Foreign Inputs and China's Export Boom

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Abstract

This paper examines the concept of foreign influence and its effects on China's export boom generally. The paper also focuses on imported intermediate goods (IIG) and share of global export (SGE). The paper adopted Ex-Post Facto research design, using already existing secondary data from reliable and relevant sources. A total of 21 years' data from 1997 to 2017 of IIG& SGE were sampled and collected for analysis for this research paper. Correlation analysis was used to test the hypotheses of this study at 0.05 level of significance (95%) for the two-tailed test. Findings of this paper reveal that generated p-value for the result (0.000) is less than the level of significant (0.05), implying there is significant positive relationship between IIG & China's SGE. The Pearson correlation result suggests that there is a high positive relationship between imported intermediate goods (IIG) and China's share of global export (SGE) (r = 0.997). This simply implies that there is 99.7% relationship between China Share of Global export and imported intermediate goods. This relationship is statistically significant since the generated p-value for the result (0.000) is less than the level of significant (0.05) used for the study. The study recommends amongst others that countries that want to grow their export rate should not depend solely on what they have the full capacity to produce but look to other countries where they can bring in intermediate goods to aid their productions for onward export.

Keywords: China-Export, Imported-Intermediate-Goods (IIG), Share-of-Global-Export (SGE)

1. Introduction

Few years ago, products from china were generally seen as inferior or imitation goods by consumers all over the world. Here in Nigeria, Chinese products, especially phones, personal computers (PC), clothing and so on, were generally referred to as "chinco products", meaning imitation or fake products that were only meant for the poor in the society. So, whenever anyone who is averagely rich goes to purchase such stuff from the market or store, the question 'hope is not china' is always asked. All those notions have changed today because both the poor and the rich now buy made in China products without feeling inferior. This change in the notion about Chinese products came as a result of tremendous upgrade in quality/standard of made in China products. According to Robert & Zhi (2010), "Made in China" is one of the most common labels one encounters in a shopping mall in the United States and Europe. Increasingly, many products that are supposed to be technically sophisticated and therefore likely to be associated with exports from high-income countries, such as digital cameras and computers, also carry that label. Since the most salient characteristic of the factor endowment in China is a vast supply of unskilled labor relative to either physical or human capital, is the country's actual export structure inconsistent with the predictions from the international trade theory based on its endowment?

A possible resolution to the puzzle is that China is simply the last section of a long global production chain that ends up assembling components from various countries into a final product before it is exported to the rest of the world. Indeed, a Mac Book computer carries a label at its back (in small type) that reads "Designed by Apple in California; Assembled in China." This label is likely to be oversimplified already, as it reports only the head and the tail of a global production chain, but skips many other countries that supply other components that go into the product (Robert &Zhi, 2010). The influx of manufacturing FDI to China has altered the trade patterns in Asia. China's rise as a manufacturing hub has intensified competition with the East Asian Seven (EA-7) economies of Korea, Taiwan, Singapore, Malaysia, Indonesia, the Philippines and Thailand in exports to the Group of three (G3) markets of the US, Japan and the EU. To assess the relative impact of competition from China on the regional economies, the technique of dynamic shift-share analysis was employed, which compares the performance of an economy's exports to a common third market with a group of reference competing economies, after accounting for size differences. A positive net shift means that the country in question has outperformed relative to the reference group. The analysis shows that all the EA-7 economies experienced negative net shifts, with the Newly Industrialized Economies (NIE-3 economies) of Singapore, Taiwan and Korea experiencing the largest negative net shifts. This is true not just in labour intensive consumer goods, where the NIE-3 is disadvantaged because of their higher wage costs, but also in low-end capital and intermediate goods exports (Kit, 2005).

This study shall focus on how foreign inputs indicator of IIG affect China's SGE, which is indicator for export growth. And in doing that it would rely on data from China's processing imports statistics, China's Customs Service, The World Bank Group and World Trade Organization to examine and determine the rate of influence of influx of IIG into China on China's SGE.

1.1. Statement of the Problem

Almost every electrical, electronics, telecommunication, etc. product we find in markets and our homes today have the made in China mark. But most of these gadgets bear components that are imported into China and in turn used to produce or assemble them and then they re-export them to other countries as made in China products.To the casual observer, everything that carry made in China is fully made in China, just like looking at a mango tree, what you see at first are the externalities; leaves, stem, branches and at appropriate times the fruits. However, to the curious observer or researcher, it does not end there, he wants to know what holds the tree up and gives it nutrients to bear more or better fruits than others. Then as he digs deeper, he would discover that there are deep, hidden sides of the tree called roots which provide it with support and nourishment to do well as a tree. Today, developed European countries like Finland which ranks among the best economies in the world are studying China's export growth. In fact, every student of international business in any Finish university is mandated to take a course about China's export. And that is exactly what this research seeks to do concerning the China's enviable export growth over the years. Though previous studies on China export growth abounds, review of some existing literatures reveals that this growth is mostly estimated in terms of volume of trade from china to the rest of the world (Richard, Zheng & Jinghai, 2010). In terms of sophistication of products from china to the rest of the world (Bin XU, 2010), etc. But nothing was found to be said about the factors propelling the growth. It is this gap that this study seeks to fill by trying to find the relationship that exists between China Export Boom indicator {share of global export (SGE)} and Foreign Inputs indicator {imported intermediate goods (IIG)}.

1.2 Research Questions
It is in the view of the above stated problem that this research question is asked for the study to find answers.
➢ Is there any relationship between Imported Intermediate Goods (IIG) and China's Share of Global Export (SGE)?

1.3 Objectives of the Study
In effectively answering the above question, the paper seeks to achieve the following objective

➢ Determine the relationship that exists between Imported Intermediate Goods (IIG) and China's Share of Global Export (SGE).

1.4 Research Hypothesis
The research hypothesis for this study is stated below:
Ho: There is no relationship between imported intermediate goods (IIG) and China's Share of Global Export (SGE).

2. Literature Review
2.1. Concept of China
China is a country in the Eastern part of Asian continent, officially known as People's Republic of China. The world's most populous country, with a population of around 1.404billion covering approximately 9,600,000 square kilometers (3,700,000sqm ;), it is the third or fourth largest country by total area, depending on the source consulted. Governed by the communist party of China, the state exercises jurisdiction over 22 provinces, five autonomous regions, four direct controlled municipalities (Beijing, Tianjin, Shangliai and Chonjging), and the special administrative regions of Hong Kong and Macan.

The above statistics makes China a force to be reckoned with regionally in Asia and globally and today many researchers in different fields are studying one thing or the other about the country China. Some areas of interests include healthcare, transportation, energy/power, education, engineering, trade which is the focus of this research work and so many other areas (researcher's assertion bases on understanding of the implications of the statistics from Wikipedia, 2018).

2.2. Concepts of export
Exports are the goods and services produced in one country and purchased by residents of another country. It doesn't matter what the good or service is. It doesn't matter how it is sent. It can be shipped, sent by email, or carried in personal luggage on a plane. If it is produced domestically and sold to someone in a foreign country, it is an export (Kimberly, A. 2017).This involves producing the product in the home base of a company and selling such product abroad (Oyedijo, Ogundele, Adekunle&Aliu, 2010).

According to Oyedijo et.al (2010), export is an integral part of international business marketing which is essentially buying and selling and as such exchange of goods and services involving two or more countries. Thus, the goods and services produced by one

country which are sold to others in exchange for foreign goods and services in which money is used as means of settlement is exporting.

2.2.1 Types of export:
There are mainly two types of export.
An organization can operate internationally through **direct** or **indirect** exporting (Oyedijo et.al, 2010).

i Direct export:
According to Oyedijo et.al, (2010) direct export is a business transaction between a seller at home and a foreign buyer abroad. In developed part of the world organizations enter into export marketing through export houses who handle export business.

ii Indirect export:
Isemede (2003) noted that indirect exporting could be an international transaction ranging from selling in local currency to grey market. The figures are never authentic. Also they are not worked with in terms of either research findings or future protection because records and documentations to support the findings in some indirect transactions are not available.

However indirect exporting can take any of the following forms outline below Oyedijo, etal (2010):
a. Indirect export via local currency
b. Overseas branch/subsidiary
c. Travelling sales representative
d. Illegal trafficking and waste dumping
e. Export by barter, etc.

2.2.2. Importance of exporting
According to Isemede (2003), every country today engages in the two types of international marketing, either import or/and export transactions. Today many organizations and government go into international marketing because it is the most important way to earn foreign exchange to develop or sustain the economy.

2.3. Theories of Foreign Input.
An important part of the growth in world trade in recent decades is the results of vertical specialization. Vertical specialization refers to the phenomenon of fragmentation of global production across countries. In the global production network, each country only engages in certain stages of the whole production process where it has comparative advantages. With the development of global production, cross-border transfer of materials and goods with this purpose has been playing an increasingly dominant role in the world trade (Richard, Zheng &Jinghai, 2010).

From review of extensive materials, the word Foreign Inputs can mean the same thing as Foreign Direct Investment (FDI) or Imported Intermediate Goods (IIG) (Researcher's position, 2018)
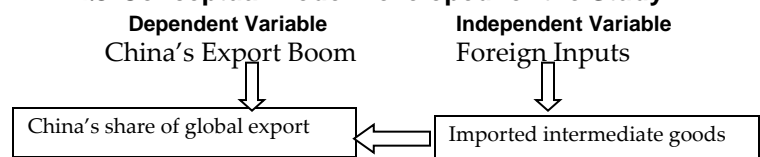
2.4. Empirical Review
In the real sense, there is scarcity in the number of studies that had been carried out as it relates to the subject matter, which is Foreign Inputs and China's Export Boom. Haven said that, we have some articles that have been published on how China has been growing her export sector since her membership of the World Trade Organization (WTO) in the year 2001(Richard, Zheng &Jinghai, 2010).

WTO accession has had a two-fold effect on China. On the one hand, trade barriers of various kinds have had to be removed to create a fairer and freer environment for investment and trade. Import tariffs were eliminated or reduced, and all import quotas on industrial goods were removed by 2005. As a result, the unweighted average tariff rate decreased from 16.4% in 2000 to below 10% by 2007. At the same time, export subsidies to domestic firms which were inconsistent with WTO rules were largely removed, foreign suppliers were allowed to retail their products, and foreign investment approvals were no longer subject to some mandatory requirements such as technology transfer or local content requirements (Blanchard &Giavazzi, 2005).

This study looks at the generality of China's export value in US dollar over the period in question (1997-2017) in order to unravel the level of effect foreign inputs have had on its export from china to the rest of the world.

2.5 Conceptual Model Developed for the Study

Dependent Variable	Independent Variable
China's Export Boom	Foreign Inputs

| China's share of global export | ← | Imported intermediate goods |

Source: Developed by the Researcher (2018) on the review of extensive and relevant literature

3.0 Methodology
The frame of this study is the monetary volume and values of China's trading activities in terms of her Imported Intermediate Goods

(IIG) for further processing to be exported out of China and China's Share of Global Export (SGE), from the year 1997 to the year end 2017; representing 21 years' period, covering four years before her World Trade Organization (WTO) membership in 2001 and sixteen years after in 2017.

The sources of data for the study consists of already published data in books, Journals, magazines, reviewed literatures, academic thesis, internet, World Bank Database (WBD) and World Trade Organization (WTO).

The simple regression model equation was adopted for the research work.

This study adopts Ex-Post Facto Research Design, because this study made use of quantitative data that are already in existence.

Data were analyzed using descriptive statistics, trend and correlation analysis were used with the aid of both Microsoft Excel and Statistical Package for Social Sciences (SPSS) data editor. The collected data were described using trend analysis as well as stylized facts on each of the specified variables. All the specified model will be tested using correlation analysis. All the hypotheses were tested out with the aid of Statistical Package for Social Sciences (SPSS) version 23.0.

4.0 Presentation/Analyses of Data.

The analyses of the data were carried out with the aim of subjecting the research hypothesis to test of validity guided by the research question, study objective and the reviewed literatures.

4.1 Analyses of Data Collated from Secondary Sources.

Table 4.1.Data from Secondary Sources

Characteristics	Frequency	Percentage
Total number of years under review	21	100%
Total number of years reviewed	21	100%
Total number of years collected but not reviewed	Nil	0%
Total not retrieved	Nil	0%
Total collected and used for analysis	21	100%

Source: Author's Review of collated data, 2018

The above table shows that the total number of years considered for this research is 21, representing 100% of the period in question. While the number of years that are reviewed is 21, representing 100% of the total period. And out of the 21-year period under review, all were review, representing 100%. It is also clear from the table that none of the year was not reviewed and that 21 number of years is collected and used for the analysis.

Table 4.2. Analyses of Collated Data collated on IIG

Year	IIG in USD.	% of IIG	Mean	Standard Dev.
1997	58,041,245.90	2.40%		
1998	57,329,187.10	2.37%		
1999	62,937,534.30	2.60%		
2000	77,721,994.60	3.22%		
2001	79,364,381.21	3.28%		
2002	92,879,736.00	3.84%		
2003	118,663,720.36	4.91%		
2004	145,141,230.00	6.00%		
2005	163,178,008.20	6.75%		
2006	178,690,726.00	7.39%		
2007	215,977,404.98	8.94%		
2008	231,035,513.00	9.56%		
2009	225,501,442.20	9.34%		
2010	291,991,883.00	12.08%		
2011	345,799,229.19	14.31%		
2012	342,013,337.00	14.15%		
2013	355,915,539.15	14.72%		
2014	379,388,317.00	15.69%		
2015	395,537,405.83	16.36%		
2016	357,957,434.00	14.81%		
2017	396,325,958.50	16.39%		

Year	SGE in USD.	% of SGE	Mean	Standard Dev.
1997	155,953,142.27	1.29%		
1998	160,418,179.00	1.33%		
1999	172,091,708.73	1.43%		
2000	219,886,446.00	1.83%		
2001	235,870,145.97	1.96%		
2002	292,591,432.00	2.43%		
2003	397,048,746.63	3.29%		
2004	542,462,960.00	4.51%		
2005	700,491,158.55	5.82%		
2006	895,668,444.00	7.44%		
2007	1,136,520,659.80	9.44%		
2008	1,331,811,013.00	11.07%		
2009	1,125,151,454.44	9.35%		
2010	1,477,155,388.00	12.27%		
2011	1,772,846,542.93	14.73%		
2012	1,925,809,949.00	15.99%		
2013	2,078,109,664.04	17.27%		
2014	2,202,693,044.00	18.30%		
2015	2,144,615,712.52	17.82%		
2016	1,966,520,813.00	16.34%		
2017	2,118,112,279.13	17.60%		
TOTAL	12,036,811,215.01	100%	1097706137.2862	780974204.51052
TOTAL	2,417,241,869.82	100%	217685296.5486	125522007.02890

Source: World Bank, World Trade Organization; author's Review, 2018

Table 4.2. shows the values, percentages, mean and the standard deviation of the findings on inflow of IIG into China during the years under review

Table 4.3.   Analyses of Collated Data collated on SGE
Source: World Trade Organization; author's review, 2108
Table 4.3. shows the values, percentages, mean and the standard deviation of the findings on SGE of China during the years under review

4.3. Results and Interpretation and Discussion of Tests

Statistics		
	LOGSGE	LOGIIG
Mean	1097706137.2862	217685296.5486
Median	1125151454.4400	215977404.9800
Std. Deviation	780974204.51052	125522007.02890
Kurtosis	-1.658	-1.603
Std. Error of Kurtosis	.972	.972
Minimum	155953142.27	57329187.10
Maximum	2202693044.00	396325958.50

The statistics above shows the mean, median, standard deviation, kurtosis, standard error of kurtosis, minimum and maximum values of each of the indicator used for the study as also explained in tables 4.2 & 4.3 above, all in US dollar.
(Source: *World Bank Database, 2018 & computation aided by SPSS version 23.0*)

H₀: *There is no relationship between IIG & China's SGE*

$$SGE_t = \pi_t + \mu_1 IIG_t + \varepsilon_t$$

(Source: *field survey, 2018 & computation aided by SPSS version 23.0)*

Pearson correlation result suggests that there is a high positive relationship between imported intermediate goods and China's share of global export (r = 0.997). This simply implies that there 99.7% relationship between China Share of Global export and imported intermediate goods. This relationship is statistically significant since the generated p-value for the result (0.000) is less than the level of significant (0.05) used for the study.

Decision

- Null hypothesis is rejected while the alternative hypothesis is accepted. This infers that there is a significant positive relationship between imported intermediate goods and China's share of global export.

5.0 Summary, Conclusion, Recommendation
5.1 Summary & Findings of the study

This project was informed by the necessity to examine the link between Foreign Influence and China's Export Boom. Using 21-year period for the study covering the period before China became a member of WTO till recent times (1997 to 2017).

The findings from the results as clearly indicated in the frequency tables and percentages of the data collated, showed that majority of the data collected showed that China's export has been supported by foreign influences significantly. The hypothesis was tested using regression analysis and Pearson correlation analysis.

The hypothesis was tested using correlation analysis; the result revealed that there is a significant relationship between imported intermediate goods (IIG) and increase in China's share of global export (SGE) (r = 0.997, p =0.000). showing that 99.7% of the appreciation in China's of Global Export is accounted for by Imported Intermediate Goods.

5.2 Conclusion

The study reviewed existing literature with reference to subjects that are in line with the research question and worthy of note is that the arguments were rational and consistent.

The study was secured on some elementary suggestions arising from the Ex Post Facto Research Design Method and Time Series Analysis.

Foreign Inputs are those resources that are sourced for and imported from another country other than the host country. They can include both human and material resources which are meant for further processing for

local usage or for onward export to other countries as

Correlations

		LOGSGE	LOGIIG
LOGSGE	Pearson Correlation	1	.997**
	Sig.(2-tailed)		.000
	N	21	21
LOGIIG	Pearson Correlation	.997**	1
	Sig. (2-tailed)	.000	
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed)

finished productions (Researcher, 2019).

Despite the fact that China is a very populous country with also a large landmass, they lacked adequate technology and professional skills to grow their economy to where it is today. And this was why the government of China opened up her economy in the year 1978 and became a member of the World Trade Organization (WTO) in the year 2001, so as to allow expatriates come in to invest and pass knowledge to her people and transfer technology. And they have followed it through since then with massive positive results to show for it (Researcher, 2019).

This opening of her economy and WTO membership of China has turned out to be the best decision the communist government of the People Republic of China has taken to boost their economy and play at the global stage as giant. Today, forty (40) years after her economic reform leading to open economy and eighteen (18) years after joining the WTO, China has rapidly grown to become the biggest or highest exporter in the world (Researcher, 2019).With all the forgoing facts, the rise and continuous growth of China's export is worth studying by people of any nation interested in growing their economy. And I believe that every nation wants just that (Researcher, 2019).

5.3 Recommendation

As a result of the above stated findings of the study, the following recommendations and suggestions have become necessary and important to note;

i. Countries that want to grow their export rate should not depend solely on what they have the full capacity to produce but look to other countries where they can bring in intermediate goods to aid their productions for onward export.

ii. Countries like Nigeria and other developing ones should not just allow developed countries to make them dumping ground for finished goods. Rather they should import the needed technological equipment and skills to manufacture locally in their countries or at least manufacture part of the components of the products consumed within their countries and exported.

5.4 Suggestions for further study

Based on the limitations of the study identified above, the study hereby suggests the following as areas for further research:

a. Policy Implementation and China's Export Boom (a study of how country's condition affects investors' decision to invest)

b. Foreign Direct Investment and China's Export Boom (a study of the effect of FDI on China's export growth)

c. Population and China's Export Boom (a study of the effect of China's population on her export growth).

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