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The Aftereffects of IMF Interventions on International Trade: Lessons from the Indian Experience

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Abstract

Loans from IMF in the form of SDRs are always conditional and the conditions are to implement structural adjustments in the economy of beneficiary nations. In this context, one of the priority areas of reforms prescribed by IMF to India in its structural adjustments was in the context of exchange rate and trade policy .So, the question is that whether IMF interventions actually have significant aftereffects on international trade or not. In order to answer this, the present study has been initiated and by implementing t-Test: Paired Two Sample for Means it has been found that there is a significant difference in exports, imports and total trade of goods and services before and after IMF interventions. But, an interesting finding of the study is that the IMF interventions though have the ability to significantly boost exports, it has also significant effects on improvements of imports. So, favorable effects of boost in exports will finally be neutralized by adverse effects of improvements in imports and the ratio between imports and exports may remain insignificant even with IMF interventions..

Key words: IMF, International Trade, t-Test, Exports, Imports

India’s Policy Choices

Before 1947, there were over 650 self-governing provinces reporting either directly or indirectly to the British Government and at the time of independence each one of them were given options either to join India, or Pakistan or remain as a separate entity. Though it was not a small task to make the new political map by convincing the princely states for joining India, the then Deputy Prime Minister Vallabh Bhai Patel met all the challenges for doing it and finally created the largest democracy of the world. In the economic front, before making and implementing any policy it was necessary to assess the productive capacity and economic resources in hand at that time. Around 60% of Indian Gross Domestic Product (GDP) at that point of time was dependent on agriculture which was again dependent on monsoon and dominated by feudal lords and upper caste population. Agricultural productivity was low and full of landless laborers. There were only a handful of colleges in India and illiteracy rate was more than 80% in the country. Though the country was and still is blessed with natural resources and minerals; power and transportation systems being almost non-existent at that time, it was not possible to give back up to economic growth. So, it was extremely necessary at that time to adopt policy measures in such a way that rapid development of the economy can be attained.

The economic philosophy of India got influenced by two competing approaches in the early years of Independence. They are: the Gandhian approach and the Nehruvian approach. The Gandhian approach came from Mahatma Mohandas Gandhi while the Nehruvian approach came from the first Prime Minister of India Jawaharlal Nehru. Gandhian approach was guided by the principles of self-reliance that advocated self-sufficiency of food, cloth and shelter, creation of small scale industries and discouragement of mass migration to urban areas for employment. Nehruvian approach was also advocating rural development like the Gandhian approach but disagreeing with its primary focus on small scale industries only as Nehru believed that it would take a long period time to achieve rapid economic growth by ignoring heavy scale industries, large education base, development of science and technology. Additionally, Nehru was also fascinated by the then Soviet model of economic planning and that is why a two sector model got adopted in Indian economy, the first sector being agriculture, industry became the other sector of economic planning. For agricultural development, Government provided loans, information, irrigation facilities, seeds, fertilizers, minimum support price mechanisms, subsidies etc. For industrial development, investment in public sector large scale industries was done. Private investments were encouraged in desired areas that would help achieve the overall economic goals while industries other than them got discouraged or banned through regulatory and licensing requirements. For example, car was considered a luxury item and that is why Government never encouraged its production because of which the entire multiplier effect on the automobile and related industries got delayed. In the name of self-reliance import of not only many consumer goods but also industrial machineries and materials were either discouraged or banned. Import substitution became a part of two-sector model. There were a number of industries in which private players were not allowed and reserved for public sector only. They include: power, steel, chemicals, nuclear technology, railways, irrigation, petroleum, TV and radio etc. So, it was a situation when a strong private sector dominated the agriculture while a mix of private and public sectors got seen within industry.

The IMF Interventions

The Nehruvian era ended with his death in 1964 after which Prime Minister Lal Bahadur Shastri take charge. However, a radical change in Indian economy got witnessed during the period of Mrs. Indira Gandhi who served as Prime Minister replacing Mr. Shastri from 1966 till 1977and again from 1980 till 1984 when she got assassinated. The economic regime proposed and implemented by Mrs. Gandhi was focused on diversification of economic base and improvement in investment. She proved herself as a pioneer of privatization in priority sectors. Mobilization of financial resources through financial sector reforms for rapid, fair and balanced regional development became the hallmark of national policy. In this connection, the credit of nationalization of banks in India and reaping its benefits for the development of economy goes to her. But still the growth rate never became promising and current account deficits always remained a concern for policy makers. The average annual rate of growth during the period was around 3.5% which is termed as the hindu rate of growth by many economists. Finally, stagnations engulfed Indian economy in the year 1981 in such a way that in order to finance for basic commodities like medicines, petroleum and defense materials also foreign exchange reserves became insufficient. India was one of the original signatories of Bretton Woods agreement which created organizations like World Bank (WB), World Trade Organization (WTO) and International Monetary Fund (IMF). But, till1981 India never knocked the doors of IMF, instead the country was more dependent on WB. In 1981, the Government of India took Special Drawing Rights (SDRs) worth of SDRs 5000 Million in the form of Extended Arrangement (EA). This has been utilized in 1982, 1983 and 1984 for mobilization of domestic savings, liberalization of trade restrictions and ensuring domestic financial stability. A balance amount of SDRs 1100 Million remained unused out of the total SDRs sanctioned. As part of the conditionality of loans in terms of SDRs, India implemented the Comprehensive Adjustment Program (CAP) prescribed by IMF and in this way the first phase of liberalization got introduced in the economy in 1984. The series of liberalization policies initiated in 1984 focused on relaxation of investment limits in different industries, permission for expansion and diversification of private sector firms, removal of price controls on industries like aluminum, paper, cement etc., deregulation for export promotion in income elastic products like gems and jewellery, leathers, electronics, computers etc. Though these interventions of IMF through its adjustment programs helped India boost its exports, another set of interventions liberalized the imports also. As part of it, licensing requirements in imports got eased for many products and non-tariff barriers got replaced by tariff barriers. Hence, favorable effects on current account due to the growth in exports got neutralized by adverse effects on it caused by improvement in level of imports.

This situation further got vulnerable as the economic growth rate globally slowed down in late 1980s. And it worsened with the emergence of oil crisis occurred due to the outbreak of Gulf war. In addition to these external adverse effects, in the home front there remained severe political instability in the country and Indian economy reached to a sick condition by the end of 1980s. The year 1991 had been characterized by a wide current account deficit, lowered investors' confidence and outflow of foreign capital. In such a situation, the newly elected Prime Minister P. V. Narasimha Rao and the Finance Minister Dr. Manmohan Singh again knocked the doors of IMF. But, this time it was in terms of a Standby Arrangement (SBA) an amount of SDRs 552 Millions in 1991 and SDRs 1656 Millions in 1993 got withdrawn. The Table 2.1 gives description of lending arrangements of India with IMF.

Table 2.1: LENDING ARRANGEMENTS OF INDIA WITH IMF

(Amounts Expressed in Millions of SDRs)

Facility	Date of Arrangement	Date of Expiration	Amount Approved	Balance not Drawn	Program Years
EA	09/11/1981	08/11/1984	5000	1100	1982,1983,1984
SBA	08/01/1991	07/04/1991	552	0	1992
SBA	31/10/1991	30/06/1993	1656	0	1992,1993
Data Source: O. S. Deol, IMF Adjustment Programmes and Developing Economies (New Delhi: New Century Publications, 2005), pp. 163.					

Like the previous attempt in 1981, this loan from IMF was also conditional and the condition was to implement Structural Adjustment Program (SAP) drafted jointly by IMF and WB and prescribed to macro-economic stabilization in Indian economy. These structural adjustments prescribed by IMF and implemented by Government of India focused on:

- tightening of monetary policy
- flexibility in trade policy
- reforms in tax structures
- promotion of foreign capital and technology
- cutting down of Government expenditures

The Aftereffects of IMF Interventions on International Trade

One of the priority areas of reforms prescribed by IMF in its structural adjustments was in the context of exchange rate and trade policy. There was a import control regime which after IMF interventions got replaced by liberalization in imports substantially. The liberalizations in imports included even capital goods, raw materials and other inputs. However, at the initial period of IMF interventions during early 1990s there remained a set of quantitative restrictions through not at all qualitative in nature on imports of especially final consumer goods. But, gradually these quantitative restrictions also got removed. Exports also got promoted by Government initiatives through incentives. Table 3.1. depicts the picture of India's foreign trade scenario from 1961 – 2018.

Table 3.1: INDIA'S FOREIGN TRADE 1961 – 2018

Year	Exports of Goods and Services (% of GDP)	Imports of Goods and Services (% of GDP)	Total Foreign Trade (%of GDP)		Year	Exports of Goods and Services (% of GDP)	Imports of Goods and Services (% of GDP)	Total Foreign Trade* (%of GDP)
1961	4.2	5.9	10.1		1990	6.9	8.3	15.2
1962	4.1	5.9	10.0		1991	8.3	8.3	16.7
1963	4.2	5.8	10.0		1992	8.7	9.4	18.1
1964	3.7	5.6	9.2		1993	9.7	9.6	19.3
1965	3.3	5.1	8.4		1994	9.7	10.0	19.7
1966	4.1	6.6	10.6		1995	10.7	11.8	22.5
1967	4.0	5.8	9.8		1996	10.2	11.3	21.6
1968	4.0	4.9	8.8		1997	10.5	11.7	22.2
1969	3.6	4.0	7.6		1998	10.8	12.5	23.3
1970	3.7	3.8	7.5		1999	11.3	13.1	24.4
1971	3.6	3.9	7.5		2000	12.8	13.7	26.4
1972	4.0	3.6	7.6		2001	12.3	13.2	25.5

1973	4.1	4.6	8.8		2002	14.0	15.0	29.0
1974	4.7	5.9	10.7		2003	14.7	15.4	30.1
1975	5.5	6.5	12.1		2004	17.6	19.3	36.9
1976	6.6	6.0	12.6		2005	19.3	22.0	41.3
1977	6.3	6.2	12.4		2006	21.1	24.2	45.3
1978	6.2	6.5	12.7		2007	20.4	24.4	44.9
1979	6.6	8.0	14.7		2008	23.6	28.7	52.3
1980	6.0	9.1	15.1		2009	20.0	25.4	45.5
1981	5.8	8.4	14.3		2010	22.0	26.3	48.3
1982	5.9	8.0	13.9		2011	23.9	30.2	54.1
1983	5.7	7.7	13.5		2012	24.0	30.7	54.7
1984	6.2	7.6	13.8		2013	24.8	28.4	53.2
1985	5.2	7.5	12.7		2014	22.9	25.9	48.8
1986	5.1	6.9	12.0		2015	19.8	22.1	41.9
1987	5.5	6.9	12.4		2016	19.2	21.0	40.2
1988	5.9	7.3	13.3		2017	18.8	22.0	40.8
1989	6.9	8.0	14.9		2018	19.7	23.6	43.4
Note: *Total foreign trade is the sum of exports and imports of goods and services (% of GDP) Data Source: World Bank Indicators Database								

Now, from the above table it is evident that the international trade scenario has changed drastically after IMF interventions as we can see that in 1993 the total trade as percentage of GDP was 19.3 and it reached to 43.4 by the year 2018. But, in order to provide analytical support to the view that IMF interventions has significant aftereffects on international trade empirical evidences are most suitable. For this purpose as a statistical tool we have adopted t-Test: Paired Two Sample for Means. One can use a paired test when there is a natural pairing of observations in the samples, such as when a sample group is tested twice — before and after an experiment. This analysis tool and its formula perform a paired two-sample Student's t-Test to determine whether observations that are taken before a treatment and observations taken after a treatment are likely to have come from distributions with equal population means. This t-test form does not assume that the variances of both populations are equal. In this case, the treatment is IMF interventions in Indian economy and we are required to study the mean value of the chosen indicators of international trade before IMF interventions and after IMF interventions. The t-Test: Paired Two Sample for Means works as follows: For example, India fully implemented IMF prescriptions in the form of structural adjustments in 1993 after which radical changes in international trade got witnessed and if we will take it as an event then we can consider the years before 1993 as pre intervention period and years after 1993 as post intervention period. The t-Test: Paired Two Sample for Means require equal number of observations in both samples and that is why if we take 1993 to 2018 as post reforms period i.e. 26 observations; then we are required to go back 26 years back from 1993 and take 1967 to 1992 as pre intervention period. The mean values of selected variables in pre intervention period and post intervention period are then has to be compared by calculating the t-value and then comparing it with the critical value of t at the given degrees of freedom and chosen significance level (0.05 in this case). The null and alternative hypotheses taken in the present analysis can be stated as follows:

Null Hypothesis - H0: There is no significant difference in positions of selected indicators of international trade in pre intervention period and post intervention period.

Alternative Hypothesis - H1: There is no significant difference in positions of selected indicators of international trade in pre intervention period and post intervention period.

The implementation of t-Test: Paired Two Sample for Means tells about the presence or absence of significant differences between sample mean values. Hence, the student's t test has given answer of the question whether the average positions of selected indicators of international trade have significantly changed in the post intervention period or not. Table 3.2 enumerates the description about selected indicators of international trade.

Table 3.2: DESCRIPTION ABOUT SELECTED REAL SECTOR INDICATORS

Name of the Variable	**Description**
Exports (as % of GDP)	Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.
Imports of (as % of GDP)	Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.
Exports/Imports	Total Exports of goods and services divided by Total Imports of goods and services
Source: World Bank Indicators Database	

The Table 3.3 shows the pre intervention period (i.e. 1967 to 1992) and post intervention period (i.e. 1993 to 2018) positions of selected international trade indicators.

Table 3.3: POSITIONS OF INTERNATIONAL TRADE INDICATORS IN PRE AND POST INTERVENTION PERIODS

Year	Exports (% of GDP)	Imports (% of GDP)	Total Foreign Trade (%of GDP)	Exports/Imports	Year	Exports o (% of GDP)	Imports (% of GDP)	Total Foreign Trade (%of GDP)	Exports/Imports
Pre-Intervention Period					Post-Intervention Period				
1967	4.0	5.8	9.8	0.69	1993	9.7	9.6	19.3	1.01
1968	4.0	4.9	8.8	0.82	1994	9.7	10.0	19.7	0.97
1969	3.6	4.0	7.6	0.90	1995	10.7	11.8	22.5	0.91
1970	3.7	3.8	7.5	0.97	1996	10.2	11.3	21.6	0.90
1971	3.6	3.9	7.5	0.92	1997	10.5	11.7	22.2	0.90
1972	4.0	3.6	7.6	1.11	1998	10.8	12.5	23.3	0.86
1973	4.1	4.6	8.8	0.89	1999	11.3	13.1	24.4	0.86
1974	4.7	5.9	10.7	0.80	2000	12.8	13.7	26.4	0.93
1975	5.5	6.5	12.1	0.85	2001	12.3	13.2	25.5	0.93
1976	6.6	6.0	12.6	1.10	2002	14.0	15.0	29.0	0.93
1977	6.3	6.2	12.4	1.02	2003	14.7	15.4	30.1	0.95
1978	6.2	6.5	12.7	0.95	2004	17.6	19.3	36.9	0.91
1979	6.6	8.0	14.7	0.83	2005	19.3	22.0	41.3	0.88
1980	6.0	9.1	15.1	0.66	2006	21.1	24.2	45.3	0.87
1981	5.8	8.4	14.3	0.69	2007	20.4	24.4	44.9	0.84
1982	5.9	8.0	13.9	0.74	2008	23.6	28.7	52.3	0.82
1983	5.7	7.7	13.5	0.74	2009	20.0	25.4	45.5	0.79
1984	6.2	7.6	13.8	0.82	2010	22.0	26.3	48.3	0.84
1985	5.2	7.5	12.7	0.69	2011	23.9	30.2	54.1	0.79
1986	5.1	6.9	12.0	0.74	2012	24.0	30.7	54.7	0.78
1987	5.5	6.9	12.4	0.80	2013	24.8	28.4	53.2	0.87
1988	5.9	7.3	13.3	0.81	2014	22.9	25.9	48.8	0.88
1989	6.9	8.0	14.9	0.86	2015	19.8	22.1	41.9	0.90
1990	6.9	8.3	15.2	0.83	2016	19.2	21.0	40.2	0.92
1991	8.3	8.3	16.7	1.00	2017	18.8	22.0	40.8	0.85
1992	8.7	9.4	18.1	0.93	2018	19.7	23.6	43.4	0.83
Mean	5.58	6.66	12.26	0.85		17.07	19.67	36.75	0.88
t-Statistic (Computed t value)						-12.8*	-11.6*	-12.22*	-1.29
t-Critical (Value of t from the table@0.05)						2.1	2.1	2.1	2.1
Note: *Null Hypothesis Rejected @ 0.05 Level of Significance Data Source: World Bank Indicators Database									

Along with the vales, the average values of each of the indicators in the two time periods have been also shown in the table. Then the computed value of t i.e. t-statistic and the value of t from the table i.e. t-critical for each of the indicators have been shown in the table. It is evident from the results that the absolute values of t-statistics for each of the indicators are more than the values of t-critical except in case of exports/imports. Hence, the null hypothesis is getting rejected for all the indicators of international trade except the last one.

Conclusions

As per the empirical evidences traced in the present study it has been proved that the IMF interventions have significant after effects on level of exports, level of imports and also the total level of international trade. But, since the ratio of exports and imports are not changing significantly, it can be concluded that that the IMF interventions though have the ability to significantly boost exports, it has also significant effects on improvements of imports. So, favorable effects of boost in exports will finally be neutralized by adverse effects of improvements in imports and the ratio between imports and exports may remain insignificant even with IMF interventions.

The present study has a limitation that it is based on a few indicators of international trade only and the results have been derived from inferential analyses like t-Test only. These limitations are expected to be overcome by future researchers on this topic.

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