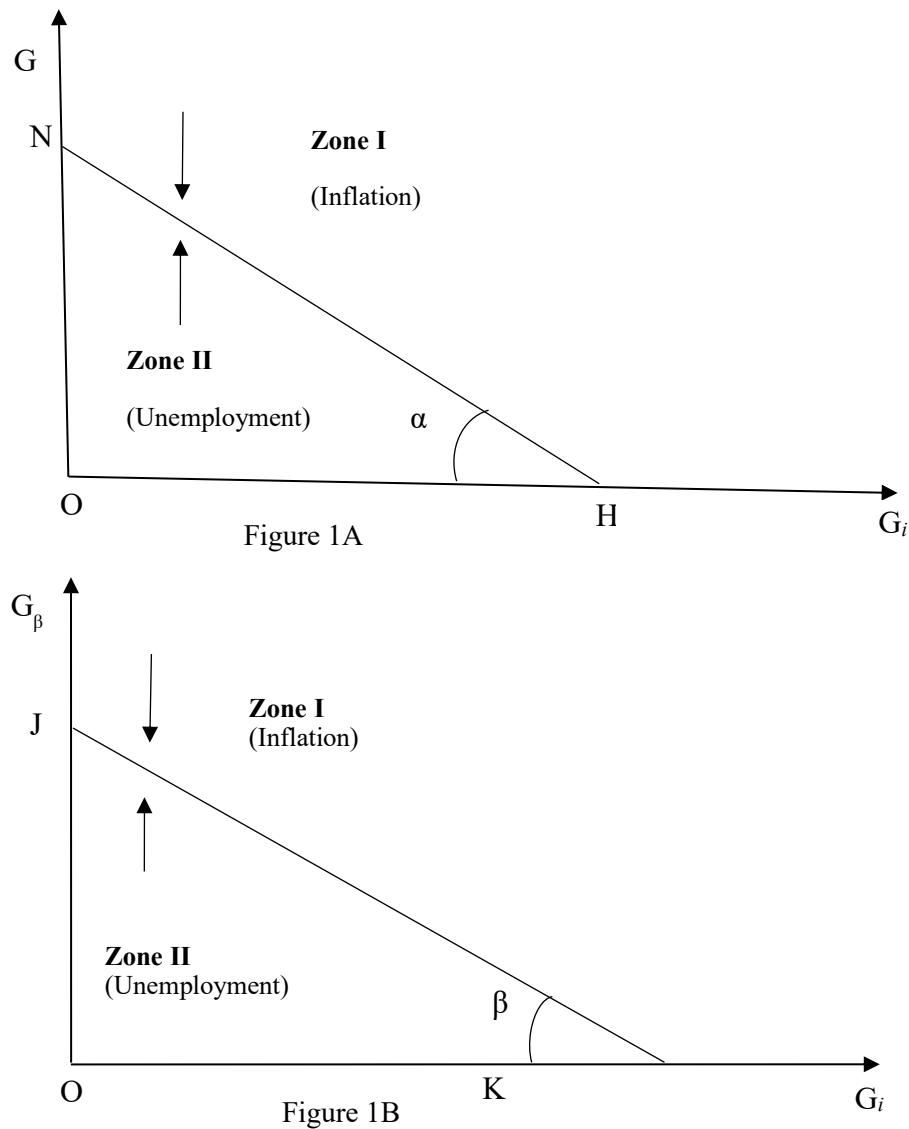


Figure 1. The Loci of the Internal Balances of the countries (with Government Spending)

Figure 2 and Figure 3 describe the interaction of the i -th country and the j -th country within the bloc of common currency or the interaction of the i -th country and the outside block country B. Equilibrium is attained at point F. External balances can be presented in Figure 4. Finally, we can bring in Figure 5, the Meade (1951) and Tinbergen (1952) reconciliation, further refined by Johnson (1963), and Swan (1968).

Following Keynesian aggregates, we get the following:

$$Y_j = C_j(Y_j, E) + I_j(Y_j, E) + G_j + T_j(Y_i, Y_a) \equiv Q_j(Y_j) + M_a(Y_a) - M_i(Y_i) \quad j = i, a \quad (8)$$

where E is the exchange rate, $T_j(Y_i, Y_a)$ is the measure of international trade, and all other symbols are known as Keynesian aggregate values. By purchasing power parity, E is of the price of home country commodity in terms of international currency (U.S. dollar), as noted earlier in Eq.(1). In fixed exchange system, E is a datum. It can be established easily that for full employment and no

inflation condition (that is, for internal balances of both countries), slopes of the schedules are negative, slopes being of different values ¹.

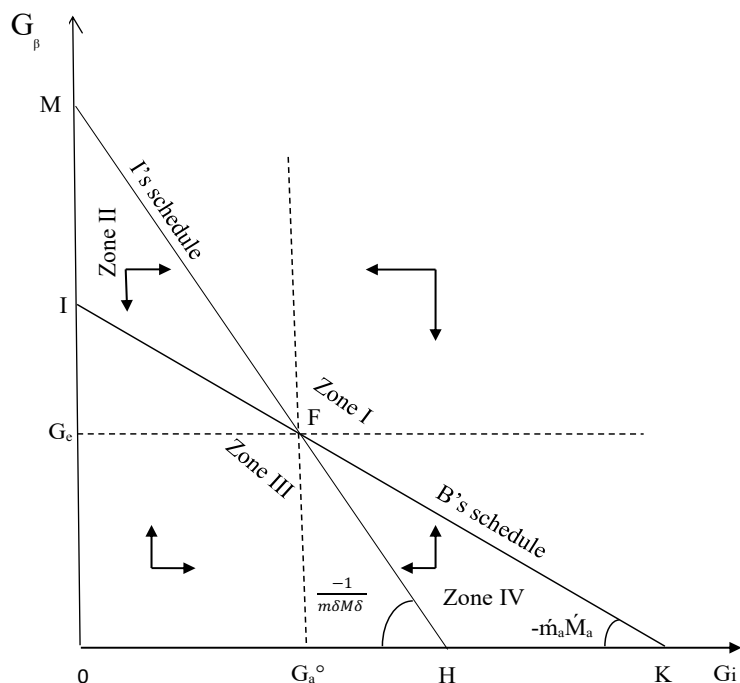


Figure 2. Equilibrium of two countries on Internal Balances

The rate of change of $Y_j, j = i, a$ with respect to time is given by:

$$\frac{dY_j}{dt} = \lambda_j \{ Q_j(Y_j) + M_a(Y_a) - M_i(Y_i) - Y_i \} \quad (9)$$

where λ_j 's are the positive speeds of adjustment. Tailoring equations in (9), and ignoring the non-linear terms, one gets the following expressions around the equilibrium (Y_i^*, Y_a^*) from (9):

$$\frac{dY_j}{dt} = \lambda_j \{ 1 - Q'_j(Y_j) + M'_j(Y_j)(Y_j - Y_j^*) - M'_a(Y_a - Y_a^*) \} \quad (10)$$

and the solution set to equations (10) is given by the following structure:

$$Y_i = Y_i^* + \alpha_{11}e^{1t} + \alpha_{12}e^{2t}, \quad Y_a = Y_a^* + \alpha_{21}e^{1t} + \alpha_{22}e^{2t},$$

Here λ_1 and λ_2 are the Eigen values of the following determinant:

$$\begin{vmatrix} -\lambda_i(1 - Q'_i + M'_i) - \lambda & +\lambda_i M'_i \\ +\lambda_a M'_a & -\lambda_a(1 - Q'_a) + M'_a \end{vmatrix} = 0 \quad (11)$$

¹ Here $\alpha = -\frac{\partial Y_a}{(\partial G_a | Y_i = Y_i^f)} \cdot \frac{\partial M_a}{\partial Y_a}$, and $\beta = -\frac{\partial Y_i}{(\partial G_i | Y_i = Y_i^f)} \cdot \frac{\partial M_i}{\partial Y_i}$. M stands for import

expenditure for the subscripted country. Y^f denotes full-employment of the subscripted country i . The i -th country is subscripted by i , and country b can be any other country within the bloc or outside.

Further analysis can easily determine with the knowledge that $M'_j > 0$ that

$$(1 - Q'_i + M'_i)(1 - Q'_a + M'_a) - M'_i M'_a > 0 \quad (12)$$

$$(1 - Q'_i + M'_i) > 0 \quad (13)$$

$$(1 - Q'_a + M'_a) > 0 \quad (14)$$

All these ensure stability of the adjustment mechanism, as figures 3, 4 and 5 exhibited.

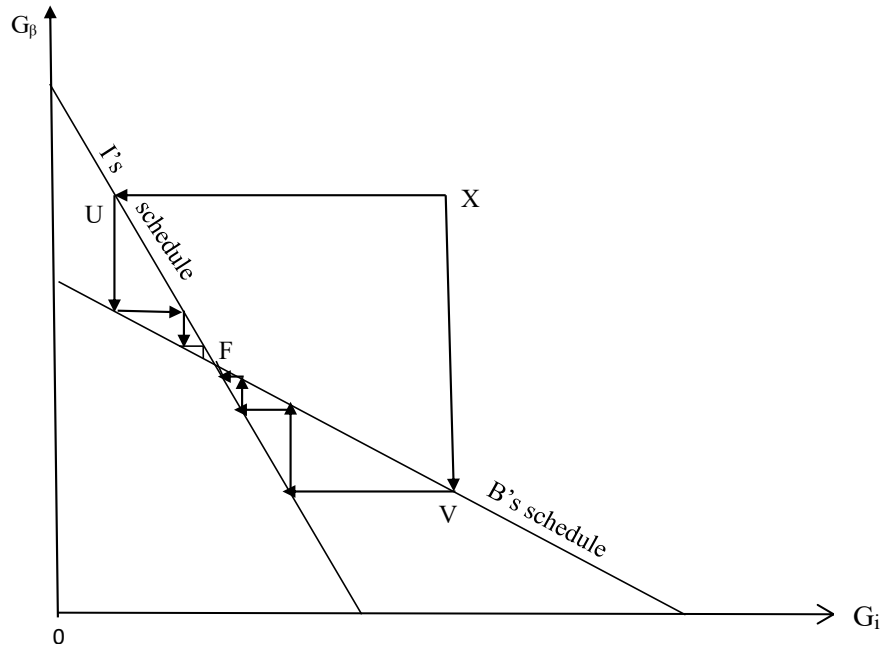


Figure 3. Dynamics of Adjustments (Cobweb with directions by arrows)

Figures 1A and 1B define the slope of the loci of government spending of both countries that keep the full employment and no-inflation for both countries. Figure 2 exhibits the equilibrium of internal balances of country i and country s at point F where both countries in full employment and no-inflation situation. Figure 3 shows the cobweb diagram as to how the equilibrium is reached and arrows show the dynamics of centripetal forces *a la* Mundell (1962; 1960, 1960), Johnson (1963), and others.

Take a look at equations (6) and (7) once again. If

$$(C_1 dw_1 + C_2 dw_2 + \dots + C_n dw_n) = 0 \text{ and}$$

$$\theta_1 \frac{dw_1}{w_1} + \theta_2 \frac{dw_2}{w_2} + \theta_3 \frac{dw_3}{w_3} + \dots + \theta_n \frac{dw_n}{w_n} = 0.$$

But for some $dw_i > 0$ and for some $dw_i \leq 0$ so that $(C_1 dw_1 + C_2 dw_2 + \dots + C_n dw_n) = 0$ and $\theta_1 \frac{dw_1}{w_1} + \theta_2 \frac{dw_2}{w_2} + \theta_3 \frac{dw_3}{w_3} + \dots + \theta_n \frac{dw_n}{w_n} = 0$, some of the component currency supply can increase and some country's currency supply will decrease, and the other countries' currency supply remain unchanged, and will remain at even with the common currency unit.

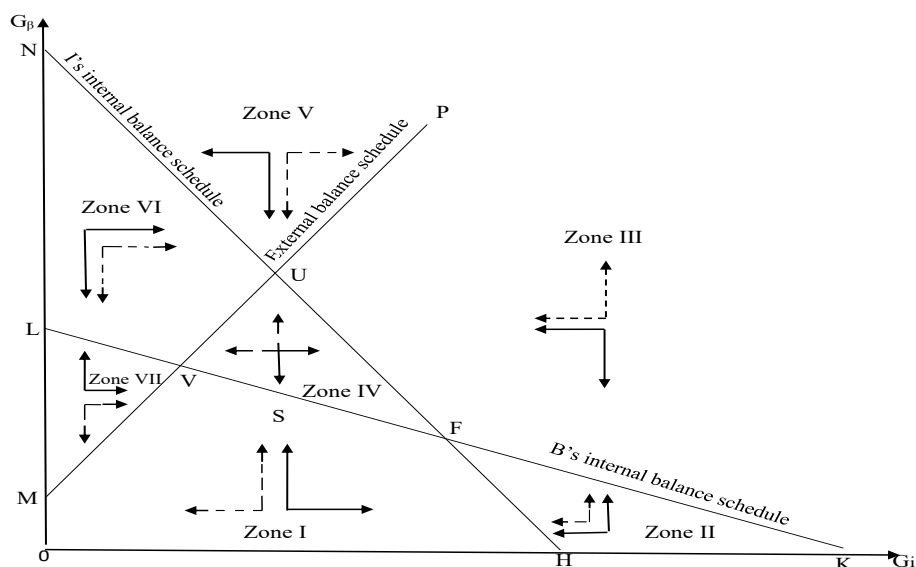


Figure 4. Internal Balances and External Balance
(direction of possible movements noted by arrows)

It yields semi-flexible exchange structure of the i -th country. Currency supply fluctuation can be managed the same way U.S Federal Reserve manages selective credit controls. European Central Bank has already shown how the economic problems as in Greece has been managed. In this new, modified paradigm, external and internal balances of the i -th country vis-à-vis country B are driven by the following dynamics:

$$\frac{dE}{dt} = -\lambda_1 \left\{ \left(\frac{\partial T_i}{\partial E} \right) (E - \hat{E}) - \left(\frac{\partial T_i}{\partial G_i} \right) (G_i - \hat{G}_i) - \left(\frac{\partial T_i}{\partial G_a} \right) (G_a - \hat{G}_a) \right\} \quad (9A)$$

$$\frac{dG_i}{dt} = -\lambda_2 \left\{ \left(\frac{\partial Y_i^e}{\partial E} \right) (E - \hat{E}) - \left(\frac{\partial Y_i^e}{\partial G_i} \right) (G_i - \hat{G}_i) - \left(\frac{\partial Y_i^e}{\partial G_a} \right) (G_a - \hat{G}_a) \right\} \quad (9B)$$

$$\frac{dG_a}{dt} = -\lambda_3 \left\{ \left(\frac{\partial Y_a^e}{\partial E} \right) (E - \hat{E}) - \left(\frac{\partial Y_a^e}{\partial G_i} \right) (G_i - \hat{G}_i) - \left(\frac{\partial Y_a^e}{\partial G_a} \right) (G_a - \hat{G}_a) \right\} \quad (9C)$$

From the following determinant,

$$\begin{vmatrix} -\lambda_1 \left(\frac{dT_i}{dE} \right) - \mu & \lambda_1 \left(\frac{dT_i}{dG_i} \right) & -\lambda_1 \left(\frac{dT_i}{dG_a} \right) \\ -\lambda_2 \left(\frac{dY_i^e}{dE} \right) & -\lambda_2 \left(\frac{dY_i^e}{dG_i} \right) & -\lambda_2 \left(\frac{dY_i^e}{dG_a} \right) \\ -\lambda_3 \left(\frac{dY_a^e}{dE} \right) & -\lambda_3 \left(\frac{dY_a^e}{dG_i} \right) & -\lambda_3 \left(\frac{dY_a^e}{dG_a} \right) \end{vmatrix} = 0 \quad (15)$$

we get the following solution:

$$\begin{aligned}
 E &= \hat{E} + \alpha_{11}e^{\mu_1 t} + \alpha_{12}e^{\mu_2 t} + \alpha_{13}e^{\mu_3 t} \\
 G_i &= \hat{G}_i + \alpha_{21}e^{\mu_1 t} + \alpha_{22}e^{\mu_2 t} + \alpha_{23}e^{\mu_3 t} \\
 G_b &= \hat{E} + \alpha_{31}e^{\mu_1 t} + \alpha_{32}e^{\mu_2 t} + \alpha_{33}e^{\mu_3 t}
 \end{aligned}
 \tag{16}$$

These E , G_i , and G_b moves to their equilibrium values, \hat{E} , \hat{G}_i and \hat{G}_b if the Eigen values have real part to be negative. In the Mundellessque way, the appropriate mix of budget surplus (or deficit) and interest rate can have the centripetal or centrifugal effect to external and internal balances.

External balance of the i -th country is positively sloped, as displayed in Figure 4 and in Figure 5. Several assignment policy mix will ensure the complete equilibrium. As one can see the triangle of UVF in Figure 4, is the zone of conflict, noted by Tinbergen (1952) and Meade (1951). Bringing in another policy variable, which is exchange rate that can move i 's and b 's internal balances and the external balance toward the directions noted by the dotted lines. Therefore, the area of conflict is narrowed and move to an overall equilibrium.

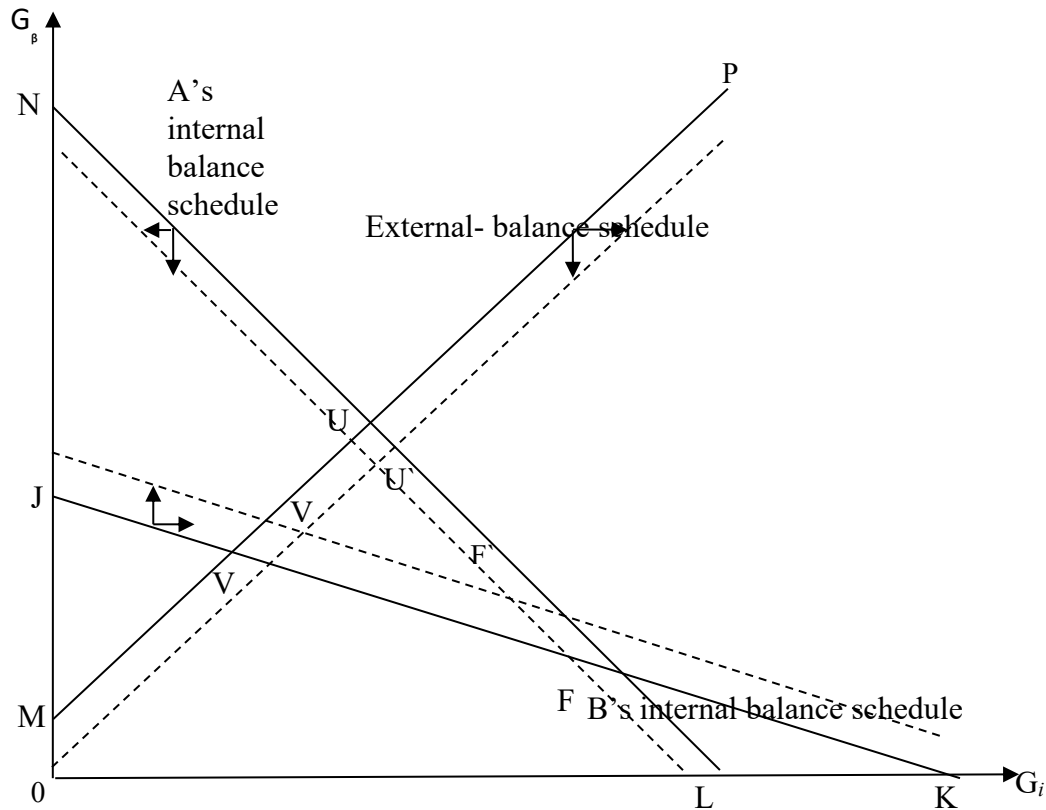


Figure 5. Dynamics toward Equilibrium (Internal Balances and External Balance: direction of possible movements noted by arrows)

3. Political Reality and Attitudes²

Beyond the underlying centripetal forces and regional harmony created by treaties and several summits, political reality and attitudes may induce a further think-over on the issue of common currency. Saudi Arabia and Qatar are not in good political terms, and they may put road blocks to further integration and the creation of CCGCC. It should be noted at this juncture that Qatar is in the process of quitting OPEC. Saudi Arabia (KSA) is the largest economy of the GCC, and its petroleum sector accounts for roughly 87 percent of Saudi budget revenues, 90 percent of export earnings, and 42 percent of GDP. Another 40 percent of GDP comes from the private sector. Saudi Arabia should recognize the importance of non-oil-based part of the economy.

Qatar's economy is one of the richest economies in the world based on GDP per capita, ranking between fifth and seventh on world rankings for 2015 and 2016 data compiled by the World Bank, United Nations, and IMF. Petroleum and natural gas are the cornerstones of Qatar's economy and account for more than 70 percent of total government revenue, more than 60 percent of gross domestic product, and roughly 85 percent of export earnings. Qatar has the world's third largest proven natural gas reserve and is the second largest exporter of natural gas. Kuwait is the second richest GCC country per capita (after Qatar). Its oil-based economy is small, and yet the World Bank rates Kuwait as the fourth richest country in the world per capita.

The economy of the United Arab Emirates (UAE) is the second largest in the Arab world. The Emirates have been successfully diversifying its economy. Although the UAE has the most diversified economy in the GCC, its economy remains extremely reliant on petroleum (oil). With the exception of Dubai, most of the UAE is dependent on oil revenues. Petroleum and natural gas continue to play a central role in the economy, especially in Abu Dhabi. More than 85 percent of the UAE's economy was based on the oil exports in 2009. While Abu Dhabi and other UAE emirates have remained relatively conservative in their approach to diversification, Dubai, which has far smaller oil reserves, was bolder in its diversification policy. In 2011, oil exports accounted for 77 percent of the UAE's state budget. UAE needs the CCGCC as the currency for its further growth and more international visibility.

Oman's is a smaller economy. Its petroleum fuels the economy, and revenues from petroleum products have enabled Oman's dramatic development over the past 30 years. The Omani Government owns 60% of PDO, and foreign interests own 40%. In 1976, Oman's oil production rose to 366,000 barrels (58,000 m³) per day but declined gradually to about 285,000 barrels (45,000 m³) per day in late 1980 due to the depletion of recoverable reserves. From 1981 to 1986, Oman compensated for declining oil prices, by increasing production levels to 600,000 b/d. With the collapse of oil prices in 1986, however, revenues dropped dramatically. Production was cut back temporarily in coordination with the Organization of Petroleum Exporting Countries (OPEC), and production levels again reached 600,000 b/d by mid-1987, which helped increase revenues. By mid-2000, production had climbed to more than 900,000 b/d where they remain. Natural gas reserves, which will increasingly provide the fuel for power generation and desalination, stand at 18 trillion ft³ (510 km³). Oman does not have the immense oil resources of some of its neighbors.

² This section was added because of the referee's suggestion, and the editor's advice. We think the inclusion of this section adds historical perspectives, and we are happy to listen to the reviewer's and the editor's comments on this issue.

Nevertheless, in recent years, it has found more oil than it has produced, and total proven reserves rose to more than 5 billion barrels (0.8 km³) by the mid-1990s.

Bahrain has an open high-income economy. The Bahraini currency is the second-highest-valued currency unit in the world although the country is the smallest one in the GCC. Since the late 20th century, Bahrain has heavily invested in the banking and tourism sectors. The country's capital is home to many large financial structures. Bahrain's finance industry is very successful. In 2008, Bahrain was named the world's fastest growing financial center by the City of London's *Global Financial Centres Index*. Its banking and financial services sector, particularly Islamic banking, have benefited from the regional boom driven by demand for oil. Petroleum production is Bahrain's most exported product, accounting for 60 percent of export receipts, 70 percent of government revenues, and 11 percent of GDP. Bahrain was recognized by the World Bank as a high-income economy.

Given all the facts cited, despite the tense political relation between Saudi Arabia and Qatar, and Crown Prince's current international tragedy and appearance on the world stage, it is easy to realize that CCGCC will be a common denominator or a multiplier (\tilde{n}) of USD (that is, $CCGCC = \tilde{n} \times USD$) where $0 < \tilde{n}$, and/or $\tilde{n} \geq 1$). CCGCC is the US dollar in disguise. If created, CCGCC will gain an international visibility, prestige, and pride to the GCC. Most importers of oil in the world market will use import invoices in terms of this common currency instead of U.S. dollar. The United States will not be demoted as the real vehicle currency, but still the real key currency.

4. Feasibility

The best reason for the common currency is that it eases or eliminates the transaction costs and conversion costs. *Euro* exists for close to two decades. U.S dollar as a common currency has been for a much longer period, and the British pound sterling even for a much longer than that. What has caused the *Euro* to be the common currency can be the same reason why GCC can have its own common currency. Meade (1951) argued against a common currency because of labor immobility, and Scitovsky (1958) contended for a common currency because he saw higher capital mobility induced by common currency. Both these economists did not realize the celebrated theory of factor price equalization championed by Paul Samuelson when factors are immobile but goods produced by the factors of production are freely tradable.

One requirement for the successful existence for a common currency is a central bank like the European Central Bank, which consists of members from all six GCC nations. As a result, conflict may linger over time, but it is possible with mutual gains and understanding, the GCC common currency will have a debut and success just like the case of the *Euro*.

5. Concluding Remarks

GCC is already a currency zone, where the dollar is effective currency with the exception of the Kuwaiti dinar, which is loosely in flexible exchange with the U.S. dollar. For political and practical reason, GCC common currency unit should be calculated based on the USD, should be normalized and chosen in such a way that each currency in the GCC be a fraction of the common currency and those fractions should add up to 100 percent. The central bank of the currency zone must adjust to Kuwait's flexibility as French franc and Dutch mark were adjusted to Euro. A good deal of work is needed to create the function and viable common currency. Common currency has a direct bearing on external balance, which will affect the money supply, and the internal balance of each country in the monetary zone of GCC. To bring internal balance, the government spending needs to be adjusted too. The central bank of the monetary zone needs to have harmonious relations with government treasury department of the constituent members of the common currency area. Figure 5 should spell out loudly what these member countries' treasury departments must do to make the external balances and internal balances move to equilibrium with centripetal forces based on their domestic control. Therefore, in conclusion, this paper recommends that the GCC common currency will be a better choice.

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