

## AN EMPIRICAL STUDY OF WORLD ECONOMY EFFECT ON WORLD EXPORTS AND IMPORTS

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**ABSTRACT:** Global economy movement will have its effect on world exports and imports. This paper has been emphasized on world export and import index behaving with the global economy fluctuation after recession period. BDI and MSCI have clear influence by the exports and imports during the analysis. Global currency reflector dollar index impact has been found by the leaner regression estimator on E & I index. Mar ratio had given MSCI is the superior performer than the BDI in post recession period. CPI and Dollar index has been considered as global macro economic factors which are having strong influence on world exports and imports. This paper is useful for the investment banker, multi-national companies, BDI traders, exporters and importers.

**Key Words:** BDI, MSCI, Dollar Index, CPI and World Exports and Imports.

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### INTRODUCTION:

Export and Import are potential weapons of developing the economy and can play an important role in achieving the country's socio-economic objectives including poverty reduction goals. Economists behind the export-led growth hypothesis consider that export can serve as an engine of growth. The increases in the output demand of a country through the growth of export allow the exploitation of economics of scale for an economy. The export and import have the significant positive relationship with each other, and also, both export and import have the significant impact on the economic growth. Further, the export and import have been associated by 98 percent, which denotes that, there is a strong positive association between export and import. We have suggested that, the small medium enterprises should be motivated towards export orientation. Meantime, the restrictions in the import of the raw materials to the industries should be implemented in the flexible way through the fiscal and monetary policy.

The expansion in exports promotes specialization in the production of export products, which in turn boost the productivity level and cause the general level of skills to rise in the export sector. World, export and import can emerge as a significant vehicle to build up physical capital, create employment opportunities, develop productive capacity and help integrate the domestic economy with the global economy. This policy note provides an assessment of the current situation of export and import in World and examines its impact on the country's balance of payments. The pace of economic development of a nation presents one of the most essential issues in economic debate. A nation could accelerate the rate of economic growth by promoting export of goods and services. The volume of import is negatively related to its relative local price and varies positively with aggregate local demand (real GDP growth).

### OBJECTIVES:

1. To find the exports and imports movement based on global economy direction.
2. To find the impact of select economic factors on world exports and imports
3. To predict the world exports and imports future direction based on global economy.
4. To find the performance measure of MSCI and its influence on world exports and imports.

**SCOPE OF THE STUDY:** This paper has been emphasized on world exports and imports fluctuations with global economy before and after effect of recession. This study has been done based on macro-economic variables. The study has been confined from 2002 to 2014.

### **Empirical Study:**

MSCI, DOLLAR Index, BDI, CPI and World exports and imports index

### **REVIEW OF LITERATURE:**

**Emerald Group Publishing Limited:** International exchange is a two-sided coin, involving exporters and importers. However, a systematic search of the academic literature reveals a striking imbalance: while exporter behavior has been extensively studied, importer behavior remains a largely neglected area of study, even though importers are playing an ever more important (often dominant) role in consummating trade transactions. In this article, we assert that this neglect stems from two critical – but flawed – assumptions. The first is that exporters are the driving force behind international trade transactions, and the second is that importers follow the neoclassical economics theory of "rational choice" in international sourcing.

**Ulrich Seidl's Import Export (2007):** A film on labor migration between eastern and western Europe, provides an international frame for revisiting the second-wave feminist debate on housework. In the last two decades, "women's work" has been outsourced transnationally on a large scale, leading to the emergence of an international private sphere inhabited by a new housewife figure. The feminist housework debate of the 1970s supplies the groundwork for a critique of autonomist neo-Marxism that foregrounds the role of language, translation, and visual gesture in the contemporary import/ export of labor.

**Michael R. Mullen:** Department of Marketing and Logistics of the Eli Broad Graduate School of Management at Michigan State University in East Lansing, Michigan. A new theoretical model is developed to explain these controversial relationships. The a priori model receives support from a structural equation analysis of data from 107 countries. Exports are found to have a direct positive effect on an economic dimension and a direct negative effect on basic needs. Imports are shown to have the opposite direct effects. Indirect and total effects also are explored.

**Thomchick, Evelyn; Young, Richard R.; Ruamsook, Kusumal:** Import and export processes are important components of international and global supply chains. Errors made during the import or export process, most often with regard to information flow or noncompliance with government regulations, often result in increased cycle time and/or costs. Yet these processes are often not given much attention, either in supply chain management executives' strategy or in academic research on supply chain management. This article describes the roles of the import and export processes in the supply chain. The article then compares several common elements of import and export processes, not

only with each other, but with the expertise that major firms possess relative to how important a particular element may be considered over time.

### **Emerald Group Publishing Limited:**

Design/methodology/approach – To achieve the goal of this paper, the autoregressive moving average with explanatory variables (ARMAX) model was applied. To this end, the paper drew on the published export demand model and the import demand model of Narayan and Narayan for Fiji. Findings – The paper's main findings are: Fiji's imports will outperform exports over the 2003-2020 periods; and current account deficits will escalate to be around F\$934.4 million on average over the 2003-2020 periods.

### **Research Methodology:**

**Correlation:** A correlation study is a research writing that attempts to relate an event to another events or sets of causality which precipitate the event.

Slabs:

0 -0.3 slightly correlated,

0.3-0.7 moderately correlated,

0.7-1 strongly correlated

**Regression:** A statistical measure that attempts to determine the strength of the relationship between one dependent variable (usually denoted by) and the series of other changing variable (known as independent variable).

$Y=a+bx$

a= the intercept

b= the slope

x= the variable that are using to predict y

y= the variable that are trying to predict

**Mar Ratio:** A measurement of returns adjusted for risk that can be used to compare the performance of commodity trading advisors, hedge funds and trading strategies. The MAR Ratio is calculated by dividing the compound annual growth rate (CAGR) of a fund or strategy since inception by its biggest drawdown. The higher the ratio, the better the risk-adjusted returns. The MAR Ratio gets its name from the Managed Accounts Report newsletter, which developed this metric.

**Mar Ratio** =  $\frac{\text{Compound Annual rate of return}}{\text{Maximum draw down}}$

**T Test:** T test is used to compare two different set of values. It is generally performed on a small set of data. T test is generally applied to normal distribution which has a small set of values. This test compares the mean of two samples. T test uses means and standard deviations of two samples to make a comparison. The formula for T test is given below:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where,

$\bar{x}_1$  = Mean of first set of values.

$\bar{x}_2$  = Mean of second set of values.

$s_1$  = Standard deviation of first set of values.

$s_2$  = Standard deviation of second set of values.

$n_1$  = Total number of values in first set.

$n_2$  = Total number of values in second set.

### LIMITATIONS:

1. MSCI data has been considered 2008 onwards.
2. Dollar index value was considered from 2006.
3. CPI has been considered from 2004 and base year was 2005 which were reviewed in 2007 and 2010.
4. BDI has considered as global economic indicator.

### DATA ANALYSIS AND INTERPRETATION:

#### Correlations

		BDI	WORLDEXPORTS	DOLLARINDEX	CPI	MSCI
BDI	Pearson Correlation	1	.195	-.222	-.064	-.823*
	Sig. (2-tailed)		.643	.597	.879	.044
	N	8	8	8	8	6
WORLDEXPORTS	Pearson Correlation	.195	1	.308	-.439	.648
	Sig. (2-tailed)	.643		.457	.277	.164
	N	8	8	8	8	6
DOLLARINDEX	Pearson Correlation	-.222	.308	1	-.698	.734
	Sig. (2-tailed)	.597	.457		.054	.097
	N	8	8	8	8	6
CPI	Pearson Correlation	-.064	-.439	-.698	1	-.673

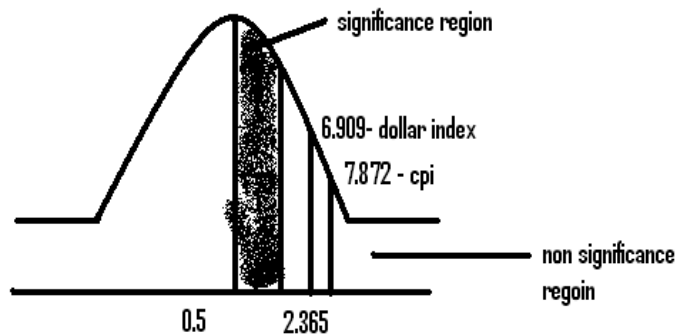
	Sig. (2-tailed)	.879	.277	.054		.143
	N	8	8	8	10	6
MSCI	Pearson Correlation	-.823*	.648	.734	-.673	1
	Sig. (2-tailed)	.044	.164	.097	.143	
	N	6	6	6	6	6

\*. Correlation is significant at the 0.05 level (2-tailed).

**Interpretation:**

Weighted least square analysis has been applied to find the future movement of world exports and imports index with BDI. The r<sup>2</sup> (square) is found to be strongly co-related that is 83%, where as the world exports got influenced by the global economy BDI. The calculated value is found to be >0.5 that is .490 hence it is significant and is expected to move down side as BDI direction towards down movement.

**T - Test**



**Interpretation:**

**Accept Null hypothesis:** If the calculated value has fallen in significant region, CPI and Dollar Index influence World exports and imports index.

Reject the Null hypothesis and accept the alternative hypothesis if the calculated has fallen in the non significant region.

**Regression Analysis:**

$$Y = a + bx$$

**Interpretation:** The world exports are expected to move downside in near future based on regression equation, as the calculated value is found to be lesser than the current value i.e.  $-0.10024945 < -0.1$ .

**Mar Ratio:**

Avg. returns	-5.722326821	Avg. returns	2.70641
10 % of returns	-0.572232682	10 % of returns	0.270641
Drawdown	321208.4	Drawdown	449.677
Mar ration	-1.7815E-05	Mar ration	0.006022

**Interpretation:** The performance measure Mar ratio has been applied on MSCI. During the analysis period the performance found to be good as the calculated value has fallen in positive region.

**Variable Processing Summary**

	Variables	
	Dependent	Independent
	WORLDEXPORTS	MSCI
Number of Positive Values	5	6
Number of Zeros	0	0
Number of Negative Values	3	0
Number of Missing User-Missing Values	0	0
System-Missing	2	4

**Model Summary and Parameter Estimates**

Dependent Variable : WORLD EXPORTS

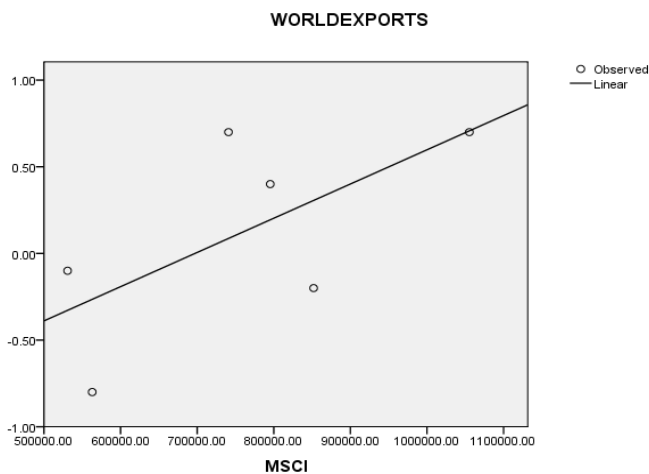
Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	.420	2.901	1	4	.164	-1.376	1.974E-6

**Model Summary and Parameter Estimates**

Dependent Variable : WORLD EXPORTS

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	.420	2.901	1	4	.164	-1.376	1.974E-6

The independent variable is MSCI.



The above linear curve estimate picture show that observed value has fallen above the trend line and expected to move upside along with the MSCI in future.

**FINDINGS:**

1. The world exports got influenced by the global economy BDI, hence it is significant and expected to move downside.
2. CPI and Dollar index is influencing world exports and import index.
3. The world exports are expected to reduce in near future based on regression analysis.
4. MSCI is expected to increase in the future as per Mar ratio.

**CONCLUSION:**

I conclude the analysis of global economy effect on world exports and imports index in pre and post recession period during 2002-2014. Global economy reflectors BDI and MSCI have been used to measure the past and future movement of exports and imports. In this analysis only two global economic factors (CPI and Dollar index) were considered which having strong influence on the world

exports and imports. In the near future global economy may get revive from the recession and move towards boom economy; along with the economy index of exports and imports are expected to move upside. Hence there is further scope to do research in this area to find future direction of the global exports and imports.

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