The Predictability and the Flexibility of Tax Revenues in Pakistan

A. H. M. NURUDDIN CHOWDHURY*

Evolving an efficient tax system is a major concern in any developing country, because the pace and viability of development programmes depends heavily on the tax system. An efficient tax system should satisfy tests on many counts. This paper analyses two aspects of Pakistan's tax structure, namely, its predictability and its flexibility. In Section I, the efficacy of the revenue estimating procedures in Pakistan is analysed. Section II contains a discussion on the flexibility of the central tax revenues with respect to changes in the national output.

SECTION I: PREDICTABILITY

Importance of Revenue Estimates

In planning for economic development the task of estimating potentially available resources in advance has assumed increased importance for on this depends the size and nature of the development plan which can be undertaken. Since the government is the principal agent in the development programmes of most countries, it is necessary that it make fairly accurate assessment of its financial position and prospects. Errors both of underestimating and of overestimating the revenues of the government will be prejudicial to economic planning. When the government underestimates its resources, its development programme will aim too low, whereas the opposite error will lead to adoption of unrealistic targets. The administration suffers from wastage, complacency and inefficiency in the first case and from anxiety, friction and frustration in the second.

In budgeting also, estimates of revenues are relevant in several ways. Firstly, revenue estimates of at least a rough and broad nature are necessary at the very outset of the budgetary process to guide the initial fiscal decisions concerning the general outline of the expenditure targets of the government. Secondly, a more firm, final estimate of revenue is needed in the summary budget statement to support new proposals for changes in taxes. Third, estimates are required by the legislature or appropriation committees at the time of reviewing the expenditure estimates. And fourth, revenue estimates

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help the execution process. As the execution process advances, the responsible authorities may modify the plans according to the changed prospects of revenue that subsequent re-estimates may reveal. They also can rationally plan the cash requirements and intra-year borrowing if they can anticipate the seasonal variations in receipts fairly well[1].

These considerations justify greater efforts to assess the quality of existing procedures for estimating revenues in Pakistan and to point out if and where change is needed.

A recent monograph of the Institute of Development Economics points out that the budget estimates of revenues and the actual receipts vary widely[2]. The purpose of this section is to assess the budget estimating procedures and results in Pakistan in the context of individual taxes.

Procedure for Preparing Revenue Estimates

In the studies of fiscal discipline of government all over the world, expenditure estimates rather than revenue estimates have received greater attention from both academicians and budget-makers. A survey of the procedures followed by the estimators of revenue will reveal three principal types: the rule of the penultimate year, the method of averages, and direct valuation[3].

According to the rule of the penultimate year and the method of averages, estimates of revenue are prepared on the basis of past collections without adjustments for any predictable changes in the future. Such estimates will lag behind actual receipts in a growing economy and thus cause unnecessary inaccuracy in government plans. To avoid this fault, methods of direct valuation have recently been adopted by many governments. The technique involves the collection of statistical material concerning factors which affect the revenue proceeds. Then, through statistical analysis and projections, future revenues are forecast directly, rather than by extrapolations. The revenue estimates of the British Treasury, which follows this technique, have a high reputation for accuracy.

The Organizational Framework in Pakistan

In Pakistan there is no admitted reliance on extrapolation in estimating

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1. *See*, Jesse Burkhead, *Government Budgeting*. (New York: John Wiley and Sons Inc., 1959), pp. 380-81.

2. Nighat Sarfaraz, *Problems of Budgetary Reform in Pakistan*. (Karachi: The Institute of Development Economics, 1961), pp. 7-19.

3. A.E. Buck, *The Budget of the Government of Today*. (New York: The Macmillan Company, 1934), pp. 175-79.

future revenues. Following the British traditions, a method in the nature of direct valuation is used. But the valuation process lacks much of the rigour that such a technique demands.

Those agencies responsible for collection of revenues also prepare the original revenue estimates[4]. At the head of the estimating organization is the Budget and Expenditure Division of the Ministry of Finance. As the body ultimately responsible for the task, it sets the time table to be followed by various agencies and sends out special instructions[5]. In conformity with these instructions and time schedule the estimates are built up from the bottom.

The estimates originate in the hands of the lowest officers responsible for collection in the various agencies: an Income Tax Officer, an Assistant Collector of Customs, an Assistant Collector of Excise or a Superintendent of Excise, as the case may be. They prepare the estimates on the basis of their records of past collections and current assessments and their subjective appraisal of future prospects[6]. These are then revised by the heads of the collecting agencies.

The collecting agencies submit their original estimates along with data for actual collections during three preceding years to the Central Board of Revenue (C.B.R.). (In the case of non-tax revenue the estimates go to the parent ministries). The C.B.R. frames the final estimates of all tax revenues by scrutinizing, collating and integrating the original estimates. This scrutiny is not very serious in the case of personal income tax and corporation tax. The original estimates of these two taxes are more or less maintained because the collecting officials are assumed to know best the relevant facts. But the estimates of customs, sales and excise taxes are often drastically changed on the basis of government import policy, *etc.*, which are to some extent known to the Board and of which the collecting agencies are likely to be ignorant. After being processed and checked in this way, the estimates take final shape and are submitted to the Budget and Expenditure Division. This is the final reviewing authority and it can alter the estimates in any way it likes though, in actual practice, changes are made in consultation with the Board.

Thus, the estimates, which originate at a low administrative level in the

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4. This practice is followed in most countries, especially in the U.K., and is not peculiar to Pakistan.

5. The "Time Table" contains the deadline dates by which the revenue estimates must reach different points in the administrative hierarchy. The special instructions are more or less in the form of exhortations for showing drive and efficiency in collections.

6. But the estimates seem to be greatly influenced by last year's actual collection. *See*, Appendix C.

hands of people who have but a rudimentary statistical sense, undergo a long chain of subsequent reviews. But at no stage does the reviewing procedure make use of much sophisticated technique. It is often a crude guess rather than a factual basis on which the reviewers raise or lower the original estimates. It is possible that the final estimates are less accurate than that which would be achieved if the original estimates were not tampered with.

The accuracy of these final estimates should, however, be judged in the perspective of the amount of prediction involved in the preparation of those estimates. The element of forecasting involved in the tax structure is reduced by two important factors. First, the system is so designed that the tax bases are fairly well known in some cases at the time of preparing the estimates. And second, the tax bases are often under the control of planned policy decisions and do not change much as a result of erratic, unpredictable movements in the economy. But the task of prediction is made more difficult by the introduction of new taxes and frequent changes in the rates and coverage of old ones.

The Budget Estimates for the next fiscal year and the Revised Estimates for the current year are completed after more than ten months of the current fiscal year have already passed. So, in the case of the Revised Estimates, information about the actual collection of ten months are available at the time of preparing the final (Revised) estimates. Telegraphic figures give the approximate position of the eleventh month as well[7]. Thus, the errors in the Revised Estimates should be attributable to the unknown factors of two months at most. On the other hand, the Budget Estimates are prepared fourteen months in advance and cover a period of twelve months in the future. But many factors affecting the tax revenues operate with a lag and are, to that extent, known to the estimators[8]. In the case of personal income tax and corporation tax the total income assessed during ten months (possibly eleven) out of twelve months are known at the time of preparing the Budget Estimates. These features, it would appear, render the task of revenue estimation rather simple, and one would expect a fairly high standard of accuracy. We shall now turn to an examination of this.

Some pertinent questions with respect to the quality of revenue estimates are the following: first, what is the extent of error[9] that the estimates

[7]. Revised estimates of revenues are submitted quarterly on the basis of actual collections. Beside this the collecting agencies send postal figures for the tenth month and telegraphic figures for the eleventh month.

[8]. The effects of new taxes which will be introduced during the year are considered by the Budget and Expenditure Division and the estimates are adjusted accordingly.

[9]. Percentage deviation of the estimates from the actuals has been taken as a measure of error in the estimate.

suffer from? Second, is the quality of the Revised Estimates any better than that of the Budget Estimates[10]? Third, is there any bias in the estimates towards underestimation or overestimation? And fourth, has there been any improvement in the quality of the estimates in recent years?

To provide some quantitative answer to the questions posed above, some simple statistical analyses of the Budget Estimates, the Revised Estimates and the Actuals of revenue receipts are made, using the budget data for the ten years, 1948-58.

A Measure of the Magnitude of Estimating Error

The average of the percentage deviations of the Budget Estimates (B.E.) and the Revised Estimates (R.E.) from the Actuals, ignoring the sign, has been taken as a measure of the inaccuracy of these estimates. In Table 1, these averages of absolute percentage deviations are presented for the principal taxes, of the Budget Estimates in Column (1) and of the Revised Estimates in Column (2).

TABLE 1

	Average Absolute Per cent Deviation	
	B.E. (%) (1)	R.E. (%) (2)
Customs	20.3	7.6
Central Excise	15.6	4.4
Corporation Tax	30.1	45.7
Personal Income Tax	19.8	12.9
Sales Tax	23.1	15.0
Total Revenue	15.2	6.3

Source: Appendix B.

The table indicates a poor quality of the estimates[11]. While the Budget Estimate of total revenue shows an average percentage deviation of 15.2,

[10]. This will indicate the efficiency of estimating procedures when most of the variables and their effects should be already known and the period of the forecast is short.

[11]. We have as an ideal the revenue estimates of the British Treasury. These estimates rarely fall off the actuals by more than 1 or 2 per cent.

the magnitude of errors in the Budget Estimates of revenue from each of the major taxes is greater. In some cases the divergence of the Estimates from the Actuals is very large[12]. Such large errors, obviously require explanation. An attempt is made below to discuss some of the factors responsible for the errors.

Nature of the Factors Responsible for the Errors

The Explanatory Memorandum of the Budget provides some brief and cursory explanation of the errors in estimates each year. Some of these are summarised below:

Customs: Unexpected buoyancy of trade due to the Korean War, liberalization of imports, increase in export duty on cotton and imposition of a new 25 per cent *ad valorem* duty on wool were mentioned as the cause of errors in 1950/51. The estimate of 1952/53 was not fulfilled because of restrictive import policy introduced during the year. In 1955/56, the underestimation resulted partly from an increase in revenue by Rs. 5 crores on account of (1) the adjustment of custom duties in arrears outstanding against the Central and Provincial Government Departments, and (2) enhancements in the rates of duty on staple cotton, jute and tea. Expectations in 1956/57 were not fulfilled because the blockade of Suez Canal hampered the flow of trade. The shortfall of collection in the next year, by a bigger margin, was caused by a decline in the export of raw cotton and jute owing to a slackening of external demand and an increase in internal consumption.

Central Excise: In 1948/49, the errors were attributed to an overly conservative estimate and imposition of excise duty on cotton cloth during the year. The short fall in 1949/50 was due to the agreement reached with India in May 1948 whereby both the countries agreed not to levy excise duty on articles exported to each other. In 1950/51, receipts from duties on motor spirit and kerosene oil rose greatly following the abolition of petrol rationing. Receipts from tea also improved as a result of better marketing facilities. During the next three years also the collections exceeded the estimates following a steady expansion in production of cigarettes, cotton textiles, motor spirits and matches. In 1954/55, the collections fell much below the estimates as a result of the abolition of duty on betel nut, the reduction in cotton textiles prices which are subject to *ad valorem* duty, and the smaller production and clearance of sugar.

Personal and Corporation Income Tax: These display persistent underestimation. The excess of collection over the estimates have been ascribed

[12]. *See,* Appendix B.

to factors such as intensive departmental drive, introduction of better system of assessment or growth in national income. Since the corporation tax is lumped with income tax in the Budget, no separate explanations of these errors have been provided. Many serious errors in the estimate of corporation tax, hence, remained unaccounted for.

Sales Tax: In 1951/52, the collections far exceeded the estimates owing to the impact of the new Sales Tax Act of 1951.

It is obvious that the explanations provided are perfunctory and incomplete. But one conclusion emerges strongly from the foregoing discussion: the estimating errors are often avoidable inasmuch as they derive from factors which can be predicted or are already known.

Accuracy of the Revised Estimates

Apparently the Revised Estimates demonstrate better accuracy than the Budget Estimates. The average of absolute percentage deviations of each of the taxes is lower except in the case of corporation tax. The average of absolute percentage deviations of the Revised Estimate is 6.3 for the total revenue. This, however, does not reflect the quality of estimates of the individual taxes. The average of absolute percentage deviation of the Revised Estimates from Actuals are 45.7, 12.9, and 15.0 for corporation tax, personal income tax and sales tax respectively.

The average of absolute percentage deviation of the Revised Estimates is not, however, strictly comparable with that for the Budget Estimates. In the case of Revised Estimates the error of prediction relates at most to a period of only two months. If we were to express the divergence as a percentage of the actual collection for the relevant period (two months instead of twelve months), the errors would be magnified six-fold. This would almost invariably make the Revised Estimates worse than the Budget Estimates. Even if we do not press the above argument, it is certain that the Revised Estimates are little better than the Budget Estimates.

Evidence of Bias in the Estimating Process

To test for bias in the estimates, we need to calculate the average of percentage deviations of the Budget Estimates and the Revised Estimates from the Actuals. Where the average of the percentage deviations is plus, actual tax yields have generally fallen short of the estimates, *i.e.*, the yields have been overestimated; conversely, where the average of the percentage deviations is minus, the yields have been underestimated. Table 2 presents the average of percentage deviations of the Budget Estimates (B.E.) in Column (1) of the Revised Estimates (R.E.) in Column (2).

TABLE 2

	Average Per cent Deviation	
	B.E. (%) (1)	R.E. (%) (2)
Customs	— 15.5	— 7.1
Central Excise	— 3.8	— 1.7
Corporation Tax	17.0	44.9
Personal Income Tax	— 19.1	— 12.9
Sales Tax	— 23.1	— 13.8
Total Revenue	— 15.2	— 6.3

Source: Appendix B.

The tale of Table 2 is unambiguous. The figures for both the Budget Estimates and the Revised Estimates show that revenue receipts are usually underestimated. If the errors of estimates were due purely to chance we should expect the average of percentage deviations to be very low (close to zero) and the errors in estimates should be plus and minus an approximately equal number of times. Calculations here strongly indicate a bias towards underestimation as the means of the percentage deviations are preponderantly negative and high[13].

Change in the Quality of Estimates over Time

Table 3 below is designed to show if there has been any improvement in the quality of the Budget Estimates and the Revised Estimates. For this purpose the full period (1948-58) has been divided into two parts: 1948-53 and 1953-58. The five-year average of percentage deviations, both absolute and with sign, for both the Budget Estimates and the Revised Estimates, have been computed separately for the two periods.

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[13]. The above assertion can be given further statistical validity as follows:

If we consider the percentage deviations of estimates of 5 important taxes during 10 years (as presented in Appendix B), out of the 50 estimates only in 12 cases do the Budget Estimates exceed the Actuals.

With a confidence of 95 per cent, we can reject the hypothesis that purely due to chance the Budget Estimates will exceed the Actuals 12 times out of 50, or, conversely, that they will fall short of the Actuals 38 times out of 50, assuming that the probability of overestimation and underestimation is equal. The same conclusion follows in the case of the Revised Estimates. In 34 cases out of 50 they are underestimated (*See*, Appendix B).

TABLE 3

	Period	*Average of Per cent Deviations*			
		of B.E.		of R.E.	
		Absolute	with sign	Absolute	with sign
		(1)	(2)	(3)	(4)
Customs	1948-53	29.0	—24.0	9.1	— 9.1
	1953-58	11.7	— 7.1	6.0	— 5.0
Central Excise	1948-53	21.3	— 7.5	5.8	— 3.8
	1953-58	10.0	*	3.0	0.3
Corporation Tax ..	1948-53	24.0	4.5	51.1	51.1
	1953-58	36.1	29.4	40.3	38.9
Personal Income Tax ..	1948-53	24.4	—23.0	14.6	—14.6
	1953-58	15.2	—15.2	11.2	—11.2
Sales Tax	1948-53	34.2	—34.2	24.7	—22.3
	1953-58	12.1	—12.1	5.3	— 5.3
Total Revenue	1948-53	22.9	22.9	9.7	— 9.5
	1953-58	7.4	— 7.4	3.1	— 3.1

*negligible

Source: Appendix B.

A comparison of the figures for the two periods shows that the errors of estimation are significantly lower in the case of the Budget Estimates of the latter period, except for corporation tax. The quality of the Revised Estimates also have improved.

An Evaluation of Revenue Estimating Practices

In the course of this inquiry, three salient features of the estimates of tax revenues are uniformly observed, except in the case of corporation tax. First, the tax revenues are usually underestimated. Second, the absolute magnitude of error in the Revised Estimates is less than that in the Budget Estimates. And third, the quality of the estimates has improved during recent years. With the estimates of corporation tax, the picture is the reverse. They err more in the direction of overestimation (particularly the Revised Estimates); the Revised Estimates of corporation tax are less accurate than the Budget Estimates; and finally the quality of the estimates has deteriorated during the recent years.

This brief analysis reveals clearly that the quality of the estimates of all the taxes is far fron satisfactory. It is appreciated that the task of making

revenue forecasts is difficult, but the problem is not unique to Pakistan. Rather there are certain features[14] which render the job relatively easier here. If the extent of error in the British Treasury estimates is no larger than 2 to 3 per cent of the actuals, it is not clear why the estimates in Pakistan should typically show errors of 15 to 20 per cent (while errors of 50 per cent or more are not totally absent) despite the fact that the tax administration is modelled very much on the British pattern.

In the last analysis many of the errors have to be attributed to non-adherence of the estimating procedures to developed statistical techniques. To estimate the future level of an aggregate economic magnitude, relevant statistics of variables determining that magnitude and the knowledge of standard methods of extrapolations are needed. More important, however, is a will to use facts to arrive at dispassionate and unbiased estimates. A scrutiny of the departmental set up and the estimating procedures currently in vogue will be highly rewarding. For, a good estimating system can help not only in knowing in advance the size of the revenues that will, in any case, come to the public treasury, but also in making the collection more efficient by fixing realistic targets not to be attained without some efforts on the part of the administrators.

SECTION II: FLEXIBILITY

A tax structure is considered flexible if its yield increases or decreases more than proportionately in response to an increase or decrease in national income, with the tax parameters remaining unchanged. The tax parameters are the statutory limits of the tax base and the rate schedule.

The importance of flexibility as a quality of taxes arises at least for two reasons: first, flexible tax system serves as an automatic stabilizer in the economy; and second, taxes can contribute increasingly in mobilizing public saving in a developing economy—*i.e.*, as income increases, yield from the taxes will expand more than proportionately and thus help to plough back an increasing share of the growing national income into further development effort. A measure of flexibility, then, will indicate how far the tax system is likely to perform these two functions. It may also help to make the estimates of future yield from different taxes more accurate if, from projections of national income, the movement of various tax-yields can be better predicted. The stabilizing influence of the tax system is, however, very insignificant where taxes form a quite small proportion of the national income. The main interest of this paper is in the growth of tax revenues with respect to the growth in national income.

The responsiveness of tax revenues to movements in national income can

14. *See*, page 192.

be measured by the familiar elasticity method[15]. The relative change in tax yield is divided by the relative change in national income to give a measure of elasticity of taxes (E_T):

$$E_T = \frac{\Delta T/T}{\Delta Y/Y}[16]; \qquad \text{where, } \begin{matrix} T = \text{tax yield} \\ Y = \text{national income} \end{matrix}$$

If the rate schedules of the taxes are not progressive the elasticity of the tax system will be equal to the elasticity of the tax bases: $E_T = E_b$. With progressivity in the rate schedules the elasticity of the tax system should be more, as E_r will become greater than zero. The elasticity of the tax bases, however, depends upon the relative rate of growth of the taxed sector and its relative sensitivity to general price movements. In Pakistan the relative growth in the more heavily taxed sector has been much greater than the overall growth. This differential in growth rate becomes still greater if growth of money income alone is considered. In view of these factors plus the progressive nature of the personal income tax schedule the Pakistan tax system should show an elasticity of at least 3 to 4 with respect to change in aggregate national income in order to be regarded as reasonably flexible.

Two important difficulties in measuring the responsiveness of taxes to change in income are the elimination of the effects of change in prices and change in tax-rates. By using the measure with respect to change in national income at current prices the first of the difficulties is partly overcome[17]. The second difficulty can be removed if hypothetical tax yields can be calculated by keeping the tax-rates equal to that of a particular base year[18].

In this paper no adjustments are made for differences in tax rates and tax exemption limits, to make the work less arduous. The gross elasticities

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15. Elasticity and flexibility are used here interchangeably.

16. Elasticity of tax revenue to change in national income, prices remaining the same, is the combined effect of elasticity of average statutory tax rates (E_r) and elasticity of tax base E_b

$$\text{where, } E_r = \frac{\Delta r/r}{\Delta b/b} \text{ and } E_b = \frac{\Delta b/b}{\Delta Y/Y} \quad \begin{matrix} r = \text{average rate of tax} \\ b = \text{the tax base} \end{matrix}$$

$$E_T = E_b\ (1 + E_r)$$

See, R.A. Musgrave, *The Theory of Public Finance*. (New York: McGraw Hill, 1959), p. 507.

17. The use of current price national income does not take account of the effects of price change on tax yield via possible changes in demand of the taxed commodities induced by the price change.

18. *See*, R.F. Bretherton, "The Sensitivity of Taxes to Fluctuations of Trade," *Econometrica*, Vol. V, 1937, pp. 171-183. Also, *see*, D.T. Lakdawala and M.V. Khambadkone, "Sensitivity of Central Taxes: 1948-49 to 1954-55", *The Economic Weekly*, December 5 and 12, 1959.

are qualified for the effects of changes in rates, exemption limits and quality of tax administration wherever possible.

Finally, the tax structure is a complex of many taxes of diverse nature. Change in national income will affect the yield of various taxes in a dissimilar manner. The effects of price changes and the nature of rates applied on different taxes are also varied. A flat rate *ad valorem* tax, a specific duty, or a progressive rate schedule will make a tax yield react differently to changes in national income. These considerations make a separate study of the flexibility of individual taxes necessary, especially if the separate effects of changes in levels of the rates and the national income are to be noted. The five major central taxes have been selected for study. Since they constitute almost the entire tax revenue[19], this study will reveal the sensitivity of the total tax structure as well. The elasticity of the total tax revenue to income is also separately obtained.

The elasticities of different taxes, from year to year, with respect to national income at current prices are shown in Table 4.

The year-to-year changes in tax yield do not show very uniform relationship to changes in income. The randomness may be due to a number of reasons, and it is difficult to trace out the exact causes of every movement. First, the movements of different components of national income such as agricultural production, industrial production and levels of exports and imports may not be always in sympathy with changes in national income, from year to year. Second, changes in the rate structure and expansion or contraction of the statutory limits of tax bases also modify the effects of changes in national income on the tax yield. Third, the correspondence of tax yields to national income may also be distorted by an alleged policy of lax collection in good years in order to create a reserve of arrears to draw upon during later lean years (as a result the tax yield does not change by as much as it should in response to a change in national income). Finally, the national income figures used are likely to suffer from much error of its own.

To reduce the chances of being misled by this quagmire of possibilities we consider several other measures. First, we compute the elasticity of tax yield to income over a longer period, 1949/50 and 1957/58, these being the years just preceding the Korean boom and the martial law, respectively. These elasticities are presented in Column (1) of Table 5. Second, we calculate the elasticity of taxes over this period by dividing the period into two parts—

[19]. In 1949/50 they formed 78.2 per cent of the total revenue and 95.2 per cent of the total tax revenue. They formed 71.0 per cent of the total revenue and 94.7 per cent of the total tax revenue in 1957/58.

TABLE 4

EAR	Elasticities[a]					
	Customs	Central Excise	Corporation	Personal Income	Sales	Total Tax Revenue
	(1)	(2)	(3)	(4)	(5)	(6)
1950/51 ..	39.1	14.1	*	*	— 1.1	31.0
1951/52 ..	0.8	0.9	25.2	11.3	13.5	5.3
1952/53 ..	— 4.5	6.1	3.6	3.2	— 2.7	— 5.0
1953/54 ..	7.8	—12.9	14.0	— 2.9	5.1	7.2
1954/55 ..	— 1.2	1.0	8.2	— 6.2	— 1.9	— 1.1
1955/56 ..	2.6	1.2	— 6.9	— 0.7	1.6	1.7
1956/57 ..	— 0.5	0.3	— 2.5	1.2	0.2	0.2
1957/58 ..	10.1	—18.7	1.9	0.3	— 9.9	— 5.3

Source: See, Appendix B.

$$^{a}\text{Elasticity} = \frac{T_t - T_{t-1}}{T_{t-1}} \cdot \frac{Y_{t-1}}{Y_t - Y_{t-1}}$$

where, T_t = Tax yield of the current year.

Y_t = Currentt price national income of the current year.

In the case of corporation tax and personal income tax a lag of one year has been used becuase these taxes are levied on previous year's income.

*No estimate of national income is available before 1949/50.

namely, 1949/50 through 1952/53 and 1953/54 through 1956/57—and taking the averages of the tax yields and national income in the two periods. These elasticities are shown in Column (2) of Table 5.

The measures of elasticity of tax yields to national income will reflect the change in yields of taxes corresponding to a change in their more proximate bases as well only if the growth of different sectors or components of the aggregate national income is proportional. In the early stages of development this is often not true. Some sectors develop far more rapidly than others because of more emphasis or more initial potentialities. Relating the receipts of some of the taxes to more specific components of national income will be more meaningful. A tax found highly flexible with respect to aggregate national income may reveal quite poor elasticity when viewed with respect to the phenomenal growth in the sector on which it is levied. We, therefore,

TABLE 5

Tax	Elasticiti (1)[a]	(2
Customs	0.0	—5.5
Central Excise	7.7	19.8
Corporation Tax	19.7	16.9
Personal Income Tax	2.9	6.3
Sales Tax	2.3	1.6
Total Tax Revenue	1.6	—0.7

[a]. Elasticity =

$$\frac{T_t - T_{t-8}}{T_{t-8}} \circ \frac{Y_{t-8}}{Y_t - Y_{t-8}}$$

where, T_t = Tax yield in 1957/58

Y_t = National Income in 1957/58.

[b]. Elasticity =

$$\frac{\sum_{t=5}^{8} T_t - \sum_{t=1}^{4} T_t}{\sum_{t=1}^{4} T_t} \circ \frac{\sum_{t=1}^{4} Y_t}{\sum_{t=5}^{8} Y_t - \sum_{t=1}^{4} Y_t}$$

where t = 1(1949/50), 2(1950/51).... ..... 8(1956/57)

T_t = Tax yield of the t-*th* year

Y_t = National Income of the t-*th* year.

have attempted to derive elasticity of taxes to other variables, such as, total income assessed in the case of personal income tax; value of foreign trade in the case of customs; index of manufacturing in the case of excise, and so on, which form their proximate bases respectively. The following paragraphs will be devoted to examining the productivity of each of the taxes under study in the light of the various measures mentioned above.

Customs Receipts: Customs include revenues from export duties and import duties. Almost 70 per cent of customs receipts derive, on the average, from the latter. Given the general level of duties, the total collection from

customs will depend upon the volume of foreign trade and its composition.

Foreign trade has become a lagging sector in the economic development of Pakistan. Export earnings are declining relative to the growing national income. Foreign exchange difficulties, in turn, have led to tight exchange controls and reduced imports. The decline in the importance of foreign trade becomes more pronounced when the proportion of trade financed by foreign aid is excluded. Furthermore, the import policy has increasingly restricted non-essential items, and the composition of imports has changed in favour of duty-free or low-dutied essential items. These two factors explain the inflexibility of customs receipts. Except for the years of the Korean boom, the total collection from customs has remained more or less stagnant.

It is, in fact, useless to look for any automatic flexibility of customs proceeds to national income when exports depend on the capricious movements of foreign demand, domestic supply, and permitted imports. In Table 5, there is a zero elasticity of customs to national income by one method while it is negative (—5.1) by the second. The negative elasticity is due to the inclusion of the boom years in the average of the earlier period (1949-53). The response of customs is poor even if considered with respect to change in total foreign trade. In 1957/58 the index of customs receipts showed an increase of 18.4 over the base of 1948/49 and index of foreign trade showed an increase of 38.8 (*see*, Appendix D). This inelasticity of customs receipts occurs despite the generally higher level of export and import duties in 1957/58 than in 1948/49.

Central Excise Receipts: Revenue from excise duties has increased enormously and in 1957/58 stood almost four times as high as in 1948/49, (*see*, Appendix D). The Table 5 elasticities of excise taxes are 7.7 and 19.8. This huge expansion occurred in spite of many reductions in the rates.

The high elasticity is due to rapid growth of manufacturing industries since partition. The index of manufacturing showed an increase of 304.2 per cent in 1957/58 over the base of 1950/51. Revenue from excise gained 205.9 per cent during the same period. Thus, the elasticity of excise to index of manufacturing is 0.7. The revenue from excise duty has not kept pace with the increase in manufacturing which provides the main excisable items. As economic development is likely to increase the relative share of industry, the elasticity of excise duty to national income will remain high. It will be required to compensate the loss on import duties with the growth of import-substituting industries within the country.

Personal Income Tax

This is the most important of the direct taxes and has in Pakistan a progressive schedule of rates. Over the period 1948-58 the yield from this

source is secularly increasing with the exception of 1953/54 and 1955/56. During these two years yields from personal income tax were lower by 13 and 8 per cent of their respective preceding year's collection. The post-Korean business recession in 1952/53 and the adverse effects of low agricultural prices in 1954/55 probably explain the exceptions[20].

The total collections of personal income tax in 1957/58 was more than $3\frac{1}{2}$ times the 1948/49 collection. If we consider 1949/50 level[21] for comparison the increment is still more than one hundred per cent (113.1 per cent). This set against the increase in national income by 38.7 per cent gives the elasticity of personal income tax as 2.9 (Table 5). Alternatively, the elasticity becomes 6.3 if we take the change of average yield and national income between the two periods 1949-53 and 1953-57.

Even the elasticity of 2.9 must be viewed with qualification. This sensitiveness cannot be considered as an automatic response to national income. Since the disruption of partition, the quality of tax administration has improved. Furthermore, personal income tax depends mostly upon the faster growing non-agricultural sector[22]. If adjusted for these factors, the elasticity would be much lower. Consider the contributions of manufacturing, government, services and wholesale and retail trade as the relevant elasticity denominator; these have increased in real terms, by 47.5 per cent between 1949/50 and 1957/58. Adjusting for an assumed 20 per cent rise in the general price level, we get an increase for these sectors of 77 per cent in current prices. On the other hand, if we attribute 20 per cent of the increase in tax collection from this source to an improvement in the quality of the tax administration, the elasticity of the income tax to change in the above mentioned base becomes only slightly greater than unity.

This rather poor performance of the only progressive tax may be ascribed to several factors. The exemption limit of personal income tax was raised from Rs. 3,000 in 1949/50 to Rs. 5,000 in 1957/58. The level of tax rates was slightly lower in 1957/58 than that of 1949/50. Moreover, the proportion of total income assessed had declined in the highest income grade (Rs. 40,000 per annum and over) and had increased in the middle and

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[20]. Though agriculture is outside the domain of personal income tax, a huge drop or rise in agricultural prices affects the income in other sectors as well and thus influences the yield of income tax indirectly.

[21]. 1948/49 was the year immediately after partition. The poor collection in that year is partially due to the fact that the administrative set up had not been put in good shape by then. The collections of income tax nearly doubled next year, though the exemption limit was raised from Rs. 2,500 to Rs. 3,000.

[22]. Agriculture is outside the jurisdiction of central taxation by constitutional provisions.

lower grades[23].

The effects of differences in the tax rates and in the exemption limits can be eliminated by choosing pairs of years with identical tax rates and exemption limits. Table 6 shows three such cases[24].

TABLE 6

		Elasticity
(1)	Between 1952/53 and 1953/54	—2.9
(2)	" 1954/55 and 1955/56	0.7
(3)	" 1955/56 and 1956/57	1.2

The elasticities in Table 6 do not behave uniformly. But they are low on the average.

Another pertinent measure of the elasticity of personal income tax may be with respect to change in total income assessed. Between 1949/50 and 1955/56 total income assessed increased by 20.1 per cent (from Rs. 51,63 lacs to Rs. 61,97 lacs) while income tax receipts increased by 66 per cent. The elasticity becomes 3.3. During the same period the current price national income has risen by 7.5 per cent only. This corroborates the fact that growth in the sector covered by personal income tax is higher than the growth in the overall economy and that substantial amount of the early increase in tax yields is due to an improved collection-machinery. The elasticity of 3.3 with respect to change in income assessed has to be ascribed to either the progressivity of the tax schedule or a higher level of tax rates or to both. Since the rates in 1955/56 are actually lower compared to those in 1949/50, this indicates a high elasticity of the average rate of personal income tax to a change in its base.

To conclude, the yield from personal income tax has increased substantially during 1948/49 to 1957/58. But considering the much higher rate of growth in the sectors covered by income tax, the progressivity in its rate structure and the efforts to improve the collection machinery the increase in yield must be regarded as low. The low elasticity is observed even when years with identical tax rates are considered. This suggests that total income assessed to income tax has been inelastic compared to the growth in taxable

[23]. Between 1949/50 and 1955/56, total income assessed in the (Rs. 0-9999) income grade increased from 24 per cent to 27 per cent; that in the (Rs. 10,000-39999) income grade increased from 29 per cent to 31 per cent, and that in the (Rs. 40,000 and over) income grade decreased from 47 per cent to 42 per cent.

[24]. The elasticity between 1949/50 and 1950/51, the only other such case, cannot be obtained as no estimate of national income for 1948/49 exists.

income. The huge declarations of some of the unreported wealth after martial law corroborates this.

Corporation Tax

Corporation tax is levied on the income of all registered companies at a flat rate of 56.25 per cent. Though this is often lumped with personal income tax, it merits separate consideration on account of the dissimilar nature of its base and rate schedule. From a very insignificant initial weight, the corporation tax has increased rapidly during the later years. Table 5 gives the elasticity of corporation tax to national income as 19.7 and 16.9. The first two year's corporation tax receipts are abnormally low compared to the receipts of the later years. This is due to both the low level of rates and the poverty of large-scale manufacturing during these years. If we leave out the two extreme pairs of years 1948-50 and 1949-51 between which the receipts almost trebled every year (*see*, Appendix D), the elasticity of corporation tax to national income becomes much lower. Between 1950/51 and 1956/57[25] it amounts to 2.6; and between 1950/51 and 1957/58[26] this amounts to 5.9.

The elasticity of corporation tax receipts to the growth of large-scale manufacturing is more modest. Between 1949/50 and 1957/58 the index of large-scale manufacturing (at constant prices) rose by 444.8 per cent, and 763.1 per cent more was added to corporation tax receipts. If we exclude the extreme years and consider the period with identical tax rates (1950-57) the tax receipts increased by 98.5 per cent in response to a change of 310.9 per cent in the index of large-scale manufacturing. The elasticity becomes as low as 0.3. The elasticity will be even lower if effects of price changes are considered. This low elasticity with respect to index of large-scale manufacturing is due in part to the fact that the coverage of corporation tax is not coterminous with large-scale manufacturing. Besides, very liberal exemptions allowed to industries have kept the yield from this source low[27].

Sales Tax

After customs, sales tax is the most important source of central government revenue. The index of sales tax receipts increased by 247.6 per cent between 1948/49 and 1957/58. Even if the extreme year 1948/49 is excluded, the increase is 68.9 per cent. Table 5 shows 2.3 and 1.6 as elasticities of sales

25. The rate of corporation tax were identical during this period.

26. The rate of corporation tax applied on corporate income exceeding Rs. 25,000 was raised to 62.50 per cent in 1957/58.

27. Many newly established concerns enjoy a tax-holiday during the initial years. They can charge high depreciation allowances on machineries and thus reduce the taxable profit. Profits ploughed back also get examption.

tax receipts to national income. Enhancement of the rate schedule and coverage contributed to the improvement of sales tax receipts during this period.

The elasticity of sales tax to national income seems to be low on the evidence of recent years. In 1951/52 sales tax receipts reached a peak due to liberal imports and the impact of the new Sales Tax Act of 1951. Since then the receipts remained below this level through 1956/57[28]. Only in 1957/58 was the level of 1951/52 finally surpassed. Again the elasticity of sales tax to the index of manufacturing between 1950/51 and 1957/58 is only 0.3. The failure of revenue from sales tax to increase, during the later years, is partly due to the raising of exemption limits from Rs. 15,000 in 1951/52 to Rs. 60,000 in 1954/55.

Next we list in Table 7 elasticity of sales tax to national income between pairs of years with same exemption limit and rates:

TABLE 7

		Elasticity
(1)	Between 1952/53 and 1953/54	5.1
(2)	" 1954/55 and 1955-56	1.6
(3)	" 1955/56 and 1956/57	0.1
(4)	" 1956/57 and 1957-58	—9.9
(5)	" 1954/55 and 1957/58	0.87

In Table 7, case (1) may suggest that sales tax has a high positive elasticity to a fall in national income given the identical rate and exemption limit. However, case (4) does not confirm the same. The fall in national income in case (1) is accompanied by a sharp decline in the total volume of exports and imports which reduced the yield from the sales tax heavily. But in case (4) the revenue from the sales tax increased in spite of a slight fall in national income, because the more relevant components of national income, *viz.*, the volume of imports and domestic manufactures increased in that year relative to 1956/57.

The relative stagnation of the sales tax revenues after 1951/52 can be explained by the decline in that part of the revenues derived from declining

[28]. This is so despite the fact that the index of national income at current prices is 29.5 per cent higher in 1956/57 than in 1951/52. The collection in 1951/52 is abnormal. A new sales tax act was introduced that year and all the existing stocks were assessed under the old tax.

imports and exports. A significant growth of domestic manufactures has occurred, but the revenues from this source have no more than compensated for the loss from the other sources.

Total Tax Revenue

The elasticity of the tax system as a whole depends upon the sensitivity of the taxes that comprise it. If most of the taxes, especially the relatively important ones, are inflexible to changes in national income then the tax system will also suffer from rigidity. Even inelasticity of a single tax may render the tax system inelastic if the importance of that tax is sufficiently large. Customs plays such a role in the tax structure of Pakistan.

During the period from 1948/49 to 1957/58, index of total tax revenue reached its peak in 1951/52, though national income reached its peak in 1956/57. This follows from the fact that customs realization reached its peak in 1951/52. Besides, sales tax, as we observed before, showed very high increase in that year under the impact of the new Sales Tax Act.

Between 1949/50 and 1957/58 total tax revenue increased by 61.1 per cent as against an increase of 38.7 per cent in national income. Thus, the flexibility is 1.6[29]. This elasticity must be considered very low because: 1) during this period, some improvement in the quality of the tax administration and much enhancement of the scope and rates of taxes have occurred; and 2) the growth in national income in the more heavily taxed sector has been much higher than the overall growth in the economy. The latter can be illustrated by taking the sum of manufacturing production, exports, imports, banking, and insurance as a measure of taxable national income. Between 1949/50 and 1957/58 this quantity expanded by 90 per cent but tax revenue increased by only 61 per cent[30]. This elasticity is only 0.68. This low response derives from the fact that customs, which contributes the bulk of the total tax revenue, has remained so inflexible. Total tax revenue excluding customs shows an elasticity of 3.6 during the same period.

Measures for Increasing the Flexibility of Tax Revenues

The inflexibility of tax revenues noted above is a product of both faulty mechanics of the tax structure and weakness in its administration. Overdependence on customs has kept the tax system tied to a stagnant source. Specific nature of many taxes has made their yields unresponsive to the

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[29]. *See*, Table 5. Column 2 gives an elasticity of —0.7 for the same period.

[30]. Assuming that prices were 20 per cent higher in 1957/58 over those in 1949/50 the constant price national income estimate of manufacturing productions has been inflated by 20 per cent.

significant price rises that took place in the economy. Besides, inadequate coverage, loopholes in the design of the rate schedules, indiscriminate exemptions and, finally, outright evasions have militated against the operation of any built-in flexibility.

To restore flexibility actions are required to mitigate all these defects. First, there should be a shift of emphasis from customs to other sources. Though import and export duties must continue to serve the purpose they are currently doing, efforts should be directed, more and more, to make the fast and sturdily growing sectors contribute to tax revenues proportionately. Second, there should be a change over to *ad valorem* duties as opposed to specific duties wherever feasible. Third, the weight and scope of the direct taxes and of the progressive taxes should be increased. Fourth, the time lag between earning of incomes and payment of taxes should be reduced. Finally, dependence on built-in flexibility alone is not enough. Increasing resort to what is known as the policy flexibility is necessary. There should be deliberate legislation of tax measures which will take note of the changing pattern of relative price movements and of relative growth rates among various sectors. The case of several upward revisions of lower exemption limit of personal income tax in Pakistan is an example of actions taken against the dictate of this policy flexibility. Such things should be discontinued. Thus, only a synchronized course of action both at policy and execution levels can give the system enough flexibility in order to contribute to the emergence of a productive tax system in Pakistan.

APPENDIX A

VISED ESTIMATES AND ACTUALS FOR SELECTED TAXES

		1948/49	1949/50	1950/51	1951/52	1952/53	1953/54	1954/55	1955/56	1956/57	1957/58
	BE	26,45	34,25	38,55	70,78	78,90	39,48	41,06	39,79	52,85	50,84
	RE	31,20	39,35	82,10	86,10	66,40	41,00	43,45	51,90	47,92	46,54
	ACTUALS	39,17	46,30	84,34	88,15	70,21	40,10	45,58	61,60	51,59	46,38
	BE	3,70	7,35	6,35	7,00	7,50	13,72	17,92	16,98	17,22	20,98
	RE	5,20	5,75	6,50	7,25	9,01	16,50	15,56	16,50	17,89	21,03
	ACTUALS	5,58	5,47	7,09	7,49	9,54	16,31	14,54	16,77	18,28	21,69
·RPORATION TAX	BE	48	74	1,30	2,92	3,56	5,14	4,83	6,55	7,19	8,60
	RE	50	1,16	2,86	4,00	5,73	5,94	6,00	6,86	7,19	8,25
	ACTUALS	28	74	2,04	3,12	3,79	6,17	3,39	6,02	4,05	6,37
PERSONAL INCOME TAX	BE	6,52	8,06	8,20	9,33	11,36	13,11	13,92	17,24	17,69	19,20
	RE	6,00	7,84	9,64	12,50	14,27	14,41	16,00	16,93	17,81	19,55
	ACTUALS	6,30	10,82	11,33	14,03	16,74	14,58	19,58	18,05	20,97	23,06
SALES TAX	BE	3,75	6,50	11,50	15,00	20,23	11,50	17,16	21,40	21,18	26,25
	RE	3,75	6,00	14,50	25,50	20,23	15,25	18,00	21,34	23,75	25,00
	ACTUALS	7,71	14,19	13,87	25,10	22,05	15,80	19,12	23,13	24,39	26,80
TOTAL REVENUE	BE	55,54	74,54	88,18	128,12	145,67	115,04	130,17	141,38	153,56	164,16
	RE	62,65	80,06	137,40	157,79	143,74	125,62	134,47	149,98	154,64	171,88
	ACTUALS	76,79	98,16	141,17	161,83	152,31	128,52	136,38	166,37	154,99	174,95

Source: Data have been compiled from the Budget Documents of the Government of Pakistan, and include the Central allocation to provinces of their share in the taxes. *See*, Budgets of the Government of Pakistan for the years 1948/49 through 1959/60.

Note: BE in this paper refers to the Budget Estimates and RE to the Revised Estimates.

APPENDIX B

ANNUAL PERCENTAGE ERRORS OF THE ESTIMATES

YEAR	Customs		Excise		Corporation Tax		Personal Income Tax		Sales Tax		Total Revenue	
	BE	RE	BE	RE	BE	RE	BE	RE	BE	RE	BE	RE
1948/49	—32.4	—20.3	—33.7	— 6.8	+71.4	+78.6	+ 3.5	— 4·8	—51.4	—51.4	—27.7	—18.4
1949/50	— 26.0	— 15.0	+34.4	+ 5.1	0.0	+56.8	— 25.5	— 27.5	— 54·2	— 57.7	— 24.1	— 18.4
1950/51	— 54.3	— 2.7	— 10.4	— 8.3	— 36.3	+40.2	— 27.6	— 14.9	—17.1	+ 4.5	—37.5	— 2.7
1951/52	—19.7	— 2.3	— 6.5	— 3.2	— 6.4	+28.3	—33.5	—10.9	—40.2	+ 1.6	—20.8	— 2.5
1952/53	+12.4	— 5.4	—21.4	— 5.6	— 6.1	+51.2	—32.1	—14.8	— 8.3	— 8.3	— 4.4	— 5.6
1953/54	— 1.5	+ 2.2	—15.9	+ 1.2	—16.7	— 3.7	—10.1	— 1.2	—27.2	— 3.4	—10.5	— 2.3
1954/55	— 9.9	— 4.7	+23.4	+ 7.0	+42.5	+77.0	—28.9	—18.3	—10.3	— 5.9	— 4.6	— 1.4
1955/56	—35.4	—15.7	+ 1.3	— 1.6	+ 8.8	+14.0	— 4.5	— 6.2	— 7.4	— 7.7	—15.0	— 9.9
1956/57	+ 1.9	— 7.1	— 5.8	— 2.1	+77.5	+77.5	—15.6	—15.1	—13.2	— 2.6	— 0.9	— 0.2
1957/58	+ 9.6	+ 0.3	— 3.3	— 3.0	+35.0	+29.5	—16.7	—15.2	— 2.1	— 6.7	— 6.2	— 1.8
With Signs:												
Average of 1st 5 years ..	—24.0	— 9.1	— 7.5	— 3.8	+4.5	+51.1	—23.0	—14.6	—34.2	—22.3	—22.9	— 9.5
" of last 5 years ..	— 7.1	— 5.0	*	+ 0.3	+29.4	+38.9	—15.2	—11.2	—12.1	— 5.3	— 7.4	— 3.1
" of whole period ..	—15.5	— 7.1	— 3.8	— 1.7	+17.0	+44.9	—19.1	—12.9	—23.1	—13.8	—15.2	— 6.3
Absolute (without signs):												
Average of 1st 5 years ..	29.0	9.1	21.3	5.8	24.0	51.1	24.4	14.6	34.2	24.7	22.9	9.5
" of last 5 years ..	11.7	6.0	10.0	3.0	36.1	40.3	15.2	11.2	12.1	5.3	7.4	3.1
" of whole period ..	20.3	7.6	15.6	4.4	30.1	45.7	19.8	12.9	23.1	15.0	15.2	6.3

*Negligible

Source: See, Appendix A.

APPENDIX C

The changes in the Budget Estimates between two years and the error of the previous year's Budget Estimates seem to be closely related. This Appendix measures the strength of this relationship.

We hypothesize that the change in the Budget Estimate (as a per cent of the previous year's Actuals) is equal to a constant, different according to the tax being estimated, less a fraction of the percentage error in the previous year's Budget Estimate. In equation form,

$$(1) \quad \left[\frac{B_t - B_{t-1}}{A_{t-1}}\right] = a_i + b\left[\frac{B_{t-1} - A_{t-1}}{A_{t-1}}\right]$$

where:

B_t = Budget Estimate in t-*th* year.

A_t = Actual receipts in t-*th* year.

a_i and b are coefficients, the former depending upon the tax (i) involved.

Re-arranging terms and adding a random error term, we have

$$(2) \quad \frac{B_t}{A_{t-1}} = (a_i - b) + (1 + b)\frac{B_{t-1}}{A_{t-1}} + U_t$$

The coefficients are estimated, by least squares, from the sample of 45 observations, nine for each of the five taxes. These estimates are:

$$(3) \quad \left[\frac{B_t - B_{t-1}}{A_{t-1}}\right] = \left\{\begin{array}{c} -.02 \text{ for customs} \\ .19 \text{ for excise} \\ .03 \text{ for personal income} \\ .48 \text{ for corp.} \\ .08 \text{ for sales} \end{array}\right\} - .33\left[\frac{B_{t-1} - A_{t-1}}{A_{t-1}}\right]$$

About two-thirds of the variation of the dependent variable, B_t/A_{t-1} is explained by the regression.

Both the use of a separate intercept for each type of tax (a_i) and the regression coefficient (b) add significantly to the explanation.

Sums of Squares	Amount	Degrees of Freedom	F-ratio
of deviations around mean ..	6.83	44	
explained by a_i ..	3.39	4	$\frac{3.39/4}{3.44/40}=9.87^{*}$
of deviation around a_i ..	3.44	40	
explained by b ..	1.09	1	$\frac{1.09/1}{2.35/39}=18.03^{*}$
of deviations around b ..	2.35	39	

$$R^2 = 1 - \frac{2.35}{6.83} = .66$$

*Significant at 1 per cent level.

As can be seen from the above table, almost half the original variance is explained by computing a separate mean for each type of tax. Almost a third of the remaining variance is explained by considering the influence of last year's budget errors on this year's estimates.

APPENDIX D

INDICES OF TAX RECEIPTS AND SOME RELATED ECONOMIC INDICATORS

Year	Index of customs receipts	Index of excise duty receipts	Index of personal income tax	Index of corporation tax receipts	Index of sales tax receipts	Index of total tax receipts	Index of national income at current prices	Index of manufacturing	Index of large-scale manufacturing	Index of foreign trade
1948/49	100.0	100.0	100.0	13.7	100.0	100.0	—	—	—	100.0
1949/50	118.2	98.0	171.7	36.3	184.0	127.4	100.0	—	100.0	119.4
1950/51	215.3	127.1	179.8	100.0	179.9	192.6	102.1	100.0	125.2	110.6
1951/52	225.0	134.2	222.7	152.9	325.6	225.1	108.2	123.6	156.4	162.9
1952/53	179.2	171.0	265.7	185.8	286.0	201.3	113.0	155.4	200.0	144.2
1953/54	102.4	292.3	231.4	302.5	204.9	156.6	106.8	202.4	293.6	97.9
1954/55	116.4	260.0	310.8	166.2	248.0	170.2	94.8	265.3	356.0	85.9
1955/56	157.3	300.5	286.5	295.1	300.0	191.7	107.5	336.6	456.8	97.2
1956/57	131.7	327.6	332.9	198.5	316.3	197.9	140.1	381.7	514.4	135.2
1957/58	118.4	388.7	366.0	312.3	347.6	205.3	138.7	404.2	544.8	138.8

Source: 1. Tax receipts: from Government of Pakistan *Budget* 1960/61, *Explanatory Memorandum* (pp. 172-73 and 181).
2. Index of large-scale manufacturing: from Government of Pakistan, *Economic Survey and Statistics: Budget*, 1961/62 (Statistics, p. 1).
3. Index of manufacturing: from State Bank of Pakistan, *Report on Currency and Finance*, 1958/59 (p. 93).
4. Index of current price national income from: *A Measure of Inflation in Pakistan*, 1951-60, Institute of Development Economics, Monograph No. 7 (p. 21); C.S.O. estimates through 1953/54.
5. Figures for foreign trade are taken from C.S.O. *Foreign Trade Statistics of Pakistan*, 1960 (p. 1).