

# Analysis of Real GDP, Imports and Exports of Indian Ocean RIM Association Member Nations

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**Abstract:** The Indian Ocean woven together by transmission of trade, commands the control of majority of the world's cargo ships, one third of the worlds cargo traffic and two thirds of total world's oil shipments. The main aim of this paper is to analyse Real GDP, Imports and Exports of Indian Ocean RIM Association Member Nations. Time period of the study is from 1980 to 2019. Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) contributes 11.7 per cent share in world exports, in case of member nations highest share is of Singapore 2.1 per cent followed by India and UAE 1.7 per cent, Australia 1.5 per cent, Thailand and Malaysia 1.3 per cent. Indonesia, South Africa, Bangladesh, Oman, Iran, Islamic Republic of, Sri Lanka the share in world exports is less than 1 per cent.

**Keywords:** Indian Ocean RIM Association; Indian Ocean; Indian Ocean Rim Association for Regional Cooperation (IOR-ARC); Exports; Imports; Real GDP

**Introduction:** The world is witnessing the emergence of various economic groupings. The economies are undergoing with rapid changes and globalisation playing a major role. There is also a general consensus on the need to adopt market friendly, liberal and private sector dominant policies. In fact almost all the countries are moving towards free market philosophy. The Indian Ocean region has a rich history of trade and cultural linkages dating back to many centuries.

The Indian Ocean woven together by transmission of trade, commands the control of majority of the world's cargo ships, one third of the worlds cargo traffic and two thirds of total world's oil shipments. The Indian Ocean is one of the major links for international trade and sea transport. Indian Ocean RIM accounts for 2.7 billion population of the world, rich in cultural, languages, religions, traditions, arts ,cuisines and economic development with diversity. In spite of such diversity, member nations are bound together by the Indian Ocean.(iora.int)

The Indian Ocean Dialogue (IOD) is a programme of the Indian Ocean Rim Association (IORA), which was initiated in the 13th Council of Ministers meeting, in Perth, Australia. The first IOD was held in Kerala, India in 2014, and has been followed by: Perth, Australia in 2015 and Padang, Indonesia in 2016, respectively.

**Table 1.1 List of exporters for the selected product in 2019**

Exp orte rs	Valu e expo rted in 2019 (US D thou sand )	Tra de bala nce in 2019 (US D thou sand )	An nu al gr ow th in val ue bet we en 2015-2019 (%)	An nu al gr ow th in val ue bet we en 2018-2019 (%)	Sh ar e in wor ld ex po rts ( % )	Ave rag e dist anc e of imp orti ng cou ntri es (km )	Conc entra tion of impo rting count ries
Worl d	1871 0834 936	- 342 916 540	5	-3	10 0	470 8	0.04
India n Ocea n	2194 1399 27	- 288 021 09			11. 7		

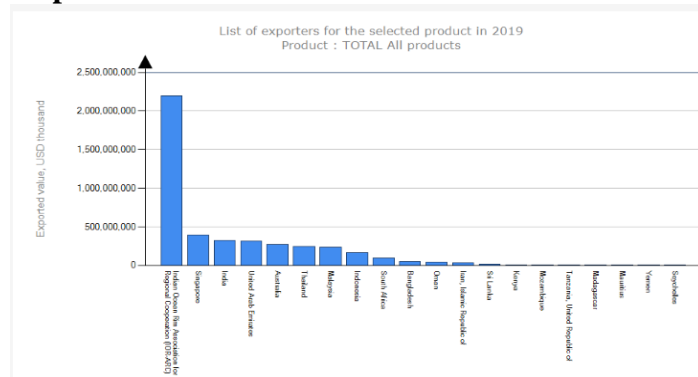
Rim Asso ciati on for Regi onal Coo perat ion (IOR - ARC ) Aggr egati on							
Sing apor e	3903 8623 4	313 779 78	5	-5	2.1	493 1	0.07
India	3227 8637 7	- 157 216 595	6	0	1.7	649 5	0.05
Unit ed Arab Emir ates	3159 4272 8	480 054 32	2	-2	1.7	336 7	0.1
Aust ralia	2725 7960 8	583 059 03	11	7	1.5	890 3	0.16
Thail and	2453 8046 5	524 126 9	5	-2	1.3	570 3	0.06
Mala ysia	2381 6112 5	331 728 11	6	-4	1.3	511 0	0.07
Indo nesia	1674 9699 1	- 323 038 1	4	-7	0.9	620 9	0.07
Sout h Afric	9041 9473	220 329 4	4	-5	0.5	787 7	0.04

a							
Bang lades h	4720 1153	- 970 286 2	7	5	0.3	805 0	0.07
Oma n	4074 1997	975 465 5	11	-3	0.2	523 2	0.25
Iran, Isla mic Repu blic of	2941 3249	- 511 407 5	-1	-60	0.2	468 1	0.25
Sri Lank a	1180 5441	- 613 018 4	4	-1	0.1	888 7	0.09
Ken ya	5836 027	- 113 843 52	0	-4	0	497 0	0.05
Moz ambi que	4722 313	- 291 642 7	13	-8	0	666 2	0.09
Tanz ania, Unit ed Repu blic of	4428 498	- 699 223 9	-2	2	0	555 9	0.08
Mad agas car	2564 400	- 133 248 7	9	-15	0	979 5	0.1
Mau ritius	1873 604	- 372 688 4	-6	-5	0	810 1	0.07
Yem en	1555 353	- 848 732 8	4	5	0	624 7	0.33

Seychelles	844891	-629637	19	-2	0	8539	0.19
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Source:trademap.org

Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) contributes 11.7 per cent share in world exports, in case of member nations highest share is of Singapore 2.1 per cent followed by India and UAE 1.7 per cent, Australia 1.5 per cent, Thailand and Malaysia 1.3 per cent. Indonesia, South Africa, Bangladesh, Oman, Iran, Islamic Republic of, Sri Lanka the share in world exports is less than 1 per cent. The concentration index of imports ranges from 0 to 1, with a larger value indicating a higher concentration in the import market. In case of Singapore, India, Thailand, Malaysia, Indonesia, South Africa, Bangladesh, Kenya and Mauritius the market concentration scores close to zero indicate that trade is diversified, i.e. equally distributed, across markets and scores close concentration on a few markets. Annual growth rate for almost all member nations between 2018-19 is negative except Australia, Bangladesh, Tanzania, and Yemen. **Fig 1.1 List of exporters for all products in 2019**



Source:trademap.org

**Table 1.2 List of Importers for the all products**

Importers	Value imported in 2019 (USD thousand and)	Trade balance in 2019 (USD thous)	Annual growth in val	Annual growth in val	Share in world imp	Average distance of supplyin	Concentration of supplying countries	Average tariff (estimated) appli
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		and)	ue bet ween 2015-2019 (%)	ue bet ween 2018-2019 (%)	(%)	g coun tries (km)		ed by the count ry (%)
World	19053751476	-342916540	5	-3	100	5156	0.04	
Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) Aggregation	2222942036	-28802109			11.7			
India	480002972	-157216595	8	-6	2.5	5833	0.05	14.1
Singapore	359008256	31377978	7	-3	1.9	6227	0.07	0
United Arab Emirates	267937296	48005432	-2	2	1.4	5716	0.05	4.7
Thailand	240139196	5241269	6	-4	1.3	5033	0.08	7.1
Australia	214273705	58305903	3	-6	1.1	10310	0.1	1.4
Malaysia	204988314	33172811	6	-6	1.1	5283	0.08	4.5
Indonesia	170727372	-3230381	7	-10	0.9	5773	0.1	5
South Africa	88216179	2203294	3	-6	0.5	9106	0.06	6.9
Bangladesh	56904015	-9702862	10	0	0.3	4222	0.13	12.8
Iran, Islamic Republic of	34527324	-5114075	-9	-33	0.2	4274	0.15	18.4
Oman	30987342	9754655	7	-4	0.2	3881	0.15	4.5

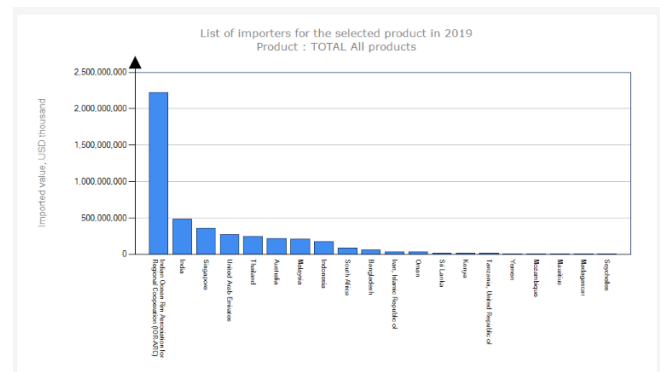
Sri Lanka	17935 625	- 6130 184	0	-10	0.1	4371	0.13	10.6
Kenya	17220 379	- 1138 4352	3	-1	0.1	6503	0.08	9.9
Tanzania, United Republic of	11420 737	- 6992 239	2	2	0.1	7028	0.15	10.1
Yemen	10042 681	- 8487 328	13	26	0.1	5519	0.12	6.9
Mozambique	76387 40	- 2916 427	2	12	0	6138	0.11	7.9
Mauritius	56004 88	- 3726 884	7	0	0	7394	0.07	0.6
Madagascar	38968 87	- 1332 487	11	-1	0	7367	0.08	7.5
Seychelles	14745 28	- 6296 37	11	-22	0	6356	0.09	1.4

Source:trademap.org

Table 1.2 represents the list of importers for the all products. Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) contributes 11.7 per cent share in world imports, in case of member nations highest share is of India 2.5 per cent, Singapore 1.9 per cent followed by UAE 1.4 per cent, Thailand 1.3 per cent, Australia 1.1 per cent, and Malaysia 1.1 per cent. In case of Indonesia, South Africa, Bangladesh, Oman, Iran, Sri Lanka, Kenya, Tanzania and Yemen the share in world exports is less than 1 per cent. The highest average tariff (estimated) applied by Iran is 18.4 per cent,

India is 14.1 per cent, Bangladesh 12.8 per cent, Sri Lanka is 10.6 per cent and Tanzania is 10.1 per cent.

**Fig 1.2 List of Importers for the all products**



Source:trademap.org

Fig 1.2 shows the List of Importers for the all products for the year 2019.

**Table 1.3 Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s imports from world and exports to World and Net Exports**

US Dollar thousand

Year	Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s imports from world	Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s exports to world	Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s Net Exports	Relative trade balance of Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s
2001	468979303	514992751	46013448	4.676
2002	506557876	537197681	30639805	2.936
2003	584775299	632714529	47939230	3.938
2004	754838901	780413544	25574643	1.666
2005	983813205	1046504328	62691123	3.088
2006	1050789343	1083969194	33179851	1.554

2007	1346330441	1400505315	54174874	1.972
2008	1727756223	1698542415	-29213808	-0.853
2009	1239143231	1228430088	-10713143	-0.434
2010	1589962355	1614234834	24272479	0.758
2011	1959577154	1998857129	39279975	0.992
2012	2315656512	2308920941	-6735571	-0.146
2013	2327087200	2326999911	-87289	-0.002

Table 1.3 shows Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s imports from world and exports to World, Net Exports and Relative trade balance. Relative trade balance takes values between -100 and +100 (per cent), IORA in the year 2001 to 2007, with positive values indicating that the IORA member nations are net exporters, whereas for the year 2008, 2009, 2012 to 2014, 2016, 2018, 2019 negative values indicate that the IORA member nations is a net importer.

**Fig 1.3 Relative trade balance of IORA from 2001 to 2019**

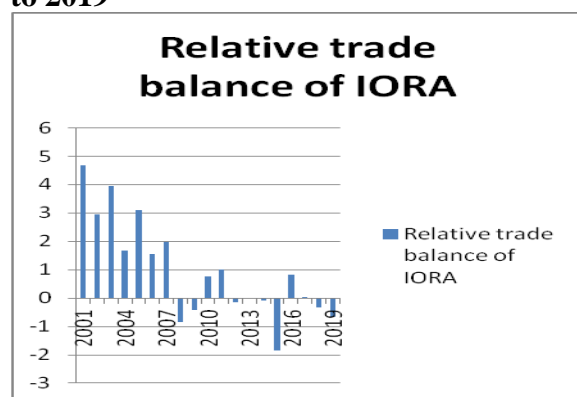


Fig 1.3 explains relative trade balance of Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)'s from year 2001 to 2019.

2014	2242214731	2238278410	-3936321	-0.088
2015	1972470387	1901028635	-71441752	-1.844
2016	1845908042	1876407146	30499104	0.819
2017	2123509660	2123827744	318084	0.007
2018	2318344008	2303204638	-15139370	-0.328
2019	2222942036	2194139927	-28802109	-0.652

Source: trademap.org

**Table 1.4 Real GDP Growth Rate during Pre and Post Formation of Indian Ocean Rim Association (Annual percent change)**

Year	Australia	Bangladesh	China	India	Indonesia	Kenya	Malaysia	Maldives	Mauritius	Mozambique	Myanmar	Senegal	Singapore	Sri Lanka	Tanzania	Thailand	UAE
1980	2.9	3.1	7.4	5.3	9.9	-1.8	5.6	0.8	7.4	1.8	-1.0	4.2	6.1	-2.3	1.6	5.8	3.6
1981	4.1	5.6	5.5	6.6	7.6	-8.1	-9.8	6.9	7.9	5.9	1.9	-7.1	1.8	5.4	5.3	0.5	8.9
1982	0.1	3.2	4.1	3.5	2.1	1.3	-1.9	5.9	7.5	-6.9	1.5	-1.9	1.1	-0.4	5.2	0.4	-2.2
1983	-0.5	6.1	3.3	7.2	4.8	1.6	0.9	6.3	4.4	-1.5	1.9	-8.6	-1.8	3.3	2.4	5.6	-2.2
1984	6.3	4.2	4.8	3.6	7.9	-1.6	1.8	7.8	1.4	-6.8	1.5	4.3	8.1	5.7	6.4	3.8	5.5
1985	5.3	2.5	3.5	5.3	-4.1	1.4	-1.1	6.1	1.6	1.1	1.1	-1.1	-1.1	-5.4	4.4	4.4	-

9	.	.	.	.	2	.	.	0	3	.		4	0	0	1	.	.	2
8	5	7	9	3	9	1	2	.	9	8	9	.	5	3	6	2	6	6
5					1													5
1	2	4	2	4	7	-	7	2	1	8	9	-	2	0	1	0	4	6
9	.	.	.	.	9				.	.	.	2	.	.	.	.	6	5
8	4		2	8	2				2	6	7	.	1	8	3	3	6	5
6												3						9
																		3
1	4	2	2	4	6	3	5	1	5	8	1	1	-	4	1	2	1	5
9	.	.	.	.	.	.	.	.	.	.	0	4	4	.	0	.	.	9
8	9	9	2		6		8	2	4	9	.	.	.	9	.	1	5	5
7											2	7		8				3
1	4	2	5	9	7	-	6	3	9	8	6	8	5	5	1	4	2	4
9	.	.	.	.	.	9	1	4	9	7	8	2	2	3	.	2	7	4
8	3	4	1	6		5									1	.	.	3
8															3			6
1	4	4	-	5	9	5	4	4	9	9	4	6	3	1	1	2	2	3
9	.	.	0	.	.	.	.	.	.	.	.	.	.	0	0	.	4	8
8	6	3	.	9	1	2	6	1	1	3	5	5		3	2	.	3	2
9			8															7
1	1	4	7	5	9	1	4	3	9	-	7	1	8	7	9	-	6	7
9	.	.	.	.	.	8	.	.	.	4	.	.	.	.	8	0	.	1
9	5	6	4	5		1	1				2		4	5	8	.	2	3
0																3		6
1	-	4	-	1	8	1	1	-	9	6	4	6	6	2	6	-	1	2
9	1	.	6	.	0	.	6	.	.	.	.	.	.	.	.	1	0	8
9		2	.	1	9	.	3	.	5	9	4	6		8	7	.	.	1
1			2		8		3											
1	2	4	7	5	6	2	-	1	8	6	6	-	8	7	6	-	-	0
9	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	2	3	.
9	6	8	4	5	5	1	.	2	9	5	5	.	5	2	6	.	.	6
2						1						1				1		1
1	3	4	2	4	8	1	-	2	9	5	5	1	6	7	1	1	7	1
9	.	.	.	.	.	0	.	.	.	.	.	0	.	.	.	.	.	.
9	9	3	5	8		3	.	1	9	4	1	.	1	3	.	2	5	2
3						1					6			5				7
1	4	4	-	6	7	-	2	0	9	7	4	6	3	-	1	3	8	1
9	.	.	4	.	.	1	.	.	.	.	.	.	.	2	1	.	.	8
9	9	5		7	5	.	5		2	5	1	5	8	.	2	.	.	6
4						5								4	1			4
1	2	4	5	7	8	1	4	1	9	7	4	2	4	0	7	3	6	3
9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8
9	8	8	6	6	2		3	7	8	4	3	3	8	5	2	1	1	6
5																		
1	4	5	-	7	7	6	4	2	1	9	5	1	2	1	7	4	1	4
9	.	.	0	.	.	.	.	.	0	.	.	.	.	.	.	.	.	5
9	2		.	5	8	2	1	2		1	6	.	9		5	3	.	3
6			5									2						
1	4	5	4	4	4	-	0	3	7	1	5	1	6	1	8	2	1	3
9	.	.	.	.	.	0	.	.	.	0	.	1	.	2	.	.	0	.
9	6	3	4	.	7	.	4	7	3	.	7	.	3	.	2	.	3	.
7						5				4					2	.	6	
1	4	5	0	6	-	1	3	3	-	9	6	9	2	2	-	0	-	3
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1 9 9 9	4 .5	5 .4	2 .7	8 .5	0 .8	0 .3	2 .2	4 .7	6 .1	7 .2	2 .6	1 .7	0 .3	1 .9	5 .7	2 .4	2 .9	4 .8	4 .6	3 .8
2 0 0 0	3	5 6	- 1	4	5 9	6 .3	0 .5	4 .7	8 .8	4 .2	8 .2	1 .2	6 .5	4 .3	9	4 2	8 4	4 9	4 5	1 2 3
A v e r a g e	3 .3	4 .4	2 .6	5 .6	5 .6	1 .1	3 .2	1 .2	6 .7	8 .4	5 .0	3 .5	6 .7	3 .8	7 .6	1 .9	5 .2	3 .5	6 .2	3 .3
2 0 0 1	2 .6	4 .8	5 .4	4 .9	3 .6	0 .8	4	6	0 .5	3 .5	3 .2	1 .1	4 .5	- 2 3	- 1 1	2 .7	- 1 9	6	3 .4	1 .3
2 0 0 2	4 .1	4 .8	4 .6	3 .9	4 .5	1 0 3	0 .5	- 1 2 4	5 .4	6 .1	1 .6	9 .3	- 1 1	1 .2	3 .9	3 .7	3 .7	7 2	6 1	2 5
2 0 0 3	2 .8	5 .8	2	7 .9	4 .8	9 .2	2 .9	9 .8	5 .8	2 .4	6	6 .9	- 2 7	- 5 9	4 .5	2 .9	5 .9	6 .9	7 .2	8 .8
2 0 0 4	4 .1	6 .1	3 .1	7 .8	5	4	4 .6	5 .3	6 .8	6	4 .3	7 .9	1 .3	- 2 9	9 .8	4 .6	5 .4	7 .8	6 .3	9 .6
2 0 0 5	3	6 .3	5 .7	9 .3	5 .7	5 .1	5 .7	4 .8	5	- 1 3 1	1 .5	6 .6	2 .5	9	7 .4	5 .3	6 .2	7 .4	4 .2	4 .9
2 0 0 6	2 .7	6 .9	- 1 8	9 .3	5 .5	5 .3	5 .9	5 .4	5 .6	2 6 1	4 .5	9 .7	5 .4	9 .4	9	5 .6	7 .7	4 .7	5	9 .8
2 0 0 7	4 .4	6 .5	0	9 .8	6 .3	6 .7	6 .9	5 .7	6 .3	7 .7	5 .7	7 .7	4 .5	1 0 4	9	5 .4	6 .8	8 .5	5 .4	3 .2
2 0 0 8	2 .7	5	4	3 .9	7 .4	- 0 1	0 .2	6 .7	4 .8	9 .5	5 .4	7 .3	8 .2	- 2 1	1 .9	3 .2	6	5 .6	1 .7	3 .2
2 0	1 .5	5 .5	3 .5	8 .5	4	0	3 .5	- 4	- 1	- 7	3 .5	6 .5	6 .5	- 1	0 .5	- 1	3 .5	5 .0	- 5	- 5

0	9	3	2	5	7		3		.	5	2	3	3	1	.	1	.	5	5	4	.	7	.	2
2	2	6	3	1	6	5	8	0	7	7	4	6	2	5	1	3	8	6	7	1	.	.	6	
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1																								
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2						7																		
2	2	6	4	6	5	-	5	2	4	7	3	7	5	6	4	2	3	6	2	5	.	.	.	
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3																								
2	2	6	2	7	5	3	5	3	6	7	3	7	1	4	3	1	5	6	1	4	.	.	.	
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1	6	3	1	4	2	4	3		.	3	7	4	4	5	9	8		7		3	.	.	.	
4																								
2	2	6	1	8	4	-	5	3	5	2	3	6	4	4	3	1	5	6	3	5	.	.	.	
0	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	3	8	3	9	.	.	7	1		9	6	7	7	9		2		2	1	1	.	.	.	
5						6																		
2	2	7	3	8	5	1	5	4	4	6	3	3	4	4	3	0	4	6	3	3	.	.	.	
0	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	8	2	5	3		5	9		4	3	8	8	9	6	2	4	5	9	4	1	.	.	.	
6						5																		
2	2	7	4	7	5	3	4	3	5	6	3	3	0	4	4	1	3	6	4	0	.	.	.	
0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	5	6	2		1	7	9	9	7	8	8	7	3	4	3	4	6	8	1	5	.	.	.	
7																								
2	2	8	3	6	5	-	6	4	4	6	3	3	1	3	3	0	3	7	4	1	.	.	.	
0	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	7		6	1	2	.	3	6	7	9	8	4	8	8	4	8	3		2	7	.	.	.	
8						4																		
2	1	7	1	4	5	-	5	4	4	5	3	2	0	3	0	0	2	6	2	1	.	.	.	
0	.	.	.	.	.	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	8	9	9	2		6	.	8	3	7	5	2	5	9	7	2	3	3	4	3	.	.	.	
9						6																		
2	-	2	-	1	0	-	1	0	-	-	-	2	-	-	-	-	-	2	-	-	.	.	.	
0	6		1	.	.	6	.	.	1	8	6	.	2	1	3	5	0		6	3	.	.	.	
2	.	.	.	9	5		.	4	.	1	.	2	.	0	0	.	.	.	7	.	.	.	.	
0	7		2						7	.	8		.	8	5	8	5		7	5	.	.	.	
2	6	9	3	7	8	3	6	5	9	1	5	4	3	8	3	4	4	4	6	3	.	.	.	
0	.	.	.	.	.	.	.	.	.	3	.	7					.	.	1	3	.	.	.	
2	1	5	1	4	2	1	1			2	9	.					2	6	.	3	.	.	.	
1																								
A	2	6	2	6	5	2	4	3	4	6	3	6	2	2	4	2	4	6	3	3	.	.	.	
v	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
e	5	3	9	9	3	1	8	0	7	2	4	5	9	9	4	2	7	3	5	4	.	.	.	

[illegible]

Table 1.4 describes the real average growth rate of GDP during pre formation of IORA for Australia is 3.3 per cent, Bangladesh is 4.4 , Comoros is 2.6, India and Indonesia is 5.6 , Iran is 1.1, Kenya is 3.2, Madagascar is 1.2, Malaysia is 6.7, Maldives is 8.4, Mauritius is 5.0, Mozambique is 3.5, Oman is 6.7, Seychelles is 3.8, Singapore is 7.6, South Africa is 1.9, Sri Lanka is 5.2, Tanzania is 6.2, Thailand is 3.3, UAE is 5.7. The real average growth rate of GDP during post formation of IORA for Australia is 2.5 per cent, Bangladesh is 6.3 per cent , Comoros is 2.9 per cent, India is 6.9 per cent, Indonesia is 5.3 per cent, Iran is 2.1 per cent, Kenya is 4.8 per cent, Madagascar is 3.0, Malaysia is 4.7, Maldives is 6.2 per cent, Mauritius is 3.4 per cent, Mozambique is 6.5 per cent, Oman and Seychelles is 2.9 per cent, Singapore is 4.4 per cent, South Africa is 1.9 per cent, Sri Lanka is 2.2 per cent, Tanzania is 6.3 per cent, Thailand is 3.5 per cent, UAE is 5.7 per cent.

**Fig 1.4 Average of Real GDP Growth Rate during Pre and Post Formation of Indian Ocean Rim Association**

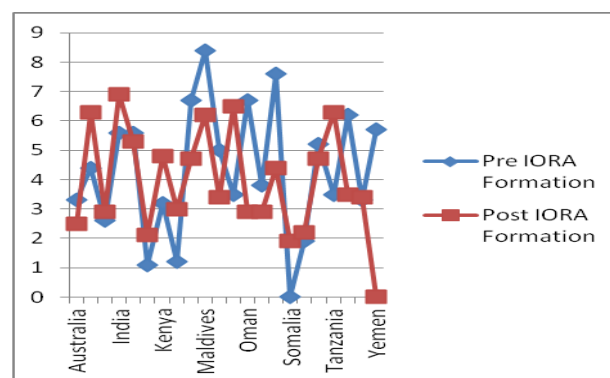


Fig 1.4 represents the average of real GDP growth rate of member nations during Pre and Post Formation of Indian Ocean Rim Association.



**Table 1.4 T test on Growth of Real GDP (Annual percent change) during pre and post formation of IORA**

Paired Samples Test									
IORA Nations	Paired Differences					t	Df	Sig.	Hypothesis
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference					
				Lower Bound	Upper Bound				
India (Pre IORA) - India (Post IORA)	-1.300	2.900	.643	-2.250	2.200	0.050	There is no significant difference in Real GDP growth after the formation of IORA		
Australia (Pre IORA) - Australia (Post IORA)	.800	3.400	.750	-.700	2.700	.020	There is no significant difference in Real GDP growth after the formation of IORA		
Bangladesh (Pre IORA) - Bangladesh (Post IORA)	-1.100	1.500	.330	-2.600	1.500	.070	There is a significant difference in Real GDP growth after the formation of IORA		

- Bangladesh (Post IORA)	3	8		5	3	9			GDP growth after the formation of IORA
Comoros (Pre IORA)	.3	3.6	.786	-1.96	1.	.4	0	6	There is no significant difference in Real GDP growth after the formation of IORA
- Comoros (Post IORA)	8.5	1.6		96	1	2	8	8	
Indonesia (Pre IORA)	.3	4.8	1.04	-1.80	2.	3	0	7	There is no significant difference in Real GDP growth after the formation of IORA
- Indonesia (Post IORA)	9.5	8.2	5	77	6	3	0	0	
Iran (Pre IORA)	-.9	1.0	.36	-5.88	3.	4	0	8	There is no significant difference in Real GDP growth after the formation of IORA
- Iran (Post IORA)	1.9	3.7	.488	1.01	6	7	0	8	
Kenya (Pre IORA)	-1.5	3.4	.747	-3.14	-	2	0	0	There is a significant difference in Real GDP growth after the formation of IORA
- Kenya (Post IORA)	8.5	4.0		43	2	1	6	6	



									formation of IORA
Madag ascar(P re IORA) - Madag ascar(P ost IORA)	- 1. 8 7 6 1 9	4. 3 7 7 5	.9 55 26 88 3	- 3. 86 6 3 4	. 1 1 6 4	- 1 . 9 4	2 0 . 6 4	. 0 4	There is no significant difference in Real GDP growth after the formation of IORA
Malays ia(Pre IORA) - Malays ia(Post IORA)	1. 9 4 7 6 2	5. 0 5 8 9 1	1. 10 39 5 17	- .3 55 17 0 4 1	4 . 2 5 0 4 1	1 . 7 6 4	2 0 . 3	. 0 9 3	There is no significant difference in Real GDP growth after the formation of IORA
Maldiv es(Pre IORA) - Maldiv es(Post IORA)	2. 1 7 1 4 3	1 0. 8 2 7 1 5	2. 36 26 8 3	- 2. 75 70 3 8 9	7 . 0 9 9 8 9	. 9 1 9 9	2 0 . 9	. 3 6 9	There is no significant difference in Real GDP growth after the formation of IORA
Mauriti us(Pre IORA) - Mauriti us(Post IORA)	1. 5 3 3 3	4. 2 3 7 3	.9 24 75 66	- .3 95 66 2 3 2	3 . 4 6 2 3 2	1 . 6 5 8	2 0 . 3	. 1 1 3	There is no significant difference in Real GDP growth after the formation of IORA
Mozam	-	8.	1.	-	1	-	2	.	There is no

bique( Pre IORA) - Mozam bique( Post IORA)	2. 9 3 8 1 0	8 2 8 1 6	92 64 6	6. 95 66 3	. 0 8 0 4	1 . 5 2 5	0 . . . .	1 4 3	significant difference in Real GDP growth after the formation of IORA
Oman( Pre IORA) - Oman( Post IORA)	3. 8 1 9 0 5	6. 8 6 3 0 6	1. 49 76 4	.6 95 02 . 8	6 . 9 4 3 0	2 . 5 5 0	2 0 . 9	. 0 1 9	There is a significant difference in Real GDP growth after the formation of IORA
Seyche lles(Pre IORA) - Seyche lles(Po st IORA)	.9 9 0 4 8	5. 5 3 6 1 5	1. 20 80 9	- 1. 52 95 5 0 5 0	3 . 5 1 0 5 0	. 8 2 0 . .	2 0 . 2	. 4 2 2	There is no significant difference in Real GDP growth after the formation of IORA
Singap ore(Pre IORA) - Singap ore(Pos t IORA)	2. 9 5 2 3 8	5. 7 5 6 5 3	1. 25 61 8	.3 32 04 . 7 2	5 . 5 7 7 2	2 . 3 5 0	2 0 . 9	. 0 2 9	There is a significant difference in Real GDP growth after the formation of IORA
South Africa( Pre IORA)	- .3 0 4	3. 9 5 3	.8 62 62	- 2. 10 41	1 . 4 9	- . 3 5	2 0 . 8	. 7 2 8	There is no significant difference in Real

- South Africa( Post IORA)	7	0		6	4	3			GDP growth after the formation of IORA
Sri Lanka( Pre IORA)	.4	4.	.9	-	2	.	2	.	There is no significant difference in Real GDP growth after the formation of IORA
- Sri Lanka( Post IORA)	8	2	31	1.	.	5	0	6	
	5	6	11	45	4	2		0	
	7	6		65	2	2		8	
	1	8		5	7				
		8			9				
					8				
Tanzania(Pre IORA)	-	2.	.5	-	-	-	2	.	There is a significant difference in Real GDP growth after the formation of IORA
- Tanzania( Post IORA)	2.	4	44	3.	1	5	0	0	
	8	9	22	95	.	.		0	
	1	3		42	6	1		0	
	9	9		6	8	8			
	0	2			3	0			
	5				8	3			
Thailand(Pre IORA)	2.	5.	1.	.0	5	2	2	.	There is a significant difference in Real GDP growth after the formation of IORA
- Thailand( Post IORA)	6	8	27	25	.	.	0	0	
	8	4	51	79	3	1		4	
	5	3	5		4	0		8	
	7	4			5	6			
	1	8			6				
					4				
United Arab Emirates(Pre IORA)	-	9.	2.	-	4	-	2	.	There is no significant difference in Real GDP growth after the formation of IORA
- United Arab Emirates( Post IORA)	.1	7	13	4.	.	.	0	9	
	6	7	35	61	2	0		3	
	6	7	6	71	8	7		9	
	6	1		9	3	8			
	7	8			8				
					5				

Arab Emirates(Post IORA)									formation of IORA
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Source: Authors calculations

Table 1.4 represents t test on Real GDP growth (Annual percent change) during pre and post formation of IORA. The p value is more than .05 in case of all member nations except Kenya, Oman, Singapore Tanzania and Thailand, hence proved that there is no significant difference in growth of real GDP after the formation of IORA in case of member nations except Kenya, Oman, Singapore Tanzania and Thailand.

**Table 1.5 Growth Rate of Imports during pre and post formation of Indian Ocean RIM Association**

Y	A	B	C	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
e	a	u	a	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
a	s	n	o	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
r	t	g	r	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
a	a	a	o	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
i	l	e	s	.I	I	K	M	M	M	M	S	S	S	S	T	U	T
a	s	h		.I	I	K	M	M	M	M	S	S	S	S	T	U	T
1	2	3	0	5	5	2	2	-	3	3	6	-	3	1	3	4	1
9	3	6	.5	1	0	5	9	6	7	3	.9	9	6	6	1	2	9
8	.	.	3	.	.	.	.	.	.	.	8	9	.	.	.	.	.
0	0	4		3	4	8	5	4	3	3	.	9	.	4	1	7	0
1	1	3	1	3	2	2	-	-	7	7	-	0	3	-	1	4	1
9	6	.	2	.	2	0	8	9	.	.	8	.	2	5	5	7	3
8	.	7	.	7	.	.	.	.	2	0	.	1	.	.	.	.	.
1	3	3	3	5	0	1	1				3	1	4	0	1	3	2
1	-	-	0	-	2	-	-	-	7	4	-	4	1	4	2	-	-
9	0	8	.	4	7	1	1	2	.	1	1	7	.	.	4	1	1
8	.	.	8	.	.	8	5	3	5	.	7	4	.	9	1	7	9
2	1	9	1	0	.	.	.	.	.	0	.	5	.	.	.	.	0
1	-	-	5	-	-	5	-	-	6	3	-	-	-	-	2	-	-
9	1	1	.	4	3	3	1	7	.	1	4	2	7	1	0	9	1

8	9	1	1	.	.	.	8	.	8	.	3	.	0	.	.	4	.	.	2	9
3	.	.	9	1	2	.	3	.	7	8	.	1	.	1	5	.	7	3	.	.
1	1	3	2	8	-	-	1	-	5	-	6	-	1	-	1	-	2	2	1	-
9	8	0	4	.	1	1	0	5	.	6	.	1	0	0	.	7	.	.	1	1
8	.	.	.	4	5	6	.	9	.	5	5	.	8	0	9	6	1	6	7	.
4	8	5	3	.	.	2	3	.	3	.	1	.	3	4	.	.	.	.	4	2
1	2	-	-	4	-	-	9	-	-	1	-	1	1	-	7	-	-	-	-	2
9	.	1	1	.	2	2	2	.	1	0	2	2	4	3	8	.	3	1	1	5
8	1	1	4	5	6	4	.	8	2	.	1	.	.	.	6	0	.	1	.	.
5	.	.	.	.	.	2	.	6	2	.	7	4	3	.	.	2	.	6	4	.
1	3	1	2	-	4	-	1	-	-	2	2	-	6	-	1	1	0	-	-	9
9	.	.	.	3	.	9	2	1	1	1	9	8	2	.	3	5	3	.	0	1
8	1	6	0	.	5	.	2	1	5	.	3	2	.	0	.	9	.	7	9	0
6	.	.	3	.	6	3	.	8	8	1	.	8	.	5	.	.	.	.	.	.
1	1	6	4	8	2	-	7	-	1	8	4	1	-	7	2	-	2	1	4	1
9	2	.	0	.	0	9	.	2	7	0	8	8	2	.	7	5	0	0	1	2
8	.	6	.	2	.	7	6	.	.	.	4	8	.	3	.	0	.	.	.	0
7	9	.	1	.	3	0	.	6	3	0	0	2	.	7	.	9	8	5	5	9
1	2	1	0	1	4	-	1	4	3	1	2	1	2	3	3	-	2	9	5	1
9	3	2	.	4	.	1	4	7	0	1	7	4	0	9	4	1	2	.	6	7
8	.	.	6	.	6	.	.	.	.	.	.	.	.	.	.	6	.	9	.	1
8	6	0	.	5	2	4	2	2	1	3	6	8	9	7	.	9	.	1	9	.
1	2	2	-	7	2	5	9	-	3	2	2	9	2	3	1	-	-	-	2	1
9	2	0	1	.	2	6	.	2	6	5	.	.	.	.	3	2	1	3	7	7
8	.	.	8	6	.	.	4	.	.	.	8	8	5	5	.	9	.	.	.	.
9	8	0	.	5	9	5	0	2	1	.	.	.	.	.	2	.	7	3	0	5
1	-	-	2	1	3	3	2	7	3	2	2	8	1	1	2	7	0	2	2	1
9	4	0	1	4	1	7	.	5	0	2	2	.	8	3	2	.	.	2	8	1
9	.	.	.	.	.	.	2	.	.	.	.	7	.	.	.	9	3	.	.	.
0	9	9	7	8	4	4	5	2	0	4	.	8	5	6	.	.	7	3	9	9
1	-	-	1	-	1	3	-	-	2	1	-	2	1	-	8	-	2	1	1	2
9	0	5	2	1	9	7	1	3	5	7	3	.	9	7	.	3	.	3	3	2
9	.	.	.	3	.	2	3	.	.	.	.	4	.	.	9	4	2	.	.	.
1	5	7	0	.	5	4	.	.	3	3	8	1	7	.	.	.	7	6	7	3
1	5	9	1	1	5	-	-	2	8	1	4	-	1	1	8	-	6	1	8	2
9	.	.	7	5	.	7	4	.	.	7	.	4	8	0	.	9	.	2	.	6
9	1	4	.	.	0	.	9	7	.	2	.	.	.	.	8	.	3	.	3	.
2	.	.	8	4	.	4	9	.	4	.	9	0	6	.	9	.	8	.	7	1
1	4	7	-	-	3	-	-	4	1	1	5	1	9	2	1	-	-	1	1	3
9	.	.	1	3	.	1	3	.	4	.	.	1	.	4	8	9	3	5	3	2
9	2	0	3	.	7	7	.	5	.	1	6	.	1	.	.	.	.	.	.	.
3	.	.	6	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
1	1	1	-	1	1	-	1	-	3	1	1	6	-	-	2	-	1	2	1	7
9	7	5	1	7	2	3	7	4	0	5	2	.	4	1	0	1	9	0	8	.
9	.	.	1	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	5

4	7	2	.	8	9	.	8	4	6	9	5	.	8	.	5	.	3	1	2	.
1	1	4	1	2	2	0	4	2	3	2	2	-	8	1	2	-	2	8	3	-
9	5	1	8	9	7	.	3	1	0	0	.	3	.	2	1	0	6	.	0	1
9	.	.	.	.	.	8	.	.	.	.	4	0	5	.	.	.	.	6	.	.
5	0	3	6	3	1	.	8	4	4	9	.	.	7	3	1	.	1	0	2	6
1	6	1	5	9	5	1	-	-	0	1	1	7	7	6	5	-	-	4	2	7
9	.	.	.	.	.	7	1	4	.	2	5	.	.	2	.	1	0	.	.	1
9	9	8	4	3	6	.	.	.	9	.	.	8	8	.	5	0	.	5	2	9
6	.	.	.	.	2	9	0	.	6	8	.	.	6	.	.	3	.	.	.	5
1	0	4	4	9	1	-	1	-	0	1	-	-	9	-	0	4	4	7	-	3
9	.	.	.	.	9	1	1	5	.	5	4	-	9	-	1	.	.	.	1	2
9	6	1	5	2	.	2	.	8	.	6	7	6	.	8	0	8	0	8	3	.
7	.	.	.	5	.	8	.	1	.	.	.	.	.	1	.	.	.	.	1	3
1	-	1	5	3	-	0	-	4	-	1	-	6	1	1	-	1	-	1	-	8
9	1	.	.	3	.	3	0	2	.	4	.	3	2	2	6	8	.	3	1	.
9	.	2	8	8	1	9	.	1	2	.	3	.	9	.	0	3	1	1	7	8
8	7	.	.	2	.	.	.	.	3	.	.	.	0	9	.	9	.	.	.	4
1	7	1	5	9	-	-	-	5	1	1	8	4	-	1	6	-	-	-	1	3
9	.	0	.	.	5	1	1	.	2	3	.	4	1	3	.	4	.	.	7	4
9	8	.	5	2	.	1	1	3	.	.	4	.	7	.	0	.	.	.	.	7
9	.	1	.	6	.	.	.	2	.	6	.	2	.	0	.	0	6	.	2	.
A	7	8	6	8	9	4	3	3	1	1	8	-	8	9	1	7	8	7	1	9
v	.	.	.	.	.	.	.	.	2	7	.	1	.	.	0	9	.	.	2	.
e	7	1	0	9	8	3	8	4	.	.	0	.	2	8	.	.	4	7	.	2
r	.	.	.	.	.	.	.	.	6	3	.	.	.	.	5	0	.	.	.	9
a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
g	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
e	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	3	8	-	9	2	1	9	3	2	-	-	2	7	-	2	0	1	7	2	5
0	.	.	4	.	9	3	.	6	5	3	1	.	8	1	.	1	.	3	.	1
0	4	8	4	8	.	6	.	.	.	.	.	0	.	.	.	9	.	0	.	7
0	.	.	3	.	3	1	.	6	3	4	9	.	.	.	.	.	.	.	.	.
2	-	-	1	-	-	1	2	1	-	-	-	-	1	3	-	3	-	-	0	6
0	1	0	8	2	1	6	.	2	9	0	9	8	5	9	1	1	6	4	.	2
0	.	.	.	0	.	5	.	.	.	.	.	.	.	.	3	.	.	.	1	5
1	.	1	9	3	.	8	.	1	9	9	9	5	0	5	.	0	5	9	.	6
2	1	-	4	1	-	2	1	-	8	1	8	4	3	-	0	0	3	2	4	1
0	3	5	.	2	2	3	.	4	.	.	.	5	.	1	.	.	.	.	4	3
0	.	.	3	.	0	.	7	3	1	3	7	.	6	1	4	9	7	2	3	.
2	5	2	.	1	.	4	.	.	.	.	.	.	.	.	.	.	.	.	4	2
2	2	2	3	2	3	2	1	1	2	2	9	1	9	-	9	1	3	9	1	2
0	3	0	1	8	6	0	4	0	8	.	.	.	3	.	2	.	1	.	7	2
0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	0	3	9	4	1	3	8	.	.	.	.	.	.	.	.	.	.	.	.	9

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2	2	3	2	3	3	2	2	2	2	3	1	1	3	2	2	1	3	1	2	3	2
0	2	2	2	7	2	8	2	3	8	6	7	6	4	0	8	.	8	9	4	8	8
0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
4	3	5	3	5	3	9	2	2	5	3	2	1	9	5	1	.	6	5	5	4	4
2	1	2	1	3	3	2	3	4	8	1	1	1	-	3	2	1	1	1	2	1	1
0	4	.	4	9	7	5	5	.	.	6	3	8	0	5	2	.	5	0	5	7	3
0	.	1	.	.	.	.	.	0	6	.	.	.	.	.	.	1	.	.	.	.	.
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0	1	6	7	5	.	.	8	.	4	4	4	9	3	2	9	.	3	6	0	8	7
0	.	.	.	.	6	8	.	8	.	.	.	.	.	.	.	1	.	.	.	.	.
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2	1	1	2	2	5	1	2	4	1	1	7	6	4	1	1	1	1	1	8	3	2
0	9	5	0	7	.	0	2	0	2	8	.	6	3	0	.	8	0	.	2	5	.
0	.	.	.	.	6	.	.	.	.	4	3	.	.	.	1	.	.	2	.	.	.
7	0	1	2	9	.	4	9	4	1	3	.	4	7	2	.	1	1	.	4	7	.
2	2	3	2	4	4	2	2	5	7	2	1	3	4	2	2	1	1	2	2	3	3
0	1	0	5	2	4	7	3	6	.	6	9	1	3	8	1	.	2	3	6	3	2
0	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	1	.	.	.	.	.
8	3	2	3	0	0	6	3	9	.	6	5	4	5	3	5	.	3	5	8	6	7
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
0	1	8	1	2	2	1	7	1	2	3	1	6	2	2	2	.	2	2	2	1	1
0	7	.	.	0	4	1	.	7	0	0	9	.	2	7	3	1	8	8	4	5	0
9	.	2	8	.	.	9	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
0	.	0	0	2	6	.	8	8	4	8	.	1	0	1	.	1	0	8	3	2	.
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1	.	.	.	.	.	.	.	9	.	.	.	6	.	.	.	1	.	.	.	.	.
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2	.	.	.	.	.	2	4	.	4	.	6	0	.	.	.	.	7	.	3	.	.
2	-	9	-	-	-	0	2	4	1	0	1	2	2	-	1	-	-	-	1	7	.
0	7	.	4	3	2	7	.	8	.	1	.	6	2	.	1	.	0	5	0	3	.
1	.	9	.	.	.	4	.	8	.	5	.	.	.	2	.	1	.	.	.	.	7
3	1	.	9	9	6	0	.	7	.	5	.	2	1	.	8	.	7	9	4	0	.
2	-	4	-	-	-	7	1	1	1	1	4	-	-	4	-	1	-	9	-	1	-
0	2	.	8	1	4	.	2	.	5	.	8	1	.	1	.	3	.	8	.	2	.
1	.	3	.	.	.	8	.	7	4	.	5	.	4	2	.	1	.	3	.	2	.
4	0	.	0	4	5	.	5	.	0	.	1	.	.	6	.	8	.	4	7	.	2
2	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
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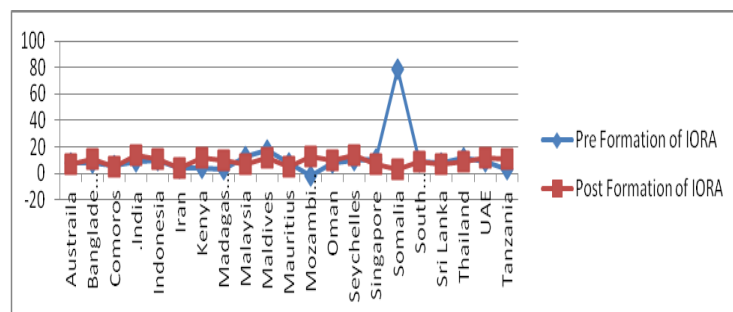
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0	5	.	1	7	5	1	1	4	4	2	3	3	2	.	1	.	1	.	3	5	2
1	.	5	5	.	.	6	2	.	.	.	.	7	0	0	6	.	2	.	.	.	7
6	6	.	2	.	9	0	.	7	4	.	1	2	.	5	3	.	5	.	3	6	.
2	1	1	-	2	1	-	1	-	1	1	1	1	1	2	1	1	1	9	1	-	-
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7	0	7	.	4	8	.	0	9	6	0	8	4	9	2	3	.	7	.	7	9	0
2	2	1	-	1	2	-	1	-	1	2	7	1	-	6	1	1	1	6	1	-	1
0	.	6	1	4	0	1	5	7	1	5	.	8	5	8	3	.	2	.	1	1	0
1	6	.	0	.	.	6	.	.	.	.	7	.	.	.	1	.	1	.	.	.	.
8	0	.	2	2	.	0	2	7	4	.	.	1	1	3	1	.	4	.	5	1	2
2	-	-	-	-	-	-	1	-	-	-	-	2	-	6	-	1	0	-	-	-	9
0	5	0	1	5	9	1	4	1	5	2	0	1	9	1	3	.	.	1	3	1	.
1	.	.	1	.	6	.	6	.	1	.	.	.	.	.	1	0	.	9	.	8	1
9	8	6	.	6	5	.	7	.	5	9	9	3	4	0	.	.	2	.	.	.	.
A	6	1	4	1	1	3	1	1	6	1	5	1	1	1	7	2	8	7	9	1	1
v	.	1	.	4	0	.	1	0	.	1	.	2	0	3	.	.	.	.	1	0	.
e	9	.	9	.	.	9	.	.	8	.	3	.	.	.	1	6	3	1	2	.	.
r	0	.	0	7	.	5	1	.	4	.	.	6	0	6	.	.	.	6	.	.	8
a																					
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e																					

Source: Authors calculations

Table 1.5 explains the growth of imports of members nations during pre formation of IORA in case of Australia is 7.7 per cent, Bangladesh is 8.1 per cent, Comoros is 6.0, India is 8.9 per cent, Indonesia is 9.8 per cent, Iran is 4.3 per cent, Kenya is 3.8 per cent, Madagascar is 3.4 per cent, Malaysia is 12.6 , Maldives is 17.3 per cent, Mauritius is 8.0 per cent, Mozambique is -1.8 per cent, Oman is 8.2 per cent, Seychelles is 9.8 per cent, Singapore is 10.5 per cent, Somalia is 79.0 per cent, South Africa is 8.4 per cent, Sri Lanka is 7.7 per cent, Thailand is 12.2 per cent, UAE is 9.2 per cent, Tanzania is 2.9 per cent. Growth of imports of members nations during post formation of IORA in case of Australia is 6.9 per cent, Bangladesh is 11.10 per cent, Comoros is 4.9 per cent, India is 14.0 per cent, Indonesia is 10.7 per cent , Iran is 3.9 per cent, Kenya is 11.5 per cent, Madagascar is 10.1 per cent, Malaysia is 6.8 per cent, Maldives is 11.4 per cent, Mauritius is 5.3 per cent, Mozambique is 12.6,

Oman is 10.0 per cent, Seychelles is 13.6 per cent, Singapore is 7.1 per cent, Somalia is 2.6 per cent, South Africa is 8.3 per cent, Sri Lanka is 7.1 per cent, Thailand is 9.2, UAE is 11.6, Tanzania is 10.8.

**Fig 1.5 Average of growth rate of imports of members' nations during pre and post formation of IORA**



**Table 1.6 t test on growth of imports during pre and post formation of IORA.**

		Paired Differences					t	df	Sig. (2-tailed)	Hypothesis
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference					
					Lower	Upper				
Pre	and Post	n	tion	n	r	r				
Pai	Pre									There is no significant difference in growth of imports after the formation of IORA
r	Australia – Post									
l	Australia									
		2.09500	14.58047	3.26029	-4.72887	8.91887	.643	19	.528	

Pai	Pre										There is no significant difference in growth of imports after the formation of IORA
r	Bangladesh – Post										
2	Bangladesh	.49000	13.05163	2.91843	-5.61835	6.59835	.168	19	.868		
Pai	Pre										There is no significant difference in growth of imports after the formation of IORA
r	Comoros – Post										
3	Comoros	-3.53000	32.42550	7.25056	-18.70560	11.64560	.487	19	.632		
Pai	Pre										There is no significant difference in growth of imports after the formation of IORA
r	India – Post										
4	India	-1.69000	14.36662	3.21247	-8.41379	5.03379	.526	19	.605		
Pai	Pre										There is no significant difference in growth of imports after the formation of IORA
r	Indonesia – Post										
5	Indonesia	-.24500	19.87295	4.44373	-9.54583	9.05583	.055	19	.957		

P ai r 6	Pre Iran –Post Iran	- .165 00	18.87 656	4.22 093	- 8.999 50	8.669 50	- .03 9	1 9	.96 9	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 7	Pre Kenya – Post Kenya	- 6.45 500	11.23 282	2.51 174	- 11.71 212	- 1.197 88	- 2.5 70	1 9	.01 9	There is a significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 8	Pre Madaga scar – Post Madaga scar	- 5.91 500	31.90 612	7.13 442	- 20.84 752	9.017 52	- .82 9	1 9	.41 7	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 9	Pre Malaysi a - Post Malaysi a	1.33 500	5.558 14	1.24 284	- 1.266 29	3.936 29	1.0 74	1 9	.29 6	There is no significa nt differenc e in growth of imports after the formatio n of IORA

P ai r 10	Pre Maldiv e – Post Maldiv e	- 1.67 000	25.14 221	5.62 197	- 13.43 692	10.09 692	- .29 7	1 9	.77 0	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 11	Pre Mauritiu s – Post Mauritiu s	- 5.23 500	10.46 761	2.34 063	- 10.13 399	- .3360 1	- 2.2 37	1 9	.03 8	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 12	Pre Mozam bique – Post Mozam bique	- 7.91 000	30.83 018	6.89 384	- 22.33 897	6.518 97	- 1.1 47	1 9	.26 5	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r 13	Pre Oman – Post Oman	2.45 500	20.53 168	4.59 102	- 7.154 12	12.06 412	.53 5	1 9	.59 9	There is no significa nt differenc e in growth of imports after the formatio n of IORA

P ai r l 4	Pre Seychell es – Post Seychell es	- 9.30 500	21.89 106	4.89 499	- 19.55 033	.9403 3	- 1.9 01	1 9	.07 3	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 5	Pre Singapo re –Post Singapo re	1.53 000	8.587 14	1.92 014	- 2.488 91	5.548 91	.79 7	1 9	.43 5	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 6	Pre Somalia -Post Somalia	7.70 150	15.85 767	3.54 588	.2798 8	15.12 312	2.1 72	1 9	.04 3	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 7	Pre South Africa - Post South Africa	2.42 500	29.07 715	6.50 185	- 11.18 353	16.03 353	.37 3	1 9	.71 3	There is no significa nt differenc e in growth of imports after the formatio n of IORA

P ai r l 8	Pre Sri Lanka - Post Sri Lanka	- .715 00	13.49 102	3.01 668	- 7.028 99	5.598 99	- .23 7	1 9	.81 5	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 9	Pre Thailan d – Post Thailan d	- .845 00	8.769 29	1.96 087	- 4.949 16	3.259 16	- .43 1	1 9	.67 1	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 20	Pre UAE – Post UAE	- .455 00	14.00 663	3.13 198	- 7.010 31	6.100 31	- .14 5	1 9	.88 6	There is no significa nt differenc e in growth of imports after the formatio n of IORA
P ai r l 21	Pre Tanzani a –Post Tanzani a	- 5.68 500	18.77 656	4.19 857	- 14.47 270	3.102 70	- 1.3 54	1 9	.19 2	There is no significa nt differenc e in growth of imports after the formatio n of IORA

Source: Authors calculations



**Table 1.7 Growth Rate of exports during pre and post formation of IORA Nations**

Test Pattern of Form A																			
Year	USA	BAN	Comoros	Indonesia	Iran	Kenya	Madagascar	Malaysia	Maldives	Mauritius	Mozambique	Myanmar	Senegal	Singapore	South Africa	Sri Lanka	Thailand	UAE	Tanzania
1980	17.6	15.2	-3.8	10.5	40.4	-13.9	11.8	16.8	69.6	13.9	-99.9	52.1	-3.8	36.1	18.6	39.2	82.8	51.5	2.8
1981	-2.1	4.2	4.8	-3.6	-4.5	-7.9	-21.0	-9.1	11.2	-23.6	0.5	34.9	-1.1	8.4	15.0	-18.7	8.1	2.7	11.1
1982	-0.6	-2.7	1.2	1.0	2.8	-1.4	-1.9	2.2	1.3	1.0	-18.5	-6.6	-1.2	-0.9	2.6	-15.1	-1.2	-2.0	-2.9
1983	-5.8	-5.9	-0.7	-2.8	4.9	-15.1	-4.5	17.2	36.0	-4.2	-4.4	23.9	3.3	4.9	-4.1	5.1	-8.3	-1.2	-17.2
1984	14.9	28.6	-3.6	35.3	-3.5	23.6	11.9	16.9	31.7	1.7	-27.3	-0.2	26.2	10.3	-5.0	-6.5	16.4	-3.3	-19.8
1985	-1.5	1.1	1.8	-1.4	2.4	-1.5	-1.0	1.1	3.5	1.4	-1.4	2.1	-1.1	-0.9	2.6	-1.4	-1.9	-1.7	-1.9

9 8 5	2 . 2	. 9 .	3 0 1	3 4 1	1 . 3	. 3 9	1 0 6	1 7 1	7 . 6	0 6 .	8 2 8	1 9 .	8 4 .	. 8 .	5 2 2	2 . 7	5 . 1	9 9 .	3 1 0	1 7 3	
1 9 8 6	- 0 . 2	- 1 0 8	2 3 3	2 7 4	- 2 0 6	- 4 6 3	2 5 3	1 4 3	- 1 0 6	6 . 5	5 3 6	2 . 6	- 5 3 4	- 3 4 5	- 1 . 4	4 . 5	1 2 . 5	- 8 . 8	2 4 7	- 1 1 8	4 6 6
1 9 8 7	1 7 . 9	2 1 . 3	- 4 2 4	2 0 . 3	1 5 . 7	6 6 . 2	- 1 9 . 9	8 . 2	3 1 . 2	2 5 . 4	3 2 . 8	2 5 . 8	2 1 . 2	2 7 . 5	7 . 8	1 5 . 4	1 4 . 6	3 2 . 0	1 4 . 4	- 1 9 . 9	
1 9 8 8	2 4 . 8	2 1 . 0	8 5 . 0	1 7 . 1	1 3 . 0	- 1 0 . 1	1 1 . 1	- 1 8 . 0	1 7 . 4	3 0 . 6	1 3 . 3	6 . 2	- 0 . 6	4 3 . 6	3 7 . 0	1 3 . 1	2 . 8	6 . 0	3 6 . 1	- 1 6 8	
1 9 8 9	1 1 . 7	1 . 1	- 1 5 . 1	1 9 . 9	1 3 . 8	2 2 . 1	- 1 0 . 8	1 5 . 8	1 8 . 3	1 1 . 1	- 1 9 . 3	1 . 3	6 4 . 3	7 . 6	1 3 . 6	- 3 2 . 6	1 . 5	4 . 7	2 5 . 9	2 6 . 3	3 2 . 4
1 9 9 0	7 . 1	2 8 . 1	- 1 . 5	1 3 . 2	1 5 . 9	4 7 . 6	8 . 4	- 0 . 6	1 7 . 6	1 9 . 1	2 1 . 3	2 0 . 0	3 5 . 4	6 6 . 9	1 8 . 1	5 . 6	6 . 4	2 3 . 8	1 5 . 0	3 3 . 8	- 9 . 2
1 9 9 1	5 . 3	1 . 0	3 8 . 9	- 1 . 4	1 5 . 1	- 3 . 3	7 . 4	- 4 . 6	1 6 . 6	0 . 9	- 0 . 1	2 8 . 6	- 1 . 5	- 1 . 1	1 . 8	- 4 . 2	- 1 . 2	3 . 9	2 3 . 2	3 . 8	3 . 2
1 9 9 2	2 . 3	2 4 . 2	- 1 . 2	1 0 . 8	1 2 . 0	6 . 5	2 0 . 9	- 8 . 9	1 8 . 7	- 2 . 1	9 . 6	- 1 . 2	1 3 . 9	- 2 . 5	7 . 6	- 8 . 5	0 . 7	2 3 . 6	1 4 . 2	1 . 3	2 0 . 5
1 9 9 3	- 0 . 3	8 . 6	- 1 . 5	9 . 8	1 . 3	- 9 . 0	2 . 6	- 6 . 4	1 5 . 6	- 1 . 2	- 5 . 3	- 3 . 0	7 . 0	1 . 7	1 6 . 5	- 8 . 3	3 . 9	1 5 . 8	1 3 . 3	3 4 . 3	9 . 3
1 9 9 4	1 . 3	1 6 . 8	- 4 . 2	1 6 . 0	8 . 8	7 . 5	1 5 . 5	5 2 . 6	2 4 . 9	3 8 . 2	3 . 7	1 8 . 9	3 . 2	1 . 7	3 0 . 8	- 8 . 9	4 . 5	1 2 . 7	2 . 4	- 1 9 . 0	1 5 . 3
1 9 9 5	1 . 9	1 . 3	0 . 4	2 2 . 4	1 3 . 5	- 5 . 1	1 9 . 0	- 7 . 6	2 5 . 6	3 . 6	1 4 . 2	7 . 0	9 . 4	2 . 2	1 . 1	1 0 . 9	1 8 . 4	2 4 . 7	3 . 1	3 1 . 8	

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1	1	3	5	8	9	2	9	2	6	1	1	2	2	1	5	-	7	4	7	-	1	1	
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1	4	1	0	5	1	-	-	-	0	1	-	2	3	-	0	2		1	3	4	-		
9	.	4	.	.	3	1	0	9	.	8	1	.	.	1	.	.	6	3	.	1	3		
9	3	.	0	7	.	7	.	4	5	.	2	.	9	8	0	9	.	.	0	.	.		
7	6			0	.	9	.			6	.		.	7		2	3	.	0	.	9		
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9	1	.	.	4	1	2	2	1	7	.	.	.	2	.	1	6	1	.	5	.	2		
9	1	4	3	.	0	8	.	3	4	0			.	8	5	.	0	.	.	7	1		
8	.	2		5	6	.	.	.					.	1	.	.				.	.		
1	0	2	0	6	1	6	-	5	1	-	-	1	3	1	4	-	1	-	7	1	-		
9	.	.	.	.	0	1	.	5	-	3	4	.	.	8	.	4	.	4	.	.	7		
9	3	3	0	6	7	.	2	8	.	4	.	.	.	.	3	4	.	3	5	.	9		
9					3	.	9	5	.	5	3	4	6	.	9	.	0						
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r	0	9	9	2	9	1	3	3	4	0	5	5	6	2	8	0	6	6	5	6	2		
a																							
g																							
e																							
2	1	2	7	1	2	3	-	4	1	1	1	3	5	3	2	1	1	1	1	1	2		
0	3	2	.	8	7	4	0	4	6	9	3	8	6	3	0	.	2	8	7	5	2		
0	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.	.	.			
0	9	2		8	6	8	8	3	1	1	5	4	4	1	2		3	3	9	1	2		
2	-	0	2	2	-	-	1	1	-	-	-	9	-	1	-	4	-	-	-	-	1		
0	0	.	1	.	1	9	2	2	1	0	9	3	2	2	1	7	2	1	5	2	7		
0	.	8	.	3	2	.	.	.	0	.	.	.	.	.	1	.	.	1	.	.			
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2	2	-	1	1	2	-	8	-	6	1	1	1	0	5	2	4	-	4	7	1			
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0	6	.	.	.	5	.	9	7	0	.	.	.	9	1	8	3	.	.	9	7	.		
2		4	2	1			.	5		3	7	2					5	4			1		
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0	0	5	3	0	0	3	1	.	6	.	.	4	.	7	.	6	2	1	1	9	5		
0																							

0	.	0	.	.	.	7	.	7	0	.	.	5	.	7	.	.	.	.	.	.	.	.	.
4	8	7	.	2	.	4	5	3	.	1	3	.	8	.	4	3	8	5	5	.	.	.	.
2	2	9	-	3	2	3	2	-	1	-	7	1	4	1	1	8	1	1	1	2	1	.	.
0	2	.	3	0	2	4	0	-	1	2	.	6	0	6	5	.	2	0	3	8	1	.	.
0	.	3	5	.	.	.	.	.	2	.	4	.	.	.	.	3	.	.	.	.	.	.	.
5	8		8	3	5	9	1	.	1	.	8	.	0	8	6		3	.	7	9	5		
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0	6	5	1	1	9	6	.	9	3	0	.	6	5	1	8	.	2	.	5	.	.		
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0	4	2	9	1	.	.	8	7	.	2	1	.	4	6	.	.	9	.	2	0	.		
0	.	.	.	.	3	8	.	.	5	0	1	3	.	.	1	5	.	4	.	3	.		
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0	.	.	5	.	.	.	.	.	.	.	4	.	.	.	.	3	.	1	.	.	.		
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9	.	7	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
9																							
2	3	1	1	3	2	2	1	-	2	-	1	8	3	1	3	8	4	1	2	1	3		
0	7	4	2	5	8	8	5	1	6	3	4	.	0	.	0	5	.	7	.	.	.		
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1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
1	2	5	6	0	1	8	8	4	8	0	.	.	.	.	.	.	.	.	.	.	.		
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1	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
2	2	2	6	8	0	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
2	1	1	4	1	9	3	1	7	6	2	5	2	4	2	1	8	2	9	1	2	2		
0	0	5	0	7	.	8	3	6	.	4	.	8	.	0	5	.	2	.	7	8	5		
0	.	.	.	.	1	.	.	.	5	.	4	.	9	.	.	.	8	.	.	.	.		
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2	2	2	-	3	1	2	1	9	2	8	5	4	1	6	3	8	2	1	1	3	3		
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0																							

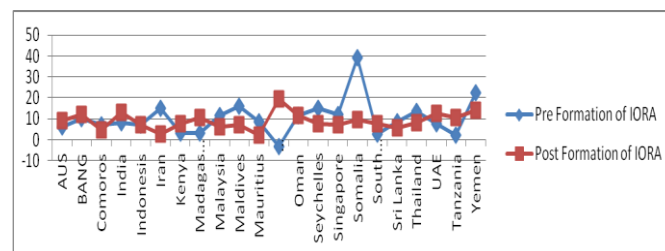
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5	.	7	9	8	7	1	3	9	5	5	8	6	5	3	.	2	6	3	4	8
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1	6	9	0	.	.	7	.	7	.	3	3	4	.	4	4	.	4	4	0	0
6			7	1	1	5	6		8	2	5	0	1	5	4	5	5	8	6	6
2	2	3	-	1	1	-	1	2	1	4	-	4	2	1	1	8	1	1	6	-
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1	.	9	.	.	.	7	9	5	.	.	.	.	.	5	.	4	.	.	3	3
7	0		6	1	0	.			8	8	1	0	0		4	3	4		2	2
2	1	7	-	8	6	-	8	0	1	-	-	1	2	2	1	8	4	6	6	-
0	1	.	5	.	.	2	.	.	3	8	0	0	8	9	0	.	5	.	4	4
1	.	2	.	5	7	7	6	2	.	.	.	.	.	.	3	.	6	6	3	3
8	3		5			.			6	9	2	0	9	6	3	7	9		3	3
2	5	6	-	-	-	7	-	-	-	-	1	-	2	-	8	-	6	-	6	-
0	.	.	6	0	7	2	.	4	3	1	5	3	7	7	.	4	.	2	.	1
1	4	8	.	.	.	7	9	.	.	3	.	.	.	.	4	.	0	.	3	5
9			9	1	1	.	5		4	7	.	0	1	3	5	1	6	4	5	4
A																				
v																				
e																				
r	9	2	4	2	7	2	7	0	6	7	2	9	1	7	7	9	7	5	8	1
a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
g	3	2	5	8	0	7	4	8	1	3	2	4	4	5	3	8	4	6	0	2
e																			5	0
																			4	4

Source:UNCOMTRADE.org

Table 1.7 explains the average growth rate of exports of member nations during pre formation of IORA for Australia is 6.0 per cent, Bangladesh is 9.9 per cent , Comoros is 6.9 per cent, India is 8.9 per cent , Indonesia is 8.2 per cent, Iran is 15.1 per cent, Kenya and Madagascar is 3.3 per cent, Malaysia is 11.4 per cent, Maldives is 16.0 per cent, Mauritius is 8.5 per cent, Mozambique is -3.5 per cent, Oman is 11.6 per cent, Seychelles is 15.2 per cent, Singapore is 11.8 per cent, South Africa is 2.6

per cent, Sri Lanka is 2.6, Tanzania is 8.6, Thailand is 13.5, UAE is 7.6. The real average growth rate of exports during post formation of IORA for Australia is 9.3 per cent, Bangladesh is 12.2 per cent , Comoros is 4.5 per cent, India is 12.8 per cent, Indonesia is 7.0 per cent, Iran is 2.7 per cent, Kenya is 7.4 per cent, Madagascar is 10.8 per cent, Malaysia is 6.1 per cent, Maldives is 7.3 per cent, Mauritius is 2.2 per cent, Mozambique is 19.4 per cent, Oman is 11.4 , Seychelles is 7.5 per cent, Singapore is 7.3 per cent, South Africa is 9.8 per cent, Sri Lanka is 7.4 per cent, Tanzania is 10.4 per cent, Thailand is 8.0 per cent, UAE is 12.5 per cent.

**Fig 1.6 Average of Growth Rate of exports during pre and post formation of IORA Nations**



**Fig 1.6 depicts the average of Growth Rate of exports during pre and post formation of IORA Nations**

**Table 1.8 Growth Rate of Exports during Pre and Post formation of IORA**

IORA Nations	Paired Differences					t	Df	Sig.	Hypothesis
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference					
				Lower	Upper				
Pre	3.2	17.	3.8	-	11.		1		The

Australia – Post Australia	5000	25248	5777	4.82441	32441	842	9	410	re is no significant difference in growth of exports after the formation of IO RA
Pre Bangladesh – Bangladesh	2.25500	14.88813	3.32909	-4.71286	9.22286	.677	19	.506	There is no significant difference in growth of exports after the formation of IO RA
Pre Comoros –	-2.46000	59.63247	13.33423	-30.36886	25.44886	-118	19	.856	There is no significant difference in

Post Comoros							4		growth of exports after the formation of IO RA
Pre India – Post India	4.55000	20.34830	4.55002	-4.97330	14.07330	1.000	19	.330	There is no significant difference in growth of exports after the formation of IO RA
Pre Indonesia – Post Indonesia	.07000	18.77199	4.19754	-8.71556	8.85556	.017	19	.987	There is no significant difference in growth of exports after the formation of IO RA
Pre Iran – Post Iran	-12.41500	68.10049	15.22773	-44.28701	19.45701	-815	19	.425	There is no significant difference in growth of exports after the formation of IO RA
Pre Kenya	4.06000	18.127	4.053	-4.444	12.54	1.09	19	.3	There is no signif

ya – Post Ken ya	00	72	48	240 3	40 3	0 0 2		2 9	icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Mad agas car – Post Mad agas car	7.5 40 00	35. 207 03	7.8 72 53	- 8.9 374 0	24. 01 74 0	. 9 5 8	1 9	. 3 5 0	There is no signif icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Mal aysi a – Post Mal aysi a	- 5.3 25 00	18. 681 74	4.1 77 36	- 14. 068 32	3.4 18 32	- 1 .2 7 5	1 9	. 2 1 8	There is no signif icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Mal dive s – Post Mal dive s	- 8.7 05 00	33. 661 40	7.5 26 92	- 24. 459 02	7.0 49 02	- 1 .1 5 7	1 9	. 2 6 2	There is no signif icant differ ence in growt h of expor ts after the form ation of IOR

									A
Pre Mau ritiu s – Post Mau ritiu s	- 6.2 65 00	17. 702 46	3.9 58 39	- 14. 550 01	2.0 20 01	- 1 .5 8 3	1 9	. 1 3 0	There is no signif icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Moz amb ique – Post Moz amb ique	22. 91 50 0	44. 057 61	9.8 51 58	2.2 954 0	43. 53 46 0	2 .3 2 6	1 9	. 0 3 1	There is a signif icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Oma n – Post Oma n	- .21 50 0	38. 826 66	8.6 81 91	- 18. 386 44	17. 95 64 4	- .0 2 5	1 9	. 9 8 1	There is no signif icant differ ence in growt h of expor ts after the form ation of IOR A
Pre Seyc helle s – Post Seyc helle s	- 7.6 65 00	52. 056 03	11. 64 00 8	- 32. 027 97	16. 69 79 7	- .6 5 9	1 9	. 5 1 8	There is no signif icant differ ence in growt h of expor ts after the

									formation of IOR A
Pre Singapor e – Post Singapor e	- 4.4 70 00	19. 996 95	4.4 71 45	- 13. 828 86	4.8 88 86	- 1 0 0	1 9 0	. 3 3 0	There is no significant difference in growth of exports after the formation of IOR A
Pre Somalia – Post Somalia	- 29. 19 35 0	197. 54 289	44. 17 19 3	- 121. 64 642	63. 25 94 2	- . 6 6 1	1 9 6	. 5 1 7	There is no significant difference in growth of exports after the formation of IOR A
Pre South Africa – Post South Africa	4.7 55 00	18. 793 85	4.2 02 43	- 4.0 407 9	13. 55 07 9	1 . 1 3 1	1 9 3	. 2 7 2	There is no significant difference in growth of exports after the formation of IOR A
Pre Sri Lanka – Post	- 2.9 80 00	15. 019 87	3.3 58 54	- 10. 009 51 51	4.0 49 51	- . 8 8 7	1 9 8	. 3 8 6	There is no significant difference in growth of

Sri Lanka									exports after the formation of IOR A
Pre Thailand – Post Thailand	- 5.5 40 00	16. 559 13	3.7 02 73	- 13. 289 91	2.2 09 91	- 1 4 9 6	1 9 5 1	. 1 5 1	There is no significant difference in growth of exports after the formation of IOR A
Pre UAE – Post UAE	4.8 90 00	29. 629 16	6.6 25 28	- 8.9 768 7	18. 75 68 7	. 7 3 8	1 9 8	. 4 6 9	There is no significant difference in growth of exports after the formation of IOR A
Pre Tanzania – Post Tanzania	8.1 50 00	27. 794 69	6.2 15 08	- 4.8 583 1	21. 15 83 1	1 . 3 1 1	1 9 0 5	. 2 0 5	There is no significant difference in growth of exports after the formation of IOR A

Source: Authors calculations

Table 1.8 represents T test on growth of exports (Annual percent change) during pre and post formation of IORA. The p value is more than .05 in case of all member nations except Mozambique, hence proved that there is no significant difference in growth of exports after the formation of IORA in case of member nations except Mozambique.

1. Australia : The annual growth rate of exports of Australia between 2015-19 is 11 per cent, accounts 1.5 per cent of share in world's export, concentration index is 0.16, the annual growth rate of exports between 2018-2019 is 7 per cent. The annual growth rate of imports of Australia between 2015-19 is 3 per cent, accounts 1.1 per cent of share in world's import, concentration index is 0.1, the annual growth rate of imports between 2018-2019 is -6 per cent. The average tariff implied is 1.4 per cent in the year 2019, which is low as compare to other member nations. Average growth rate of real GDP is 3.3 per cent during pre formation of IORA and this is 2.5 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Australia the P value is .299 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 7.7 per cent during pre formation of IORA and this is 6.9 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Australia the P value is .528 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 6.0 per cent during pre formation of IORA and this is 9.3 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Australia the P

value is .410 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. Australia finds Flatfish, whole, frozen easiest to reach. Data processing machines is the product that faces the strongest demand potential in World. The products with greatest export potential from Australia to World are Bovine cuts boneless, frozen, Gold, semi-manufactured, for non-monetary purposes, and Wheat (excl durum) & meslin. Bovine cuts boneless, frozen shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$5.2 bn.

2. Bangladesh : The annual growth rate of exports Bangladesh of between 2015-19 is 7 per cent, accounts 0.3 per cent of share in world's export, concentration index is 0.07, the annual growth rate of exports between 2018-2019 is 5 per cent. The annual growth rate of imports of Bangladesh between 2015-19 is 10 per cent, accounts 0.3 per cent of share in world's import, concentration index is 0.13 per cent, the annual growth rate of imports between 2018-2019 is 0 per cent. The average tariff implied is 12.8 per cent in the year 2019, which is high as compare to other member nations. Average growth rate of real GDP is 4.4 per cent during pre formation of IORA and this is 6.3 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Bangladesh the P value is .00 which is less than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.1 per cent during pre formation of IORA and this is 11.0 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Bangladesh the P value is .868 which is more than .05, hence proved that



there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 9.9 per cent during pre formation of IORA and this is 12.2 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Bangladesh the P value is .506 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Bangladesh to World are T-shirts & vests of cotton, knit/crochet, Men's trousers & shorts of cotton, and Women's trousers & shorts of cotton. Men's trousers & shorts of cotton shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$3.7 bn. Bangladesh's best options for export diversification in World are Roots & tubers of manioc, Manioc starch and Cardamons. Bangladesh finds Roots & tubers of manioc easiest to reach. Reception apparatus for television is the product that faces the strongest demand potential in World.

3. Comoros: Average growth rate of real GDP is 2.6 per cent during pre formation of IORA and this is 2.9 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Comoros the P value is .681 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 6.0 per cent during pre formation of IORA and this is 4.9 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Comoros the P value is .632 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of

export is 6.9 per cent during pre formation of IORA and this is 4.5 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Australia the P value is .856 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Comoros to World are Cloves, Vanilla, and Essential oils. Cloves shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$31.5 mn. The products with greatest export potential from Comoros to World are Cloves, Vanilla, and Essential oils. Cloves shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$31.5 mn.

4. India: : The annual growth rate of exports of India between 2015-19 is 6 per cent, accounts 1.7 per cent of share in world's export, concentration index is 0.05, the annual growth rate of exports between 2018-2019 is 0 per cent. The annual growth rate of imports of India between 2015-19 is 8 per cent, accounts 2.5 per cent of share in world's import, concentration index is 0.05, the annual growth rate of imports between 2018-2019 is -6 per cent. The average tariff implied is 14.1 per cent in the year 2019, which is high as compare to other member nations. Average growth rate of real GDP is 5.6 per cent during pre formation of IORA and this is 6.9 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of India the P value is .055 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.9 per cent during pre formation of IORA and this is 14.0 per cent during post

formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of India the P value is .605 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 8.2 per cent during pre formation of IORA and this is 12.8 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of India the P value is .330 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. India's best options for export diversification in World are Data processing machines, Parts of telephone sets & other transmission apparatus and Floating or submersible drilling. India finds Asparagus easiest to reach. Data processing machines is the product that faces the strongest demand potential in World. The products with greatest export potential from India to World are Diamonds, worked, Jewellery, of precious metal, nes, and Medicaments consisting of mixed or unmixed products, for retail sale. Diamonds, worked shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$18.8 bn.

5. Indonesia: The annual growth rate of exports of Indonesia between 2015-19 is 4 per cent, accounts 0.9 per cent of share in world's export, concentration index is 0.07, the annual growth rate of exports between 2018-2019 is -7 per cent. The annual growth rate of imports of Indonesia between 2015-19 is 7 per cent, accounts 0.9 per cent of share in world's import, concentration index is 0.1, the annual growth rate of imports between 2018-2019 is -10 per cent. The average tariff implied is 5 per cent in the year 2019, which is moderate as compare to other member nations. Average growth rate of real

GDP is 5.6 per cent during pre formation of IORA and this is 5.1 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Indonesia the P value is .720 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 9.8 per cent during pre formation of IORA and this is 10.7 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Indonesia the P value is .957 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 6.9 per cent during pre formation of IORA and this is 7.0 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of India the P value is .987 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Indonesia to World are Palm oil (excl crude) & fractions, Crude palm oil, and Technically specified natural rubber. Palm oil (excl crude) & fractions shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$8.4 bn. Indonesia's best options for export diversification in World are Data processing machines, Raw cane sugar and Computer data storage units. Indonesia finds Single yarn of jute easiest to reach. Data processing machines is the product that faces the strongest demand potential in World.

6. Iran: The annual growth rate of exports of Iran between 2015-19 is -1 per cent, accounts 0.2 per cent of share in world's export, concentration index is 0.25, the

annual growth rate of exports between 2018-2019 is -60 per cent. The annual growth rate of imports of Iran between 2015-19 is -9 per cent, accounts 0.2 per cent of share in world's import, concentration index is 0.15, the annual growth rate of imports between 2018-2019 is -33 per cent. The average tariff implied is 18.4 per cent in the year 2019, which is high as compare to other member nations. Average growth rate of real GDP is 1.1 per cent during pre formation of IORA and this is 2.1 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Indonesia the P value is .688 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 4.3 per cent during pre formation of IORA and this is 3.9 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Iran the P value is .969 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 15.1 per cent during pre formation of IORA and this is 2.7 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Iran the P value is .425 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. Iran, Islamic Republic of's best options for export diversification in World are Lentils, dried & shelled, Cotton, not carded/combed and Sesamum seeds. Iran, Islamic Republic of finds Lentils, dried & shelled easiest to reach. Wine of fresh grapes is the product that faces the strongest demand potential in World. Iran, Islamic Republic of's best options for export diversification in World are Polyethylene,

specific gravity  $\geq 0.94$ , in primary forms, Methanol "methyl alcohol" and Polyethylene, specific gravity  $< 0.94$ , in primary forms. Iran, Islamic Republic of finds Saffron easiest to reach. Copper cathodes is the product that faces the strongest demand potential in World.

7. Kenya: The annual growth rate of exports of Kenya between 2015-19 is 0 per cent, accounts 0 per cent of share in world's export, concentration index is 0.05, the annual growth rate of exports between 2018-2019 is -4 per cent. The annual growth rate of imports of Kenya between 2015-19 is 3 per cent, accounts 0.1 per cent of share in world's import, concentration index is 0.08, the annual growth rate of imports between 2018-2019 is -1 per cent. The average tariff implied is 9.9 per cent in the year 2019, which is high as compare to other member nations. Average growth rate of real GDP is 3.2 per cent during pre formation of IORA and this is 4.8 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Kenya the P value is .046 which is less than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 3.8 per cent during pre formation of IORA and this is 11.5 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Kenya the P value is .019 which is less than .05, hence proved that there is a significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 3.3 per cent during pre formation of IORA and this is 7.4 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Kenya the P value is .329 which is more than .05, hence proved that there is no significant difference in growth of exports

during pre and post formation of IORA. The products with greatest export potential from Kenya to World are Black tea, packings >3kg, Cut flowers & buds, fresh, and Coffee, not roasted, not decaffeinated. Black tea, packings >3kg shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$839.4 mn. Kenya's best options for export diversification in World are Bananas, fresh or dried, Cashew nuts, in shell and Cocoa beans. Kenya finds Roots & tubers of manioc easiest to reach. Semi-milled or wholly milled rice is the product that faces the strongest demand potential in World.

8. Madagascar: The annual growth rate of exports of Madagascar between 2015-19 is -9 per cent, accounts 0 per cent of share in world's export, concentration index is 0.1, the annual growth rate of exports between 2018-2019 is -15 per cent. The annual growth rate of imports of Madagascar between 2015-19 is 11 per cent, accounts 0 per cent of share in world's import, concentration index is 0.08, the annual growth rate of imports between 2018-2019 is -1 per cent. The average tariff implied is 7.5 per cent in the year 2019, which is moderate as compare to other member nations. Average growth rate of real GDP is 1.2 per cent during pre formation of IORA and this is 3.0 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Madagascar the P value is .064 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 3.4 per cent during pre formation of IORA and this is 10.1 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Madagascar the P value is .417 which is more than .05,

hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 3.3 per cent during pre formation of IORA and this is 10.8 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Madagascar the P value is .350 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. Madagascar's best options for export diversification in World are Other footwear, rubber/plastic soles & uppers, Single yarn of jute and Footwear, rubber/plastic soles & textile uppers, nes. Madagascar finds Single yarn of jute easiest to reach. Other footwear, rubber/plastic soles & uppers is the product that faces the strongest demand potential in World. The products with greatest export potential from Madagascar to World are Vanilla, Nickel, not alloyed, unwrought, and Cloves. Vanilla shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$599.5 mn.

9. Malaysia: The annual growth rate of exports of Malaysia between 2015-19 is 6 per cent, accounts 1.3 per cent of share in world's export, concentration index is 0.07, the annual growth rate of exports between 2018-2019 is -4 per cent. The annual growth rate of imports of Malaysia between 2015-19 is 6 per cent, accounts 1.1 per cent of share in world's import, concentration index is 0.08, the annual growth rate of imports between 2018-2019 is -6 per cent. The average tariff implied is 4.5 per cent in the year 2019, which is low as compare to other member nations. Average growth rate of real GDP is 6.7 per cent during pre formation of IORA and this is 4.7 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Malaysia the P value is



.093 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 12.6 per cent during pre formation of IORA and this is 6.8 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Malaysia the P value is .296 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 11.4 per cent during pre formation of IORA and this is 6.1 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Malaysia the P value is .218 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Malaysia to World are Smart cards; electronic integrated circuits; LED lamps, Palm oil (excl crude) & fractions, and Parts of office machines. Smart cards; electronic integrated circuits; LED lamps shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$31.4 bn. Malaysia's best options for export diversification in World are 4,4'-Isopropylidenediphenol, Ferro-nickel and Vinyl chloride "chloroethylene". Malaysia finds Tuna (yellowfin), fresh easiest to reach. Tankers is the product that faces the strongest demand potential in World.

10. Comoros: Average growth rate of real GDP is 8.4 per cent during pre formation of IORA and this is 6.2 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Comoros the P value is .369 which is more than .05, hence proved that there is no significant difference in

growth of real GDP during pre and post formation of IORA. Average growth rate of import is 17.3 per cent during pre formation of IORA and this is 11.4 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Comoros the P value is .770 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 16.0 per cent during pre formation of IORA and this is 7.3 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Australia the P value is .262 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Comoros to World are Skipjack & bonito, frozen, Prepared or preserved tunas, and Fish cuts, fresh. Skipjack & bonito, frozen shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$68.7 mn. Comoros best options for export diversification in World are Crude coconut oil, Tuna (albacore/longfinned), frozen and Oilcake of coconut or copra. Maldives finds Crude coconut oil easiest to reach. Shrimps & prawns, frozen is the product that faces the strongest demand potential in World.

11. Mauritius: The annual growth rate of exports of Mauritius between 2015-19 is -6 per cent, accounts 0 per cent of share in world's export, concentration index is 0.07, the annual growth rate of exports between 2018-2019 is -5 per cent. The annual growth rate of imports of Mauritius between 2015-19 is 7 per cent, accounts 0 per cent of share in world's import, concentration index is 0.07, the annual growth rate of imports between 2018-2019 is 0 per cent. The average tariff implied is 0.6 per cent in the year 2019,

which is low as compare to other member nations. Average growth rate of real GDP is 5.0 per cent during pre formation of IORA and this is 3.4 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Mauritius the P value is .113 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.0 per cent during pre formation of IORA and this is 5.3 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Mauritius the P value is .770 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 8.5 per cent during pre formation of IORA and this is 2.2 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Mauritius the P value is .130 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. Mauritius's best options for export diversification in World are Shrimps & prawns, frozen, Bananas, fresh or dried and Men's wind-jackets & similar of man-made fibres. Mauritius finds Single yarn of jute easiest to reach. Telephone sets & other voice/image transmission apparatus is the product that faces the strongest demand potential in World. The products with greatest export potential from Mauritius to World are Prepared or preserved tunas, Men's trousers & shorts of cotton, and Men's shirts of cotton. Prepared or preserved tunas shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$314.3 mn.

12. Mozambique: The annual growth rate of exports of Mozambique between 2015-19 is -13 per cent, accounts 0 per cent of share in world's export, concentration index is 0.09, the annual growth rate of exports between 2018-2019 is -8 per cent. The annual growth rate of imports of Mozambique between 2015-19 is 2 per cent, accounts 0 per cent of share in world's import, concentration index is 0.11, the annual growth rate of imports between 2018-2019 is 12 per cent. The average tariff implied is 7.96 per cent in the year 2019, which is high as compare to other member nations. Average growth rate of real GDP is 3.5 per cent during pre formation of IORA and this is 6.5 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Mauritius the P value is .143 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is -1.8 per cent during pre formation of IORA and this is 12.6 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Mozambique the P value is .265 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is -3.5 per cent during pre formation of IORA and this is 19.4 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Mozambique the P value is .031 which is less than .05, hence proved that there is a significant difference in growth of exports during pre and post formation of IORA. The products with greatest export potential from Mozambique to World are Aluminium, not alloyed, unwrought, Wood in the rough, nes, and Electrical energy. Wood in the rough,

nes shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$608.2 mn. Mozambique's best options for export diversification in World are Cocoa beans, Prepared or preserved tunas and Flours of fish or crustaceans. Mozambique finds Cocoa beans easiest to reach. Copper cathodes is the product that faces the strongest demand potential in World.

13. Oman: The annual growth rate of exports of Oman between 2015-19 is 11 per cent, accounts 0.2 per cent of share in world's export, concentration index is 0.25, the annual growth rate of exports between 2018-2019 is -3 per cent. The annual growth rate of imports of Oman between 2015-19 is 7 per cent, accounts 0.2 per cent of share in world's import, concentration index is 0.15, the annual growth rate of imports between 2018-2019 is 0.2 per cent. The average tariff implied is 4.5 per cent in the year 2019, which is low as compare to other member nations. Average growth rate of real GDP is 6.7 per cent during pre formation of IORA and this is 2.9 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Oman the P value is .019 which is more than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.2 per cent during pre formation of IORA and this is 10.0 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Oman the P value is .599 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 11.6 per cent during pre formation of IORA and this is 11.4 per cent during

post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Oman the P value is .981 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA. Oman's best options for export diversification in World are Aluminium alloys, unwrought, Mineral or chemical fertilisers and Broken rice. Oman finds Skins of sheep or lambs, in the wet state easiest to reach. Telephone sets & other voice/image transmission apparatus is the product that faces the strongest demand potential in World.

14. Seychelles: The annual growth rate of exports of Seychelles between 2015-19 is 19 per cent, accounts 0 per cent of share in world's export, concentration index is 0.25, the annual growth rate of exports between 2018-2019 is -3 per cent. The annual growth rate of imports of Seychelles between 2015-19 is 7 per cent, accounts 0.2 per cent of share in world's import, concentration index is 0.15, the annual growth rate of imports between 2018-2019 is 0.2 per cent. The average tariff implied is 4.5 per cent in the year 2019, which is low as compare to other member nations. Average growth rate of real GDP is 6.7 per cent during pre formation of IORA and this is 2.9 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Oman the P value is .019 which is more than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.2 per cent during pre formation of IORA and this is 10.0 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Seychelles the P value is .599 which is more than .05, hence proved that there is no significant difference in growth of



imports during pre and post formation of IORA. Average growth rate of export is 11.6 per cent during pre formation of IORA and this is 11.4 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Seychelles the P value is .981 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.

15. Singapore: The annual growth rate of exports of Singapore between 2015-19 is 5 per cent, accounts 2.1 per cent of share in world's export, concentration index is 0.07, the annual growth rate of exports between 2018-2019 is -5 per cent. The annual growth rate of imports of Singapore between 2015-19 is 7 per cent, accounts 1.9 per cent of share in world's import, concentration index is 0.07, the annual growth rate of imports between 2018-2019 is -3 per cent. The average tariff implied is 0 per cent in the year 2019, which is negligible as compare to other member nations. Average growth rate of real GDP is 7.6 per cent during pre formation of IORA and this is 4.4 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Singapore the P value is .029 which is less than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 10.5 per cent during pre formation of IORA and this is 7.1 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Singapore the P value is .435 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 11.8 per cent during pre formation of IORA and this is 7.3 per cent during post formation of

IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Singapore the P value is .330 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.

16. South Africa: The annual growth rate of exports of South Africa between 2015-19 is 4 per cent, accounts 0.5 per cent of share in world's export, concentration index is 0.04, the annual growth rate of exports between 2018-2019 is -5 per cent. The annual growth rate of imports of South Africa between 2015-19 is 3 per cent, accounts 0.5 per cent of share in world's import, concentration index is 0.06, the annual growth rate of imports between 2018-2019 is -6 per cent. The average tariff implied is 6.9 per cent in the year 2019, which is higher as compare to other member nations. Average growth rate of real GDP is 1.9 per cent during pre formation of IORA and this is 2.2 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of South Africa the P value is .728 which is more than .05, hence proved that there is a no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 8.4 per cent during pre formation of IORA and this is 8.3 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of South Africa the P value is .713 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 2.6 per cent during pre formation of IORA and this is 7.4 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of South Africa the P value is .272 which is more than .05, hence proved that

there is no significant difference in growth of exports during pre and post formation of IORA.

17. Sri Lanka: The annual growth rate of exports of Sri Lanka between 2015-19 is 4 per cent, accounts 0.1 per cent of share in world's export, concentration index is 0.09, the annual growth rate of exports between 2018-2019 is -1 per cent. The annual growth rate of imports of Sri Lanka between 2015-19 is 0 per cent, accounts 0.1 per cent of share in world's import, concentration index is 0.13, the annual growth rate of imports between 2018-2019 is -10 per cent. The average tariff implied is 10.6 per cent in the year 2019, which is higher as compare to other member nations. Average growth rate of real GDP is 5.2 per cent during pre formation of IORA and this is 4.7 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Sri Lanka the P value is .608 which is more than .05, hence proved that there is a no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 7.7 per cent during pre formation of IORA and this is 7.1 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Sri Lanka the P value is .815 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 8.6 per cent during pre formation of IORA and this is 5.6 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Sri Lanka the P value is .386 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.

18. Thailand: The annual growth rate of exports of Thailand between 2015-19 is 5 per cent, accounts 1.3 per cent of share in world's export, concentration index is 0.06, the annual growth rate of exports between 2018-2019 is -2 per cent. The annual growth rate of imports of Thailand between 2015-19 is 6 per cent, accounts 1.3 per cent of share in world's import, concentration index is 0.08, the annual growth rate of imports between 2018-2019 is -4 per cent. The average tariff implied is 7.1 per cent in the year 2019, which is higher as compare to other member nations. Average growth rate of real GDP is 6.2 per cent during pre formation of IORA and this is 3.5 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Thailand the P value is .048 which is less than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 12.2 per cent during pre formation of IORA and this is 9.2 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Thailand the P value is .671 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 13.5 per cent during pre formation of IORA and this is 8.0 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Thailand the P value is .151 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.
19. UAE: The annual growth rate of exports of UAE between 2015-19 is 2 per cent, accounts 1.7 per cent of share in world's export, concentration index is 0.1 the annual growth rate of exports between 2018-2019 is

-2 per cent. The annual growth rate of imports of UAE between 2015-19 is -2 per cent, accounts 1.4 per cent of share in world's import, concentration index is 0.05, the annual growth rate of imports between 2018-2019 is -2 per cent. The average tariff implied is 4.7 per cent in the year 2019, which is higher as compare to other member nations. Average growth rate of real GDP is 3.3 per cent during pre formation of IORA and this is 3.4 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of UAE the P value is .939 which is more than .05, hence proved that there is no significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 9.2 per cent during pre formation of IORA and this is 11.6 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of UAE the P value is .886 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 7.6 per cent during pre formation of IORA and this is 12.5 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of v the P value is .469 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.

20. Tanzania: The annual growth rate of exports of Tanzania between 2015-19 is -2 per cent, accounts 0 per cent of share in world's export, concentration index is 0.08 the annual growth rate of exports between 2018-2019 is 2 per cent. The annual growth rate of imports of Tanzania between 2015-19 is 2 per cent, accounts 0.1 per cent of share in world's import, concentration index is 0.15, the annual growth rate of imports between

2018-2019 is 2 per cent. The average tariff implied is 10.1 per cent in the year 2019, which is higher as compare to other member nations. Average growth rate of real GDP is 3.5 per cent during pre formation of IORA and this is 6.4 per cent during post formation of IORA. t test on growth of real GDP during pre and post formation of IORA is applied. In case of Tanzania the P value is .000 which is less than .05, hence proved that there is a significant difference in growth of real GDP during pre and post formation of IORA. Average growth rate of import is 2.9 per cent during pre formation of IORA and this is 10.8 per cent during post formation of IORA. t test on growth of imports during pre and post formation of IORA is applied. In case of Tanzania the P value is .192 which is more than .05, hence proved that there is no significant difference in growth of imports during pre and post formation of IORA. Average growth rate of export is 2.2 per cent during pre formation of IORA and this is 10.4 per cent during post formation of IORA. t test on growth of exports during pre and post formation of IORA is applied. In case of Tanzania the P value is .205 which is more than .05, hence proved that there is no significant difference in growth of exports during pre and post formation of IORA.

**Conclusion and Recommendations:** The member nations have yet to evolve a consensus position on the format of the economic bloc in the region. This trading bloc contains asymmetric levels of development. There is no significant difference in case of growth of real GDP, growth of exports and growth of imports during pre and post formation of Indian Ocean RIM Association. There is further need of changes in Preferential Trade Agreements, non-tariff concessions and tariffs reductions. More concentration and awareness is required for the promotion of Indian Ocean RIM Association.

## References

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