

# Economic diversification and intra-GCC merchandise trade

## An empirical analysis during 1995-2015

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Intra-GCC  
merchandise  
trade

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### Abstract

**Purpose** – The purpose of this paper is to analyze merchandise trade patterns among the GCC states with the backdrop of economic diversification within these economies.

**Design/methodology/approach** – This empirical research quantitatively analyses patterns of merchandise trade among the GCC states during 1995-2015 with specific focus on concentration, diversification and similarity of (export and import) trade indices as well as diversification within GCC economies.

**Findings** – The paper concludes that while Bahrain merchandise export structure shows dissimilarity when compared with other GCC states during 1995 and 2015, its imports appear to be very similar with those of the rest. The other five GCC states show more similarity among themselves in both merchandise exports and imports than that of Bahrain. Only UAE has shown an increase in both concentration and diversification indices though the increased numbers are still lower than those of the other GCC states and low in absolute terms.

**Originality/value** – The GCC has embarked on economic diversification; however, there is relatively less trade within the GCC as compared with other regional trading blocks. The paper considers trade within the GCC to explore the degree of similarity, diversification and concentration of traded products of each country. Further study should analyze the impact of diversification on intra-GCC trade. The results of this paper will be of value to GCC policymakers for providing a clear rationale for boosting trade and diversification with the long-term goal of a single currency economic union.

**Keywords** Concentration index, GCC, Bahrain, Diversification, International trade, Similarity index

**Paper type** Research paper

### Sustainable intra-GCC trade – too little to analyze or are we missing something?

Gulf Cooperation Council (GCC) was set up in 1981 among Bahrain, Oman, Qatar, Saudi Arabia, United Arab Emirates and Kuwait for strengthening cooperation and economic development in the region. The GCC has made strides toward economic consolidation by forming a customs union and a common market. The long-term vision is to create an Economic and Monetary Union (EMU) with a single currency. Progress toward the EMU has been slow and the recent oil price plunge has led to concerns regarding sustainable growth of member countries due to their significant dependence on oil and lack of diversification (Ganguli, 2016). The GCC economies, though similar, do not meet all the convergence criteria which were met by the EU accession countries during the 1990s prior to joining the EMU. Hence the GCC economies are not considered to be ready for a sustainable single currency zone without further diversification and integration (Ganguli, 2016).

Since 2001, GCC economies have formed a common market and forged a customs union. Dr Khalid Shams Abdulqader (2015) mentioned that “Perhaps the GCC’s greatest achievement to date has been its success in invigorating trade among its member states, via the customs union and the joint market. Merely getting this far was sure to have a positive impact on mutual trade. [...] almost \$100 billion in trade took place between member states in 2013. This is seven times greater than it was in 2000, before the launch of the customs union. Despite this dramatic growth, however, mutual trade still represents a mere 7.1 percent of the aggregate foreign trade conducted by the six member states.” By contrast, in 2013 just over 62 percent of the total value of goods (intra-EU and extra-EU trade combined) exported from EU Member States were directed to other Member States



(Eurostat Database, 2016). One of the reasons for slow trade is the lack of good transportation network among the GCC states. Some of the GCC states like Bahrain, UAE and Qatar have become important aviation hubs which have helped in integrating the region through air transport. The role of the private sector has remained weak and government sector has loomed large with heavy expenditure and high employment levels.

Diversification in the GCC: each GCC country has launched its unique diversification strategy to overcome the hurdles imposed by fluctuations in oil prices under heavy dependence on oil. Bahrain 2030 economic vision aims to provide a robust and vibrant private sector with employment of Bahrainis who will be able to access proper healthcare, education and a sound and secure environment. Its national development strategy aims at developing a sound business environment aimed at doubling the income of Bahrainis through a competitive economy boosted by a growing private sector. Bahrain aims to build a knowledge-based economy.

Kuwait would like to diversify into trade and finance led by a competitive private sector. It aims at a strong legal system. Moreover, the government targets a sound fiscal system for a strong private sector growth. The six pillars of reforms include private sector reforms, labor market reforms, institutional and fiscal reforms among others. Attracting foreign investment is another goal for the government along with improving business climate, diversification and PPPs.

Oman identified sectors such as logistics, manufacturing, fisheries and mining for further development as part of an aggressive strategy for diversification. The ninth development plan of Oman aims to reduce the oil dependence through SME sector growth, providing training and education for absorbing more Omanis in private sector by reducing expatriate employment and creating PPPs.

Qatar's diversification strategy is built on improvement in education, culture, responsible use of natural gas, sports, finance and transportation among others. Fiscal restructuring is also on the way along with efforts for improving the health and education system, improved participation of Qataris in the labor force, environmental development among others.

Saudi Arabia follows similar diversification strategies including higher participation of Saudi nationals in the labor force, diversification of the national economy and increased privatization as the main goals. The National Transformation Program (NTP) aims to increase the share of the private sector from 40 to 65 percent by 2020 as well as increase the contribution of the SME sector from 20 to 35 percent. PPP schemes are envisaged for increased private sector participation, and fiscal restructuring has been implemented for combating higher budget deficits due to low oil prices.

UAE has been the most diversified among all the GCC states and aims to become a knowledge-based economy with sustainable development goals for environmental protection and management.

### **Literature review**

Ravi (2013) pointed out that the intra-GCC trade is at a very modest level and integrated GCC has not achieved a significant GCC trade level. Moreover the trade is heavily influenced by oil prices. Boughanmi (2008) suggested that though intra-GCC trade is small, yet it is not insignificant compared to the predictions of the gravity trade model that was used in his paper. Askari *et al.* (2003) pointed that the lack of diversification and complementarity lead to low intra-GCC trade. Gani (2011) discussed that the lack of business environment has led to low trade within GCC. He used various business environment indicators which showed significant impact on trade in GCC and calls for major reforms in such areas for boosting trade within the region. Hossain and Naser (2008) discussed the improvement in trade in GCC since the implementation of the customs union which was also followed by higher levels of FDI, joint ventures and technology diffusion in the region.

Abdmoulah (2011) suggests that intra-GCC trade can be enhanced using diversification of exports strategy away from oil and opening markets for GCC exports through ratification of more regional trade agreements. Facilitation of further trade through opening of more transport and communication networks within the region and free movement of labor, capital and resources within the same should be enhanced. Bhattacharya and Holde (2010) conclude that delay in customs clearance and the lack of infrastructure like transport facilities explain why trade in the MENA is low compared to the predictions of the gravity trade model. Dennis (2006) shows that GCC trade with the EU will lead to higher benefits than the integration of the GCC itself. Mundell (1961), in his OCA analysis, concludes that countries benefit using single currency in a region due to microeconomic gains arising from easier transactions owing to price transparency, reduced exchange rate risks, higher trade and investment due to loss of risks, higher capital and labor mobility for ease of doing business.

This paper addresses diversification efforts in the GCC and studies the nature of intra-GCC trade within the backdrop of the economic diversification strategy of the GCC states.

### **Achievements of diversification efforts in the GCC**

Callen *et al.* (2014) mentioned “Growth in GCC non-oil output averaged 6.8 percent during 2000-2013, and the share of the non-oil sector in total real GDP rose by 12 to 70 percent, driven mainly by Saudi Arabia and the United Arab Emirates.” Most of the growth in non-oil output has been linked to the growth in oil prices after 2000. Seven million jobs have been created in the GCC during 2000-2010 and 88 percent of the private sector jobs were offered to expatriates, while nationals filled 70 percent of the public sector jobs. Though there has been non-oil exports growth in goods, the growth has not been uniform across the GCC states. Most of the growth in non-oil manufacturing exports growth has originated from Saudi Arabia, Dubai and Oman. In its true sense of diversification Dubai has fared well among the GCC states through strengthening of sectors such as aluminum (DUBAL, now part of Emirates Global Aluminum), transportation (Emirates Airlines and two large airports), trade (Jebel Ali Port), finance (Dubai International Financial Center), and tourism (more than 500 hotels) (Callen *et al.*, 2014).

Outside the Middle East GCC has entered into discussions with India, EU and others to sign free trade agreements. Three of the GCC states have signed Free Trade Agreement with the USA and a GCC-Singapore Free Trade Agreement has been ratified in 2013. Export promotion and diversification strategies are being focused on via establishment of the Export Development Authority in Saudi Arabia and an Export Development Center in Bahrain.

As part of its diversification initiatives in the GCC, Bahrain has attracted offshore financial institutions to create a financial hub. Bahrain’s financial sector contributes 17.2 percent toward its GDP ([www.cbb.gov.bh/page-p-financial\\_sector\\_fact\\_sheet.htm](http://www.cbb.gov.bh/page-p-financial_sector_fact_sheet.htm)). Training and development and possibilities of career progression have positive impact on Bahrainization rates in the financial sector of Bahrain (Ganguli and Matar, 2016). Medical tourism represents a particularly rich opportunity for Bahrain to further diversify its tourism strategy; allow its travel and hotel sectors to prosper; intensify competition for higher quality medical services; and allow hotels and hospitals to optimize their performance (Ebrahim and Ganguli, 2016). UAE and Qatar have developed airlines and logistics; Saudi Arabia is developing industrial clusters around oil and its technology; and Kuwait is focusing on the oil industry and Qatar on natural gas and energy-related sectors.

### **Data collection**

Data for the empirical analysis have been collected from secondary data sources such as the United Nations Conference on Trade and Development Statistics (UNCTADstat) database

for years between 1995 and 2015 for the concentration index and diversification index for merchandise exports and imports for the GCC countries. Similarity index of trade between each of the GCC states and the rest of GCC has been collected from secondary data sources, namely, UNCTADstat database during 1995-2013. The indices have been prepared by UNCTAD and are publicly available databases for researches worldwide.

## Variables

Three variables used for analysis in this paper are diversification index for export and import during 1995-2015, concentration index for import and export for GCC countries during 1995-2015 and similarity index for GCC countries' exports and imports during 1995-2013 – all sourced from the UNCTADstat database. A brief explanation of the variables as they are calculated is provided for the interpretation of the data analyzed for analysis of intra-GCC trade during 1995-2015. No new variable or index has been prepared for the purpose of this research:

- (1) Concentration index or Hirschman ( $H$ ) index is calculated using the shares of all three-digit products in a country's exports:

$$H_j = \text{sqrt} \left[ \sum (x_i / X_t)^2 \right]$$

where  $x_i$  is country  $j$ 's exports of product  $i$  (at the three-digit classification) and  $X_t$  is country  $j$ 's total exports. The index has been normalized to account for the number of actual three-digit products that could be exported (Source: [http://wits.worldbank.org/wits/wits/witshelp/Content/Utilities/e1.trade\\_indicators.htm](http://wits.worldbank.org/wits/wits/witshelp/Content/Utilities/e1.trade_indicators.htm)).

The value of the concentration index varies between 0 and 1. Higher value indicates less diversified and more concentrated export or import items. Lower value of the concentration index implies less concentrated or more diversified export or import items. This also provides less risks for the countries in terms of price fluctuations of import and export items (UNCTADstat).

- (2) The export diversification index (DX) for a country is defined as:

$$DX_j = (\sum |h_{ij} - h_i|) / 2$$

where  $h_{ij}$  is the share of commodity  $i$  in the total exports of country  $j$  and  $h_i$  is the share of the commodity in world exports. DX takes values between 0 and 1. Values closer to 1 indicates greater divergence from world pattern of trade. (UNCTADstat) (Source: [http://wits.worldbank.org/wits/wits/witshelp/Content/Utilities/e1.trade\\_indicators.htm](http://wits.worldbank.org/wits/wits/witshelp/Content/Utilities/e1.trade_indicators.htm)).

- (3) "The index of similarity signals whether the structure of exports or imports by product of a given country or group of countries differs from that of its counterpart country or group of countries. The index is calculated at the three-digit level of the Standard Industrial Trade Classification Revision 3 and ranges from 0 to 1. Value closer to 1 reveals the greater similarity of the trade structure between two countries or two groups of countries" (UNCTADstat). The indicator is computed as:

$$S_{jk} = 1 - \frac{1}{2} \sum_i |h_{ij} - h_{ik}|$$

where  $S_{jk}$  is the indicator of similarity in merchandise trade structures  $j$  and  $k$ ,  $h_{ij}$  is the share in total merchandise exports or imports of product  $i$  of country or country group  $j$ , and  $h_{ik}$  is the share in total merchandise exports or imports of product  $i$  in country or country group  $k$  (Source: <http://unctadstat.unctad.org/wds/TableViewer/summary.aspx>).

The paper explores the nature of movement of the variables namely concentration index, diversification index during 1995-2015 and similarity index during 1995-2013 to conclude about the dynamics of the intra-GCC trade composition for each of the GCC countries against each other and against the rest of the GCC.

## Methodology

The paper considers the trends in the movements of the variables namely concentration and diversification indices of exports and imports of the GCC states during 1995-2015 and the similarity indices of trade between each of the GCC states with the rest of the GCC during 1995-2013 to throw light on the trends of intra-GCC merchandise trade. The paper uses graphs and tables for analyzing the trends in the movement of the variables. The paper does not explain the cause and effect relationship between economic diversification of the GCC economies and the concentration, diversification, similarity indices of trade in the GCC states. The objective of the paper has been to explore the possibility of diversification of trade within the GCC given that the economies have taken steps toward economic diversification. The possibility of the cause and effect relationship between economic diversification and diversification of trade can be explored through future research, should it be established that there exists such an intra-GCC diversification of trade during 1995-2015. If there does not exist such diversification of trade within the GCC then it will not be beneficial to explore the impact of diversification of GCC economies on intra-GCC trade.

## International trade and the GCC states

The literature has mentioned that GCC states have little or no trade between themselves and there has been little improvement in the volume of trade during the aftermath of the integration in the GCC with efforts such as free trade agreements, common market and customs union. This paper studies the nature of intra-GCC merchandise trade to identify trends, if any, in changes in the composition of the trade items during 1995-2015. Table I shows the concentration and diversification indices of the merchandise export items of the GCC states for the years 1995 and 2015, respectively. Concentration index shows that the country's export and import goods are concentrated on a few products or are well diversified across the basket of tradable goods against its trading partner or group of partners.

Table I shows merchandise export concentration and diversification indices of the GCC countries during 1995 and 2015.

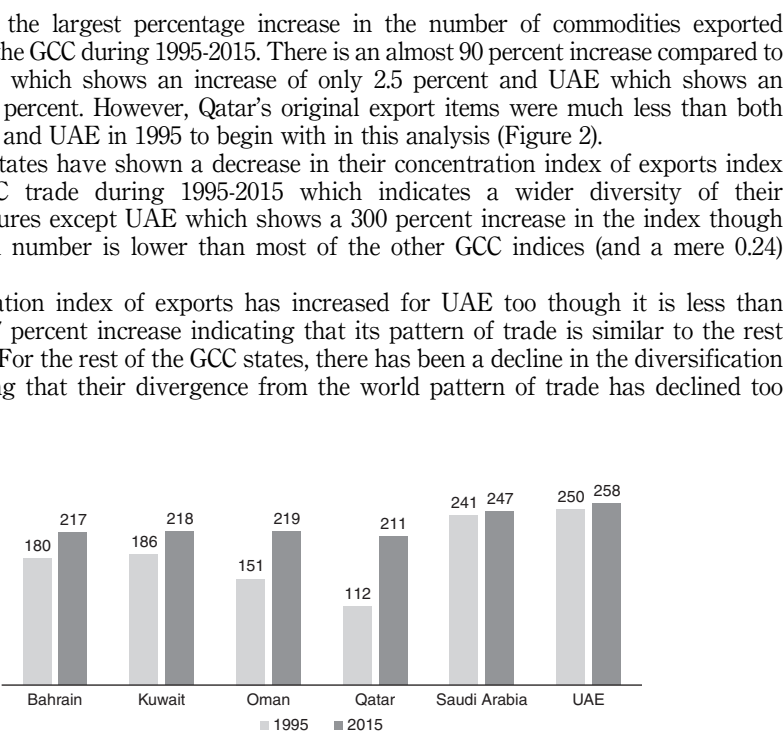
Figure 1 shows merchandise export concentration index and diversification index for each of the GCC countries namely Bahrain, Kuwait, Qatar, Oman, UAE and Saudi Arabia during the years 1995 and 2015 to show the movement of the indices over time.

Economy	Items	1995		Items	2015	
		Concentration index	Diversification index		Concentration index	Diversification index
Bahrain	180	0.40	0.76	217	0.31	0.67
Kuwait	186	0.61	0.84	218	0.60	0.79
Oman	151	0.75	0.76	219	0.45	0.72
Qatar	112	0.63	0.83	211	0.51	0.80
Saudi Arabia	241	0.68	0.83	247	0.53	0.76
UAE	250	0.06	0.35	258	0.24	0.48

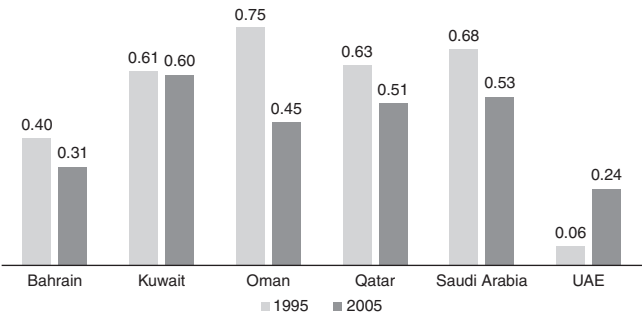
Source: UNCTADSTATS

**Table I.**  
Merchandise export  
concentration and  
diversification  
indices of the GCC  
states at the three  
digit SITC level

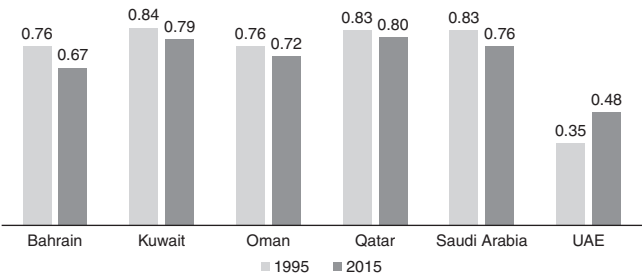
**Figure 1.**  
GCC states' number of  
commodities exported  
to the rest of the GCC



**Figure 2.**  
GCC states' concentration index in  
merchandise exports  
during 1995-2015 to  
the rest of the GCC  
during 1995-2015



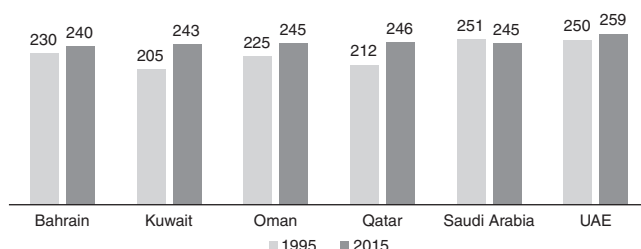
**Figure 3.**  
GCC states' diversification index  
in merchandise  
exports during  
1995-2015 to the  
rest of the GCC



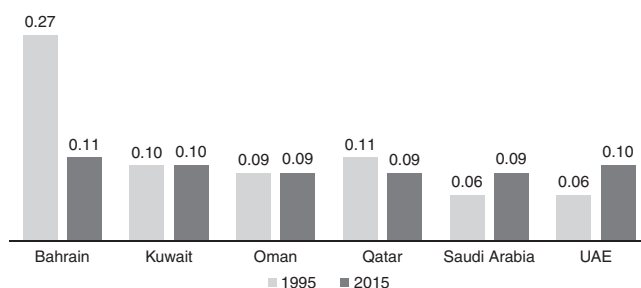
The number of commodities imported from other GCC states has increased the most for Kuwait (19 percent) followed by Qatar (16 percent). Saudi Arabia is the only country whose imports from the rest of the GCC have declined (by 2.40 percent). Thus overall there has been an increase in imports of commodities between the GCC states from one another during 1995-2015 which indicates higher intra-GCC merchandise trade in 2015 compared to 1995 (Figure 5).

Concentration index of merchandise imports has decreased the most for Bahrain (by 60 percent) but has increased the most for UAE. The index is still at a low of 0.10 after the 67 percent increase during 1995-2015. Kuwait and Oman have shown no change in their concentration index of merchandise imports while Saudi Arabia has a 50 percent increase. Further research may analyze the nature of the decline in Bahrain's concentration index (Figure 6).

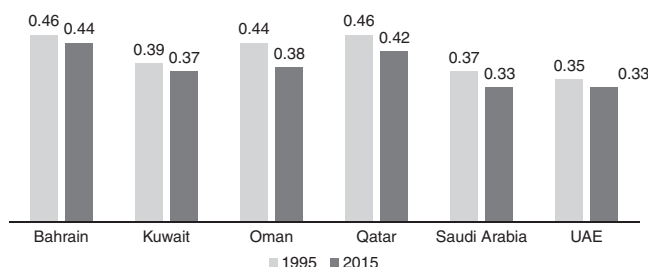
Diversification index for merchandise imports has shown a decline for all GCC states during 1995-2013 indicating lesser divergence from the rest of the world in terms of import structures which is a redeeming feature for the GCC states.



**Figure 4.**  
GCC states' number of  
commodities imported  
from the rest of the  
GCC during 1995-2015



**Figure 5.**  
GCC states'  
concentration index in  
merchandise imports  
during 1995-2015 to  
the rest of the GCC

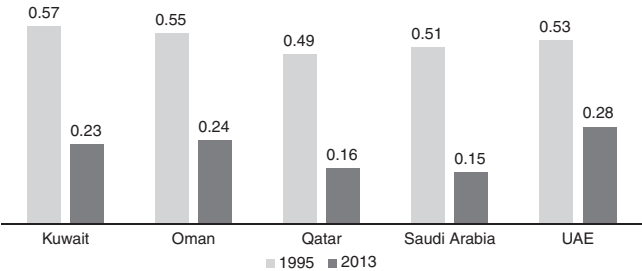


**Figure 6.**  
GCC states'  
diversification index  
in merchandise  
imports during  
1995-2015 from the  
rest of the GCC

There has been marginal improvement in the export concentration indices for merchandise products between 1995 and 2015 with all countries having reduced these values. This indicates that the exports of the GCC economies are less concentrated on item/s, though by a small margin. The diversification index which shows values closer to 1 for all the GCC states in 1995 (which should be due to high concentration of hydrocarbon-related exports in their share of total exports to the rest of the world) indicates a decrease in 2015 values from 1995 values which implies lesser divergence from the world patterns of exports though marginal. The question remains if the narrowing of the diversification index with the rest of the world is due to lower oil prices and slow global growth. Both the indices point to similar patterns of more diversity or lesser concentration of item/s. The only exception in the above trend of the values is the reversal of the export concentration and diversification indices for UAE from a lower to marginally higher levels yet remaining significantly less than the other GCC counterparts or lower in absolute terms. The relatively less diversified nature of UAE trade with the rest of the world is evident from the values despite their marginal increase from 1995 to 2013. Cherif and Hasanov (2014) mention that compared to the rest of the GCC, UAE has increased its non-oil exports substantially. Future research may consider exploring the nature of the diversity of UAE's merchandise export composition during 1995-2015 to evaluate the impact of the factors after identifying them. Further, the impact of economic diversification on trade diversification of UAE within GCC can be explored.

The GCC economies exhibit very low concentration and similarly low diversification indices for merchandise imports indicating that the imports are widely diversified and also similar to world patterns in 1995 and 2015, respectively. This is natural since most of the GCC countries have to import all essential commodities. The number of import items has increased for the GCC economies over the years but the import concentration index has declined or remained steady for all the GCC states – which is clearly a redeeming feature. This index has increased only for UAE and Saudi Arabia. The diversification index has declined for all and may very well be related to diversification efforts of the GCC economies. The only exception is again UAE where though the concentration and diversification indices have both increased, yet these are still lower than those of most of the other GCC states.

In Figure 7, there has been a decline in Bahrain's similarity index during 1995-2015 between Bahrain's merchandise exports and each of the GCC states. Bahrain's similarity index in merchandise exports has declined the most with Saudi Arabia (70 percent) followed by Qatar (67 percent) and Kuwait (60 percent). The similarity index covers all the items of exports. The source of this dissimilarity between Bahrain's exports and the rest of the GCC is unique to Bahrain among other GCC trade partners. This indicates diversification of exports from Bahrain, however further analysis of this finding is limited by the scope of the data used in this research.



**Figure 7.**  
Bahrain's similarity  
index in merchandise  
exports during  
1995-2013 with each of  
the other GCC states

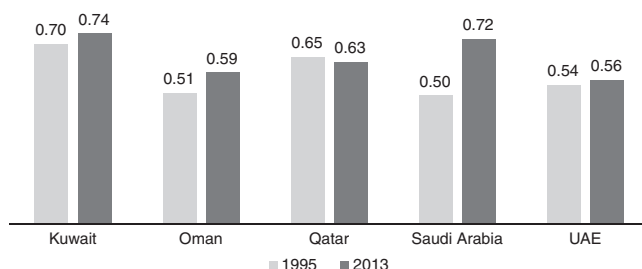


On the other hand, Figure 8 shows that Bahrain's similarity index of merchandise imports with the rest of the GCC has increased against all GCC states except with Qatar (which shows a very minor reduction of 3 percent). The highest similarity indices are observed between Bahrain and Kuwait; Bahrain and Saudi Arabia.

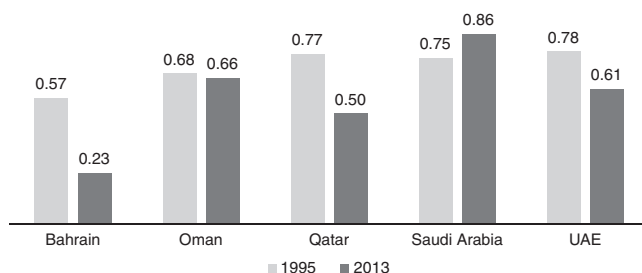
Figure 9 shows Kuwait has the least similarity index in export composition with Bahrain among the rest of the GCC in 2013 compared with 1995. Except between Kuwait and Saudi Arabia, similarity index has declined between Kuwait and all GCC states. So the export composition is less similar between Kuwait and each of the GCC states in 2013 than in 1995 though the percentage decline in the indices for Kuwait against others is less than Bahrain's case as seen in Figure 10.

Kuwait's imports have continued to remain similar with the rest of the GCC between 1995 and 2013 with very minor changes. The index has declined marginally with Oman (5.88 percent) and UAE (10.45 percent) and increased with the rest of the GCC marginally.

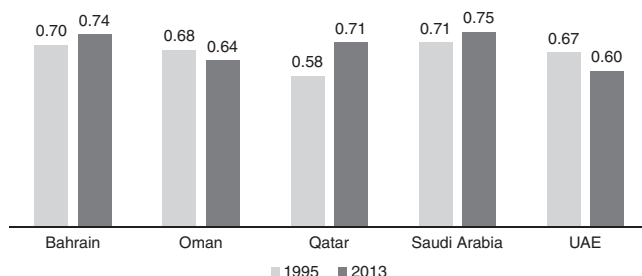
Oman shows the same trend as Bahrain in its decline of similarity index of exports and exhibits the most decline in the index with respect to Bahrain (56 percent) in Figure 11; however, it shows no pattern in terms of similarity of imports index with the rest of the GCC



**Figure 8.**  
Bahrain's similarity  
index in merchandise  
imports during  
1995-2013 with each of  
the other GCC states

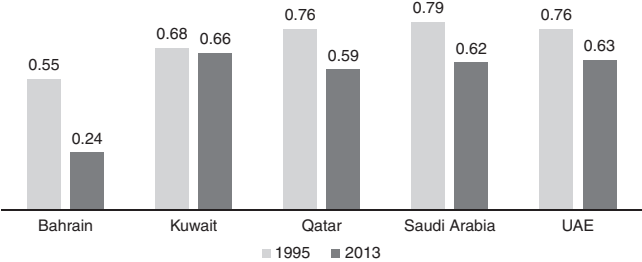


**Figure 9.**  
Kuwait's similarity  
index in merchandise  
exports during  
1995-2013 with each of  
the other GCC states

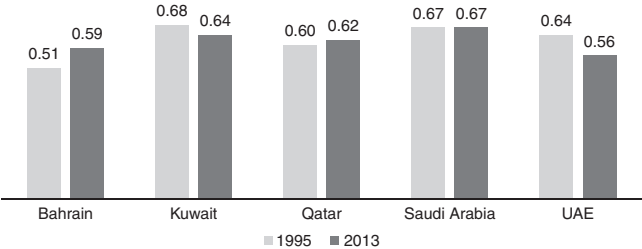


**Figure 10.**  
Kuwait's similarity  
index in merchandise  
imports during  
1995-2013 with each of  
the other GCC states

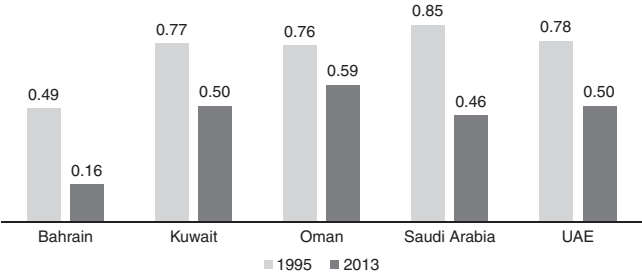
**Figure 11.**  
Oman's similarity  
index in merchandise  
exports during  
1995-2013 with each of  
the other GCC states



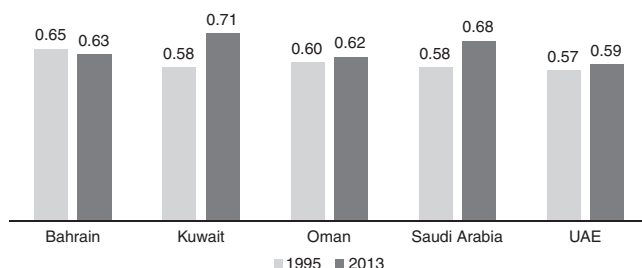
**Figure 12.**  
Oman's similarity  
index in merchandise  
imports during  
1995-2013 with each of  
the other GCC states



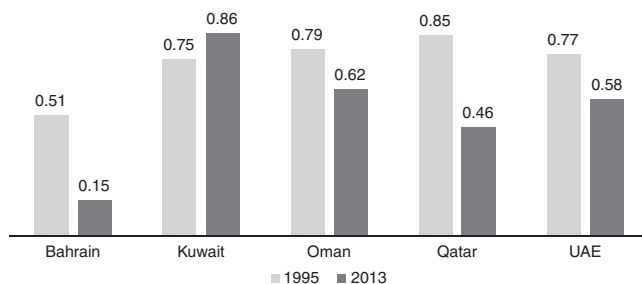
**Figure 13.**  
Qatar's similarity  
index in merchandise  
exports during  
1995-2013 with each of  
the other GCC states



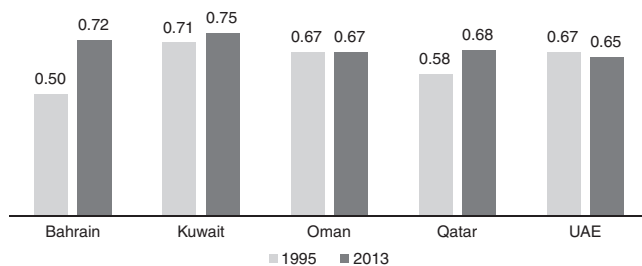
From Figure 17, UAE's similarity index with all GCC countries has decreased (largest percent decrease is with Bahrain by 47 percent) in merchandise exports during 1995 and 2013 except with Kuwait where it has increased (marginally by 5 percent) during this period.



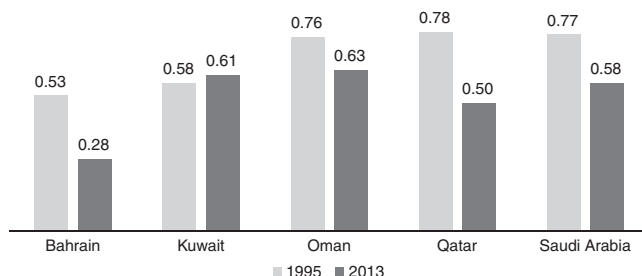
**Figure 14.**  
Qatar's similarity index in merchandise imports during 1995-2013 with each of the other GCC states



**Figure 15.**  
Saudi Arabia's similarity index in merchandise exports during 1995-2013 with each of the other GCC states



**Figure 16.**  
Saudi Arabia's similarity index in merchandise imports during 1995-2013 with each of the other GCC states



**Figure 17.**  
UAE's similarity index in merchandise exports during 1995-2013 with each of the other GCC states

On the other hand, in Figure 18, UAE's similarity index in merchandise exports has increased for some of the GCC countries and have decreased for some of the GCC countries showing no particular pattern between 1995 and 2013.

Similarity of Trade between the GCC states: similarity index as initially provided by Grubel-Lloyd (1975) shows the degree to which two economies trade similar products. Higher values of the index ( $> 0.5$ ) show high similarities of trade between countries and low values indicate lower similarity. Table II and Figures 7 and 8 show the similarity index between Bahrain and each of the GCC states in 1995 and 2013. Table II and Figure 7 show that exports between Bahrain and each of the GCC states were very similar in nature in 1995. However, the same is not true between Bahrain and the rest of the GCC in 2013. Bahrain's exports show marked dissimilarity from those of the other GCC states. This could be a reflection of Bahrain's diversification efforts launched earlier than most GCC states which is beyond the scope of this research. However, it indicates diversity of export structure and lower concentration in one or few export items between 1995 and 2013. Table II also shows Bahrain's similarity index in terms of imports with the rest of the GCC. It reveals that Bahrain's diversification efforts have not been observed in self-sufficiency in merchandise imports as these are very similar in nature to the imports of the rest of the GCC states. These similarity indices have either remained the same or have increased marginally in 2013 from 1995 values. Hence this leads to higher risk for the economy arising from price fluctuations of imports.

Kuwait's exports and imports with rest of the GCC are very similar both in 1995 and 2013. This indicates dependence on oil for exports and less diversification due to import requirements remaining similar to all GCC countries. The same trend is noticed among all GCC states except Bahrain as mentioned in Table II and Figure 7.

Conclusion

Economic diversification trends have been observed in the GCC for some years already, however its impact has not been considered on intra-GCC trade in the literature.

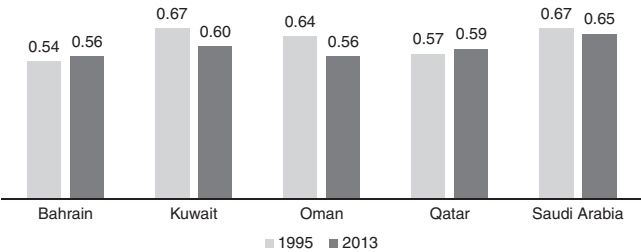


Figure 18.  
UAE's similarity  
index in merchandise  
imports during  
1995-2013 with each of  
the other GCC states

Table II.  
Bahrain's similarity  
index with GCC  
countries

	Exports		Imports	
	1995	2013	1995	2013
Bahrain	1.00	1.00	1.00	1.00
Kuwait	0.57	0.23	0.70	0.74
Oman	0.55	0.24	0.51	0.59
Qatar	0.49	0.16	0.65	0.63
Saudi Arabia	0.51	0.15	0.50	0.72
United Arab Emirates	0.53	0.28	0.54	0.56

Source: UNCTADSTATS

The present paper has studied diversification efforts in the GCC in recent times and has examined GCC economies from trade concentration and trade diversification for the years 1995 and 2013 and has used similarity index for the intra-GCC trade during 1995-2013. Literature mentions that the GCC economies exhibit low intra-GCC trade and have identified various reasons like poor infrastructure, lack of transportation, inadequate business environment, lack of diversification and trade complementarity for low levels of intra-GCC trade (Tables III-VIII).

The paper examines concentration, diversification and similarity indices of trade for the GCC countries and concludes that GCC states have exhibited minor improvement in the export concentration indices for merchandise products between 1995 and 2015 for intra-GCC trade. The only exception to the above trend is the reversal of the export concentration and diversification indices for UAE from a lower to marginally higher levels during 1995-2013 though remaining significantly less than the other GCC counterparts and also at low levels in absolute terms. The low values of all indices despite the marginal

**Table III.**  
Merchandise import  
product concentration  
and diversification  
indices of the GCC  
states during 1995  
and 2015

Economy	Items	1995		2015	
		Concentration index	Diversification index	Concentration index	Diversification index
Bahrain	230	0.27	0.46	240	0.11
Kuwait	205	0.10	0.39	243	0.10
Oman	225	0.09	0.44	245	0.09
Qatar	212	0.11	0.46	246	0.09
Saudi Arabia	251	0.06	0.37	245	0.09
UAE	250	0.06	0.35	259	0.10

Source: UNCTADSTATS

**Table IV.**  
Kuwait's similarity  
index with GCC  
countries

	Kuwait's similarity index			
	Exports		Imports	
	1995	2013	1995	2013
Bahrain	0.57	0.23	0.70	0.74
Kuwait	1.00	1.00	1.00	1.00
Oman	0.68	0.66	0.68	0.64
Qatar	0.77	0.50	0.58	0.71
Saudi Arabia	0.75	0.86	0.71	0.75
United Arab Emirates	0.78	0.61	0.67	0.60

Source: UNCTADSTATS

**Table V.**  
Oman's similarity  
index with GCC  
countries

	Oman's similarity index			
	Exports		Imports	
	1995	2013	1995	2013
Bahrain	0.55	0.24	0.51	0.59
Kuwait	0.68	0.66	0.68	0.64
Oman	1.00	1.00	1.00	1.00
Qatar	0.76	0.59	0.60	0.62
Saudi Arabia	0.79	0.62	0.67	0.67
United Arab Emirates	0.76	0.63	0.64	0.56

Source: UNCTADSTATS

increase in the indices during 1995-2013 could be due to diversification of the UAE economy and is beyond the scope of this research. This is an important result and given the economic diversification of the UAE away from oil and oil related sectors, a future direction of study should consider the impact of economic diversification on trade patterns between UAE and the rest of the GCC. Past literature has not considered the movement of the concentration, diversification and similarity indices for the analysis of intra-GCC trade. This is the first study which has used variables such as the concentration index and diversification index as well as similarity index from the UNCTADstat database to conclude about the trends in the intra-GCC trade during 1995-2015 given the economic diversification efforts within the GCC.

Bahrain's export structure shows marked dissimilarity from those of the other GCC countries after examination of the similarity index of merchandise exports. This is possibly a reflection of Bahrain's diversification efforts launched earlier than most GCC states.

**Table VI.**  
Qatar's similarity  
index with  
GCC countries

	Exports		Qatar's similarity index		Imports	
	1995	2013	1995	2013	1995	2013
Bahrain	0.49	0.16	0.65	0.63		
Kuwait	0.77	0.50	0.58	0.71		
Oman	0.76	0.59	0.60	0.62		
Qatar	1.00	1.00	1.00	1.00		
Saudi Arabia	0.85	0.46	0.58	0.68		
United Arab Emirates	0.78	0.50	0.57	0.59		

**Source:** UNCTADSTATS

**Table VII.**  
Saudi Arabia's  
similarity index  
with GCC countries

	Exports		Saudi Arabia's similarity index		Imports	
	1995	2013	1995	2013	1995	2013
Bahrain	0.51	0.15	0.50	0.72		
Kuwait	0.75	0.86	0.71	0.75		
Oman	0.79	0.62	0.67	0.67		
Qatar	0.85	0.46	0.58	0.68		
Saudi Arabia	1.00	1.00	1.00	1.00		
United Arab Emirates	0.77	0.58	0.67	0.65		

**Source:** UNCTADSTATS

**Table VIII.**  
UAE's similarity  
index with  
GCC countries

	Exports		United Arab Emirates' similarity index		Imports	
	1995	2013	1995	2013	1995	2013
Bahrain	0.53	0.28	0.54	0.56		
Kuwait	0.58	0.61	0.67	0.60		
Oman	0.76	0.63	0.64	0.56		
Qatar	0.78	0.50	0.57	0.59		
Saudi Arabia	0.77	0.58	0.67	0.65		
United Arab Emirates	1.00	1.00	1.00	1.00		

**Source:** UNCTADSTATS

This may be explored further through future research. The rest of the GCC countries show high similarity indices in 1995 and 2013 both in imports and exports with minor exceptions. Bahrain is the only country to exhibit lower similarity index with the rest of the GCC states during 1995- 2013 though it exhibited very similar import structure with the same. This calls for further research to explore the composition of trade basket of Bahrain against the GCC countries to establish a relation, if any, between the impacts of economic diversification of Bahrain on its merchandise trade flows.

One of the caveats of the research is that the diversification of the GCC economies has been aimed at a number of service sectors. However, the trade data available from UNCTADstat cover merchandise exports and imports, and the various indices studied in this paper namely diversification, concentration and similarity indices are for merchandise exports and imports. For further analysis of the impact of diversification efforts of GCC on its intra-trade composition, data on trade in services need to be gathered and analyzed using appropriate quantitative methods.

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#### **Further reading**

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#### **About the author**

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