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Foreign Aid, Defence Expenditure and Public Investment in Pakistan

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1. INTRODUCTION

The government schemes in many *developing economies* are, in general, financed through internal borrowings, generating taxes domestically and increased foreign capital resources from public or private donor agencies. While the need for the *public sector* in planning, operation and implementations process of the government schemes, in developing economies is now well recognised [e.g., Weisskopf (1972); Papanek (1973); Heller (1974, 1975)], there still seems to be some controversy prevailing, at least for some developing nations, so far as, the ability of the public sector in channelling these scarce resources to the most productive use is concerned. In this context, [Heller (1975), p. 429] writes:

> *... the effectiveness of the government's development efforts have been cast in doubt. [It has been] argue[d] that foreign capital inflows have resulted in increased public or private consumption rather than increased investment, and contributed less to growth than was anticipated... the higher tax burden has been squandered on non-productive forms of public consumption.*

It is also important to note that foreign inflows come under two dominant categories, namely, *grants* and *loans*. The first type (grants) can be viewed as inflows intended to provide temporary and immediate relief of the developing economy in situations of emergencies. On the other hand, the second category of transfers by the donor agencies are for long-term developmental purposes and are expected to be used for public investments. Based on a panel data on developing countries, [Levy (1987), p. 456] argued that:

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> *... foreign aid that is not of a relief or emergency nature is not consumed, rather invested... This optimistic conclusion regarding the effectiveness of foreign aid... could be the result of tied aid, or it could follow from a perception among recipients that these flows are fully transitory in nature and should, therefore, be saved.*

Recently, Gang and Khan (1991) criticised, the use of panel data and the inappropriate use of econometric methodology to investigate the role of foreign aid on Indian economy using a time series data. His conclusions (1991), p. 365), however, were similar to that of Levy (1987) which state that 'aid actually induces transfers of domestic public resources from non-investment to investment for development purposes'.

In this study, an attempt has been made to address these issues with particular reference to Pakistan. The public sector of Pakistan has grown at an impressive average annual rate of 13.9 percent during the 1980s. Much of this growth has been on the basis of domestic and external resources. The domestic debt in the 1990-91 fiscal year reached to 422 billion rupees which amount to about 42.8 percent of the total GDP. On the other hand, foreign debt has been accumulated to more than 15 billion dollars. In 1981-82 the ratio of foreign debt to GNP was about 0.27. The same ratio, however, had reached a record level of about 45 percent in 1988-89. Indeed, the foreign capital flows have played a significant role in determining the *fiscal* behaviour of the public sector in Pakistan.

The purpose of this study is to empirically examine the impact of foreign inflows (*grants* and *loans*) on the investment and consumption activities of the public sector in Pakistan using a time series data over the period 1971–88. We have also investigated the role of borrowings and taxes on the public sector. The theoretical model used in this study is a variant of Heller's (1975) original model which derives the consistent behavioural equations from the policy-maker's objective function subject to the public sectors budget constraints. These equations are then used to estimate the impact of foreign flows on the public sector's behaviour. Our model differs from that of the earlier ones in atleast two important ways. First, now it explicitly incorporates the defence expenditure as part of the public sector's consumption and, secondly, unlike Gang and Khan (1991), we do not impose the restriction that all the public sector's borrowing is spent on public investment. In fact, we allow the data to speak for itself. This model in this study was estimated using an efficient *iterative three stage least squares* technique.

The public sector's theoretical utility maximising model, constraints and its behavioural equations are discussed in Section 2. A summary of data sources and its definitions are presented in Section 3. Section 4 is devoted to the discussion

where W is defined as the welfare of the public-sector policy-makers and the variables with asterisks represent the *intermediate target* or *desired* levels of each variable. Any deviation from these targets, whether positive or negative, is considered to diminish the welfare level of the public sector's. We further assume that the decision-makers derive a positive welfare from public expenditures (*PI*, *GS*, *GC* and *GD*) and a negative welfare from domestic finances (*B* and *TR*). The above public sector's welfare function is optimised subject to both *economic* and *institutional* constraints. We argue that, in the case of Pakistan, the following two constraints may represent the alternative uses of total revenues of the public sector:

$$PI = \gamma_1 B + \gamma_2 TR + \gamma_3 A_1 + \gamma_4 A_2; \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (2)$$

$$GS + GC + GD = (1-\gamma_1)B + (1-\gamma_2)TR + (1-\gamma_3)A_1 + (1-4_\gamma) A_2;$$

$$0 \leq \gamma_i \leq 1, \quad i = 1,.....,4; \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (3)$$

where A_1 is defined as the foreign aid in the form of *grants* and A_2 is the *loan* component of foreign aid. γ_i and $(1-\gamma_i)$ represent the shares of revenues generated from ith sources (B, TR, A_1, A_2) spent on *public investment* (*PI*) and the total government expenditures (e.g., *GS*, *GC*, *GD*), respectively.

In order to empirically analyse whether or not foreign aid affects the public sector decision variables (*PI*, *TR*, *B*, *GS*, *GC*, *GD*), we first need to express the model in such a way so that it is *identifiable* and can be estimated with relative ease. This can be achieved by first deriving the first order conditions through maximisation of the welfare function [Equation (1)] with respect to *PI*, *TR*, *B*, *GS*, *GC* and *GD* subject to the constraints [Equations (2) and (3)] and then by solving these first order conditions to obtain the following structural equations.[3]

$$PI = \pi_1 + \pi_2 PI^* - \gamma_1\pi_3(GS - GS^*) + \pi_4 [\gamma_1 B \gamma_2 TR + \gamma_3 A_1 + \gamma_4 A_2]; \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (4)$$

$$TR = \pi_5 - \gamma_2\pi_6 PI + \pi_7 TR^* + \gamma_1 \pi_8(GS - GS^*) + \pi_9 [\gamma_1 B + \gamma_3 A_1 + \gamma_4 A_2]; \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (5)$$

$$B = \pi_{10} + \gamma_1\pi_{11} PI^* + (1-\gamma_1) \pi_{12}(GS - GS^*) + \pi_{13} B^* -$$

[3]These figures were taken from Ali (1988). For a critical review on the role of the defence sector on Pakistan's economy, readers may refer to Gardezi (1990).

$$\pi_{14}[\gamma_2 TR + \gamma_3 A_1 + \gamma_4 A_2]; \ldots \quad (6)$$

$$GS = \pi_{15} + p_{16} GS^{\bullet} + \pi_{17}[-(GC^{\bullet} + GD^{\bullet}) + (1-\gamma_1)B + (1-\gamma_2)TR + (1-\gamma_3)A_1 + (1-\gamma_4)A_2]; \ldots \quad (7)$$

$$GC = \pi_{18} + \pi_{19} GC^{\bullet} + \pi_{20}[-(GS^{\bullet} + GD^{\bullet}) + (1-\gamma_1)B + (1-\gamma_2)TR + (1-\gamma_3)A_1 + (1-\gamma_4)A_2]; \ldots \quad (8)$$

$$GD = \pi_{21} + \pi_{22} GD^{\bullet} + \pi_{23}[-(GS^{\bullet} + GC^{\bullet}) + (1-\gamma_1)B + (1-\gamma_2)TR + (1-\gamma_3)A_1 + (1-\gamma_4)A_2]; \ldots \quad (9)$$

where

$$\pi_1 = (\gamma_1/(\beta_6 + \gamma_1^2\beta_2)[\gamma_1\beta_1 + (1-\gamma_1)\beta_7 - \beta_5]; \pi_2 = (\gamma_1^2\beta_2)/(\beta_6 + \gamma_1^2\beta_2);$$

$$\pi_3 = (1-\gamma_1)/(\beta_6 + \gamma_1 2\beta_2); \ \pi_4 = (\beta_6)/(\beta_6 + \gamma^2{}_1\beta_2);$$

$$\pi_5 = [\gamma_2(\beta_5 - \beta_7) + \gamma_1(\beta_7 + \beta_3)]/(\gamma^2{}_1\beta_4 - \gamma^2{}_2\beta_6); \pi_6 = \beta_6/(\gamma^2{}_1\beta_4 - \beta_6);$$

$$\pi_7 = \gamma_1 2\beta_{10}/(\gamma_1\beta_4 - \gamma^2{}_2\beta_6); \pi_8 = \gamma_1(\gamma_1 - \gamma_2)/(\gamma^2{}_1\beta_4 - \gamma^2{}_2\beta_6);$$

$$\pi_9 = \gamma_2\beta_6/(\gamma^2{}_1\beta_4 - \gamma^2{}_2\beta_6); \pi_{10} = [\beta_7(1-\gamma_1) + \gamma_1(\beta_1 - \beta_7)]/(\beta_6 + \gamma^2{}_1\beta_2);$$

$$\pi_{11} = [(\beta_6 + \gamma^2{}_1\beta_2) - \gamma^2{}_1]/(\beta_6 + \gamma^2{}_1\beta_2);$$

$$\pi_{12} = [\gamma^2{}_1\beta_2 - \beta_8(\beta_6 + \gamma^2{}_1\beta_2)]/[\beta_2(\beta_6 + \gamma^2{}_1\beta_2)];$$

$$\pi_{13} = 1/[\beta_2(\beta_6 + \gamma^2{}_1\beta_2)]; \pi_{14} = \gamma_1/[\beta_2(\beta_6 + \gamma^2{}_1\beta_2)];$$

$$\pi_{15} = [\beta_7(\beta_{10} + \beta_{12}) - \beta_9\beta_{12} - \beta_{10}\beta_{11}]/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{16} = [\beta_8(\beta_{10} + \beta_{12})]/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{17} = (\beta_{10}\beta_{12})/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{18} = [\beta_9(\beta_8 + \beta_{12}) - \beta_7\beta_{12} - \beta_{10}\beta_{11}]/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{19} = \beta_{10}(\beta_8 + \beta_{12})/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{20} = (\beta_8\beta_{12})/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{21} = [\beta_{11}(\beta_8 + \beta_{10}) - \beta_7\beta_{10} - \beta_8\beta_9]/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{22} = \beta_{11}(\beta_8 + \beta_{10})/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

$$\pi_{23} = (\beta_8\beta_{10})/[\beta_{10}\beta_{12} + \beta_8(\beta_{10} + \beta_{12})];$$

Equations (4)–(9) comprise the model to be estimated. In the next section, we briefly discuss the data sources and estimation technique to be used.

3. DATA SOURCES AND THE ESTIMATION PROCEDURE

Data

The major data source for most of our variables is the *Public Finance Statistics*, published by the Finance Division of the Government of Pakistan. Some additional data has also been obtain from various issues of the *Economic Survey of Pakistan.*

It is important to note that the annual budget statement of the *Government of Pakistan* has two main components, a revenue budget and a *capital budget.* Approximately 75 percent of the revenue receipts the revenue budget consists of taxes. The expenditures met from revenues are classified as *current expenditures* and *development expenditures*. However, these development expenditures are not related to asset building investments. In fact, they are also a part of the current government consumption. The distinction has been maintained to be in accordance with certain accounting practices rather that being functionally different. The receipt side of the capital budget primarily consists of domestic and external borrowings. On the other hand, the *loan* and *grant* components of external resources are separately reported. Furthermore, the capital expenditure is classified into development and current expenditures on the capital account. Again, the actual asset building capital expenditure corresponds to the development expenditure on the capital account only.

Target Variables

Unfortunately, in the case of Pakistan not in all target or desired variables (with asterisks) are published. In this study, we are therefore, forced to use some sort of proxy or predicted values of these variables based on relevant information. Following Gang and Khan (1991) and Hasan (1987), we use an *instrumental variable technique* to generate the fitted or predicted values for these targets. The information set used for each target variable is given below:

$PI^{*} = \Omega_1\{constant, \text{GDP}_{-1}, PIV, PI_{-1}\}$; $TR^{*} = \Omega_2\{constant, GDP, IMP_{-1}\}$;

$B^{*} = \Omega_3\{constant, \text{BD}, DI\}$; $GS^{*} = \Omega_4\{constant, ENI, \Delta GDP\}$;

$GC^{*} = \Omega_5\{constant, \text{GC}_{-1}\}$; $GD^{*} = \Omega_6\{constant, GDP, DIND\}$;

where

GDP = *gross domestic product, PIV = total private investment,*
IMP = *total imports, BD = total budget deficit, EN*1 *= total school enrollment,*

DIND = *total defence expenditure by India,* $\Delta GDP = GDP - GDP_{-1}$, *D1 = Dummy variable in order to capture the 1986 introduction of bearer bond certificate in 1986.*

Since the predicted values are *non-stochastic*, they can, therefore, be treated as exogenous variables in our model along with the other two exogenous foreign aid variables.[4]

Estimation Procedure

Since our model, represented by Equations (4)–(9), is *simultaneous* as well as *nonlinear,* we employ an efficient *iterative three stage least squares* (*ITSLS*) method to estimate the model. Although a *single equation technique* (*SEM*) may be attractive from the point of view of simplicity and ease of application as used by Heller (1974, 1975) and Mosley *et al.* (1987), it, however, ignores the information available in the model. In fact, Dhrymes has shown that a continuing iteration of *ITSLS* procedure, until the *variance covariance matrix* converges, yields the maximum likelihood estimates.[5] This method is obviously computationally equivalent to maximum likelihood. We have used the *TSP* (*version 7.0*) *programme* to estimate our model. There is, however, one important caveat with regard to the estimated *t-values* produced by such a procedure. For instance, due to over-parameterisation and numerous cross equation restrictions, the *standard errors* of parameter values from this technique are, in general, understated and, thus, cannot be reliable in testing the significance as well as the restrictions imposed on the parameters. In order to correct for such caveats, we therefore use an alternative testing procedure known as *Wald test.*[6] This is more flexible and can test hypothesis involving restrictions on the coefficients of explanatory variables. The restrictions may be linear or nonlinear, and two or more restrictions may be tested jointly.

4. RESULTS

Our model consists of Equations (4)–(9) with *PI, TR, B, GS, GC* and *GD* being the endogenous variables while *A*1, *A*2 and other target values are exogenous. As indicated earlier, we employ an efficient *ITSLS* method to estimate

[4]The estimated regression results for the target variables are available on request from the authors.

[5]For a detailed discussion on the relative usefulness of this method, see Hasan and Mahmud (1991).

[6]Berndt (1991) and Gregory and Veall (1985) provide an excellent discussion on the *Wald test.*

the parameter values of the model. The estimated parameters and the associated *chi-square values* produced from the *Wald statistic* are reported in Table 1.

Table 1

ITSLS Regression Results Pertaining to Foreign aid and other Domestic Financial Flows

Parameter	Estimate	Chi-square value (χ^2)	Level of Significance or *P*-Value
γ_1	0.2164	0.6919	0.4055
γ_2	−0.5518	2.4744	0.1157
γ_3	8.8964	2.8240	0.0929
γ_4	0.5520	1.2277	0.2679
π_1	−748.2448	2.6610	0.1028
π_2	1.1799	124.6140	0.0000
π_3	−6.9918	0.4890	0.4840
π_4	0.2686	1.7840	0.1817
π_5	1999.4500	4.6731	0.0306
π_6	−0.9948	1.8645	0.1721
π_7	1.0828	228.0840	0.0000
π_8	42.4640	0.8006	0.3709
π_9	0.0730	0.5890	0.4428
π_{10}	1194.3560	2.6610	0.1028
π_{11}	−1.7067	0.78194	0.3765
π_{12}	−2.1557	0.4261	0.5139
π_{13}	1.2214	107.2010	0.0000
π_{14}	0.2943	1.2137	0.2706
π_{15}	−199.4291	13.7208	0.0002
π_{16}	0.3810	15.7818	0.0001
π_{17}	−0.0139	44.7165	0.0000
π_{18}	−1624.9010	2.6918	0.1009
π_{19}	0.4684	51.8598	0.0000
π_{20}	−0.2176	33.4957	0.0000
π_{21}	681.5472	6.3087	0.0120
π_{22}	0.4446	18.3721	0.0000
π_{23}	−0.0604	17.6075	0.0000
No. of OBS	17		

Note: (1) For nonlinear restrictions, the test statistics is an asymptotic χ^2.

Our primary focus in this study is on the estimated parameter values related to the foreign aid and other financial flow variables e.g., γ_1, γ_2, γ_3 and γ_4. Table 1 indicates that, with the exception of γ_3 (coefficient of *grant* in *PI* equation), all other parameter estimates are not significantly different from zero at the 1 percent or even 5 percent level of significance. In order to provide some additional, interesting and intuitive interpretations for these estimated parameters we conduct further *Wald tests* on these parameter estimates imposing a *non-zero* restrictions. These results are presented in Table 2.

Table 2

Wald Test Statistic for Testing Non Zero Restrictions on Aid and Other Domestic Financial Flows Parameters

Parameter	Null-hypothesis	Chi-square value (χ^2)	Level of Significance
γ_1	$\gamma_1 = 1.00$	9.0700	0.0026
	$\gamma_1 = 0.73$	3.8962	0.0484
	$\gamma_1 = 0.72$	3.7460	0.0529
γ_2	$\gamma_2 = 1.00$	19.5673	0.0000
	$\gamma_2 = 0.15$	4.0024	0.0454
	$\gamma_2 = 0.10$	3.4524	0.0632
γ_3, γ_4	$\gamma_3 = \gamma_4 = 0.00$	2.8248	0.2436
	$\gamma_3 = \gamma_4 = 1.00$	8.1846	0.0167
	$\gamma_3 = 1.00$ & $\gamma_4 = 0.00$	2.2605	0.3230
	$\gamma_3 = 0.00$ & $\gamma_4 = 1.00$	9.5903	0.0083

We first consider the coefficient of *domestic borrowing*, γ_1, in the equation for public investment. In all the previous studies, a unity restriction ($\gamma_1 = 1$) is normally imposed *a priori* on this coefficient. As indicated earlier we believe such a restriction is too strong, particularly, in the case of Pakistan's economy. In fact, the results in Table 2, strongly support our argument in the sense that the *hypothesis*

that $\gamma_1 = 1$ (indicating that all domestic borrowing is spent on *PI*) is overwhelmingly rejected at less than 1 percent level of significance. Not only that, we also did some interesting *sensitivity* testing to investigate the percentage of the *public borrowing* (*B*) that goes towards *public investment* (*PI*). Table 2 (rows 2 and 3) shows that between 72 percent and 73 percent of *B* may have been used for *PI*, however, the remaining 26 percent of *B* in Pakistan seems to have been used for the purposes of financing the non-investment recurrent government spending which, among other things, also includes the expenditure on defence.

The *Wald test statistic* for the estimated coefficient of *TR* (γ_2) in Equation (2) also provides some additional insight as to how much of the domestically collected total tax revenues (*TR*) were used for *PI* and other government expenditures (*GS, GC* and *GD*). As expected, Table 2 strongly rejects the null hypothesis that all *TR* goes towards *PI*. In fact, our results in this context suggest that a relatively small portion (only approximately between 10 percent to 15 percent) of *TR* is spent on *PI* and the rest may have been spent on the government's social and other non-developmental expenditures.

The estimates of the foreign aid variables (*grant* and *loan*) for Pakistan's economy, on the face of it, provide even more puzzling results. First, although the *grant* portion of the foreign aid (γ_3) seems to have some significant impact on *PI,* at least at the 10 percent level (as shown in Table 1), the same cannot be said for *loans* (γ_4). Unlike Gang and Khan's (1991) results on Indian time series data and Levy's (1987) cross-section study on developing economies, we could not reject the null hypothesis that foreign aid consisting of *loans* does not matter in enhancing *PI* in Pakistan. In order to get more insight, we further conducted several *joint sensitivity tests* on the coefficients of γ_3 and γ_4. These results are reported at the bottom of Table 2.

It is interesting to note that the foreign aid in the form of *grants* (γ_3) by themselves were individually significant. However, when tested jointly with *loans* (γ_4) for a *null-hypothesis* that they are both equal to zero, we simply could not reject such a hypothesis. On the other hand, the *joint null-hypothesis* that they are both equal to one is easily rejected at less than 5 percent level of significance. Furthermore, when the coefficients of *grant* and *loan* are, respectively, assumed to be equal to one and zero, we again could not reject such a hypothesis. However, when the assumptions are reversed, namely that $\gamma_3 = 0$ and $\gamma_4 = 1$, the hypothesis is then rejected even at less than 1 percent level of significance. All these statistical results can be simply interpreted to imply that the impact of foreign aid on *PI* in the form of *grants* is, at best, marginal. But when *grants* are taken together with *loans* the combined effect of foreign aid on *PI* is less than significant.

Our results on Pakistan's economy seem to differ dramatically from those of Gang and Khan (1991) and Levy (1987) studies. For example, [Gang and Khan (1991), p. 363] argued that in Indian foreign aid money is 'used to finance development projects' and that these external resources 'are not used for the *daily* expenses of running a country'.

5. CONCLUSIONS

In this study, we empirically analysed the impact of foreign aid (*grants* and *loans*) and other domestic financial flows (e.g., *public borrowings* and *tax revenues*) on the *public investment* in Pakistan within the framework of a public sector's *welfare* maximisation approach. To this effect, we estimated the *public sector's* fiscal behavioural parameters employing a *nonlinear iterative three stage least squares (ITSLS)* technique using Pakistani data over the period 1971–88.

While one must exercise caution in generalising and interpreting the *ITSLS* results, the findings of this study are, nevertheless, quite interesting and of some practical importance so far as Pakistan's economy is concerned.[7] Unlike earlier studies, our results seem to suggest, that in Pakistan, not all financial resources generated from *domestic borrowing* are spent on *public investment*. In fact, we found that about 28 percent of the *domestic borrowing* goes towards financing the public sectors non-developmental expenditures.

Our results also indicate that foreign aid, in the form of *grant*, may have a modest impact on the *public investment*, however, the same cannot be said with regard to *foreign loans*. Foreign aid in the form of *loans* does not seem to have a significant impact on *public investment*. We believe that the following could be a possible explanation to justify this finding. During the past decade, Pakistan did receive large sums of foreign aid, notably from the U.S. A substantial portion of this aid money was, however, spent or assigned specifically for defence purposes because Pakistan assumed a "front line" position in the early eighties due to the Afghan war. It appears that some of the economic or project aid money was *fungible* and it may have been channelled to meet and run the civil government and defence expenditures.

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[7]Some of the caveats of our results may pertain to: (a) the estimation is based on a limited number of degrees of freedom, and (b) the parameter estimates may have the usual shortcomings of the *ITSLS* method.

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Comments on "Foreign Aid, Defence Expenditure and Public Investment in Pakistan"

Aynul Hasan and Saleem Chishti's paper is an important step towards exploring an area which, until recently, had not been the focus of much empirical research in the context of the Pakistan economy. However, as many of you must have realised that the relationship between foreign capital inflows in the form of foreign private investment or foreign aid and macro variables like the growth rate of real GNP and the domestic private/public saving rate has been the subject of at least three papers presented in the current PSDE meeting. In fact, the timing of the Hasan and Chishti paper could not be better because it gives us an added opportunity to view it in the perspective of the results that have been stated in the other papers presented by Dr Tayyeb Shabbir, Dr Ashfaque H. Khan and Dr A. R. Kemal in this meeting.

The paper under discussion uses a utility maximising approach to analyse the investment and consumption behaviour of the public sector as influenced by foreign aid in the form of grants and loans. Let me remind the audience that to my knowledge this paper constitutes the first step towards analysing the foreign aid – economic growth debate in a welfare optimising framework for Pakistan. I commend the authors for their efforts in presenting and estimating a sophisticated behavioural model of the public sector which, I am sure, will provide much inspiration for future research in this area.

First of all, I would like to make a general comment about the paper. In my view the title of the paper does not truly reflect the subject matter of the paper. As suggested title which has also been alluded to by the authors in the concluding section could be "Public Fiscal Behaviour in Pakistan in relation to foreign aid and domestic financial flows".

Coming to more specific comments and queries:

Why do the authors use a non-negative value for desired domestic public borrowings whereas two of the studies that they draw heavily upon [Heller (1975); Gang and Khan (1991)] assume an *ex ante* borrowing target of zero which, of course, does not preclude a positive level of borrowing.

More justification should be given for the *a priori* choice of the null hypothesis regarding the percentage of public borrowings used for financing public investment. (I am referring to the Wald test statistic for testing non-zero restrictions in Table 2.)

The empirical result that foreign aid does not have a significant impact on public investment has linkages with the macroeconomic relationship between foreign aid, domestic saving and economic growth which need to be spelled out in the light of the results of this paper.

Can the results of this paper enable the authors to make a statement about how the burden of financing government consumption expenditure (say expenditure on defence) will be divided between domestic and foreign sources keeping in view of the result that foreign aid as well as the major share of tax revenues are channelised towards financing non-development expenditures of the government.

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