Analysing the Terms of Trade Effect for Pakistan

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ABSTRACT

The study investigates the impact of changes in terms of trade in Pakistan on its income and consumption potentials, by employing two measures of terms of trade, namely, barter terms of trade and income terms of trade. The study examines Pakistan's terms of trade behaviour using time series data from 1990-2008, and works out the losses the country had to bear owing to deterioration in its terms of trade. Paper finds that worsening of terms of trade has a negative impact on economic growth of Pakistan, as it ultimately reduces gross domestic product.

I. INTRODUCTION

Trade policies' analysis in developing countries have gained key interest for the past several decades. Deterioration of terms of trade is one of the important factors to explain the widening income gap between developing (LDCs) and developed countries. Developing economies typically face large fluctutions in the price of the goods they export. This pattern is attributed to the heavy reliance of LDCs on commodity exports, whose prices are more volatile than those of manufactured goods. Such fluctuations are unwelcomed because they can contribute to increased volatility in the growth of output (GDP). Indeed, several studies have concluded that changes in the terms of trade can account for half of the output volatility in developing countries [Mendoza (1995)].

Growth economists have discovered a very profound impact of terms of trade changes on economic growth. *Income* terms of trade instability has long-run relationships with output; both are negatively related with each other [Ghirmay, Sharma, and Grabowski (1999)]. An improvement in terms of trade leads to higher levels of investment and thereby rapid economic growth [Mendoza (1997); Bleaney and Greenaway (2001); Blattman (2003)]. Important detail that needs to be talked about at this point is what are the factors which are believed to determine the terms of trade. These primarily involve the cost of production of the two countries involved, along with their productivity and efficiency. Another essential variable is high variability in terms of trade. Abrupt change in a country's terms of trade (e.g., a drastic fall in the price of a primary product that is a country's main export) can cause serious balance-of-payments problems if the country depends on the foreign exchange earned by its exports to pay for the import of its manufactured goods and capital equipment. High variability can also adversely influence the economy's growth through reallocation of both inputs (production processes) and outputs, with a loss in output while reallocation takes place. Existing investment may no longer be profitable to continue operating and may have to be scrapped that definitely reduces capital stock. *Ex-ante* uncertainty associated with high relative price volatility of both inputs and outputs may reduce investment significantly where hedge markets are incomplete.

Exchange rate variation also has close connection with terms of trade. A large fall (depreciation) in the value of the exchange rate would lead to a fall in export prices and a rise in the cost of imports. This worsens the terms of trade index. On the contrary, the lower exchange rate restores competitiveness for a country since, demand for exports grows and import demand from domestic consumers slows down.

In Pakistan's scenario, despite of having a significant openness to international trade, the country encounters low diversification in production and exports. This makes it vulnerable to adverse fluctuations and shocks in world markets, as is evident, for instance, in the terms of trade fluctuations and the volatility in its economic performance. Before examining Pakistan's long run terms of trade pattern and probing the loss in terms of GDP the country had to bear owing to deterioration in its terms of trade in detail, it is essential to conceptualise certain associated terminologies and comprehend the correlation that exists between them.

For convenience, the paper is organised as follows: Section II gives a discussion on basic concepts of terms of trade. Section III reviews literature and includes abstracts from the relevant researches that have been carried out in past. Section IV contains empirical evidence on countries-specific terms of trade. Brief description of Pakistan's economy is given in Section V, followed by data, methodology and findings in Section VI. Paper is concluded in Section VII, and a few policy implications are stated in Section VIII.

II. TERMS OF TRADE: BASIC CONCEPTS

The concept of terms of trade was introduced by J. S. Mill for determining the division of gains between the trading countries. The terms of trade were understood as a quantitative relation between two commodities traded between two countries. However, in the later discussion of gains from trade, the same measure was variously defined. Of such definitions, three stand out to be prominent in the literature:

(i) Barter terms of trade:

  (a) Gross
  (b) Net

(ii) Income terms of trade.
(iii) Single or double factorial terms of trade.

The double factorial terms of trade is theoretically superior to the 'net barter terms of trade', yet it is relatively difficult to calculate. Similarly, the 'gross barter terms' of trade is equally difficult. Generally two concepts, namely, the net *barter* TOT and *income* TOT are applied in empirical studies. The same will be done in the present case.

Net *barter* terms of trade exhibit relationship between the prices at which a country sells its exports and the prices it pays for its imports. If the prices of a country's exports rise relative to the prices of its imports, it signifies that its terms of trade have moved in a favourable direction, because it now receives more imports for each unit of goods exported.

Thus, the net *barter* terms of trade expressed in index form can be written as:

Barter Terms of Trade (TOT) = [Unit Value Index of Exports /
Unit Value Index of Imports]*100 ... ... (1)

The indices are expressed with reference to a certain year as a base.

An abrupt deterioration in the country's terms of trade in the above example can cause rising trade deficit if the country largely depends on foreign exchange earned by its primary exports (say cotton, wheat, hides and skin) to pay for the import of its manufactured goods and capital equipment.

The formulation in Equation 1 compares only the prices of exports and imports. As such, changes in this ratio alone does not tell us whether the country would be better off or worse off (in terms of exports as capacity to import), because the formulation does not include the variable of actual amount of exports. Knowing that, under the law of demand, the world demand for our exports will go down with the rise in price of our exports, it is likely that the country may even end up with lesser export receipts than before despite higher export prices (this can be particularly true in case the demand elasticity is greater than unity). To delineate implications in terms of exports as capacity to import, therefore, requires modification in the above formula. This has been done by replacing the *Barter* TOT by an *Income* TOT, which explicitly takes into account the actual export volume that can change with the change in price of exports. The formulation takes the form:

Income Terms of Trade = [Unit Value Index of Exports /
Unit Value Index of Imports] * Qx ... ... (2)

where Qx refers to actual quantity of exports in real terms.

Expression 2 reveals that whether the country would end up with net gain or net loss as a result of changes in terms of trade depends on the elasticity of demand for its exports. In broader terms, it depends on Marshall Lerner Condition that states that if foreign demand for exports and domestic demand for imports are relatively elastic [i.e., PED x + PED m >1] then an increase in terms of trade will worsen the trade balance.

Sometimes elasticity of demand varies over time. In the short term demand is often inelastic, as it takes time to change consuming patterns; in the longer term demand becomes more elastic. Therefore, we often see a J Curve effect where an improvement in terms of trade worsens trade balance in short term but improves in long term.

III. LITERATURE REVIEW

A lot of research has been carried out to investigate the behaviour and determinants of terms of trade, and their impact on major macroeconomic

variables. One such worth mentioning relationship which has been widely studied is between movements in the terms of trade and its influence on the balance of payments. On the development standpoint, the Prebisch- Singer thesis [Prebisch (1950) and Singer (1950)] suggests that the relative prices of primary commodities show a negative trend. Therefore, the effect of terms of trade deterioration (that is, import prices rising faster than export prices, other things being the same) is to deteriorate the balance of payments at a given growth rate [Thirlwall (2003)]. This has two important implications.

Firstly, there are the implications of the declining terms of trade for primary commodities relative to manufactures, and secondly, the terms of trade of developing countries relative to developed ones. Despite being dissimilar, they are considerably related to each other.

Baxter and Kouparitsas (2000) reported that the magnitude of change in terms of trade is twice as large in DCs as in developed countries. Indeed, several studies have concluded that changes in terms of trade can account for roughly half of output volatility in DCs [Mendoza (1997); Kose (2002)]. The criticality of the relationship between terms of trade and economic growth can be seen particularly during the changing world trade scenario of global integration or disintegration, when export prices converge or diverge world wide, transforming the terms of trade structure and bringing economy wide responses [Blattman (2003)].

Kipici (1996) analysed the existence of the Harberger-Laursen-Metzler hypothesis for Turkey. The hypothesis states that when the terms of trade improves, a country's real income level will rise and, since part of that increase will fall on saving, the improvement in the terms of trade improves the trade balance. The models within the intertemporal optimising framework, however, assert that the relation between the terms of trade and trade balance depends on the relative importance of consumption-smoothing and consumption-tilting motives that are governed by the intertemporal elasticity of substitutions. When there are non tradable goods, the intratemporal elasticity of substitution also plays an important role.

To show the relationship between terms of trade and economic growth, Mendoza (1997) examined the impact of terms of trade on economic growth of a sample of 40 countries (9 industrial countries and 31 developing countries) using cross-country evidence over the period 1971-1991. And the results showed a positive correlation between the two variables.

Moreover, DCs' exports mainly comprise of commodity products, which generally have a high degree of openness to international trade and therefore a change in terms of trade, will lead to significant change in their economies [Broda and Tille (2003), p. 2]. Furthermore, export prices of commodity

products are fluctuating and price elasticities of commodity products are inelastic.[1]

Barro and Sala-i-Martin (1995) empirically investigated determinants of economic growth, using cross-country data. They established that the growth rate in real per capita GDP was positively correlated with an improvement in the world price. No theoretical reasoning was being provided in the paper for this. In a small open economy context, conventional static trade theory reveals that an improvement in the terms of trade leads to an increased "absolute level" of national income. However, this framework fails to investigate the effects of the terms of trade on the growth rate. In contrast, by using a dynamic trade model of a small open economy, this paper looks into the relationship between an improvement in the terms of trade and the "growth rate" of national income. And trade pattern was found to determine the effect of the terms of trade on the growth rate of national income.

Hadass and Williamson (2003) studied the relationship between terms of trade and economic growth using cross-country evidence over the period 1870-1940. Countries were classified in their study according to the core and periphery, which are defined according to labour scarcity and level of development criteria. They also tried few criteria of the periphery in their sample. On the whole, it was concluded that although it is the primary product exporters who are favoured by the terms of trade movement, it slowed their economic growth. Moreover, there is strong evidence of asymmetry in economic growth between the core and periphery. Generally, the impact of terms of trade on economic growth was very small for the core and periphery. In the pre-war period, changes in terms of trade explained less than one-fifth of economic growth, which is expressed by the GDP per capita growth rate. Nonetheless, the study covers few of DCs that remained poor up to World War II.

In sum, theory points to a potentially robust negative relationship between economic growth and terms of trade volatility, and predicts that a country will adjust to a terms of trade shock through a contraction in output. Theory makes a compelling case that terms of trade dramatically affects the funds available to underdeveloped countries for capital formation, and hence growth, as changes in the volume and value of foreign trade tend to be important in underdeveloped countries because their surplus income over subsistence is often entirely dependent on export revenues, and investment is in turn dependent on these income sources.

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[1]The demand for commodity is price inelastic mainly because only a small portion of income is spent for commodity and few substitutes are available. Thus, when the price of the commodity changes, it does not significantly change the consumption of it. Moreover, the demand for the commodity exports of developed countries is unstable because of business cycle fluctuations in developed countries. The supply of commodity exports of DCs is price inelastic because of internal rigidities and inflexibilities in resource used in most DCs. Supplies are unstable or shifting because of weather conditions and so forth [Salvatore (2004), pp. 367–369].

IV. EMPIRICAL EVIDENCE ON COUNTRIES-
SPECIFIC TERMS OF TRADE

(a) South Asia

Between January 2003 and May 2008 South Asia suffered a huge loss of income from a severe terms-of-trade shock owing to the surge in global commodity prices. South Asia lost substantially from both higher food and petroleum prices. Within the region, losses range from 36 percent of GDP for the tiny Island country of Maldives to 8 percent for Bangladesh (Figure 1). Much of the loss came from higher petroleum prices, where all countries lost. On the food account, Bangladesh lost most, followed by Nepal and Sri Lanka. Pakistan and India actually gained, being significant rice exporters.

Fig. 1. Terms of Trade Loss as Percentage of GDP for South Asian Economies
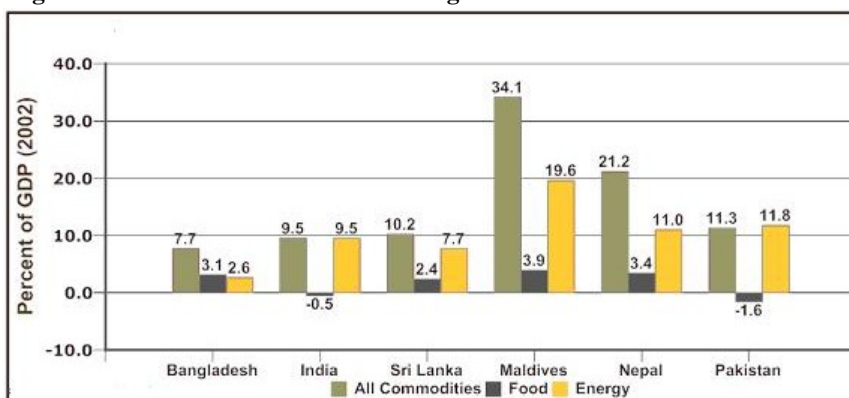
Source: The World Bank.

(b) Developing Countries

The terms of trade for the oil-exporting developing countries deteriorated sharply from a very high level after 1980 throughout till 2001 when it started experiencing improvement. Some metal-exporting economies, such as Chile and Zambia, have also experienced favourable terms of trade, thanks to recent increase in copper prices. For other developing countries, the terms of trade remained slightly above 100 during the 80s but from 1990 onwards became almost flat at 100 (see Figure 2).

(c) Developed Countries

Take the example of G8 countries. Taken together, these eight highly developed economies represent about 14 percent of the world population, but they account for about 65 percent of the World GDP. High income countries in general experienced worsening of terms of trade during 1980-1985, though afterwards it became static at a level slightly above 100 (see Figure 2).

Fig. 2. Terms of Trade for Oil Exporting LDCs, other LDCs and DCs

Index (2000 = 100)
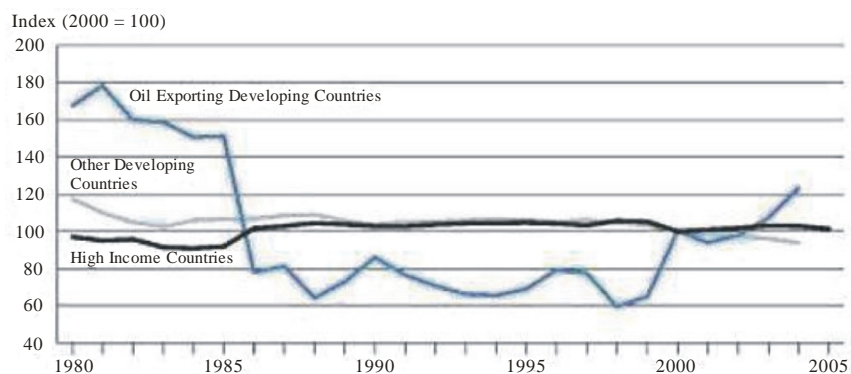
Source: World Development Indicators 2008.

V. BRIEF DESCRIPTION OF PAKISTAN'S ECONOMY

(a) GDP

According to the latest data available for 2007-08, Pakistan is a country with 161 million population and a per capita income (in terms of GNP in current market prices) of Rs 66,548 or US $1085. The economy is the 26th largest economy in the world in terms of purchasing power, and the 47th largest in absolute dollar terms. The per capita has almost doubled from $526 in 1999-00. During this period, the GDP in real terms grew, on average, by 5.5 percent per annum, contributed by the sectoral growth rates of 2.8 percent in agriculture, 9 percent in manufacturing, and 6.2 percent in services. In 2005, it was the third fastest growing economy in Asia. The composition of GDP, i.e., sectoral shares, has shown the following changes: (see Table 1).

Table 1

Sectoral Shares in GDPfc (%)

Sector	1999-00	2003-04	2007-08
a. Commodity Producing Sector	**49.3**	**48.4**	**46.8**
Agriculture	25.9	22.9	20.9
Manufacturing	14.7	17.3	18.9
Construction	2.5	2.0	2.7
Other	6.2	6.2	4.3
b. Services Sector	**50.7**	**51.6**	**53.2**
Total (a+b)	100.0	100.0	100.0

Rising manufacturing share in GDP over time and falling agriculture share is consistent with the historical international pattern of economic growth. As economies mature, their share of manufacturing sector in overall GDP increases and that of agriculture falls. The manufacturing sector is generally dynamic in nature and has much larger forward and backward linkages. Thus, its rapid growth ensures diversification of the economy.

As far the expenditure on GDP is concerned, in Pakistan generally slightly above 80 percent goes to consumption. The proportion of expenditure on investment keeps on changing. In 1999-00, it was 17.4 percent, which declined to 16.2 percent in 2003-04 though picked up to above 20 percent in 2007-08. The share of net exports plus net factor income from abroad has also been changing both in terms of quantum and direction. It was negative in 1999-00, became positive in 2003-04, but again became negative in 2007-08 (see Table 2).

Table 2

Percentage Shares in Total Expenditure

Sector	1999-00	2003-04	2007-08
Consumption	85.1	80.1	86.6
Investment	17.4	16.2	21.1
Net Exports and Factor Income	–2.5	3.7	–7.7
Total Expenditure on GNP (Rs billion)	3778	5765	10712

(b) Saving and Investment

Both saving and investment rates in Pakistan are relatively low compared to comparable developing countries. Moreover, since the saving rate is usually less than the investment rate, a significant part of the investment expenditure is financed from external resources. This reflects dependency of Pakistan's economy on foreign resources in investment financing of Pakistan's economy on foreign resources in investment financing. During 2007-08, Pakistan's total investment as a ratio to GDP was 22 percent, of which only 13.4 percentage points was financed from national saving and the remaining 8.6 points from net external resource inflow. This implied that as large as 61 percent of investment was financed through national saving and the remaining 39 percent from foreign saving. This is shown in Table 3.

Table 3

Saving, Investment Rates (%)

| Country | 2005 | |
	Investment Rate	Saving Rate
Bangladesh	25	30
China	44	51
India	33	32
Indonesia	22	24
South Korea	30	32
Malaysia	20	36
Pakistan	17	18

(c) Inflation

The Consumer Price inflation in Pakistan averaged almost 10 percent per annum during the 90s. It remained fairly low during the earlier years of 2000s, but started picking up again since 2004-05 reaching 12 percent in 2007-08. In the on-going year of 2008-09, the inflation is running around 20 percent. The recent double-digit inflation, while definitely causing hardship to the general consumer, is equally affecting the economic activity in the economy due to sharp increases in the prices of raw material especially construction material.

(d) Foreign Trade

In foreign trade, Pakistan has moved fairly ahead in terms of quantum as well as in its economic classification. Looking at trade numbers since 1980-81 onwards, it transpires that merchandise exports (fob) which averaged 9.8 percent of GDP during the 80s picked up to 13 percent during the 90s. On the contrary, imports (fob) declined from 18.7 percent to 17.4 percent during the same period. This has been helpful in reducing the size of the trade deficit from 8.9 percent of GDP in the 80s to 4.4 percent of GDP in the 90s. In the latest year of 2007-08, exports amounted to $20.2 billion compared to imports of $35.1 billion, leaving a foreign exchange gap of $15 billion.

Viewed in historical perspective, the composition of exports from Pakistan has improved significantly over the past 3 decades. Exports fell 2.5 percent and imports dropped 20 percent in 1998, but by 2000 they were back on the upswing, growing at 8.3 percent and 19 percent, respectively. Pakistan's commerce ministry estimates that up to $1.5 billion of unregistered trade occurs annually, mostly from smuggled imports. The share of primary commodities in total exports which was 44 percent in 1980-81 came down to 10 percent in 2007-08, while the share of manufactured goods rose from 45 percent in 1980-81 to 78 percent in 2007-08. Though the Pakistan's exports, in terms of commodity groups, are still concentrated in a few groups namely, textile group, other manufactures group, food group, and petroleum group, the number of items under these groups has increased sharply over time.

At present, major items of Pakistan's exports pertain to cotton yarn, cotton cloth, knitwear, bed wear, ready-made garments, rice, leather manufactures, footwear, surgical goods, and cement. Figure. 3 gives an insight into their composition.

One of the leading reasons of Pakistan still lagging behind in this sector is the narrow export base, and heavy dependence on textiles and clothing, which account for two thirds of the total exports. Apart from developing new export groups as well as increasing number of exportable items under them, there is a need for improving the quality of exports and hence the value-added component of exports.

Fig.3. Pakistan's Major Exports 2007-08 (Percentage Share)
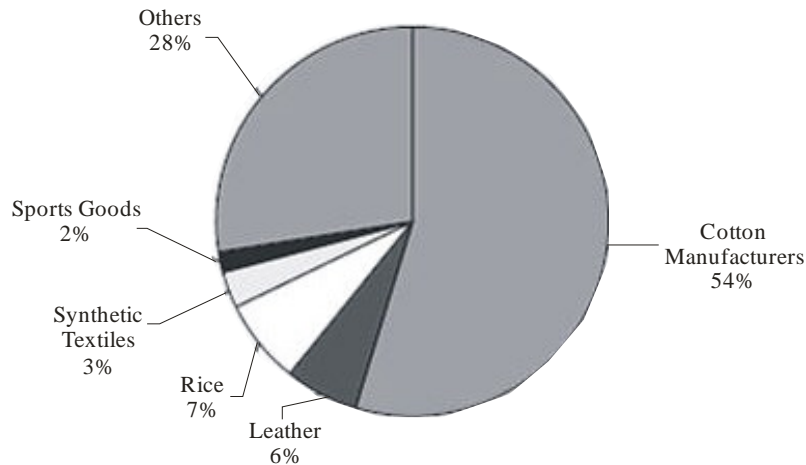
Source: Economic Survey of Pakistan.

Compared to the level of exports in Pakistan, the value of imports is much higher which poses a problem of import financing. For example, for 2007-08, against the export level of $ 20.2 billion, the import value amounted to $ 35.1 billion. The ratio therefore is only 58 percent, implying that as large as 42 percent of imports need to be financed from sources other than exports earnings. Major imports include petroleum crude and products, (some times) wheat, tea, palm oil, machinery, iron and steel, and transport equipment. In more recent years, the growth in imports increased substantially owing to unprecedented rise in oil and food prices.

Pakistan is a member of the World Trade Organisation, and has bilateral and multilateral trade agreements with many nations and international organisations. Fluctuating world demand for its exports, domestic political uncertainty, and the impact of occasional droughts on its agricultural production have all contributed to variability in Pakistan's trade balance.

VI. TERMS OF TRADE OF PAKISTAN: DATA AND FINDINGS

Three kinds of elements have been identified in the study:

– Computation of net *barter* terms of trade.
– Computation of 'export as capacity to import' or *income* terms of trade.
– Terms of trade effect computed in absolute as well as in ratio to GDP terms.

An attempt has been made to ascertain whether there had been any consistent long-term trend in Pakistan's terms of trade. For this purpose, linked series of index numbers of terms of trade for the period 1999-91 to 2007-08 have

been used. (Table 4) Primary data (price indices of exports and imports, and their values in real terms) is taken from Pakistan's Economic Survey. The rest of the data has been arithmetically generated. An examination of the series reveals, however, no distinct trend—either upward or downward-during the period taken as a whole. Segment wise analysis gives a slightly different picture**.** As may be seen from Figure 4, Pakistan' net barter terms of trade remained favourable only for few years, particularly in 1997-98 and 1998-99. For other years, it showed significant worsening behaviour. The index with 100 for 1990-91 declined to 55 by 2007-08. On the average, it remained 90 during the years under question.

Table 4

Terms of Trade (TOT)
(Indices with 1990-91 as base)

Year	UVIX	UVIM	Barter TOT (UVIX/ UVIM)	Income TOT (UVIX/UVIM) .Qx
1990-1991	100	100	100	100
1991-1992	119.92	131.89	91	94
1992-1993	123.54	133.49	93	96
1993-1994	142.93	141.16	101	05
1994-1995	168.61	164.22	103	111
1995-1996	185.36	185.48	100	115
1996-1997	204.85	201.71	102	117
1997-1998	245.62	198.87	124	136
1998-1999	258.4	223.32	116	126
1999-2000	253.77	259.03	98	124
2000-2001	271.47	298.44	91	131
2001-2002	271.18	298.56	91	136
2002-2003	254.02	309.52	82	152
2003-2004	279.65	355.43	79	144
2004-2005	288.84	392.45	74	157
2005-2006	299.31	460.38	65	155
2006-2007	310.03	495.33	63	150
2007-2008	350.4	632.3	55	137
Percentage Increase per Annum	7.65	11.46	-341	186

Symbols defined as:
   UVIX = Unit Value Index of exports in Mln rupees.
   UVIM = Unit Value Index for imports in Mln rupees.
   Qx = Index of exports in 90-91 prices.

However, the *income* terms of trade index remained below 100 only for two years. For all other years, it was greater than 100, with 129 as an average during the period under review (see Table 4). This reflected a favourable trend for Pakistan.

Moreover, terms of trade effect was estimated to be negative barring for 5 years. For the 17 years sample period, it averaged Rs -33.3 billion per annum. The openness of Pakistan's economy to international trade in terms of total trade to gross domestic product (GDP) decreased over time. As expected, the worsening of the terms of trade leads to a substantial decrease in GDP in all the respective years. As a ratio to GDP, the effect averaged –1.62 percent.

Export prices in Rupee terms for Pakistan increased by 250 percent during the 17 years period from 1991 to 2008, indicating an annual increase of 7.7 percent. In dollar terms the annual increase was 1.4 percent, whereas import prices in Rupee terms for Pakistan increased by 532 percent during the same period, suggesting an annual increase of 11.5 percent. In dollar terms, the increase was 5 percent. Points 1 and 2 taken together clearly suggest that the net barter terms of trade for Pakistan deteriorated significantly during the period under review. From an index of 100 in 1990-91, it fell to 55 by 2007-08. As regards the behaviour of the index for individual years, it remained above 100 only for six years and below 100 for the remaining 11 years.

Pertaining to instability in export prices, the evidence has been overwhelmingly in favour of the thesis that developing countries are experiencing severe instability. In order to measure the degree of instability in export prices and quantum of major exports of Pakistan during the period, standard deviation of the concerned indices have been calculated. The index varied between the maximum of 157 and minimum of 105. The average index for the 17 years period worked out to be 129, with standard deviation of 21. The index of exports as capacity to import, often termed as income TOT, however, improved somewhat during the period. Barring for two years of 1992 and 1993, the index remained above 100 though the incremental margin was relatively small.

Fig.4. Terms of Trade (1990-91=100)
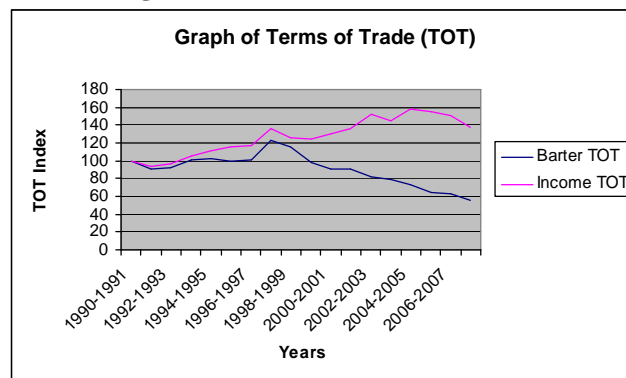
VII. CONCLUSION

The main objective behind studying the behaviour of terms of trade usually is the determination of the *terms of trade effect* and to check whether this effect has been positive or negative. The calculations for Pakistan conclude that barring for 5 out of 17 sample years, the effect remained negative. On average, the effect in 1990-91 prices amounted to Rs –33.3 billion per annum. As percent of GDP, the effect averaged –1.6 percent per annum. In other words, the TOT-Adjusted GDP has, on average, been 1.6 percent less than the actual GDP. This indicated a loss in gross domestic savings. It may be recalled that in 1970 prices the terms of trade effect was –533 million for 1971-72 and –1.1 billion for 1980-81 [World Bank (1982)]. As a ratio to GDP, this effect works out to be 1.1 percent and 1.4 percent respectively (Table 5).

Table 5

Terms of Trade (TOT) Effect

Year Symbols	Exp. As Capacity to Import*	TOT Effect**	TOT Effect % of GDP***
1990-1991	138282	0	
1991-1992	130205	–12997	–1.2
1992-1993	132615	–10681	–0.9
1993-1994	145579	1803	0.2
1994-1995	152949	3982	0.3
1995-1996	158907	–103	0.0
1996-1997	161278	2472	0.2
1997-1998	187640	35714	2.6
1998-1999	174790	23729	1.6
1999-2000	171284	–3550	–0.2
2000-2001	180629	–17945	–1.2
2001-2002	187884	–18970	–1.2
2002-2003	210744	–46045	–2.8
2003-2004	199487	–54057	–3.0
2004-2005	217630	–78066	–4.0
2005-2006	213919	–115118	–5.6
2006-2007	207803	–124201	–5.7
2007-2008	189252	–152255	–6.6
Percentage Increase per Annum		–33311	–1.62

 *Defined as (Px/Pm).Exports in real terms.

** Exports as capacity to import minus real exports.

*** Terms of Trade Effect/GDP.

All these results are finally depicted graphically below in Figure 4.

VIII. POLICY IMPLICATIONS

The negative terms of trade effect as mentioned in the preceding paragraph can be adjusted by the society either by cutting down consumption or by reducing savings. Since cutting consumption is difficult, usually it is adjusted in the form of reduced savings. As savings provide a basis for future economic growth, the negative terms of trade effect reduces the growth potential of the economy.

Finally, as part of a long term development strategy, it is imperative for Pakistan to diversify its output and export structures in favour of commodities and economic activities with more advantageous production and demand characteristics.

The theoretical solution to the problem of adverse terms of trade is to restructure the distributional pattern of productive resources—from sectors where the foreign exchange realisation per unit is declining or susceptible to large fluctuations to those where the unit value realisation is high and stable. The operative policy of the Government of Pakistan to encourage exports of manufactures and semi-manufactures, though explicitly not motivated by terms of trade considerations definitely helps to achieve a more viable distribution of resources which helps to 'reduce the intensity of the twin problems associated with the terms of trade. But this first best solution assumes complete mobility of productive resources which obviously is not a valid assumption for most semi-industrial countries, including Pakistan, with a large subsistence agricultural sector. Since the bulk of foreign exchange earnings come mostly from the export of precisely those items which are vulnerable to high price fluctuations, it is impossible, at least in the short run, to either reduce or eliminate, these, product groups from the export basket. Therefore, the only feasible solution is to combine resource allocation policies with specific measures designed to reduce price fluctuations of the sensitive commodity groups. However, unilateral national action will be of limited use in reducing price instability in view of the fact that Pakistan at present does not have monopolistic power in any of the major export items. What is required, therefore, is joint action by the major producing-exporting countries to regulate volatile price fluctuation.

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