The Current Account Deficit Sustainability:
An Empirical Investigation for Pakistan

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The existence of large and persistent current account deficit is always viewed with great concerns, as it usually leads an economy to a state of insolvency due to building up excessive net foreign debt. As the current account deficit is a persistent feature of Pakistan's economy, therefore, it becomes essential to empirically investigate, whether this deficit is sustainable or not. To this end, the present study has applied two alternative approaches, namely, the intertemporal approach to the current account and the intertemporal solvency approach, in order to get more convincing evidence on the sustainability issue in Pakistan using the time series data over the period 1960 to 2012. From the perspective of both the approaches, Pakistan's current account deficit is on a sustainable path and the macroeconomic policies of the country remained effective in securing it from any external sector crisis.

1. INTRODUCTION

Large and persistent current account deficits are detrimental to economic welfare, and hence there arises the issue of sustainability of these deficits. A country that continually runs a current account deficit will become ever more indebted to foreigners. The sustainability of the current account deficits depends on certain characteristics such as measures of determining, when a deficit is a large deficit, the financing of a deficit, and whether the deficits are used for investment or for consumption [Edwards (2001)]. If for long, these borrowings are invested wisely, the deficits need not be a problem, since future economic growth should allow the debt to be serviced. On the other hand, if the foreign resources are not employed properly, or if the current account deficit grows too fast, a country may not be able to meet its obligations to foreign creditors. Hence, a large current account deficit that fuels consumption or a property price bubble may become a problem.

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Table 1

*Historical Trends in Exports, Imports, Trade Deficit and Current
Account Deficit in Pakistan (As Percent of GDP)*

Years	Exports	Imports	Trade Deficit	Current Account Deficit
1960s	8.96	12.88	5.71	2.37
1970s	10.47	15.86	6.35	4.75
1980s	12.07	21.27	7.79	3.93
1990s	16.39	19.68	3.98	4.52
2000-01	13.42	14.74	2.16	0.11
2001-02	14.73	15.77	1.70	+1.90
2002-03	15.27	15.31	1.33	+3.83
2003-04	16.72	16.13	3.36	+1.34
2004-05	15.75	14.68	5.50	0.83
2005-06	15.74	19.54	9.53	3.29
2006-07	15.22	20.57	9.42	5.30
2007-08	14.17	18.12	12.84	5.81
2008-09	12.16	18.26	10.61	4.98
2009-10	11.84	19.61	8.72	2.13
2010-11	11.6	18.9	7.3	+0.1
2011-12	10.5	20.0	9.5	2.1
2012-13	10.5	19.3	8.8	1.1

Source: Pakistan Economic Survey (various issues) and World Development Indicators (WDIs), 2013.
Note: Values are averaged over each decade up to figures for 1999.

The economy of Pakistan has been facing persistent external sector deficits since 1960s with few exceptions.[1] Low domestic saving rates, persistent budget and trade deficits bear major responsibility for deterioration in the external accounts. Recurring current account deficit coupled with the evolution of external debt and fluctuating private consumption have generated interest in examining the dynamics of Pakistan's current account balance. This interest is partly due to the fact that the economic theory suggests that nations should use the current account as a tool to smooth consumption [Sachs (1981)].

Pakistan has experienced chronic balance of payments (BOP) problems as its trade and current account balances remained in deficit almost throughout its history. Trade balance delivered surplus twice, first time just after independence when due to Korean War Pakistan's exports increased and its trade balance went into surplus. Trade balance turned into surplus second time in 1972 when Pakistan devalued its currency by 131 percent. In 1973, however, there was an oil price shock and worldwide inflationary pressures caused deterioration in Pakistan's terms of trade. Accordingly, the increase in imports far outstripped the increase in exports and trade deficit persisted throughout the rest of the decade. Even after liberalisation episodes of late 1980s imports increased more than exports, thereby leaving trade balance in deficit. In early 2000s oil prices surged world-wide, therefore, trade deficit further increased. The deficit in current account

[1]For the fiscal years 1960-61, 1983-84, 2001-02, 2002-03, 2003-04 and 2010-11 Pakistan experienced the current account surplus.

remained less than the deficit in trade account for most of the periods mainly due to massive inflow of unilateral transfers in terms of workers' remittance particularly after the 1980s when a number of Pakistanis migrated to Middle East. After the event of 9/11 current account went into surplus for the three consecutive years (FY2001-02, FY2002-03 and FY2003-04) due to a high influx of workers' remittances but it again showed deficits due to the increase in world oil prices. The current account deficit to GDP ratio ranged from 0.83 to 5.8 percent for the fiscal years 2004-05 to 2008-09, however, it stood at 2.13 percent during 2009-10. However, the current account became surplus in 2010-11 and onward 2010-11 it again turned into deficit (see Table 1).

The above discussion points towards investigating whether or not the current account deficit of Pakistan is sustainable. Hence, the present study aims to examine the current account deficit sustainability issue using alternative approaches, namely, the intertemporal to the current account (ICA) and the intertemporal solvency approach. The use of alternative approaches provides an opportunity to have relatively more conclusive evidence with regard to the current account deficit sustainability issue.

This study is divided into five sections. Following this introduction to the study the next section presents a review of the empirical literature related to the issue of the current account deficit sustainability. Section 3 deals with theoretical models that will be tested empirically in the subsequent section, the construction of variables, data sources and estimation procedures. Section 4 provides empirical results for the models presented in Section 3 along with their interpretations. Finally, concluding remarks along with policy recommendations are summarised in Section 5.

2. LITERATURE REVIEW

The economic literature on the current account sustainability is of a recent origin in the aftermath of the financial and currency crises during the 1990s in different parts of the world. Milesi-Ferretti and Razin (1996) formulate the current account sustainability as the possibility of continuation of the current policy stance and/or present private behaviour without entailing the need for a drastic policy shift (such as, for example, a sudden policy tightening causing a large recession), or without leading to a crisis (such as, for example, an exchange rate collapse leading to inability to service external obligations). Zanghieri (2004) also analyses the sustainability of current accounts explaining that current account position is sustainable as long as foreign investors are willing to finance it. The instruments of financing also matter as the foreign direct investment (FDI) is the most appropriate instrument of external financing in comparison, for instance, to short-term debt instruments. Zanghieri also points out that a deficit created by a reduction of savings is much more worrying than a deficit caused by an increase of investments. Another similar assumption of current account sustainability is that the current account balance is said to be sustainable if it stabilises the stock of external debt at the current level.

Unfortunately, there is no simple answer to the question of the sustainable level of the current account balance. According to Milesi-Ferretti and Razin (1996) "…current account deficits above 5 percent of GDP flash a red light…" However, they conclude that a specific threshold is not a sufficient informative indicator of sustainability. Similarly, Summers (1996) contends that current account deficit in excess of 5 percent of GDP

should be seen as uncomfortable. He further maintains that it is even more critical if this deficit is particularly financed in a way that leads to rapid reversals or through a Ponzi-type of game. This even becomes more prominent when empirical studies after the Asian crisis conclude that countries affected severely were those with large deficit/GDP ratios throughout the 1990s [Corseti, *et al*. (1999) and Radelet and Sachs (2000)]. According to Roubini and Wachtel (1998), "there is no simple rule that can help us determine when current account deficit is sustainable or not". They are of the view that what is sustainable for one country it is not for other because current account sustainability depends on a country's specifics. In addition, the Benhima and Haveylchyk (2006) analysis reminds us that the deficit of the current account in Mexico has been 7 percent in 1994 and in Thailand it has been 8 percent in 1996, just before the sudden stop of capital flows and the beginning of the crisis.

The literature on the sustainability of the current account revolves around two approaches. On the one hand, there is an intertemporal solvency approach pioneered by Husted (1992) where a time series perspective is employed to investigate the long run relationship between exports and imports such that that the slope coefficients obtained from the equations derived from these series should be statistically equal to unity. The rationale of this approach is straightforward. If such a long run relationship exists, the time series of imports and exports will tend to move closely together over time, i.e., they will not permanently diverge from each other, implying that the current account imbalance is sustainable. Using this approach Husted (1992), Bahmani-Oskooee and Rhee (1997), Fountas and Wu (1999), Arize (2002), Tang (2002), Baharumshah, *et al*. (2003), Irandoust and Ericsson (2004), Keong,*etal*. (2004), Kalyoncu (2005), Narayan and Narayan (2005), Tang and Mohammad (2005), Hollauer and Mendonça (2006), Cunado, *et al*. (2008), Erbaykal and Karaca (2008), Verma and Perera (2008), Kalyoncu and Ozturk (2010), Pattichis (2010), Greenidge, *et al*. (2011) and Holmes, *et al*. (2011) have reported mixed evidence across countries on the issue of the current account imbalance sustainability.

But the intertemporal solvency approach is beset with two main limitations .Firstly, this approach fails to give a rational explanation for the current account behaviour. Secondly, Roubini and Wachtel (1998) note that the IBC of a country imposes very mild restrictions on the evolution of a country's current account and foreign debt. They conclude that according to this approach one country can run very large current account deficits for a long time and remain solvent as long as there are surpluses at some time in the future.

The second approach that dominates the literature on the current account sustainability is based upon the ICA. Thus, we do find the extensive use of the present value model of current account (PVMCA) and other small open economy models in the literature for investigating the issue of the external balance sustainability both in the developed and developing economies. This approach, in principle, is able to provide a benchmark for defining "excessive" current account deficits in the context of models that yield predictions about the equilibrium path of external imbalances [Milesi-Ferretti and Razin (1996)]. The intertemporal approach to assessing the current account sustainability allows us to compute the optimal or benchmark current account and compare the actual with the optimal current account. If the actual current account deficit is significantly

higher than the optimal it implies unsustainability of the current account deficit. Since the optimal current account gives an indication of what a country's current account position ought to be, policy makers must seek to implement measures to narrow the gap between optimal and actual current account balances. This approach has been implemented by Cashin and McDermott (1998) for Australia, Makrydakis (1999) for Greece, Hudson and Robert (2003) for Jamaica, Ogus and Niloufer (2006) for Turkey, Goh (2007) for Malaysia, Khundrakpam and Rajiv (2008) for India, Kim, *et al*. (2009) for Indonesia, Malaysia, South Korea, the Philippines and Thailand and Karunaratne (2010) for Australia in order to assess the current account deficit sustainability.

Empirical research pertaining to the current account deficit sustainability is very limited in the context of Pakistan. Moreover, the findings of the available literature do not provide decisive evidence whether the current account deficit of Pakistan is sustainable or not. For instance, Naqvi and Kimio (2005) and Mukhtar and Sarwat (2010), using quarterly data covering the period 1972:1 to 2004:4 and 1972:1 to 2006: 4 respectively, find that both exports and imports are cointegrated and the slope coefficient on export is significant and close to unity. Hence, they conclude that Pakistan is not in violation of its IBC, implying thereby that the current account imbalances of the country are sustainable in the long run. On the other hand, applying the recently developed unit root tests with unknown level shift [Saikkonen and Lutkepohl (2002)] and the cointegration test with structural break [Gregory and Hansen (1996)], Tang (2006) reinvestigates the cointegration relationship between imports and exports for the Organisation of the Islamic Conference (OIC) member countries including Pakistan. The findings of the study show that not only the current account series is non- stationary but also there is a lack of any long run equilibrium relationship between exports and imports of Pakistan. Consequently, unsustainability of the current account deficit of the country is established. Azgun and Ozdemir (2008) also reach the same conclusion. They consider the period 1980:1–2004:2 to demonstrate whether the foreign debt arising from deficit current accounts policies has sustainability in the current economic policies of Pakistan. The results obtained using Husted's (1992) model reveal that current account deficit is not sustainable.

All the four above studies on Pakistan have applied simple export-import cointegration model developed by Husted (1992) which has its own defects as discussed above in this section. Therefore, methodological aspects of the existing studies on Pakistan require some refinement to reach at a more plausible explanation regarding the external imbalance sustainability for the country. Thus, to address the limited and conflicting evidence from the existing literature as well as the related methodological issues there is a need to revisit the topic of current account deficit sustainability in Pakistan. In this regard, the present study aims to apply the ICA along with the intertemporal solvency approach to investigate the current account deficit sustainability issue in the country.

3. ANALYTICAL FRAMEWORK

3.1. The Intertemporal Solvency Approach

A simple framework is provided by the intertemporal solvency approach to assess sustainability issue through examining a long run relationship between exports and imports

of a country. This approach, primarily developed by Husted (1992), assumes a small open economy without government sector where an optimising representative household is free to borrow and lend in international financial markets at a given world rate of interest for achieving maximum utility. Endowments or output and redistributed profits from firms constitute the agent's resources which are used for consumption and saving purposes. The representative household faces the following budget constraint for each time period:

$$C_0 = Y_0 + A_0 + I_0 - (1 + r_0)A_{-1} \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad (1)$$

where C_0, Y_0, A_0 and I_0 refer to current consumption, output, net foreign assets or international borrowing (which could be positive or negative) and investment respectively, r_0 is the one period world interest rate and $(1 + r_0)A_{-1}$ is the initial external debt of the country.

Since the budget constraint (1) must hold in every time period, we can obtain the IBC by combining all individuals' budget constraints given in (1) in the economy. Iterating (1) forward the IBC becomes:

$$A_0 = \sum_{t=1}^{\infty} \mu_t TB_t + \lim_{n \to \infty} \mu_n A_n \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad (2)$$

where $TB_t = X_t - M_t = (Y_t - C_t - I_t)$ is the trade balance in period t (income minus absorption), X_t and M_t represent exports and imports for period t and $\mu_t = \Pi_{s=1}^{t}\left(\dfrac{1}{1+r_s}\right)$ is the product of the first t discount factors. An important element in (2) is the limit term as if it is equal to zero, the amount of international borrowing (lending) is exactly the same as the sum of present discounted value of future trade surpluses (deficits). If this is not the case (i.e., the limit term is nonzero) and A_0 is positive, then the current stock of external debt exceeds the present value of future trade balances and the country is said to be "bubble-financing" its external debt, meaning that the economy needs new debt and its current account is not sustainable. On the other hand, a nonzero limit term and negative A_0 means that the country is making Pareto inferior decisions [Husted (1992)]. Thus, from a theoretical perspective we need to investigate whether the limit term in (2) is equal to zero.

After making several assumptions Husted (1992) reaches a testable model which is of the following form:

$$X_t = a + bM_t^* + e_t \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad \ldots \qquad (3)$$

where M_t^* indicates imports of goods and services plus net interest payments. If $b = 1$ and e_t is a stationary process i.e., $I(0)$, the economy is not violating its IBC. In other words, if these conditions hold, on average the current account balance will be equal to zero, which implies that it is sustainable. If $b < 1$ while e_t remains stationary, X_t and M_t^* will be on the long run equilibrium path while the economy will violate its IBC because in such a situation the current account balance will be continuously deteriorating. Lastly, if e_t is a non-stationary process, it implies a lack of cointegration between X_t and M_t^*

which means that both the variables do not tend to move towards long run equilibrium and thus the sustainability is ruled out. It should be remembered that $b = 1$ is considered a relatively strong condition for the current account sustainability.

3.2. The PVMCA and Derivation of Optimal Current Account

The theoretical model adopted here is based on Sachs (1981), Sheffrin and Woo (1990), Otto (1992), and Ghosh (1995). The PVMCA considers an infinitely lived representative household in a small open economy. This economy consumes a single good and has access to the world capital markets at an exogenously given world real interest rate. The intertemporal model is similar to the PIH [Friedman (1957) and Hall (1978)] where the representative agent chooses an optimal consumption path to maximise the present-value of lifetime utility subject to a budget constraint. The representative agent is assumed to have rational expectations. The infinitely lived household has the expected lifetime utility function given as:

$$E_t U = E_t \left[u(C_t) + \beta u(C_{t+1}) + \beta^2 u(C_{t+2}) + \cdots \cdots \right] = E_t \left[\sum_{s=t}^{\infty} \beta^{s-t} \{ u(C_s) \} \right], \qquad \dots \quad (4)$$

where $E_t U$ is the expected utility, E_t is the conditional expectations operator based on the information set of the representative agent at period t, β is the subjective discount factor with $0 < \beta < 1$, and C represents private consumption of the single good .The period utility function $u(C)$ is continuously differentiable and it is also strictly increasing in consumption and strictly concave: $u'(C) > 0$ and $u''(C) < 0$.

In the ICA, the current account acts as a mean of smoothing consumption amidst shocks faced by the economy e.g., shocks to national output, investment and government spending. The current account expresses the evolution of the country's net foreign assets with the rest of the world and is given by:

$$CA_s = A_{s+1} - A_s = Y_s + rA_s - C_s - I_s - G_s, \qquad \dots \qquad \dots \qquad \dots \qquad \dots \quad (5)$$

Where CA_s is the current account balance in period s, A_s represents the country's net foreign assets, r denotes the world real interest rate (assumed constant), Y_s is the gross domestic product, C_s, I_s and G_s capture aggregate consumption, government expenditures and total investment respectively.

Constraint (5) holds as an equality based on the assumption of non-satiation. By taking the expectation of (5) and by imposing the standard no-Ponzi game condition to rule out the possibility of bubbles, iterating the dynamic budget constraint in (5) gives the intertemporal budget constraint facing the representative agent as:

$$\sum_{s=t}^{\infty} \left(\frac{1}{1+r} \right)^{s-t} Y_s + (1+r) A_t = \sum_{s=t}^{\infty} \left(\frac{1}{1+r} \right)^{s-t} (C_s + I_s + G_s) \qquad \dots \qquad \dots \quad (6)$$

Deriving and substituting the optimal consumption level in Equation (5), it can be shown that the present value relationship between the current account balance and future changes in net output (ΔNO) is given by:

$$\widehat{CA_t} = -\sum_{s=t+1}^{\infty} \left(\frac{1}{1+r}\right)^{s-t} E_t\left(\Delta NO_s\right) \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad (7)^2$$

We define net output (*NO*) as gross domestic output less gross investment and government expenditures i.e.,

$$NO \equiv Y - I - G \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad (8)$$

According to Equation (7), the optimal current account balance is equal to minus the present value of the expected changes in net output. For example, the representative agent will increase its current account, accumulating foreign assets, if a future decrease in income is expected and vice versa.

But problem is that Equation (7) is not empirically operational because the expression requires the researcher to be knowledgeable of the full information set of consumers' expectations. Campbell and Shiller (1987) explain that information on consumers' expectations is not required since the current account contains consumers' expectations of shocks to national cash flow. We begin therefore by estimating a first-order vector autoregressive (VAR)[3] model in the changes in net output and the current account as:

$$\begin{bmatrix} \Delta NO_s \\ CA_s \end{bmatrix} = \begin{bmatrix} \phi_{11} & \phi_{12} \\ \phi_{21} & \phi_{22} \end{bmatrix} \begin{bmatrix} \Delta NO_{s-1} \\ CA_{s-1} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1s} \\ \varepsilon_{2s} \end{bmatrix} \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad (9)$$

where ε_{1s} and ε_{2s} are errors with conditional means of zero, ΔNO_s and CA_s are now expressed as deviations from unconditional means so that only the dynamic restrictions of the present value model of the current account are tested [see Otto (1992); Ghosh (1995); Adler (2002); Goh (2007); and Adedeji and Jagdish (2008)]. The main interest in (9) concerns the regression in which ΔNO_s is a dependent variable. It is the discounted value of all date*s* forecasts of this variable conditional on the agent's full set of information that will determine the optimal current account at time *t*. That is, according to (9), future expected changes in net output are reflected in today's current account. Then intuitively, not only will ΔNO_{s-1} be important in determining ΔNO_s but also CA_{s-1} is helpful in predicting ΔNO_s, since it may contain additional information. So, Granger causality should run from the current account to changes in net output.

Taking expectation of Equation (9) we get

$$E_t\begin{bmatrix} \Delta NO_s \\ CA_s \end{bmatrix} = \begin{bmatrix} \phi_{11} & \phi_{12} \\ \phi_{21} & \phi_{22} \end{bmatrix}^{s-t} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix}. \qquad \dots \qquad \dots \qquad \dots \qquad \dots \qquad (10)$$

In equation (10) we use the condition that $E_t\left(X_{t+j}\right) = \Omega^j X$ which is derived considering that expectations are formed rationally in the underlying theoretical model [Makrydakis

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[2]See Sheffrin and Woo (1990), Milbourne and Otto (1992), Otto (1992), Ghosh and Ostry (1995) and Makrydakis (1999) for derivation details.

[3]The generalisation to higher order VARs is straightforward. Given that the present study will use annual data and that the sample is relatively small, the first order VAR is sufficient to capture the time series properties.

(1999)]. Ω is the 2×2 matrix of coefficients ϕ_{ij}. We can get forecast of ΔNO_s by pre-multiplying right hand side of Equation (10) by vector $\begin{bmatrix} 1 & 0 \end{bmatrix}$ as:

$$E_t \Delta NO_s = \begin{bmatrix} 1 & 0 \end{bmatrix} \begin{bmatrix} \phi_{11} & \phi_{12} \\ \phi_{21} & \phi_{22} \end{bmatrix}^{s-t} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix} \quad \dots \quad \dots \quad \dots \quad (11)$$

Or

$$E_t \Delta NO_s = \begin{bmatrix} 1 & 0 \end{bmatrix} \Omega^{s-t} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix} \quad \dots \quad \dots \quad \dots \quad \dots \quad (12)$$

Let I be a 2×2 identity matrix. Substituting Equation (12) into Equation (7) and simplifying gives:

$$\widehat{CA}_t = -\begin{bmatrix} 1 & 0 \end{bmatrix} \left(\frac{1}{1+r} \Omega \right) \left(I - \frac{1}{1+r} \Omega \right)^{-1} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix}$$

$$= \begin{bmatrix} \Phi_{\Delta NO} & \Phi_{CA} \end{bmatrix} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix} = k \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix}. \quad \dots \quad \dots \quad \dots \quad \dots \quad (13)$$

Equation (13) has the advantage that the optimal current account series $\widehat{CA}_t$ can be compared to the actual series CA_t. If the model is true, the two series should be identical. So, if the model is true, it follows that

$$\widehat{CA}_t = \begin{bmatrix} 0 & 1 \end{bmatrix} \begin{bmatrix} \Delta NO_t \\ CA_t \end{bmatrix} = CA_t. \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (14)$$

There are a few testable implications of the present value relationship indicated in Equation (4) noted by Otto (1992), Ghosh and Ostry (1995), Makrydakis (1999), Adedeji (2001) and others which we conduct as well. In brief they are: (i) the optimal current account $\left(\widehat{CA}_t \right)$ variable is stationary in level; (ii) the current account Granger causes changes in net output ;(iii) there is equality between the optimal and actual current account balances; (iv) there is equality of variances of the optimal and current account series; and (v) the stationarity of the optimal current account implies the stationarity of the actual current account.

3.3. Data Sources and Construction of Variables

The present study aims to conduct a time series analysis for Pakistan, which requires a large data set to obtain robust results. While quarterly data would be the right choice for this empirical exercise, however, due to non-availability of quarterly data for some variables we use annual data for the period 1960 to 2012. Data sources for the present study include *International Financial Statistics* (IFS) and Pakistan *Economic Survey* (various issues).

Consistent with the theoretical framework, exports include exports of goods and services, while imports comprise of imports of goods and services plus net interest

payments. The nominal exports and imports are converted into corresponding real variables by deflating them by export and import price indices and expressed in natural logarithms. With regard to the construction of variables used the ICA, we have collected the data on private consumption, government consumption, investment (which consists of gross fixed capital formation and change in inventories) and gross domestic product (GDP). All variables are used in real per capita terms by dividing the nominal variables by the GDP deflator (2005=100) and the level of total population. Following Ghosh (1995), Bergin and Sheffrin (2000) and Adler (2002) along with many others, we construct current account series by subtracting private and government consumption expenditures and investment from the gross national product (GNP). The net output series (*NO*) is computed by subtracting government and investment expenditures from GDP. Similarly, we construct the net output inclusive of interest payment (*NOR*) by subtracting government and investment expenditures from GNP. All the models of the ICA express net output and the current account in per capita terms with the aim to link the data of these variables to the assumption of a representative agent.

3.4. Econometric Methodology

To diagnose stationarity of the variables a number of tests have been proposed in the literature. Among them the Augmented Dickey-Fuller (ADF) test of Dickey and Fuller (1979, 1981), and the Phillips-Perron (PP) test of Phillips and Perron (1988) are frequently used. However, because of their poor size and power properties these tests are not reliable for small sample data sets [Dejong, *et al*. (1992) and Harris and Sollis (2003)].[4] In such a situation, we prefer to apply a more efficient and powerful univariate Dickey-Fuller Generalised Least Square (DF-GLS) test developed by Elliot, *et al*. (1996) which is basically a modified version of the ADF test in which data are detrended before the unit root test is conducted.[5]

For testing the current account sustainability applying intertemporal solvency approach the econometric framework used in the study is the Johansen (1988) and Johansen and Juselius (1990) maximum likelihood cointegration approach, which tests both the existence and the number of cointegration vectors. Individual variables need not be identified as endogenous/exogenous as this approach treats all variables in the system as endogenous. As we have derived the testable implications of the basic PVMCA within the framework of an unrestricted VAR model which is indicative of the use of this technique for examining the validity of the ICA in Pakistan.

4. RESULTS AND DISCUSSION

The intertemporal solvency approach is based on a testing procedure developed by Husted (1992). In this method, an estimation of a long run relationship between exports and imports provides an empirical measure to investigate the current account sustainability. Keeping in view the importance of peculiar characteristics of the time series, we examine the order of integration of both real exports (rx_t) and real imports (rm_t^*)[6] before conducting the

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[4]Both these studies conclude that the ADF and the PP tests have the tendency to over-reject the null hypothesis when it is true and under-reject it when it is false.

[5]For detailed discussion on different unit root tests see Maddala and Kim (1998).

[6]The lower case letters denote that the underlying variables are logarithmic.

cointegration test. The results for the DF-GLS test are given in Table 2. It is evident from the table that both the series are non-stationary at levels as the null hypothesis of the non-stationarity cannot be rejected at any reasonable level of significance. However, the underlying variables are first difference stationary. Hence both the time series are $I(1)$.

Table 2

The DF-GLS Test for Exports and Imports

Variables	Level	First Difference	1 %	5 %	10 %	Decision	Order of Integration
			Mackinnon Critical Values for Rejection of Hypothesis of a Unit Root				
rx_t	1.152	−7.354	−2.613	−1.947	−1.612	Non-stationary at level but stationary at first difference	$I(1)$
Rm^*_t	0.210	−7.164	−2.613	−1.947	−1.612	Non-stationary at level but stationary at first difference	$I(!)$

Having established that both the time series are integrated of the same order, we step forward to investigate the long run relationship between exports and imports using the Johansen and Juselius co-integration test for probing the current account balance sustainability. Before undertaking the cointegration test, the optimal lag length to be used in the analysis is determined. On the basis of the AIC and the SBC the lag length is selected at 1. As regard to the co-integration test Table 3 reports the results. Starting with the null hypothesis of no cointegration ($r = 0$) between the exports and the imports, the trace statistic is 24.538 which is above the 95 percent critical value of 20.261. Thus, the null hypothesis $r = 0$ is rejected in favour of the general alternative $r = 1$. But we fail to reject the null hypothesis $r = 1$ at 5 percent level of significance. Consequently, it is concluded that there exists one co-integrating relationship between rx_t and rm_t. Furthermore, the maximum eigenvalue test also corroborates the result of the trace test. As the exports and the imports are co-integrated, so, the intertemporal budget constraint is satisfied in the context of Pakistan during the period under investigation.

Table 3

Results of Cointegration Test

Null Hypothesis λ_{trace} rank tests	Alternative Hypothesis	Eigen Values	λ_{trace} Rank Value	Critical Values 95 %	P-values[**]
$H_0 : r = 0$	$H_1 : r = 1$	0.256	24.539**	20.262	0.024
$H_0 : r = 1$	$H_1 : r = 2$	0.083	6.346	9.165	0.147
λ_{max} rank tests			λ_{max} rank value		
$H_0 : r = 0$	$H_1 : r > 0$	0.256	17.924**	15.294	0.049
$H_0 : r \leq 1$	$H_1 : r > 1$	0.083	6.346	9.165	0.147

Normalised Cointegrating Coefficient	Test of Restriction
$rx_t = -7.854 + 0.914 * rm^*_t$	$H_0 : b = 1$
(−4.661)*** (3.734)***	$\chi^2 = 1.142\, p\text{-value}=0.273$

Note: Figures in the parentheses are t values.*** and ** denote rejection of the null hypothesis at 1 percent and 5 percent significance levels respectively.
[**]MacKinnon-Haug-Michelis (1999) p-values.

However, just looking at the long run relationship between exports and imports we cannot decisively state that the external deficit is sustainable. To reach an absolute conclusion about the issue, it is also necessary that there exists a co-integrating relationship between the two series such that the slope coefficient obtained from the equation derived from the cointegration test should be statistically equal to unity. To this end, an equation normalised on rx_t is given in table 3 from which it can be seen that rx_t and rm_t^* are positively and significantly related to each other in the long run. The estimated coefficient of rm_t^* i.e., slope coefficient is 0.914, which is close to unity, and it indicates Pakistan's adherence to the international budget constraint. In order to validate this finding, we proceed with the restricted cointegration test to check the one-to-one relationship between rx_t and rm_t^*. From Table 3 it is obvious that on the basis of likelihood ratio test we fail to reject the null hypothesis that the coefficient of rm_t^* is not statistically different from unity. It implies that the macroeconomic policies of Pakistan remained quite effective in directing exports and imports of the country into a long run steady-state equilibrium relationship. Our finding is in line with the results obtained by Naqvi and Kimio (2005) and Mukhtar and Sarwat (2010) for Pakistan employing the same approach. Nonetheless, the result of the present study is in total contrast with those of Tang (2006) and Azgun and Ozdemir (2008) for Pakistan. Our result is statistically more reliable than all these studies in that we have supplemented the estimation procedure with the restricted cointegration test, whereas none of the above studies on Pakistan have applied this test.

After it has been established that both the variables in the model are cointegrated, as a next logical step a VECM with one cointegrating relation and one lag in each equation is estimated for examining the stability of the model. From the estimated VECM it becomes easy to gauge the speed of adjustment of the endogenous variables to converge to their long run equilibrium relationship while allowing a wide range of short run dynamics. Table 4 presents the summary results from VECM. The coefficient of the

Table 4

Summary Results from VECM and Diagnostic Tests

	Δrx_t	Δrx_t^*
Constant	–0.143	0.067
	(–2.168)**	(1.77)*
$ECT(-1)$	–0.266	0.134
	(–2.746)**	(3.081)**
R^2	0.708	0.597
Adjusted R^2	0.676	0.562
F-Stat	17.634	10.842
Diagnostic Tests	χ^2 (*p* values are in the parentheses)	
Serial Correlation	1.22	0.814
(Breusch–Godfrey serial LM)	(0.442)	(0.541)
Heteroscedasticity	0.086	0.412
(White Heteroskedasticity Test)	(0.886)	(0.643)
Normality	0.526	0.775
(Jorque-Bera)	(0.392)	(0.363)
AR.Cond.Heteroscedasticity	0.005	1.241
(ARCH LM Test)	(0.961)	(0.292)

Note: t-values given in parentheses with ** and * indicate rejection of the null hypothesis at 5 percent and 10 percent significance levels respectively.

lagged error correction term (ECT) of export variable carries the correct sign i.e., negative and it is statistically significant at 5 percent level, with 26.6 percent speed of adjustment. Hence, every year exports are adjusted by almost 27 percent of the past year's deviation from equilibrium and the overall restoration to equilibrium will take place in nearly 4 years. This result implies the stability of the system. The coefficient of the lagged ECT of imports has positive sign and it is statistically significant at 10 percent level. It shows that due to any disturbance in the system, a continuous divergence from long run equilibrium will occur and the system will be unstable. Finally, the results of the diagnostic tests are also reported in Table 4 which clearly reveal that in both the equations the residuals are Gaussian as the Johansen cointegration technique assumes.

Now we come to empirically analyse the current account deficit sustainability issue of Pakistan within the framework of the ICA employing the PVMCA. As a first step in estimating the PVMCA, stationarity of the time series used in the model is checked. Applying the DF-GLS unit root test we find that change in net output (ΔNO_t), actual current account (CA_t) and the model's predicted or optimal current account $\left(\widehat{CA_t}\right)$ are stationary at levels while net output inclusive of interest payments (NOR_t) and private consumption (C_t) are non-stationary at levels but they become stationary at their first differences (see Table 5). Hence the time series ΔNO_t, CA_t and $\widehat{CA_t}$ are integrated of order zero i.e., $I(0)$, while NOR_t and C_t are integrated of order one i.e., $I(1)$. The inclusion of NOR_t and C_t in the analysis is to verify the stationarity of the actual current account series from the perspective of a long run relationship between these two time series. If both NOR_t and C_t are $I(1)$ and make a co-integrating relationship then the residual series which is the actual current series will be $I(0)$.

Table 5

Unit Root Test

Variables	Level	First Difference	Mackinnon Critical for Rejection of Hypothesis of a Unit Root			Decision	Order of Integration
			1 %	5 %	10 %		
ΔNO_t	–4.94	–	–3.76	–3.18	–2.88	Stationary at level	$I(0)$
CA_t	–3.77	–	–3.76	–3.18	–2.88	Stationary at level	$I(0)$
$\widehat{CA_t}$	–3.79	–	–3.76	–3.18	–2.88	Stationary at level	$I(0)$
NOR_t	1.44	–5.22	–3.76	–3.18	–2.88	Nonstationary at level but stationary at first difference	$I(1)$
C_t	1.66	–4.37	–3.76	–3.18	–2.88	Nonstationary at level but stationary at first difference	$I(1)$

Co-integration between NOR_t and C_t is investigated using Johansen's maximum likelihood method[7] and the results are reported in Table 6. Both trace statistics (λ_{trace}) and maximal eigenvalue (λ_{max}) statistics indicate that there is at least one co-integrating vector between the two time series. We can reject the null hypothesis of no co-integrating

[7]See Johansen (1988) and Johansen and Juselius (1990).

Table 6

Cointegration Test Results

Null Hypothesis	Alternative Hypothesis			Critical Values	
				95 %	P-values[**]
λ_{trace} Rank Tests		Eigen Values	λ_{trace} Rank Value		
$H_0 : r = 0$	$H_1 : r = 1$	0.335	23.172**	21.514	0.024
$H_0 : r = 1$	$H_1 : r = 2$	0.074	3.961	8.993	0.504
λ_{max} rank tests			λ_{max} rank value		
$H_0 : r = 0$	$H_1 : r > 0$	0.335	20.311**	16.477	0.037
$H_0 : r \leq 1$	$H_1 : r > 1$	0.074	3.961	8.993	0.504
$H_o : a = 1,\ b = -1$	$\chi^2 = 0.966$ p-value$=0.313$				

** denotes rejection of the null hypothesis at the 5 percent significance level.
[**]MacKinnon-Haug-Michelis (1999) p-values.

vector in favour of one co-integrating vector under both test statistics at 5 percent level of significance. We also cannot reject the null hypothesis of at most one co-integrating vector against the alternative hypothesis of two co-integrating vectors, both for the trace and max-eigen test statistics. Consequently, we can conclude that there is only one co-integrating relationship between the variables under investigation. Thus, a long run equilibrium relationship exists between net output inclusive of interest payments and private consumption in Pakistan. At the bottom of Table 6 we present the likelihood ratio test result of the hypothesis that the vector $[a, b] = [1,-1]$ belongs to the co-integrating space such that $[1,-1][NOR_t, C_t]' = CA_t$ is $I(0)$. It is evident that we fail to reject the null hypothesis and hence it is confirmed that NOR_t and C_t are both not only $I(1)$ but they are also co-integrated such that CA_t is $I(0)$.

For the validity of the PVMCA, the expression (14) must hold. In this case both the actual and the optimal current account series are identical which implies that if the actual current account balance is $I(0)$ then the optimal current account series will also be $I(0)$. This is confirmed from the unit root test results of Table 5 where both the series are $I(0)$. As this finding is in accordance with one of the implications of the basic PVMCA, therefore, it provides evidence in favour of the model.

The applicability of the basic PVMCA to Pakistan's data is evaluated by testing some of the important implications of the model. In this regard we proceed by conducting some formal and informal tests using VAR model where we have estimated equations for ΔNO_t and CA_t by applying OLS technique. Following the standard practice both the variables are expressed as deviations from their means since we are interested in testing the dynamic restrictions of the model [see Ghosh (1995); Manteu (1997); Makrydakis (1999); Adedeji (2001); Adler (2002); and Darku (2008)]. On the basis of the Akaike Information Criterion (AIC) and the Schwarz Bayesian Criteria (SBC), a one lag VAR model is chosen which is not surprising for annual data. Table 7 lists the estimated coefficients, the associated standard errors and the residual diagnostic tests from the VAR model along with the computed values of the formal and informal tests of the basic PVMCA obtained for the period 1960 to 2012. First of all the null hypothesis that CA_t

Table 7

VAR Estimation and Tests of Restriction of the Basic PVMCA

Dependent Variable	Regressors		Diagnostic Tests:χ^2 (*p* values are in the parentheses)			
	ΔNO_{t-1}	CA_{t-1}	S.Corr	ARCH	Heteroscedasticity	Normality
ΔNO_t	0.315 s.e.(0.217)	−0.456 s.e.(0.081)***	1.161 (0.292)	0.003 (0.989)	0.077 (0.921)	0.747 (0.345)
CA_t	0.085 s.e.(0.074)	0.922 s.e.(0.204)***	0.766 (0.334)	1.164 (0.291)	1.477 (0.234)	0.454 (0.793)

Granger Causality Test: F statistic (*p* values are in the parentheses)

CA does not Granger Cause ΔNO   7.925 (0.006)

1.084

ΔNO does not Granger Cause CA   (0.429)

Tests of Restrictions

ΔNO_t −0.107 s.e.(0.111)

CA_t 0.805 s.e.(0.197)***

$\chi^2=37.915$; *p*-value=0.000

$\dfrac{var\left(\hat{CA}\right)}{var\left(CA\right)}=0.738$

$Corr\left(CA,\hat{CA}\right)=0.686$

Notes:
- As both the variables entering the model are expressed as deviations from their means, so, the VAR model is estimated without a constant term.
- s.e. stands for standard errors.

*** indicate rejection of null hypothesis at 1 percent level.

does not Granger cause ΔNO_t is rejected which suggests that the representative agent has superior information. It means that the fluctuations in Pakistan's current account provide a signal about how this agent is expecting net output to change in the future. As a whole this finding constitutes weak evidence in favour of the PVMCA. However, we fail to reject the hypothesis that ΔNO_t does not Granger cause CA_t.

For further evidence on the relevance of the PVMCA to Pakistan's data we turn to figure 1 that reflects the time series graphs of the actual current account series and its optimal counterpart. Following Sheffrin and Woo (1990); Otto (1992); Obstfeld and Rogoff (1995); Makrydakis (1999); and Adler (2002) we have used an annual real world interest rate of 4 percent for discounting purposes while calculating the optimal current account series.[8] We know that if the PVMCA holds in Pakistan then graphically both the actual and the optimal current account series should differ only by the sampling error. In case there are significant differences in the time series plots of both the variables it will be considered as evidence against the consumption smoothing behaviour of the current account. Despite the fact that basic PVMCA is quite restrictive and simple in structure, the visual inspection of the two series in figure 1 represents a reasonably good capability of the optimal (or VAR model predicted) current account series to follow the year-to-year trends of Pakistan's actual current account balance during almost the entire period of study. Nevertheless, the actual current account series exhibits relatively more volatility as compared to its optimal counterpart, which is a very common outcome when consumption smoothing model is applied to small open economies [Adler (2002)].

[8]Most of the empirical computations have been carried out using 2,4,6 and 8 percent real world interest rate but they have almost the same quantitative results [Makrydakis (1999)].

Fig. 1. Actual and Optimal Current Account Balances
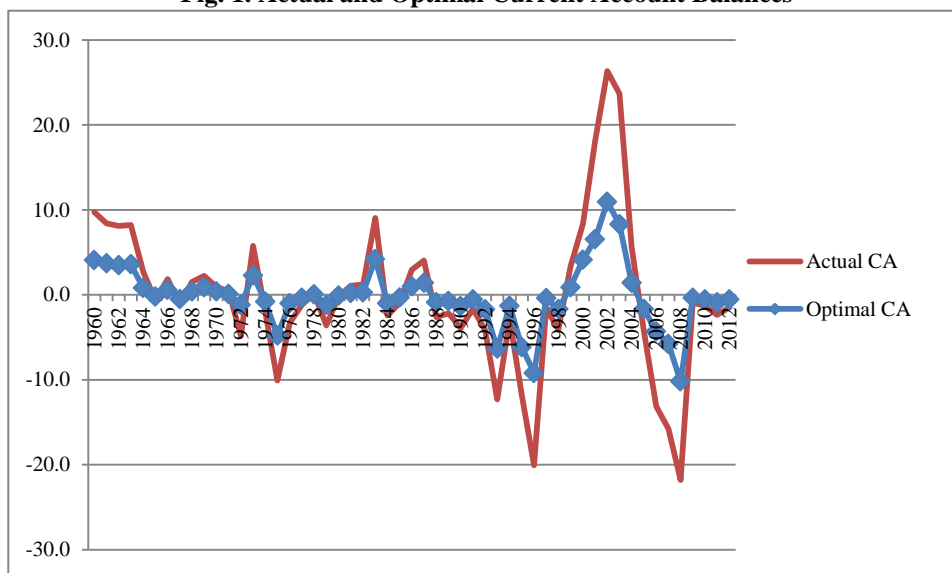
Another testable implication of the model is the equality between the variances of the actual and the optimal current account series. If the variance ratio of optimal to actual current account series is equal to unity then it validates the assumption of high degree of capital mobility and the intertemporal model of current account [Ghosh (1995); Agenor, *et al.* (1999)]. In Table 7 this ratio is 0.738, which is different from unity, and thus indicative of some degree of excessively volatile international capital flows to Pakistan in the sense of Ghosh (1995). It implies that in case of some shocks, Pakistan's consumption smoothing current account flows have been more volatile than justified by expected changes in economic fundamentals i.e., net output.[9] The problem with excessive volatility is that it raises the possibility of inappropriate utilisation of foreign capital for domestic consumption [Ismail and Ahmad (2008)]. As the variance of the actual current account balance is larger than its optimal counterpart, therefore, in Figure 1 the time series plot of the former has larger amplitude than that of the latter. With regard to the correlation coefficient between the two current account series it is found to be moderate i.e., 0.686. The graphs of the two series in figure1 are clearly consistent with this modest relationship between them, hence the model's predicted current account series succeeds in explaining a reasonable portion of the fluctuations in the actual current account of Pakistan.

Now we come to examine the result of the formal and most stringent test of parameter restrictions imposed on estimated coefficients of ΔNO_t and CA_t. Considering that if the basic PVMCA gives a convincing representation of the actual current account fluctuations then equation 5.1 will hold; it implies that in the context of first order VAR the estimated values of $\Phi_{\Delta NO}$ and Φ_{CA} should be zero and unity respectively. Table 3 reports the result for this statistical test. The estimated values for both the variables are –0.107 and 0.805 respectively. From the perspective of individual testing we find that ΔNO_t is found not to be significantly different from its theoretical value of zero but CA_t is

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[9]It means that capital movements are mainly dominated by speculative capital flows.

quite different from its theoretical value of unity. For overall testing of the model, our computed value of Wald test statistic (which is distributed as a χ^2 with two degrees of freedom) is 37.915 with *p*-value of zero, which indicates the rejection of the restrictions of the basic PVMCA on the VAR model even at 1 percent significance level. It suggests that Pakistan lacked the ability to smooth consumption through external borrowing and lending in the face of exogenous shocks during the sample period of the study.

Finally Table 7 also presents results for some diagnostic tests, which involve χ^2 tests for the hypothesis that there is no serial correlation; that the residual follow the normal distribution; that there is no heteroscedasticity; and lastly that there is no autoregressive conditional heteroscedasticity. In all equations the diagnostics suggest that the residuals are Gaussian.

Thus, while the basic intertemporal model is a bit capable of tracing the peaks and troughs of the Pakistan's current account series for the period 1960 to 2012, it remains unsuccessful in capturing the full magnitude of the cyclical fluctuations of the said series. Similarly, while the informal evidence reveals adequacy of the model in Pakistan's case, the formal restrictions of the model are strongly rejected by the country's data. This outcome is supported by a number of empirical studies for other developing countries including Manteu (1997) for Portugal, Adedeji (2001) for Nigeria, Landeau (2002) for Chile, Ogus and Niloufer (2006) for Turkey, Goh (2007) for Malaysia and Lau, *et al.* (2007) for the Philippines and Singapore. However, our findings are in contrast with those obtained by Ghosh and Ostry (1995) for majority of developing countries in their sample, Callen and Cashin (1999) for India, Lau, *et al.* (2007) for Indonesia, Malaysia and Thailand and Khundrakpam and Rajiv (2008) for India. In all these cases the formal and informal tests have provided evidence in favour of the model.

Ghosh and Ostry (1995) are pioneers in testing the validity of the PVMCA for a number of developing countries including Pakistan. Nonetheless, their study does not address the issue of the excessiveness and sustainability of current account deficits in its empirical endeavour using the framework of the intertemporal approach. Studies aimed at examining the sustainability of the current account deficit in Pakistan have not applied the intertemporal model. Hence, the present study is distinguished from others in that it uses the PVMCA to analyse the issue of the excessiveness and sustainability of current account deficits in the country. From the perspective of the intertemporal model, the actual and the optimal current account series are compared to judge the extent of deviations between them and whether or not these deviations follow a systemic pattern for scrutinising the sustainability issue. For the sustainability of the current account imbalances to occur, it is essential that there must be consistency between these imbalances and the optimal current account path generated by the intertemporal model.

One of the features of the intertemporal approach is that it also provides an opportunity to test the stationarity of the current account series in order to investigate the sustainability issue. This is an easy way to examine whether the current account imbalances of a country are sustainable or not. Stationarity of current account is considered to be in line with a fixed external debt to GNP ratio which in any manner does not encourage a country to default on its external debts [Wu (2000)]. Thus, in the literature, several studies have used different unit root tests for exploring the current account sustainability of various countries [see, for example, Trehan and Walsh (1991);

Gundlach and Sinn (1992); Wickens and Uctum (1993); Wu (2000); Dulger and Ozdemir (2005); Tang (2006, 2007) and Lau, *et al*. (2007)]. When this yardstick is applied in the context of Pakistan, it turns out on the basis of the DF-GLS unit root test that the current account series is stationary at level [see Table 5.1]. It implies that Pakistan is invulnerable to unsustainability problem despite facing persistent current account deficits.

With regard to the findings based on the intertemporal methodology, we find that the basic PVMCA is rejected strongly by the data of the country which categorically suggests that the actual and the optimal current account balances are not identical statistically. A graphical examination demonstrates the persistent excessiveness of the actual current account series vis-à-vis the optimal series which points towards a careful inspection of the pattern of this excessiveness so that it can be decided whether there is some problem of unsustainability or not. From figure 1 it can be seen that during the sample period of the study on the whole the gap between the two current account series does not follow any systematic pattern. However, in between 1999 and 2003 the degree of the excessiveness of the actual current account series increases but it falls later on. Thus, from the perspective of the basic PVMCA the current account deficits are sustainable in the case of Pakistan.

The above analysis of the current account imbalance sustainability depicts an encouraging picture for Pakistan. Both the approaches applied in the study provide a consensus that the country's current account deficits are sustainable and the macroeconomic policies of the country remained effective in securing it from any external sector crisis.

5. CONCLUSION AND POLICY IMPLICATION

The current account deficit is a persistent feature of Pakistan's economy, so, it becomes natural to empirically investigate, whether this deficit is sustainable or not. The existence of large and persistent current account deficit is always viewed with great concerns as it usually leads an economy to a state of insolvency due to building up excessive net foreign debt. Consequently, there are increasing prospects of default on foreign payments or a sharp reversal in capital flows, which may force an abrupt and costly adjustment. The countries facing the situation of large current account deficit, and rising indebtedness are always more vulnerable to adverse external shocks, including a change in the foreign creditors' sentiment. Therefore, for a country such as Pakistan which is constantly facing the external imbalances, it is always recommended that the current account deficit sustainability issue should be evaluated effectively. To this end, the present study has applied two alternative approaches in order to get more convincing evidence on the sustainability issue in Pakistan.

The first approach is the intertemporal solvency approach pioneered by Husted (1992) which provides a simple and direct testing procedure for examining the sustainability of the current account balance. The fundamental nature of this approach stresses that to declare the current account deficit sustainable it is essential that exports and imports of a country have a long run relationship such that the coefficient obtained from the equation derived from the cointegration test should be statistically equal to unity. The results from the Johansen cointegration test reveal that exports and imports share long run equilibrium. Furthermore, from the restricted cointegration test it appears

that the coefficient of imports is statistically not different from unity, hence, Pakistan satisfies its intertemporal budget constraint. Thus, the time series of imports and exports will never move too far apart from each other over time which implies that the current account balance is sustainable in the long run in Pakistan.

While the findings of the second approach i.e., the ICA clearly indicate that the actual current account series is relatively more volatile as compared to its optimal counterpart. So, the excessiveness of the actual current account balance is established during the period under study. However, absence of a systemic pattern of divergence of the optimal current account from the actual one is suggestive of the fact that Pakistan's current account deficits remained sustainable over the period of this study. The main limitation of this approach is that it fails to address the issue of current account deficit sustainability directly. The ICA actually shows excessiveness of the current account balance and the issue of sustainability is decided on the basis of this excessiveness.

Thus, from the perspective of both the approaches, Pakistan's current account deficit is on a sustainable path and the macroeconomic policies of the country remained effective in securing it from any external sector crisis. The policy implication of the study is straight forward. Since Pakistan's current account imbalances has not been appeared to be unsustainable, so, the application of coherent, consistent and well-coordinated exchange rate, trade and macroeconomic policies aimed at the floating exchange rate, reduction in fiscal deficits, increased savings rate and export volumes, increased growth rate of the economy and efficient debt management strategy should remain in operation effectively to keep the current account deficit on the sustainable path.

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