EVALUATION OF BUDGET POLICY IN THE PHILIPPINES 1947-1973

By

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Introduction

The growing role of the government in economic affairs, instigated by motives that are intrinsic in the present philosophy of socio-economic development, implies increasing responsibility for the management of the national economy. Notwithstanding the evident adherence "to the policy that economic development is principally a task of private enterprises and not of government"[1] , the government has felt that its duty has been to establish and maintain favorable conditions for steady growth, stability and full employment.

Although the government has been regularly using monetary policy to influence economic affairs, a congnizant fiscal policy has been rather sporadic.[2] It was during the mid-1950s that the

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[1] See for example, Budget Message for Fiscal Year 1962-1963. February 6, 1962, *Budget for the Fiscal Year 1963*, Republic of the Philippines, (Manila 1962), pp. 3A-13A.

[2] "It is in the process of capital formation that fiscal policy can play a very important role. . . It is painful for me to admit that it seems that the Filipino people, or at least their leaders, have chosen by design or ignorance, not to use fiscal policy for this purpose. What contributions conscious fiscal policy had, if any, in augmenting capital formation in the Philippines since its independence, is meager indeed." Agustin Kintanar, "Financing the Public Sector", *The Philippine Economy in the 1970's: Prospects and Problems of Development*, Institute of Economic Development and Research, University of the Philippines, (1972), p. 171.

government became increasingly aware of a great potential offered by fiscal policy instruments in fulfilling these functions both in the short term, by restraining or encouraging its own and private demand to maintain the stability of a growing economy, and in the long term, by providing a favorable environment to encourage investment activities. A long neglect of fiscal policy might have contributed to an overburdening of monetary instruments and thus negatively affected their efficacy. It can be expected that in the future, monetary policy will be more and more motivated by the balance of payments considerations and by the business investment activity and less by the level of domestic aggregate demand. This will, in turn, call for fiscal policy framed to influence domestic incomes, prices, and employment.

There is little doubt that in some years fiscal policy was not formulated correctly and effected changes in the wrong direction, either by depressing an economy already in a downswing or adding to an already inflationary situation. Hence, the reluctance of the government to make fuller use of fiscal policy is understandable because those responsible for its formulation have not always been able to estimate and predict the quantitative effects of instruments they might have used.

In order to improve the performance of budget policy, a decision maker responsible for economic policy mangement must have some quantitative knowledge of the impact of the budget and of the effects of changes in fiscal parameters on target variables.

The primary concern of this study is to show how successfully fiscal policy was used in creating conditions conducive to economic growth and stability during a time period of more than a quarter of a century by measuring total and disaggregated budget effects. This study does not contain advice for policy improvement. However, the estimates of the effects of changes in budgets and of the changes in individual parameters over a relatively long period of time, provide a decision maker with valuable information which, if correctly interpreted, may help to improve the efficacy of budget policy. Thus, by reviewing past experience, a practical lesson can be learned for the future. However, past successes and failures should be also interpreted as conditioned by political considerations, existing institutional structure and other factors.

Part II presents the basic methodology used for measuring the

effects of changes in budgets in the study and the statistical procedures adopted. Part III forms the main body of the study and is concerned with measuring the total, discretionary, and automatic effects of the budgets and the effects of the changes in various categories of expenditures and revenues over the 1947-73 period. It also contains the quantitative analysis of the long-run impact of the budgets, effects on the growth trend, and of short-term stabilization around the trend. The appraisal of budget effects is limited to the effects on aggregate demand only. No attempt is made to illuminate the other aspects of fiscal policy. Tables containing detailed estimates of budget effects and stabilization data on which these effects were calculated are omitted. However, the reader will find all data annexed to my Discussion Paper mentioned above.

The Methodology of Estimation

The definition of budget effects and the methodology used throughout the paper was based on the study by Bent Hansen[3] as supplemented by Wayne W. Snyder.[4]

The analysis presented in this paper used the following measures to evaluate the impact of budget changes: the average annual effect on domestic demand, the effect on trend increase of GNP, and the short-term stabilization around the trend path of both actual and potential GNP.

The formulas used in the statistical estimates followed the demand type model presented in Hansen's (1969) study.[5] The model assumes that investments and exports are exogenously determined. The formulas were disaggregated in the volume and price changes components and adjusted for corporation tax and slightly modified in contents because of difference in the Philippine National Accounts system. The parameters of action on the government were assumed

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[3] Bent Hansen assisted by Wayne W. Snyder, *Fiscal Policy in Seven Countries 1955-1965* (Belgium, France, Germany, Italy, Sweden, United Kingdom, United States) OECD, Paris, March 1969, especially Chapters 1 and 2. For the similar approach see, for example, Walter Heller *et al., Fiscal Policy for a Balanced Economy: Experience, Problems and Prospects*. OECD, Paris, December 1968, especially Annex A.

[4] Wayne W. Snyder, "Measuring Economic Stabilization: 1955-65," *The American Economic Review*, Vol. LX, No. 5 (December, 1970).

[5] Bent Hansen, *op. cit.*, pp. 21-32.

to be government purchases of consumption and investment goods and of labor, wage and salary rates, and marginal tax rates.

The three formulas for estimating the total budget effects, effects of discretionary measures, and effects of automatic responses used in this paper, were as follows:

$$E_{TOT} = \frac{1}{\delta} \quad (dg_p^d + dg_i^d + dg_1)[1 + (1 - \frac{\alpha}{a}) \frac{T_i}{c}]$$

$$+ g_p dp_g + g_i dp_i + g_i dw)[\alpha(1 - \mu)]$$

$$- dT_i[\frac{\alpha}{a}(1 - \mu)] - dT_{dp}[\alpha(1 - \mu)]$$

$$- dT_{dcorp} (1 - \mu)] \qquad (1)$$

E_{TOT} represents the difference between the actual change in GNP and the change which would have taken place had no changes occurred in the budget including automatic changes. Note that

$$= \frac{1}{\delta} = \frac{1}{1} + (1 - \frac{\alpha}{a}) \frac{T_i}{c} - \alpha (1 - \mu) \text{ is the multiplier}$$

expression for dy.

$$E_{DIS} = \frac{1}{\Delta} \quad (dg_g^d + dg_i^d + dg_1) [1 + t_i]$$

$$+ g_1 dw [(1 - \mu)(1 - td_p)]$$

$$\gamma \cdot cdt_i [\frac{\alpha}{a}(1 - \mu)] - ydt_{dp}[\alpha(1 - \mu)]$$

$$- ydt_{dcorp} [(1 - \mu)] \qquad (2)$$

E_{DIS} represents the difference between the actual change in GNP and the change which would have taken place had no discretionary budget measures been taken, where

$$\frac{1}{\Delta} = \frac{1}{1} + t_i - \alpha(1 - \mu)(1 - t_d)$$

is the multiplier expression for dy.

It is therefore logical to define and measure the automatic effects of

the budget as

$$E_{AUT} = E_{TOT} - E_{DIS} \qquad (3)$$

E_{AUT} represents the dampening exerted by the automatic budget responses on GNP fluctuations generated by non-budgetary forces.

In order to permit comparison over time, the effects were, where necessary, normalized through division by GNP of the previous year and thus expressed as percentage changes of GNP (e = E/GNP_{t-i}-100). Notations used in this paper are as follows:

y	=	GNP, volume
c	=	personal consumption expenditure, volume
g_p	=	general government purchases of domestic products, volume
g_i	=	general government purchases of investment goods, volume
p_g	=	implicit price index for general government purchases
w	=	implicit index of general government purchases
p_i	=	implicit index for GDCF
p	=	consumer price index net of indirect taxes
T_d	=	direct taxes
T_{dp}	=	direct taxes on persons
T_{dcorp}	=	direct taxes on corporation
T_i	=	indirect taxes
T_j	=	marginal rate of indirect taxation
t_j	=	marginal rate of indirect taxation
t_d	=	marginal rate of direct taxation

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t_{dp} = marginal rate of direct taxation on persons

t_{dcorp} = marginal rate of direct taxation on corporations

α = marginal propensity to consume[6]

μ = marginal propensity to import

a = average propensity to consume

The symbols in formulas 1 and 2 denoting budget expenditures and revenues were related to the Philippine National Accounts statistics in the following manner:

$dg_p^d = dg_p(1 - \mu)$ — the change in the volume of general government domestic purchases of consumption goods. It consists of the volume change of other government expenditures (I-8B).[7] The data on direct government imports were not available; therefore, the import contents were estimated by applying import coefficients to government purchases. To estimate the annual changes in the volume the data were deflated by the implicit price index for other expenditures.

$dg_i^d = dg_i(1 - \mu)$ — the change in the volume of general government investment expenditures. Due to the lack of data on general government gross fixed capital formation and on gross investment of government enterprises prior to 1960, the data for general government savings (III-3) were substituted. However, beginning with

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[6] Marginal propensity to consume α represents a ratio of the changes in private and government consumption expenditures to changes in income composed of the following items: compensation of employees and entrepreneurial and property income of persons; current transfer payments to persons from abroad; general government income from property and entrepreneurship; indirect taxes less subsidies; current transfer payments to government from abroad; corporate income.

[7] The symbols in parentheses refer to tables and items in the National Income Accounts of the Republic of the Philippines.

1960 two series of data were presented. The import contents were estimated by applying the import coefficient. The data were deflated by the implicit price index for capital formation.

dg_l — the change in the volume of general government purchases of labor. It was obtained by deflating government expenditures on compensation of employees (I-8A) by the implicit price index for employees expenditures.

$(g_p dp_g + g_i dp_i + g_l dw)$ — the change in general government domestic purchases of goods and services due to the changes in prices for consumption goods, capital goods, and the changes in wage and salary rates. The estimates were obtained in the process of deflating government purchases.

dT_i — the change in revenue from indirect taxation. It was identified with item (III-5), indirect taxes less subsidies.

dT_{dp} — the change in revenue from direct taxation on households was identified with the changes in direct taxation on persons (III-6b) plus general government income from property and entrepreneurship (III-4) minus current transfer payments to persons (III-2).

dT_{dcorp} — the change in direct taxes on corporations (III-6a).

Net current transfer payment from abroad (III-7) increases the total general government revenue but does not represent a withdrawal of resources from domestic consumption. On the contrary, it directly adds to domestic demand and is thus a part of the total expenditure change. For this reason, net current transfer payment from abroad was excluded from general government revenue. It would have been also methodologically correct to exclude this item from the estimates of the effects of discretionary changes in expenditure. However, this was not done.

In line with Hansen's study[8], changes in tax revenue and changes

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[8] Bent Hansen, *op. cit.*, p. 34. The reason was that in the model adopted, p, prices of goods before indirect taxes, appears as an exogenous variable and the effects of changes in p, including the changes in real value of revenue from taxation, are ascribed to p.

in expenditure due to the changes in prices and in wage and salary rates were not deflated by the appropriate indexes as might have seemed logical. Thus,

cdt_i — the discretionary change in net indirect taxation less subsidies.

ydt_{dp} — the discretionary change in net direct taxation on persons plus income from property and entrepreneurial activity minus direct transfers to persons.

ydt_{dcorp} — the discretionary change in net direct taxation on corporations.

In the formula (1) for total effects, E_{TOT}, changes in budget items were separated into several broad categories of expenditures and revenues in order to obtain estimates of different budget parameters whose impacts on the economy were not likely to be the same. A distinction was also made between effects resulting from the changes in discretionary measures and automatic effects resulting from budget responses to economic fluctuations. However, only discretionary effects, E_{DIS}, were estimated directly. Automatic effects were obtained as a residual [cf. (3)]. In the formula (2) for measuring the effects of discretionary measures, changes in price for purchases of consumption and capital goods were not considered discretionary since government purchases were not significant enough to influence or command the price. On the other hand, effects resulting from the change in wage and salary rates were considered discretionary since the government, as one of the largest employers, could exert, at least in the short-run, a strong influence on the labor market, particularly for civil servants.

The study used a year-to-year analysis over a period of 27 years. Since all effects were estimated on an annual basis, any lags involved were considered unimportant.

To estimate the multiplier effects of the changes in government budgets, it was necessary to compute the numerical values of coefficients used in multiplier formulas. The values were in all cases based on simple time series estimates over the period under consideration. The analysis was carried on the assumption of unchanged coefficients throughout the whole period.

Table II-1
Values of Coefficients used in Multiplier Formulas

a	α^1	μ	t_i	t_{dp}	t_{dcorp}
0.90	0.83	0.20	0.10	0.01	0.01

Source: See Tomas J.F. Riha, *op. cit.*, Tables II-4 to II-6 and III-1a.

[1] Note: A similar estimate for α was obtained by E. R. Moras, "Fiscal Policy, Savings, and Economic Growth in Developing Countries: An Empirical Study," *Finanzarchiv,* Vol. 28, (1968-69), p. 466.

Such coefficients implied values for the multipliers for total and discretionary effects as follows:

Table II-2
Values of Multiplier for Total Budget Effects

dg_p^d	dg_i^d	dg_1	g_p^d	$g_i^d dp_i$	$g_1 dw$	dT_i	$dT \ldots .dpdTdcorp$
0.87	0.45	1.34	-0.14	-0.13	0.18	1.71	0.01 0.22

Source: See Tomas J.F. Riha, *op. cit*, Table IV-4a, b.

Table II-3
Values of Multipliers for Discretionary Budget Effects

dg_p^d	dg_i^d	dg_1	$g_1 dw$	cdt_i	ydt_{dp}	ydt_{dcorp}
0.74	0.37	1.12	0.13	-0.80	-0.09	-0.03

Source: See Tomas J.F. Riha, *op. cit.*, Table IV-5.

Each value of the above multipliers pertained to the average over the period, showing the effect on GNP, at constant 1955 prices, of an increase of one unit of a particular group of expenditure or revenue. The expenditure and tax effects multipliers were scaled by their appropriate multipliers and by their weights (in square brackets) in the multiplicands (1) and (2)[9]

III. Analysis of the Effects of the Budgets, 1947-1973

The prime concern of this analysis was to find out to what extent the government budget policies influenced the course of economic events during the period 1947-1973.
period 1947-1973.

Effects of budget changes cannot be directly compared with actual GNP changes because the latter had been influenced by other economic policies. Therefore, a hypothetical series of GNP was constructed simply by subtracting from actual GNP the estimated effects of the budget for each year. This hypothetical series, which was called the "pure" series,[10] estimated what GNP would have been if the budget had shown no change from year to year. The pure series retained, however, all other policy effects and autonomous forces in it. On the assumption that there were no changes at all in the budgets, the total pure series was derived by subtracting the estimated total effects from actual GNP ($GNP^*_{TOT} = GNP_A - E_{TOT}$). The discretionary pure series was constructed by subtracting the effects of discretionary measures from actual GNP ($GNP^*_{DIS} = GNP_A - E_{DIS}$). Using the same concept, various pure rates of growth of GNP, defined as the difference between actual rate of growth of GNP and the budget effects ($e = E/GNP_{t-i}$) can be constructed. The actual rate of increase of GNP_{g1} was adjusted for total effects ($g^*_{tot} = g - e_{tot}$). g^*_{tot} show what the rate of growth would have been if the budget had shown no changes from last year; g^*_{dis} indicates what the rate of growth should have been in the absence of

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[9] See Bent Hansen, *op. cit.* p. 47. It would be methodologically appropriate to reduce the value of the multiplier by the portion going to the corporate sector. This may be an important leakage from the income stream and was partly accounted for in the construction of α.

[10] See for example, Bent Hansen, *op. cit.*, p. 55 and W. W. Snyder, *op. cit.*, p. 920.

discretionary measures but with the automatic budget responses working. The difference between rates of growth adjusted for discretionary effects shows to what extent automatic budget responses modified the developments ($g_{tot}^* - g_{dis}^* = e_{aut}$).[11]

IV. The Long-Run Impact of the Budgets

The Philippine economy has been rapidly growing since the end of World War II. In the period considered, the average annual increase of GNP (at 1955 constant prices) was 8.5 per cent. When the period 1947-1949 was excluded the average annual rate of growth of GNP (at 1955 constant prices) was 6.6 per cent. There was a discernible tendency for growth to slow down in the late 1950's and to fluctuate fairly widely throughout the first half of the 1960's and to level up after 1967. The high rates of growth of GNP were accompanied by an increase in the number of employed. The total number of employed was growing at a rate of 2.3 per cent over the period 1948-19733.[12] In spite of the growing participation of labor, unemployment remained an acute problem. The average number of unemployed was estimated at almost 7 per cent of the total labor force during the period 1956-71, and more than 10 per cent for 1948-73.[13]

The impact of the budget changes did not seem to exert much effect on unemployment. It could be said that employment considerations played a negligible role in overall budget policy.[14] Prices slowly fell following the end of the War, reaching the lowest point in 1954. The period of relative price stability from 1955 to 1960 turned to a period of mild inflation which lasted until 1969

[11] For detailed data on GNP_{TOT}^*, GNP_{DIS}^*, g_{tot}^*, g_{dis}^*, e_{aut}, see Tomas J.F. Riha. op. cit., Tables IV-24 and IV-26.

[12] See, for example, Tomas J.F. Riha, op. cit., Figure 4.

[13] See, for example, Tomas J.F. Riha, op. cit., Figure 5.

[14] For data and discussion see, for example, T.A. Mijares and C. Ordinario, "Labor Absorption in the Philippines and the Reliability of Employment Data," Table 1, presented at the Conference of Manpower Problems in East and Southeast Asia, May 22-28, 1971 in Singapore, and J. Encarnacion, Jr. et.al., Philippine Economic Problems in Perspective. Chapter 5, IEDR, University of the Philippines, 1975.

when the inflationary pressure became very strong.[15] The price level development was mainly influenced by sharply rising demand, particularly for consumer goods, which was not adequately matched by a rise in supply. It could be assumed that budget, too, in many instances worked on prices and balance of payments rather than on production and employment.[16]

The long-run impact of the budget changes can be described by the difference between the average actual growth of GNP, $\bar{g}$, and the average pure growth rate of GNP, $\bar{g}^*$. This difference is identical to the average trend of budget effects ($\bar{g} - \bar{g}^* = g$) and serves to describe the average upward push or downward pull resulting from the budget changes for the period as a whole.

Table IV-1
Average Annual Budget Effects
(Per Cent of GNP)

Period	Actual average rate of growth at constant prices $\bar{g}$	Total effects $\bar{g}_{tot}$	Discretionary effects $\bar{g}_{dis}$	Automatic effects $\bar{e}_{aut}$
1947-73	8.51	0.63	3.22	-2.59
1950-73	6.63	-0.70	0.51	-1.21

Source: See Tomas J.F. Riha, *op. cit.*, Table IV-3.

Table IV-1 shows that the average upward push from the budgets was 0.63 over the whole period considered. However, in the period 1950-73, total budget effects exerted a downward pull.[17] In other words, effects of the budget changes influenced the annual rate of increase of GNP by slightly more than 0.6 per cent annually. If the effects of changes in real domestic capital formation of general

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[15] See, for example, Romeo M. Bautista, "Inflation in the Philippines, 1955-1974," *Philippine Economic Problems in Perspective*, Chapter 6, IEDR, University of the Philippines, 1975.

[16] See Tomas J.F. Riha, *op. cit.*, Figure 6 and Table 11-6

[17] For the estimates of disaggregated effects of the budget changes see Tomas J.F. Riha, *op. cit.*, Tables IV-3 to IV-21.

government and of government enterprises not financed from the
budget had been included, the expansionary long-term impact on the
rate of growth of GNP would have amounted to 0.85 per cent.
However, there did not seem a strong correlation between the
expansionary budget changes and the actual rates of GNP growth
over the period as a whole. It might be partly due to the fact that a
budgetary expansion worked on prices rather than on output and
partly because the strong expansionary pressure from budgets was
concentrated in the beginning of the period. Since 1950, the total
effect of budget changes was contractionary, dampening the annual
rate of growth of GNP by 0.7 per cent.

From Table IV-1 it can be seen that, on the average, effects of the
discretionary measures were about five times more expansive than
total effects. They were negative only in seven out of 27 years. It is
therefore natural that the average annual automatic budget effects
had to be negative. The automatic budget effects pulled downward
the rate of growth of GNP in 20 out of 27 years.

More than 84 per cent of the expansionary effects of discretionary
measures were condensed into the 1947-49 period. This situation
influenced a high positive value of total effects for the period as a
whole. It can be also noted that the value of effects of automatic
budget responses was related to rates of growth. The higher the rate
of annual increase of GNP, the stronger were the automatic effects.
More detailed estimates of the total effects of expenditure and
revenue changes show that the strongest expansionary influence on
the average was attributable to the changes in the volume component
of total expenditures.[18]

In accordance with a great weight of indirect taxation in total
general government revenue,[19] effects of the changes in indirect
taxes exerted the strongest dampening influence on GNP growth,
followed by effects of the changes in corporation tax and direct
personal taxes.

The values of discretionary effects and of effects of automatic
responses were, to a considerable extent, influenced by the definition
of discretionary effects (see equation 2). This definition considered
as discretionary all volume components of government expenditure

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[18] See Tomas J.F. Riha, *op. cit.*, Tables IV-4a, b.

[19] See Tomas J.F. Riha, *op. cit*, Part II.

changes in wages and salary rates. The price components of consumption and investment expenditures were excluded. This step was methodologically supported by an argument that the government could have exercised a significant control over the imperfect labor market while having had only a limited control over the commodities market. With the exception of effects of corporation taxes, effects of discretionary tax measures were, on the average, expansionary. Needless to say, this observation must be interpreted with great caution since the definition of discretionary measure used is disputable and the data on the discretionary changes are far from being complete and accurate and in many instances were estimated only indirectly.

Exclusion of the price components of other expenditures and investment expenditures from the discretionary effects decreased overall dampening effects of automatic responses over the period as a whole. Automatic effects (see equation 3) were estimated as the difference between total and discretionary effects and hence incorporated a number of other fiscal factors unaccounted for in the definitions and also other disturbances.

In evaluating the relative importance of individual automatic responses, the effects resulting from expenditure responses were found slightly expansionary while revenue responses exerted a strong downward pull.

The automatic responsiveness of the fiscal system or built-in flexibility is generally considered a desirable feature since the economy more or less controls itself without calling for discretionary measures to be made.[20] The strength of built-in flexibility depends on marginal tax rates, marginal saving ratio, marginal propensity to consume and marginal propensity to import.[21] Using Hansen's definition for built-in flexibility, $1 - \frac{\alpha}{\Delta}$, the numerical value of the coefficient of built-in flexibility obtained was found equal to 0.23. This means that about 23 per cent of the expansionary effects from changes in government expenditure were, on the average, siphoned

[20] See, for example, R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory and Practice*, Chapter 24, (New York: MacGraw-Hill Book Company, 1973).

[21] See R.A. Musgrave, *The Theory of Public Finance*. (New York: MacGraw Hill, 1959), pp. 505-515.

off by the built-in increase in tax leakages. The value of the coefficient was rather high considering the composition of general government revenue and the low marginal tax rates ($t_i = 0.01$; $t_{dp} = 0.01$; $t_{dcorp} = 0.01$). One explanation for this occurrence might be the low saving ratio.

Rapid economic growth can be accompanied by increases in revenue in excess of expenditure. This phenomenon was dubbed by Walter Heller as fiscal drag.[22] "Fiscal drag refers to a situation in which built-in revenue rises more rapidly than do expenditures."[23] It is dependent on the actual growth rates and on the marginal rate of taxation of GNP. The calculation yielded the value of about 1 per cent of GNP: This means that with an average rate of growth of GNP of 8.5 per cent per year and a marginal rate of taxation of 12 per cent, the automatic tax revenue increased by 1 per cent of GNP. The high fiscal drag was the result of the high rate of growth of GNP. Unless matched by appropriate discretionary policies aimed at increasing government expenditure or lowering tax rates, the fiscal drag can exert a long-run dampening effect upon the economy and thus slow its rate of growth. In the short-run, some fiscal drag may be desirable to dampen a too-buoyant economy.

It is difficult to say whether, on balance, the automatic responses were harmful or desirable. They were probably desirable from 1947 to 1956, and again in the 1970's when they dampened the overheated economy. In the interim period, however, the automatic budget responses might have been considered harmful since they had a tendency to dampen economy recovering from an already deflationary situation.

Total effects of general government budgets were expensive during the second half of 1940's as a result of the government's deliberate attempt to speed up the reconstruction of the post war economy. In the 1950s and the first half of the 1960s, total effects continued to be generally expansionary, pushing the rate of increase of GNP slightly upwards. Since 1965, however, the budgets became increasingly contractive.

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[22] See Walter Heller, *New Dimensions in Fiscal Policy*, (New York: Norton, 1967).

[23] R.A. Musgrave and P.B. Musgrave, *op. cit.*, p. 551
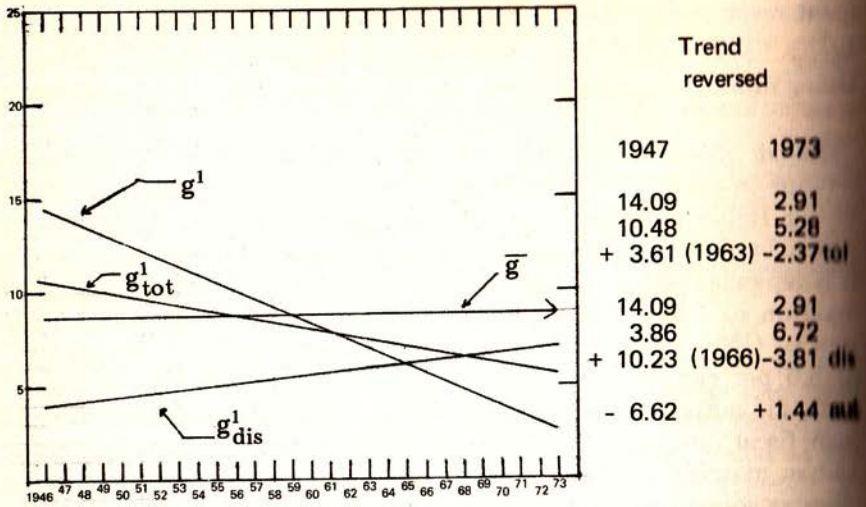
Rate of Growth of GNP (Per Cent)

	Trend reversed
1947	1973
14.09	2.91
10.48	5.28
+ 3.61 (1963)	-2.37 tot
14.09	2.91
3.86	6.72
+ 10.23 (1966)	-3.81 dis
- 6.62	+ 1.44 mil

Figure 1.   THE LONG-RUN IMPACT OF THE BUDGETS: 1947-1973
Source: See Tomas J. F. Riha, *op. cit.,* Table IV-26.
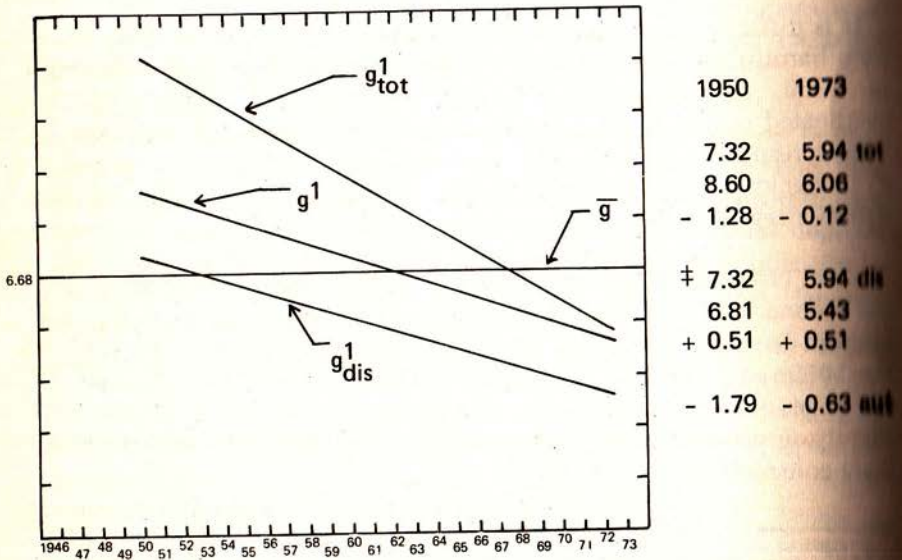
Rate of Growth of GNP (Per Cent)

1950	1973
7.32	5.94 tot
8.60	6.06
- 1.28	- 0.12
‡ 7.32	5.94 dis
6.81	5.43
+ 0.51	+ 0.51
- 1.79	- 0.63 aut

Figure 2.   THE LONG-RUN IMPACT OF THE BUDGETS: 1950-1973
Source: See Tomas J. F. Riha, *op. cit.,* Table IV-26.

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The long-run impact of budget changes on economic development can be described by fitting a regression line to the time series for the actual and pure growth rates. The difference between the slopes of the trends of actual and pure growth rates shows the direction of the impact and also depicts whether the budget influence was becoming stronger or weaker during the period considered.

Table IV-2
Budget Effects on Trend of GNP
(Per Cent of GNP Per Year)

Period	Actual Trend of GNP Growth Rate g'	Trend of Pure Total Growth Rate g'^*_{tot}	Trend of Pure Discretionary Growth Rate g'^*_{dis}	Trend of Automatic Effects e'_{aut}
1947-73	-0.43	-0.20	+0.11	-0.31
1950-73	-0.06	-0.11	-0.06	-0.05

Source: See Tomas J.F. Riha, *op. cit.*, Table IV-26.

Table IV-2 and Figure 1 show that when considering the period as a whole, budgets were becoming decreasingly expansive through 1963 and increasingly contractive afterwards. Effects of the discretionary measures show a similar trend. The expansionary impact of discretionary measures on growth trend was strongest at the beginning of the period under consideration. However, their impact was reversed in 1966 and became increasingly contractive. Strong expansionary effects were partly due to the post war government increase in purchases of consumption goods, services, and government investments, and partly to a considerable decrease in taxation after the war.

Effects of the automatic responses were negative throughout the whole period with the exception of three years. Automatic effects were very strong at the beginning of the period because of high rates of economic growth and then they became gradually weaker in their dampening effects with the actual rate of growth falling. By definition, price changes were included in the estimates of automatic effects. Though price effects were negligible in the long-run, they strongly affected the values of automatic effects at the beginning of

the period. When the price component was excluded from the effects of automatic changes, their dampening impact, even over the whole period, appeared smaller (-2.39 versus -2.59). The exclusion of the price component decreased the value of automatic effects and increased the value of discretionary effects. The strong pull downwards at the end of the period might have resulted from the tax responses to the exceptionally high rate of growth in 1967 and from the increases in the marginal tax rates in 1970.

When the period 1950-73 was considered, a striking difference in results appeared (see Table IV-2 and Figure 2). The budgets were found decreasingly contractive throughout this period while effects of discretionary measures maintained an expansionary push of equal strength during the period. It follows that automatic effects were also decreasingly contractive. It can be observed in Figures 1 and 2 that the budget influence on economic development was weaker at the end of the period than it had been at the beginning.

Short-term stabilization

To measure the extent of influence that the budgets exerted on short-term stabilization around the trend, both the Hansen and Snyder methods were tried. The approach implicit in the Snyder model measures the degree of short-term stabilization accomplished not in relation to the actual rates of growth as the Hansen method does, but in relation to potential levels of GNP.

Potential GNP was defined as the optimum that the economy is capable of sustaining on the average, year after year, without running into serious instability of output, prices, or employment. However, official estimates of potential GNP were not available for the Philippines. After trying Okun's Output/Unemployment leap and Kuh's production function, the unsophisticated linked peaks method was finally used to derive a series of potential GNP (cf. Figure 3). It was assumed that potential GNP coincided with actual real output in 1950, 1955, and 1973 and that it grew at constant rates of 8.1 per cent through 1955 and 6.1 per cent afterwards. The linked peaks approach is somewhat problematic because it implies subjectivity in choosing the peaks and thus influences the findings. As could be noticed from Figure 3, the choice of peaks in this study implied a long period of under-utilization, particularly since 1959.
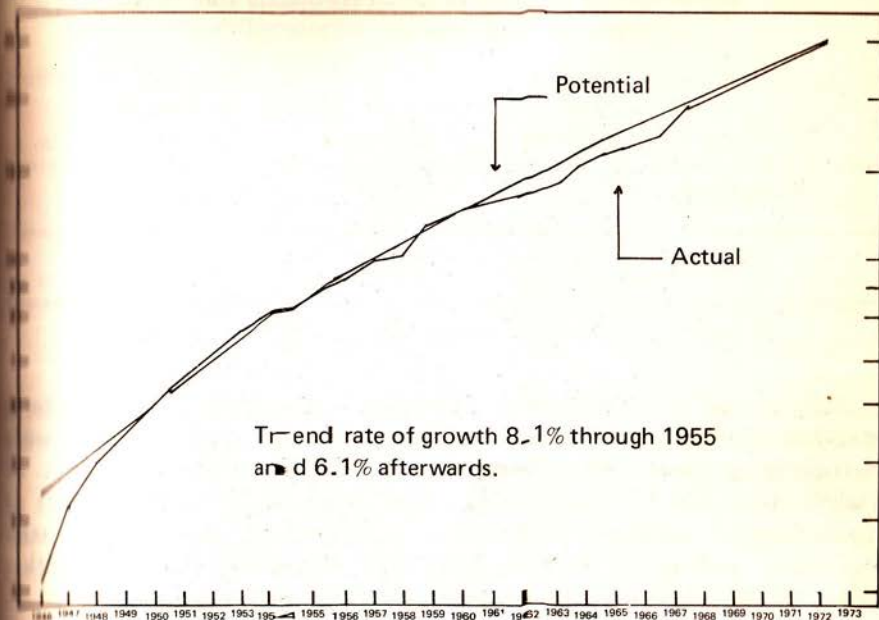
Billion of Pesos (Ratio Scale)

Potential

Actual

Trend rate of growth 8.1% through 1955
and 6.1% afterwards.

1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973

Figure 3.   GNP: Actual and Potential (At Constant 1955 Prices)

Source: Tomas J.F. Riha, *op. cit.,* Tables 11-5 and IV-24.

Hansen defines the coefficient of short-term stabilization as the root mean squares of deviations for actual and pure growth rates:[24]

$$s = 100 \quad 1 - \sqrt{\frac{\Sigma \ (g - g^1)^2}{\Sigma \ (g^* - g^{*1})^2}}$$

In order to obtain the dampening effect the ratio is substracted from 1 and multiplied by 100. The closer the percentage to 100 (perfect stabilization) the stronger is the stabilizing effect of the budget. The closer the percentage to 0, the weaker the stabilizing effect. At negative values the budget is destabilizing.

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[24] Bent Hansen, *op. cit.,* p. 56

Table IV-3
Stabilization of GNP Growth Around the Trend
(Percentage Dampening Accomplished)

Period	Total Effects	Discretionary Effects	Automatic Effects
1947-73	-41	-43	+2
1950-73	44	31	13

Source: Tomas J.F. Riha, *op. cit.*, Table IV-26.

Making use of the Hansen approach the analysis of short-term stabilization around the trend proved that budget effects were destabilizing over the period as a whole. The coefficient of stabilization for the total effects was -0.41 and for the effects of discretionary measures -0.43. The stabilization due to automatic responses, calculated as the difference between the stabilization accomplished through total and discretionary effects, was 0.02.

A completely different picture appeared, however, when the 1947-49 budget effects were excluded. During the 1950-73 period, not only total effects but also effects of the discretionary measures and automatic budget responses stabilized the economy.

The estimates of the budget impact on short-term stabilization around the trend are depicted in Figure 4.

Figure 4 shows the tremendous upward push of budgets in 1946-49. Because of the slow revival of private business activities, the government was the only organized and financially potent element in the society that could undertake the task of reconstructing the war-damaged economy. The most important role in this expansionary process was played by government discretionary measures. As a percentage of GNP, discretionary effects pushed the economy up by 34.9 per cent, 18.2 per cent, and 21.4 per cent in 1947, 1948 and 1949 respectively. This upward push was partly due to the expansion in government outlays linked to establishing and consolidating the new independent government administration, and also to important expansionary tax measures. The total impact was, however, mitigated by the strong downward pull emanating from budget
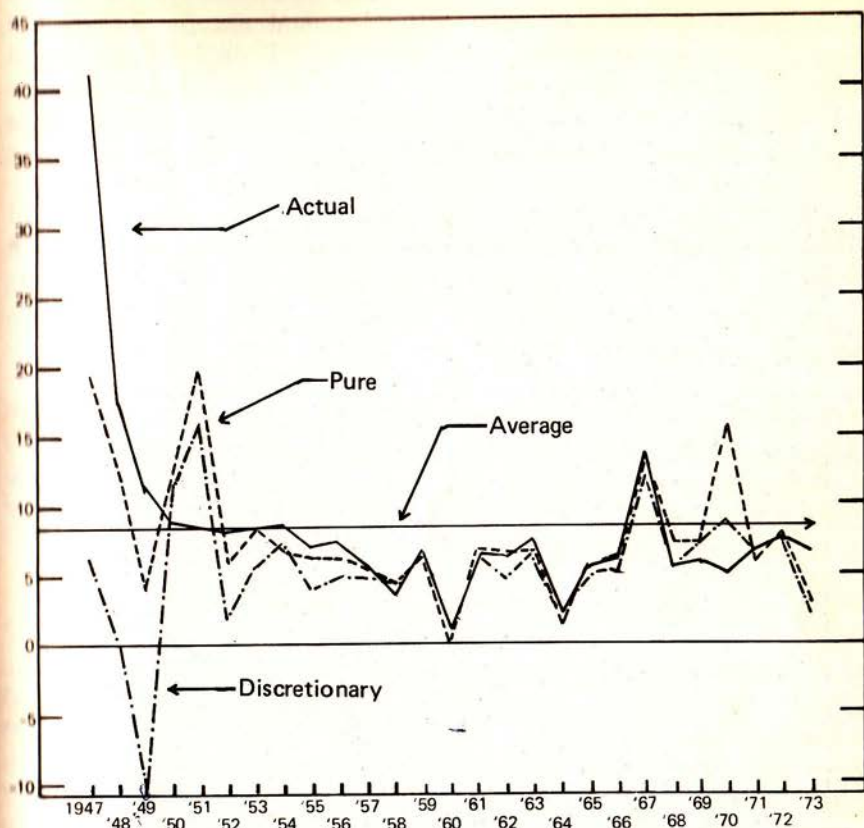
Per Cent of GNP

Figure 4. IMPACT OF THE BUDGET EFFECTS ON ECONOMIC GROWTH.

Source: See Tomas J.F. Riha, *op. cit.,* Tables IV-9 to IV-21.

automatics. In the 1950-51 period, budget dampened to a large extent expansionary developments in the economy. Contractionary total effects of 1950 and 1951 were achieved through both the discretionary measures and automatic responses. The major dampening effect came from a fall in the volume of government consumption expenditure and investment spending and from increased revenue from indirect taxation. Budget influence also prevented the shortfalls of GNP growth in the period 1952-54. The stabilizing impact of budgets in the following period resulted from the combined effects of expenditure increase, a further rise in indirect taxation, and a decline in direct taxation. The discretionary expansionary measures were on balance stronger than the downward

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pull of automatic effects. From 1955 till 1967 it may be observed that budget effects had been rather neutral except for slightly expansionary effects (about 1 per cent of GNP) in 1956, 1960 and 1964. In 1968, 1969, and 1970, budgets had a considerable contractionary impact. In the following two year period, budgets were almost neutral with discernible expansionary effect in 1973.

Figures 5 and 6 introduce Snyder's concept of the measurement of economic stabilization. Here, actual GNP and pure GNP* $(GNP^*_{TOT} = GNP - E_{TOT}; \quad GNP^*_{DIS} = GNP - E_{DIS})$ were
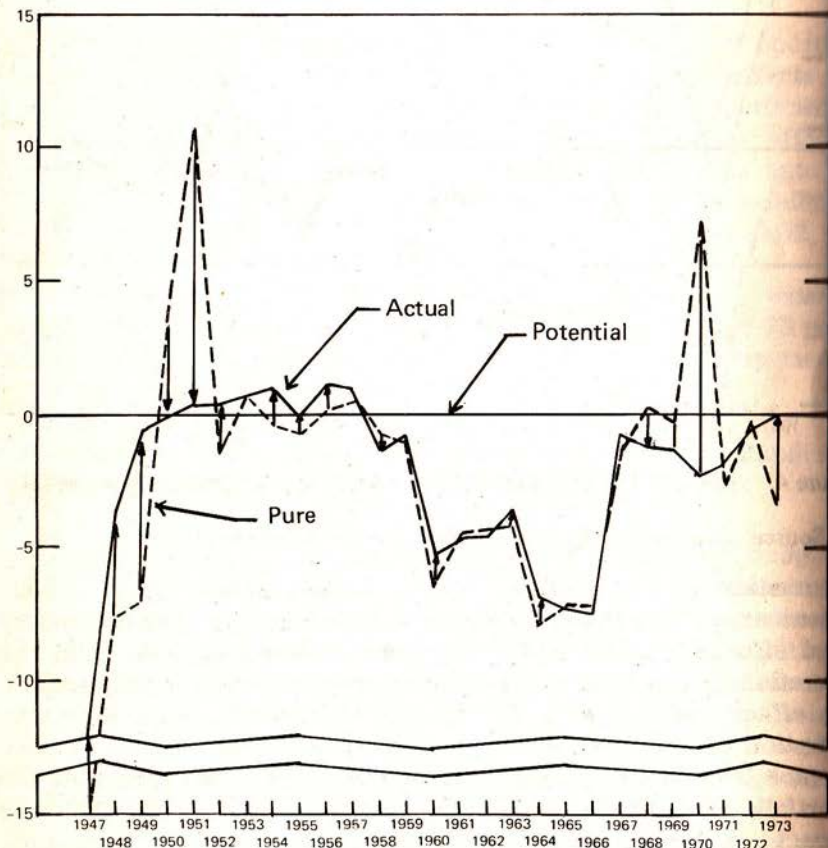
Per Cent of Potential GNP

Figure 5.   TOTAL BUDGET EFFECTS IN RELATION TO POTENTIAL GNP.
Source: See Tomas J.F. Riha, *op. cit.,* Tables IV-24, 25, 26.

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expressed as percentage deviations from potential GNP which is depicted as a horizontal line. The vertical distance between actual GNP and pure GNP* for each year reflects the estimated effects of budget changes, and the vertical difference between pure GNP* and potential GNP indicates the desired degree of stabilization. The arrows imply the direction of budget effects.

A quick glance at Figure 5 shows that with the exception of the first five years (1947-52) and the last four years (1970-73), budget policy did not play a very significant role in stabilizing the economy around the potential rate of growth. In addition to the distortion of reality that is intrinsic in the method used, there might have been many other reasons for this situation. The government might have been economically too weak to be reasonably successful in stabilizing the economy, or it might have attempted to achieve objectives other than stabilization. Balance of payments consideration might have been of prime importance, or the government might have used other than fiscal measures to attain the policy targets.

The analysis of the direction of fiscal policy indicated that in over 50 per cent of all cases, government chose "push" or "pull" policies in the right direction. In all other instances the budget changes either fueled an already overheated economy or further hindered its recovery. The analysis shows that there was very little effort made throughout the 1960's to give the economy an expansionary push which would have helped to level domestic demand with potential output. Some other interesting developments may be detected from Figure 5. 1947-49 is shown as a period of low potential output where budgetary effects were very strong indeed but not enough to push the economy up to its potential output line. In 1950 and 1951, budget policy was properly employed to dampen fluctuation of actual GNP. The same could be said for 1968, 1969 and 1970 when the budgetary effects dampened a quickly rising demand. It went well below the desired potential, however, and thus might have considerably slowed down a possible recovery.

Figure 6 depicts effects of the discretionary measures on the economic stabilization around potential GNP. The vertical distance between actual GNP and pure discretionary GNP* is equivalent to the percentage effect of discretionary measures. In other words, it shows the difference between what GNP really was and what it would have been in the absence of discretionary measures but with budget automatic responses working. Over the period as a whole,
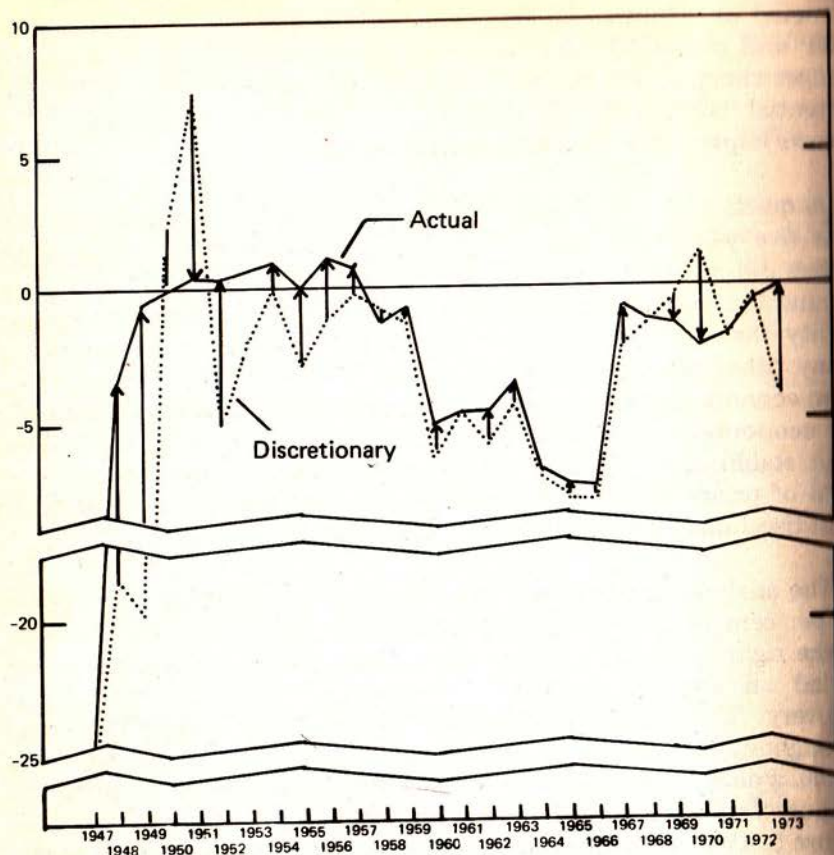
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Fig. 6. DISCRETIONARY FISCAL EFFECTS IN RELATION TO POTENTIAL GNP

Source: See Tomas J.F. Riha, *op. cit.,* Tables IV-24, 25, 26

discretionary effects were stronger than total effects implying destabilizing automatic effects. This was detectable particularly in the period of 1947-1952.

To quantitatively evaluate the degree of short-term stabilization around potential GNP accomplished through the budgets, Snyder's methods were employed.[25] In line with this methodological approach, the vertical distance between pure and potential GNP was identified with the desired (potential) stabilization. Accordingly, budget effects diminishing this distance (pointing in the direction of

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[25] See W.W. Snyder, *op. cit.*, p. 930.

the potential GNP) were considered stabilizing and those increasing it were considered destabilizing. In the case where budget effects were in the right direction but overshot (1952, 1954) or undershot (1968, 1970) the target, only the part that was stabilizing was treated as stabilizing, with the other part as destabilizing.

Table IV-4
Budget Effects and Economic Stabilization 1947-73
(Expressed as Percentage and Cumulated for 1946-1973)

	Total Effects	Discretionary Effects	Automatic Effects
1. Total Divergence Between Pure GNP and Potential GNP	117.7	150.9	
a. Above Potential GNP	23.9	11.1	
b. Below Potential GNP	93.8	139.8	
2. Sum of Stabilizing Effects	56.8	88.9	
a. Above Potential GNP	2.2	10.7	
b. Below Potential GNP	34.6	78.2	
3. Sum of Destabilizing Effects	9.3	8.2	
a. Above Potential GNP	2.7	4.0	
b. Below Potential GNP	6.6	4.2	
4. Net Stabilizing Effects (2-3)	47.5	80.7	
a. Above Potential GNP	19.5	6.7	
b. Below Potential GNP	28.0	74.0	
5. Total Divergence Between Actual GNP and Potential GNP	70.2	70.2	
a. Above Potential GNP	4.4	4.4	
b. Below Potential GNP	65.8	65.8	
6. Net Stabilization Achieved (4:1)	0.4036	0.5348	-0.1312
7. Net Stabilization in Per Cent	40.36	53.48	-13.1212

Source: See Tomas J.F. Riha, *op. cit* Table IV-25

Table IV-4 shows the estimates of budget effects on economic stabilization. The cumulated potential stabilization expressed as a

percentage amounted to about 118 per cent and 151 per cent for the period 1947-73 for total and discretionary effects respectively. Average annual potential stabilization over the whole period was about 4 per cent for total effects and 5 per cent for discretionary effects. Almost 80 per cent of the desirable stabilization would have required expansionary fiscal policies if total budget effects were taken into consideration, and more than 90 per cent if only discretionary measures were considered.

The impact of total budget changes on stabilization appeared to be stronger when pure GNP was below potential. It was equally true for the impact of discretionary measures except that here the stabilization below potential was much more powerful (about 90 per cent). Destabilizing total effects were relatively small. About 70 per cent of destabilizing effects resulted from dampening actual GNP further below its potential. The discretionary measures were acting in an equally destabilizing manner when pure GNP was above as well as below its potential. Some of the budgetary effects which contributed to increasing the gap between potential and actual GNP were due to the policy, which despite its being aimed in the right direction, resulted in overshooting or undershooting potential GNP.

The total divergence between actual GNP and potential GNP can be partly explained by the subjective method used in constructing potential GNP. Intrinsic in the method is the image of the Philippine economy which until recently, had not fully recovered from the slump at the end of the 1950's and was, for over a period of ten years, running well below its potential.

Net stabilizing effects are the combination of stabilizing and destabilizing effects. The comparison of this item with the potential stabilization produces a net stabilizing effect accomplished through budget policies. Total budget changes accomplished about 40 per cent of total desired stabilization. When the effects of discretionary measures alone were brought into focus an even more favorable picture appeared. The changes in discretionary measures achieved more than 53 per cent of potential stabilization. The impact of automatic responses, obtained as the difference between net stabilization accomplished through total and discretionary effects, was destabilizing.

The results of the analysis of the budget impact on stabilization over shorter periods of time, corresponding to the particular government's time in office, were presented in Table IV-5.

In the **1947-50 period,** budget policies were very successful in stabilizing the economy around its potential. Total divergence between pure GNP was largest compared with all the other periods. However, budget policy contributed very much to pushing actual GNP towards its potential and was also correctly reversed in 1950 in keeping it there. The expansionary results were achieved particularly by means of appropriate discretionary measures, such as the increases in government current and investment expenditures, to hasten reconstruction of war-damaged physical plant and infrastructure, and also to create an environment conducive to the revival of private economy. The government also introduced budgetary reform aimed at economizing government outlays especially those on wages and salaries. The budget impact on economic stabilization could have been much more pronounced (78 per cent) without the strong downward pull which came from automatic budget responses (-15 per cent).

In the 1951-54 period, the potential stabilization which could have been achieved was smaller than in 1947-50 and almost 82 per cent of it was accomplished. It was a remarkable achievement. This success showed the flexibility of fiscal policy as its best. Budget policy was skillfully reversed from a contractionary one in 1951 to an expansionary one in the following three years. Automatic budget responses were only marginally destabilizing in this period.

The stabilization in 1951 was achieved by dampening effects of the discretionary measures and by automatic responses. The government lowered almost all expenditures and increased indirect taxation. Negative automatic tax responses also supported the stabilization. In 1952, there came a moderate push which, however, proved to be too strong. As a result, the target of potential GNP was overshot by 0.4 per cent. This might have been caused by price and other developments beyond government control. In 1953 total effects were neither stabilizing nor destabilizing and actual GNP remained above potential. This was largely due to automatic effects which neutralized otherwise expansionary discretionary measures. In 1954, the target output was overshot again and budgetary effects contributed in pushing an already expansionary economy further above its potential. This resulted from the expansionary discretionary measures just enough for actual GNP to attain its potential.

The budget policies in 1956 and 1957 were expansionary in their impact. During this period, the government attempted to improve

Table IV-5

Budget Effects and Economic Stabilization
(Expressed as Percentage and Cumulated for the Respective Time Periods)

	1947-50	1951-54	1955-58	1959-62	1963-66	1967-70	1971-73	1967-73
1. Total Divergence Between GNP* and GNP^P	43.4	13.6	2.0	16.2	26.7	9.8	6.0	15.8
2. Sum of Stabilizing Effects	27.5	12.5	0.7	1.5	1.8	8.8	4.0	12.8
3. Sum of Destabilizing Effects	0.0	1.4	2.0	0.4	0.3	4.7	0.5	5.2
4. Net Stabilizing Effects (2-3)	27.5	11.1	-1.3	1.1	1.5	4.1	3.5	7.6
5. Total Divergence Between GNP and GNP^P	15.9	2.5	3.3	15.1	25.2	5.7	2.5	7.7
6. Net Stabilization Achieved (4:1) x 100	63.36	81.62	(-65.00)	6.79	5.62	41.84	58.33	48.10
1. Total Divergence Between GNP* and GNP^P	73.9	14.6	5.0	18.3	27.4	5.2	6.5	11.7
2. Sum of Stabilizing Effects	58.0	14.2	4.2	3.3	2.2	2.8	4.2	7.0
3. Sum of Destabilizing Effects	0.0	2.1	2.5	0.1	0.0	3.3	0.2	3.5
4. Net Stabilizing Effects (2-3)	58.0	12.1	1.7	3.2	2.2	-0.5	4.0	3.5
5. Total Divergence Between GNP and GNP^P	15.9	2.5	3.3	15.1	25.2	5.7	2.5	7.7
6. Net Stabilization Achieved (4:1) x 100	78.48	82.88	34.0	17.49	0.03	(-9.6)	61.53	29.91
Net Stabilization Achieved	-15.12	-1.26	-99.0	-10.70	-2.41	51.44	-3.2	18.19

Source: See Tomas J.F. Riha, *op. cit.*, Table IV-25.
Note: *GNP* = pure GNP; GNP^P = potential GNP

the efficiency of fiscal policy and also its coordination with the nation's development goals. The performance type of budget was proposed in 1955, and in 1957 the Five Year Fiscal Plan 1957-1961 was launched. Its purpose was to use fiscal policy to accelerate transition from a "trade oriented type of economy to a balanced agro-industrial economy."[26] The government, however, expressed its conation to pursue a balanced budget policy so as to keep monetary expansion within bounds and to avail of any inflationary tendencies. Fiscal instruments were to be used in such a way as to provide every encouragement and opportunity for further development of private enterprise. The government also set itself to alleviate the pressing problem of unemployment.

A large part of the 1959-62 period was covered by the Five Year Fiscal Plan. However, from the point of view of economic stabilization around the potential trend, the budgetary policies employed scored below the level of expectation in achieving the Plan's targets. The total budget changes accomplished only less than 7 per cent of potential stabilization. Actual GNP was well below its potential during the whole period and budgetary policies applied in 1959 and 1960 were too weak to produce a desirable upward push. In 1962 and 1964, the budget impact hindered feeble attempts of the economy towards recovery. This inappropriate budget policy was probably provoked by inflationary pressure and balance of payment difficulties arising from the overheated economy of 1951-57 to which government policies had contributed.[27] In 1959, another Five Year Fiscal Plan for FY 1959-1963 was launched with an ambitious goal — to create a viable economy, solve the unemployment problem, raise real per capita income and bring about a more equitable distribution of income. The short-term objective of fiscal stabilization was to be achieved mainly by obtaining revenues through a "more equitable income"[28] and by reducing government expenditure. From the point of view of economic stabilization the effects

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[26] See Five Year Fiscal Plan 1957-1961, *Central Bank News Digest*, Vol. IX, No. 9 (1957), Manila, pp. 2-12.

[27] "Increased tempo of our economic and social development resulted from expansionary measures taken by government to meet the sluggishness of the national economy which became very evident in 1953." See President's Budget Message for FY 1958-1959. February 11, 1958. *Central Bank News Digest*, Vol. X, No. 8 (1958), pp. 2-11.

[28] See *Central Bank News Digest* Vol. XI, No. 14 (1959), pp. 3-6.

exerted by budgetary changes were slightly expansionary in 1959 and 1960 and slightly contractionary in 1961 and 1962.

In 1963-66, the degree of potential stabilization accomplished by budget policy was less than 6 per cent. Actual GNP continued to grow its potential and, in fact, declined further down at the end of the period. In the Budget Message for fiscal year 1962-63 a "fiscal policy synchronized with a socio-economic development program" was launched.[29] However, the budget itself had only a minimum effect on economic development.

The budget impacts in 1963 and 1964 were slightly expansionary but it did not prevent the economy from falling further below its potential. The 1963 expansion was achieved through an increase in government expenditure, due primarily to effects of the price changes. In 1964, a combined effect of price increase and a decline in tax revenues produced an expansionary effect. Dampening effects that resulted from tax changes were greater than expansionary effects of expenditures and pulled actual GNP downwards in 1965 and 1966.

In 1967-70, the potential stabilization which could have been accomplished was smaller in comparison with two preceding periods. Actual GNP increased by 7.9 per cent in comparison with the 1966 level and almost reached its potential. The net result of budget policies was the achievement of about 42 per cent of potential stabilization. In this period the discretion changes were destabilizing while automatic responses had strong stabilizing effects.

In 1967 the budget policy of "restraint in expenditure of public funds without sacrificing essential public services"[30] pushed the economy up towards its potential. This expansionary impact was accomplished through the increase in government expenditure. In 1968 the government, under financial stress and facing huge deficit, decreased the volume of government expenditure on services (however, the net effect due to the price and wage increases was positive) and increased revenue collection. The total effect of these measures was contractionary, generating a downward pull stronger than what was desirable. Thus, the budget policy undershot the

[29] Budget Commission, Budget Message of the President to the Congress of the Philippine Republic," *Budget for the Fiscal Year 1963*. (Manila 1962) p. 3A.

[30] Budget Commission, "Budget Message of the President to the Congress of Philippine Republic," *Budget for the Fiscal Year 1967*, (Manila 1966), p. 3A

target and increased the gap between actual GNP and potential GNP. In 1969, total effects of the budget changes were destabilizing, dampening actual GNP below its potential. The contractionary budget effects were due to discretionary measures alone. In 1970 budget effects exerted very strong contractionary influence and prevented inflationary growth of GNP. The effects had had not only a stabilizing impact but, because the dampening effect was much stronger than necessary, had also a destabilizing effect by under-shooting the desired level of GNP. The dampening effect of budget changes was due to a significant decrease in government expenditure which, in spite of price and wage rate increases, had a contractionary impact. It was further strengthened by a rise in tax automatics echoing the increase in aggregate demand.

In the 1971-73 period, the budget impact on economic stabili-zation was favorable. Total budget effects accomplished more than 58 per cent of potential stabilization. In 1971, fiscal policy was reversed creating a slightly expansionary push while still maintaining the policy of fiscal restraint. In spite of the decline in the volume component of expenditure, price and wage increases resulted in a net positive effect and the automatic and discretionary tax changes were not strong enough to neutralize the overall expansionary effects. In 1972, total budgetary effects, destabilizing in its impact, were slightly contractionary due to a further fall in the volume of expenditure which more than neutralized the decline in tax revenue. In 1973, fiscal policy contributed to a strong upward push which brought actual GNP to its potential. This push was achieved through a strong expansionary effect resulting from the changes in ex-penditure.

The budget changes favorably influenced economic stabilization in all but one period. However, the power and flexibility of budget as an instrument of short-run stabilization were utilized in four periods only and much of the stabilization accomplished could be ascribed to fortuitous events rather than to a cognizant policy.

The estimates of budget impact on short-run stabilization over the whole period measured with respect to actual GNP contrasted greatly with the estimates obtained using potential GNP. The total impact of budget changes was significantly destabilizing when actual GNP was used; and reasonably stabilizing when the potential output concept was used. The same conclusion applied to the impact of discretionary measures. On the other hand, the impact of automatic effects was

stabilizing when actual growth trend were employed and destabi-
lizing when potential output was used.

However, a different picture appeared when the first three years of
the period were excluded from the measurement of budget impact
with respect to actual GNP. The degree of short-term stabilization
around the trend accomplished through the budgets was more
successful than when the potential concept was used. The difference
in results for the whole period considered as compared with those for
the shorter period can be explained by the exceptionally great
divergence between the average and actual rates of growth at the
beginning of the period which strongly influenced the overall trends.

V. Conclusion

The study attempted to estimate the economic impact of budget
policy in a developing country. The Hansen type model used had
been developed to suit the economic conditions and policy targets
prevailing in advanced countries and was not, therefore, completely
satisfactory in providing answers to some analytical problems. The
study analyzed effects of the changes in budgets over a relatively
long period but, in the case of the Philippines, there were no
discernable features of business cycles. However, the period under
consideration comprised a wide variety of deflationary and infla-
tionary situations.

The results of the study must be interpreted with sufficient
caution. There certainly were other economic objectives besides
stabilization and some fiscal actions were taken for other than
stabilization purposes. Balance of payments and also price stability
considerations might have been given preference by a decision-maker
from time to time.[31]

Due to the nature of the model used, it was not possible to
correctly assess situations when other than fiscal parameters played
the major role. Demand effects on prices and inflationary spillover
effects on the balance of trade were not built into the model.[32]
Exports were considered exogenous but the import volume was

[31] Difficulties in the balance of payments led in the second half of the 1960's
to the adoption of the floating rate of exchange which effectively devaluated the
currency.

[32] See Bent Hansen, *op. cit.*, pp. 33 and 85.

treated as an endogenous variable through which the budget effects influenced the balance of payments.[33]

The methodology employed implied that the policy objectives did not change over the whole period of twenty-seven years. This assumption is hard to accept in the case of the rapidly developing economy where not only economic values but also social attitudes towards these values have been undergoing significant changes.

The potential series concept used in measuring the degree of short-term stabilization around the trend assumed an unchanged rate of growth for a relatively long period of time. In a developing country like the Philippines, however, circumstances beyond control, such as natural disasters, could have changed potential GNP over short periods. Another drawback in utilizing the potential GNP concept for the evaluation of budget impact on short-run stabilization follows from the fact that the results, depend to a large extent, on a particular choice of the potential series. As could be already clear to the reader, different series of potential GNP may yield diverse results. On the other hand, there is an obvious attraction in using the concept of potential output for a decision maker who can easily frame a budget policy with respect to a national plan's growth target.

In spite of these methodological misgivings, the results of the analysis are not completely worthless. The illumination of the past circumstances leading to achievements and failures can, if correctly interpreted, be of significance to the formulation of the appropriate budget policy in the future.

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[33]The volume of imports was affected by government purchases abroad $dg(1 - \mu)$ and also by induced effects $\mu\alpha(1/\delta)(dg_p^d + dg_i^d + dge + gdp_g + gdp_i + dw - (1/a)dT_i - dT_g)$. Estimated direct impact of budget expenditure on balance of payments amounted to 0.33 per cent of GNP and estimated induced annual effects on balance of payments of the expansion of GNP due to the budgets amounted to 0.45 per cent of GNP. It implies that the total impact of the budgets on the balance of payments has been, on the average, positive 0.78.