



1983

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Recommended Citation

Lim, D. (1983). Government recurrent expenditure and economic growth in less developed countries. *World Development*, 11 (4), 377-380. [http://dx.doi.org/10.1016/0305-750X\(83\)90048-7](http://dx.doi.org/10.1016/0305-750X(83)90048-7)

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Government Recurrent Expenditure and Economic Growth in Less Developed Countries

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Summary. - *There is not much support in less developed countries for the hypothesis that recurrent government expenditure is seen as consumption and hence more dispensable than capital expenditure. There is little evidence of a secular decline in recurrent expenditure for a group of 54 less developed countries over the period 1965-1973, nor is there strong evidence of greater instability in recurrent expenditure.*

INTRODUCTION

It has often been claimed that many governments of less developed countries (LDCs) tend to regard capital expenditure as investment and recurrent expenditure as consumption.¹ Economic growth is seen to depend largely on investment so that government recurrent expenditure has to be curbed in order to generate 'public savings' for investment purposes. There are also political reasons for this belief. Governments are more likely, at least in the short-run, to obtain greater political benefits by having more, but less efficient, projects than by having fewer, but more efficient, ones. The former are simply more visible and so more politically rewarding.

One important implication of this view is that scarce government revenue is more likely to be spent on new projects or on the expansion of existing ones than on the recurrent operational and maintenance expenditures of existing projects. There are certainly examples in LDCs of new schools being built and opened without there being sufficient qualified teachers to man them or the existing one. Examples also abound of new agricultural projects being started while existing ones are short of extension services. If such practices are the rule rather than the exception, we would expect the share of recurrent expenditure in total government expenditure to fall over the years, resulting in the under-utilization and the neglect of projects.

Another important implication is that recurrent expenditure will fluctuate more than capital expenditure. As recurrent expenditure is regarded as consumption it is therefore more dispensable than capital expenditure and more likely to bear the brunt of any instability in government revenue. While the problems posed by instability in recurrent expenditure may be less serious for economic growth than those posed by a secular decline in it, they cannot be ignored altogether. Given the complementarity of recurrent and capital expenditures in most projects, uncertainty in the supply of the former will reduce the overall productivity of these projects.

The secular decline in and the instability of recurrent expenditure may therefore reduce the productivity of development projects, with subsequent adverse effects on economic growth. This paper does not attempt to show empirically the relationship between the secular decline in and the instability of recurrent expenditure, on the one hand, and economic growth, on the other. Its aims are the rather more limited ones of seeing: (i) whether there had been a secular decline in recurrent expenditure, and (ii) whether

recurrent expenditure had fluctuated more than capital expenditure, for a group of 54 LDCs over the period 1965-1973.

2. SECULAR DECLINE IN RECURRENT EXPENDITURE

In order to test for the secular decline in recurrent expenditure, the following linear regressions on time (t) were estimated for each of the 54 LDCs in the sample:

$$\text{TRE/TRCE} = a_1 + b_1(t) \quad (1)$$

$$\text{REA/TEA} = a_2 + b_2(t) \quad (2)$$

$$\text{REE/TEE} = a_3 + b_3(t) \quad (3)$$

$$\text{REH/TEH} = a_4 + b_4(t) \quad (4)$$

$$\text{RET/TET} = a_5 + b_5(t) \quad (5)$$

TRE/TRCE is the percentage share of government recurrent expenditure (TRE) in total government expenditure (TRCE); REA/TEA the percentage share of government recurrent expenditure on agriculture (REA) in total government expenditure on agriculture (TEA); REE/TEE the percentage share of government recurrent expenditure on education (REE) in total government expenditure on education (TEE); REH/TEH the percentage share of government recurrent expenditure on health (REH) in total government expenditure on health (TEH); and RET/TET the percentage share of government recurrent expenditure on transport and communications (RET) in total government expenditure on transport and communications (TET). Evidence of a secular decline in government recurrent expenditure as a whole and in the agricultural, educational, health, and transport and communications sectors will be shown by the presence of negative and statistically significant values for the coefficients b_1 , b_2 , b_3 , b_4 and b_5 respectively.

Equations (1)-(5) were estimated by ordinary least-squares regression analysis for each of the 54 LDCs for the period 1965-1973. The sample was made up of 21 African, 13 Western Hemisphere, 11 Asian and nine Middle Eastern and Southern European LDCs.² The number of negative and statistically significant regression coefficients, at the 1 and the 5% levels of confidence, as a percentage of the total number of regression coefficients are given in Table 1 for the five categories of expenditure and for six groups of LDCs (total, total less Middle East and Southern Europe,³ African, Western Hemisphere, Asian, and Middle Eastern and Southern European).

For the TRE/TRCE category of expenditure, 18.5% and 32.5% of the total sample of LDCs had statistically significant negative coefficients at the 1 and the 5% levels of confidence respectively. More or less the same results were obtained for the sub-total sample of countries (20.0 and 35.6%). The percentages of the coefficients that are negative and significant are much higher for the African group (33.3 and 49.4%), and much lower for the Asian group (0 and 9.1%). For the Middle East and Southern European group they are 11.1 and 33.3% respectively. The overall picture is therefore that the majority of LDCs did not experience a secular decline in total government recurrent expenditure over the period 1965-1973.

However, these results do not show, on their own, that there had not been a secular decline in recurrent expenditure. The absence of a negative and a significant coefficient when TRE/TRCE is regressed on time (t) may be due to changes in the composition of the government expenditure programme. Projects requiring a higher proportion of capital to recurrent expenditure may now be preferred to those requiring a higher proportion of recurrent to capital expenditure. In order to eliminate this 'compositional effect' to a certain extent, we have to look at the recurrent to total expenditure ratio at the sectoral level.⁴

The analysis at the sectoral level also shows that there had not been a secular decline in recurrent expenditure in the majority of LDCs over the period 1965- 1973. The strongest evidence of a secular decline in recurrent expenditure was found in the health sector, but even here only 35.2% of the 54 LDCs had negative and significant coefficients at the 5% confidence level. Among the regional groups the strongest support was found in the Western Hemisphere group where nearly 62% of the LDCs had negative and significant coefficients at the 5% level of confidence.⁵ At the 1% confidence level the proportion was only 46%.

3. INSTABILITY IN RECURRENT EXPENDITURE

Instability indices, measured by the standard errors of estimates from linear regressions on time over the period 1965-1973, are presented for recurrent and capital expenditures in total and in the various industry-groups for the six regional groupings of LDCs. The arithmetic mean and the median values of these indices are given in Table 2.

The table shows quite clearly that recurrent expenditure is more unstable than capital expenditure in the educational, health and other sectors. In the educational sector recurrent expenditure was markedly more unstable in all of the regional groupings whether the arithmetic mean or the median values are used. The same is true of the position in the health sector, with the single exception of the arithmetic mean value for the Middle East and Southern European group, and of the position in the other sector, with the single exception of the arithmetic mean value for the African group.

The reverse position is found in the agricultural and the transport and communications sectors. The values of the instability indices for recurrent expenditure are lower than those for capital expenditure, with the sole exception of that for the arithmetic mean for the agricultural sector in the Western Hemisphere LDCs.

Given that the median gives a more representative picture than the arithmetic mean, the overwhelming conclusion is that there is strong evidence that recurrent expenditure fluctuated more than capital expenditure in the educational, health and other sectors, while the reverse is true in the agricultural and the transport sectors.

The total recurrent expenditure was more unstable for all but the Asian group of LDCs when the arithmetic mean values are used. However, when the median values are used, the reverse is true, with the sole exception of the 'total less the Middle East and Southern Europe' group. These results suggest that the total recurrent expenditures of certain LDCs in Africa, the Western Hemisphere, and the Middle East and Southern Europe were extremely unstable and were very unrepresentative of the general level of instability in their

respective groups. For the LDCs as a whole and for each of the African, Western Hemisphere, Asian, and Middle East and Southern European groups, there is no evidence that the total recurrent expenditure is more unstable than the total capital expenditure. This is due to the greater importance of the agricultural and transport sectors and the relative stability of the recurrent expenditure in these two sectors. However, the overall result should not hide the fact that recurrent expenditure in the educational, health, and other sectors of the economy were much more unstable than capital expenditure in all of the LDCs.

Table 1. *Negative and statistically significant regression coefficients/total number of regression coefficients by category of expenditure and region: 1965-1973 (%)*

Category of expenditure	Negative and statistically significant regression coefficients/total number of regression coefficients (%) in:											
	Total		Total-Middle East and Southern Europe		Africa		Western Hemisphere		Asia		Middle East and Southern Europe	
	(54 LDCs)		(45 LDCs)		(21 LDCs)		(13 LDCs)		(11 LDcs)		(9 LDCs)	
	1%	5%	1%	5%	1%	5%	1%	5%	1%	5%	1%	5%
TRE/TRCE	18.5	35.2	20.0	35.6	33.3	49.4	15.4	30.7	0	9.1	11.1	33.3
REA/TEA	9.3	22.2	8.9	22.2	4.8	23.8	23.1	30.7	0	0	11.1	22.2
REE/TEE	13.0	24.1	8.9	20.0	14.3	23.8	7.7	30.7	0	0	33.3	44.4
REH/TEH	26.0	35.2	28.9	40.0	19.1	33.3	46.2	61.6	27.3	27.3	11.1	11.1
RET/TET	11.1	20.4	11.1	20.0	9.5	14.3	7.7	23.1	18.2	27.3	11.1	22.2

4. CONCLUDING REMARKS

There is little evidence in most LDCs of a secular decline in recurrent expenditure over the period 1965-1973. The coefficients obtained by regressing the recurrent expenditure to total expenditure ratios upon time are negative and statistically significant in only a minority of the LDCs, whether the analysis was conducted at the aggregative or the sectoral level.

Recurrent expenditure fluctuated more than capital expenditure in the educational, health and other sectors, while the reverse is true in the agricultural and the transport sectors. The greater importance of the latter two sectors meant that the total capital expenditure fluctuated more than the total recurrent expenditure. It also points out the dangers of generalizing about the extent of instability in recurrent expenditure across sectors.

Overall, then, there does not seem to be much support for the hypothesis that recurrent expenditure is considered by most governments to be consumption expenditure and hence more dispensable than capital expenditure for our group of LDCs over the period 1965-1973. However, this result must remain tentative because the time-series used may not be long enough for meaningful trend values to be obtained and the sample, especially at the regional level, may not be large enough for meaningful generalizations to be made.

NOTES

1. P. Heller, 'The underfinancing of recurrent developments costs', Finance and Development (March 1979), p. 39.
2. Africa: Algeria, Botswana, Burundi, Egypt, Ethiopia, Ghana, Kenya, Libya, Malawi, Mauritius, Morocco, Nigeria, Rwanda, Senegal, Sierra Leone, Sudan, Tanzania, Tunisia, Uganda, Zaire and Zambia; Western Hemisphere: Argentina, Barbados, Bolivia, Brazil, Guatemala, Guyana, Honduras, Jamaica, Panama, Paraguay, Peru, Trinidad and Tobago, and Venezuela; Asia: Afghanistan, Burma, Hong Kong, India, Malaysia, Nepal, Philippines, Singapore, South Korea, Sri Lanka, and Thailand; Middle East and Southern Europe: Cyprus, Greece, Iran, Iraq, Israel, Kuwait, Saudi Arabia, Syria and Turkey. The data are taken from The World Bank, World Tables 1976 (Baltimore: Johns Hopkins University Press, 1977).
3. This sub-total was used because the countries in the Middle East and Southern Europe possess many characteristics which differ significantly from those present in the other countries
4. Of course, even within a sector certain projects will be more dependent on capital expenditure than others so that the 'compositional effect' will not be eliminated altogether.
5. This is the only instance where a figure of over 50% was recorded.