Pakistan's Trade Complementarities with OECD Countries

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Abstract

This paper has made an empirical analysis to ascertain complementarities of Pakistan with OECD countries. The objective of the study is to check how well export of Pakistan matches with the import of OECD countries in order to find out the suitable courtiers, with them Pakistan can boost its export. Annual data has been taken from Un-Com trade's webs site over the period 2001-2016, based on SITC Rev.3 at two digit level. 96 Product categories as whole. And used Trade Complementarity Index as a measure for assesses Complementarity of Pakistan with all OECD countries that are 33 in number. Result of trade complementarity indices shows that if answer of TCI is more near to one that is more favorable and well match partner for trade. Most of the results of our study is above 0.2 that means Pakistan export partially match with the most of the countries just answer of hungry is below than 0.2 meaning that Pakistan need to fuscous upon all OECD countries for boost its export.

1. Introduction

Trade means exchange of goods and services between or among the parties and is meant for the transactions both at national and international level. From the barter trade to online trade, world has passed through many recessions and booms but learning through time has added a number of terms in the dictionary of trade terminology. At international level, trade means both export and import. The word 'Export' can be defined as commercial sale of goods, services and financial assets in the international market. Export refers to the value of goods and non-factor services that one country produces and sells to the rest of the world; it includes merchandise, freight, insurance, travel, and other non-factor services whereas the repetition of the same phenomena with the intention of purchasing from the international market is declared as imports (Appleyard and Field, 1992).

Adam Smith presented how both countries can get advantage from trade, but it was David Ricardo who is accredited with what is commonly called comparative advantage. The idea that both countries can get advantage from trading even if one of them is better at manufacturing everything then the other International trade and expansion of financial markets can be key source of economic growth. Country having specialization in production of particular products at the mass scale, leads to comparative advantage. David Ricardo published a book "Principles of Political Economy and Taxation" which was published in 1817 and in that book he presented comparative advantage. According to theory of comparative advantage, a state export such products or services in which it has a well-built comparative advantage and imports such products or services in which it has low comparative advantage (Ricardo, 1817).

Further section two contains upon objective and research questions of the study , section three talks about literature, section four is about data and methodology then section five and six contains results and conclusion .

2. Objective and research question of the study

The objective of the study is to ascertain how well export of Pakistan matches with the import of OECD countries in order to find out the suitable courtiers, with them Pakistan can boost its export and can earn more exchange so research question of present study is, what are the suitable countries of OECD with them Pakistan focus more to boost its export. Gap of present study is, no any study is available that gives complementarities with all OECD countries. Present study will cover this.

3. Literature review

Bhattacharyya (2011) investigated the revealed comparative advantage and competitiveness: A case study for India in horticultural products. This study conclude that the India's comparative advantage in fruit, vegetables, and flower trade in the Asian, EU, and North American (USA and Canada) markets as compared to other south East Asian countries.

Sabonienė, (2011) checked export competitiveness in Lithuanian industry by via Balassa index. Writer used item level information for interval from 2004 to 2010 determined that merchandise display and the RCA crawls towards modification of those merchandise which were powerful business categories. Research further described that exports and imports revealed the reducing pattern as 28% and 38% respectively during 2008-2009. In the complete worldwide business from 2004 to 2008 imports and exports revealed 57 and 43 percent respectively contribute in Lithuanian case.

Gong and Gu (2010) found that export of electronic products and miscellaneous manufactured from Xinjiang to neighboring countries demonstrate strong RCA. Their study based on six neighboring countries of Xinjiang namely: Kazakhstan, Mongolia, Pakistan, Russia, Kyrgyzstan and India. Furthermore, they analyzed exports potential from Xinjiang by including China in sample under consideration and concluded that Xinjiang have strong export potential among its neighboring countries.

Serin et al. (2008) estimated the RCA in Turkey's tomato, olive oil and veggie fruit juice sectors where comparatively its competitors documented that industry of veggie fruit juice and essential olive oil show strong relative advantage in EU, but tomato industry has less relative advantage. They used Balassa and Comparative Export Performance indices and included Italy, Greece and Spain in sample countries from market of EU. They found that RCA shows downward trends from 2000 but RCA changed from 1995 to 2000 in EU market.

4. Methodology of research

Annual data has been taken from Un-Com trade's webs site over the period 2001-2016, based on SITC Rev.3 at two digit level 96 Product categories as whole and used Trade Complementarity Index as a measure for assess Complementarity of Pakistan with all OECD countries that is 33 in number.

Trade Complementarity Index introduces by Michaely (1996) calculate the extent to which two states are ''naturally trading partners'' in the sense what one state export overlaps with what the other country imports. To test the 'export-trade complementary' of Pakistan with Asian and OECD economies we will use TCI. Value of trade complementary index lies between 0 and 1, higher the value of index assumes more favorable prospects of trade among the sampled economies. Complementarity index is defined as;

$$C_{i,k} = 1 - \sum \left(\frac{|M_{j,i} - X_{j,i}|}{2} \right) \qquad (1)$$

Where:

$C_{i,k}$ representing the export trade complementarity index between country i, k, $M_{j,i}$ representing the share of commodity j in total imports of country i, $X_{j,i}$ representing the share of commodity j in total exports of country i. Various studies have been used this index that includes Venkatesh and Sudarshan (2006), Gong and Gu (2010) Xie et al. (2013) , Yu and Qi (2015).

5. Results and interpretation

The trade complementarity indices for Pakistan with OECD countries are computed in one way i.e. Pakistan with USA UK with all OECD countries. This reckoning is based on 96 product categories over time period 2001-2016 in order to discover out that at what degree export of Pakistan matches with the imports of OECD countries as whole.

Table 1. Results of Trade complementarity Indices

	Countries	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean TCI
1	USA	0.19	0.20	0.22	0.24	0.25	0.25	0.26	0.28	0.29	0.30	0.28	0.26	0.25	0.25	0.23	0.23	0.25
2	UK	0.18	0.19	0.22	0.24	0.26	0.25	0.27	0.30	0.31	0.32	0.30	0.31	0.28	0.28	0.25	0.23	0.26
3	Germany	0.18	0.18	0.20	0.22	0.24	0.23	0.25	0.27	0.29	0.30	0.29	0.26	0.26	0.26	0.23	0.23	0.24
4	Spain	0.18	0.19	0.21	0.23	0.25	0.25	0.27	0.29	0.30	0.31	0.30	0.28	0.28	0.29	0.27	0.27	0.26
5	Itly	0.18	0.20	0.22	0.24	0.26	0.26	0.28	0.29	0.31	0.31	0.31	0.29	0.29	0.29	0.26	0.26	0.27
6	Netherlands	0.16	0.17	0.19	0.20	0.22	0.23	0.24	0.27	0.27	0.27	0.28	0.24	0.25	0.26	0.24	0.23	0.23
7	Belgium	0.17	0.17	0.20	0.22	0.23	0.23	0.25	0.27	0.29	0.29	0.28	0.28	0.25	0.25	0.22	0.22	0.24
8	France	0.18	0.19	0.22	0.24	0.25	0.25	0.26	0.28	0.28	0.29	0.28	0.25	0.26	0.27	0.25	0.23	0.25
9	Turkey	0.16	0.17	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.27	0.26	0.24	0.22	0.22	0.19	0.18	0.22
10	Korea republic of	0.13	0.14	0.18	0.19	0.20	0.21	0.22	0.24	0.23	0.25	0.24	0.21	0.21	0.22	0.21	0.21	0.21
11	Canada	0.14	0.15	0.19	0.20	0.22	0.22	0.24	0.27	0.28	0.29	0.28	0.26	0.25	0.25	0.23	0.22	0.23
12	Japan	0.20	0.20	0.23	0.25	0.26	0.26	0.27	0.29	0.31	0.30	0.29	0.26	0.27	0.27	0.26	0.25	0.26
13	Australia	0.16	0.17	0.19	0.21	0.23	0.23	0.24	0.26	0.27	0.28	0.26	0.24	0.23	0.24	0.22	0.22	0.23
14	Portugal	0.21	0.21	0.25	0.24	0.27	0.27	0.28	0.29	0.31	0.31	0.31	0.28	0.29	0.30	0.28	0.26	0.27
15	Poland	0.17	0.18	0.20	0.24	0.24	0.23	0.25	0.26	0.27	0.27	0.27	0.24	0.24	0.26	0.24	0.24	0.24
16	Sweden	0.16	0.17	0.20	0.21	0.23	0.23	0.25	0.26	0.27	0.27	0.26	0.24	0.25	0.26	0.24	0.22	0.23
17	Mexico	0.14	0.15	0.19	0.20	0.22	0.22	0.23	0.25	0.24	0.24	0.24	0.22	0.21	0.22	0.19	0.18	0.21
18	Denmark	0.20	0.20	0.23	0.27	0.27	0.27	0.28	0.30	0.30	0.31	0.31	0.28	0.28	0.30	0.28	0.26	0.27
19	chili	0.16	0.17	0.21	0.22	0.24	0.24	0.25	0.27	0.27	0.27	0.27	0.24	0.24	0.26	0.25	0.23	0.24
20	Greece	0.18	0.18	0.21	0.25	0.25	0.25	0.30	0.28	0.28	0.28	0.28	0.23	0.25	0.26	0.24	0.23	0.25
21	Finland	0.15	0.16	0.18	0.20	0.21	0.21	0.23	0.24	0.26	0.26	0.25	0.23	0.23	0.24	0.22	0.21	0.22
22	Norway	0.17	0.18	0.21	0.25	0.25	0.24	0.26	0.26	0.27	0.28	0.28	0.25	0.25	0.26	0.23	0.22	0.24
23	Ireland	0.15	0.15	0.18	0.19	0.22	0.22	0.24	0.26	0.26	0.28	0.28	0.25	0.25	0.26	0.21	0.20	0.23
24	Slovenia	0.17	0.18	0.21	0.23	0.24	0.24	0.24	0.25	0.26	0.27	0.27	0.23	0.24	0.25	0.22	0.21	0.23
25	Newziland	0.17	0.18	0.21	0.23	0.24	0.25	0.28	0.29	0.28	0.29	0.29	0.25	0.26	0.26	0.24	0.23	0.25
26	Czech republic	0.15	0.15	0.18	0.20	0.23	0.22	0.23	0.24	0.25	0.25	0.25	0.22	0.23	0.24	0.21	0.20	0.21
27	Estonia	0.17	0.17	0.21	0.23	0.24	0.24	0.25	0.28	0.28	0.28	0.27	0.23	0.25	0.26	0.23	0.22	0.24
28	Austria	0.17	0.18	0.21	0.23	0.24	0.24	0.25	0.28	0.30	0.30	0.29	0.26	0.26	0.26	0.24	0.23	0.25
29	Switzerland	0.17	0.18	0.20	0.22	0.23	0.23	0.24	0.27	0.28	0.28	0.27	0.25	0.20	0.21	0.19	0.18	0.22
30	Hungry	0.13	0.14	0.17	0.18	0.20	0.20	0.19	0.22	0.22	0.23	0.23	0.20	0.20	0.21	0.19	0.18	0.19
31	slovakia	0.15	0.16	0.18	0.20	0.22	0.21	0.22	0.24	0.25	0.25	0.25	0.22	0.22	0.23	0.20	0.19	0.21
32	Luxemburg	0.13	0.15	0.19	0.20	0.22	0.22	0.22	0.24	0.26	0.27	0.26	0.22	0.23	0.24	0.22	0.21	0.22
33	Iceland			0.21	0.23	0.23	0.23	0.25	0.27	0.27	0.27	0.27	0.23	0.24	0.25	0.22	0.21	0.21

Source: Author self-calculation based upon data from Un-com trade

Table 1 contains the mean result of Trade complementarity indices, if answer of TCI is more near to one that is more favorable and well match partner for trade. Most of the results of our study are above 0.2 that means Pakistan export partially match with the most of the countries just answer of hungry is below than 0.2 meaning that Pakistan need to fuscous upon all OECD countries for boost its export.

6. Conclusions

Present study attempts to assess Pakistan's trade complementarities with OECD countries for the period of 2001-2016. The objective of the study is to ascertain how well export of Pakistan match with all OECD countries in order to find out the suitable countries for boosts its export. 96 products categories with annual data have been taken from the web site of UN-Com trade. The mean result of Trade complementarity indices show that, if answer of TCI is more near to one that is more favorable and well match partner for trade. Most of the results of our study is above 0.2 that means Pakistan export partially match with the most of the countries just answer of hungry is below than 0.2 meaning that Pakistan need to fuscous upon all OECD countries for boos its export.

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