

CHAPTER SIX

THE DEGREE AND BEHAVIOUR OF VERTICAL FISCAL IMBALANCE UNDER ALTERNATIVE DEFINITIONS OF FISCAL VARIABLES

I. INTRODUCTION

As has been noted in the earlier chapters, vertical fiscal imbalance is a phenomenon that is present in every federal arrangement. Nigeria is no exception to this universal rule. And as chapter four and five have revealed, the symptoms of this dreaded disease has ever been present in the Nigerian federal polity. In this chapter, therefore, the primary problem tackled is that of estimating the degree of vertical fiscal imbalance in Nigeria (using the Vertical Imbalance Ratio - VIR cited in page 34, i.e, equation 28 of chapter two). We have also examined the vertical equalizing tendency of the federal transfers. This has been done in two ways.

The first method uses the traditional concept of the independent revenue of the States. i.e, "own revenue from their own sources". The second approach adopts the redefined concept of the term. In this method, it has been argued (as we saw in chapter two) that the independent revenue of the States in the real sense of the term includes all obligatory transfers that are due to the States from the Centre. Under these two approaches, attempts have been made to ascertain the equalizing tendency of federal transfers on vertical imbalance.

In this case, for the traditional definition, what constitutes the transfer pool are Statutory Allocations, Federal Grants and Federal Loans whereas for the redefined concept, actual transfers connote only Federal Grants and Federal Loans.

II. ISSUES EXAMINED

The following issues have been examined using the Vertical Imbalance Ration (VIR)

1. Under the traditional definition of the independent revenue of the governments, the degree of vertical imbalances is very high in Nigeria as has been observed in earlier chapters. Thus, we intend to examine the degree of the same using the Vertical Imbalance Ratio.

2. Although the aggregate federal transfers to the states in Nigeria may cause tremendous reduction in the vertical fiscal disparity, this could be mainly traced to the statutory transfers in most of the years. Hence it is also intended to find out the role of statutory transfers, Federal Grants and Federal Loans in vertical fiscal equalization in Nigeria.

III. METHODOLOGY

Our analysis here has been based on the Vertical Imbalance Ratio¹ cited in section III.2.2.2 of chapter two.

$$\text{That is VIR} = \text{RfEs/EfRs}$$

Where : Rf and Rs = the respective proportionate share of the federal and states in the total revenue of the federation.

 Ef and Es = the respectively share of the federal and the states in the total expenditure of the federation.

The formula cited above is defined with respect to the revenues of the centre and the states before any federal transfers to ascertain the degree of pre-transfers Vertical Imbalance. And adjusted after the application of a specific transfer mechanism in order to ascertain the impact of a particular channel of federal transfers in the Vertical Imbalances.²

VIR > 1 or < 1 implies the existence of vertical fiscal imbalance - in favour of the federal when VIR > 1 and in favour of the states when VIR < 1. Thus VIR = 1 connotes vertical fiscal balance or zero vertical fiscal imbalances.³

IV. VERTICAL FISCAL IMBALANCE IN NIGERIA UNDER THE TRADITIONAL DEFINITION OF INDEPENDENT REVENUE OF THE GOVERNMENTS

IV.1. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE BEFORE TRANSFERS

Table 6.01 indicates the degree of vertical fiscal imbalances in Nigeria and its reduction through various transfers mechanisms (under the traditional definition of

1. For details see section III.2.2 of chapter two.
2. For details see section III.2.5 of chapter two.
3. See section III.2.2.3 of chapter two.

independent revenue of the governments).⁴ From here it is noted that a high degree of pre-transfers vertical fiscal imbalances existed in Nigeria. Thus, it is observed from column 2 of this table that during the entire period of the study 1956-88, the lowest value of VIR recorded was 1.82 in 1971. In this year, the Centre controlled 71.91% of the total revenue of all the governments whereas its share of expenditure was 64.69%, while on the other hand, the States with an expenditure share of 35.31% had to manage with only 23.09% of the total revenue (see columns 2 to 5 of Appendix Table VI.01).

At the other extreme, the highest VIR recorded in 1976 was as high as 9.25 - with the Federal authority in possession of 93.77% of the total revenue, and just 61.94% share in expenditure, whereas, the States with 38.06% of expenditure pocketed only 6.23% of the total revenue of all the governments. These two extreme values of the VIR show that the discrepancy between revenue and expenditure of the Centre and its constituent units is tremendously high in Nigeria, such that the States are greatly deprived of any fiscal advantage.

The overall picture reveals that the VIR of vertical fiscal imbalance in Nigeria was quite erratic over the period covered in this study. The lowest and highest VIR for the first phase (1956-67) was 2.00 (recorded in 1957) and 6.00 (observed in 1967). In 1957 the centre with 43.61% share in the total expenditure of the federation recorded 60.70% of the total revenue, whereas the states with 56.39% share of expenditure collected only 39.30% of the total revenue of the federation. Similarly, in 1967 whereas the share of the Centre in the total expenditure was 46.93%, its share of revenue stood at 84.15%, while the states with the expenditure share of 53.07% accounted for a mere 15.85% of the total revenue. On the other hand, the lowest VIR during the third phase was 2.38, which occurred in 1986, and the highest 6.30 was recorded in 1984. In the case of the former, the share of the Centre in the expenditure and revenue of the federation was 68.11% and 83.58% respectively while those of the states were 31.89% and 16.42% respectively. As for the latter case, the federal

4. The calculation is based on the Vertical Imbalance Ratio (VIR) formula cited in chapter two. That is $VIR = RfEs/EfRs$. For details see section III.2.2 of chapter two. Also see the source note 7 of table 6.02.

TABLE 6.01

**DEGREE OF VERTICAL IMBALANCES IN NIGERIA AND ITS REDUCTION THROUGH VARIOUS TRANSFER MECHANICS
(UNDER THE TRADITIONAL DEFINITION OF INDEPENDENT REVENUE OF THE GOVERNMENTS) 1956-88**

| Year | DEGREE OF IMBALANCES (VIR) | | | | | | | | | | REDUCTION IN INEQUALITY DUE TO | | | | % REDUCTION IN INEQUALITY DUE TO | | | | | |
|------|----------------------------|------|------|------|------|------|------|------|------|--------|--------------------------------|---------------------------------|----------------------------|---------------------------|----------------------------------|------------------------|-------------------|------------------|--------------------|--|
| | Before Transfers | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total Transfers (2-6) | Statutory Transfers (2-3) | Federal Grants (2-4) | Federal Loans (2-5) | Total Transfers (2-6) | Statutory Transfers | Federal Grants | Federal Loans | Total Transfers | |
| 1 | | | | | | | | | | | | | | | | | | | | |
| 1956 | 4.40 | 1.03 | 4.40 | 4.06 | 0.99 | 3.37 | 0.00 | 0.34 | 3.41 | 99.12 | 00.00 | 10.00 | 100.29 | | | | | | | |
| 1957 | 2.00 | 0.86 | 2.00 | 1.93 | 0.83 | 1.14 | 0.00 | 0.07 | 1.17 | 114.00 | 00.00 | 07.00 | 117.00 | | | | | | | |
| 1958 | 3.66 | 1.01 | 3.66 | 3.66 | 1.01 | 2.65 | 0.00 | 0.00 | 2.65 | 99.62 | 00.00 | 00.00 | 99.62 | | | | | | | |
| 1959 | 4.29 | 1.03 | 3.82 | 3.75 | 0.88 | 3.26 | 0.47 | 0.54 | 3.41 | 99.09 | 14.29 | 16.41 | 103.65 | | | | | | | |
| 1960 | 5.82 | 1.26 | 5.08 | 4.73 | 1.05 | 4.56 | 0.74 | 1.09 | 4.77 | 94.61 | 15.35 | 22.61 | 98.96 | | | | | | | |
| 1961 | 8.38 | 2.04 | 4.49 | 6.00 | 1.22 | 6.34 | 3.89 | 2.38 | 7.16 | 85.91 | 52.71 | 32.25 | 97.02 | | | | | | | |
| 1962 | 4.97 | 1.35 | 4.19 | 4.64 | 1.16 | 3.62 | 0.78 | 0.33 | 3.81 | 91.18 | 19.65 | 08.31 | 95.97 | | | | | | | |
| 1963 | 5.58 | 1.35 | 4.65 | 4.05 | 1.01 | 4.23 | 0.93 | 1.53 | 4.57 | 92.36 | 20.31 | 33.41 | 99.78 | | | | | | | |
| 1964 | 5.05 | 1.28 | 3.75 | 3.83 | 0.94 | 3.77 | 1.30 | 1.22 | 4.11 | 93.09 | 32.10 | 30.12 | 101.48 | | | | | | | |
| 1965 | 5.57 | 1.11 | 4.42 | 3.88 | 0.78 | 4.46 | 1.15 | 1.69 | 4.79 | 97.59 | 25.16 | 36.98 | 104.81 | | | | | | | |
| 1966 | 6.02 | 1.32 | 4.76 | 5.30 | 1.09 | 4.70 | 1.26 | 0.72 | 4.93 | 93.63 | 25.10 | 14.34 | 98.21 | | | | | | | |
| 1967 | 6.00 | 1.68 | 4.87 | 4.59 | 1.27 | 4.32 | 1.13 | 1.41 | 4.73 | 86.40 | 22.60 | 28.20 | 94.60 | | | | | | | |
| 1968 | 2.69 | 0.92 | 2.61 | 2.59 | 0.89 | 1.77 | 0.08 | 0.10 | 1.80 | 104.73 | 04.73 | 05.92 | 106.51 | | | | | | | |
| 1969 | 2.89 | 1.14 | 2.80 | 2.50 | 1.03 | 1.75 | 0.09 | 0.39 | 1.86 | 92.59 | 04.76 | 20.63 | 98.41 | | | | | | | |
| 1970 | 3.04 | 0.87 | 3.01 | 2.47 | 0.78 | 2.17 | 0.03 | 0.57 | 2.26 | 106.37 | 01.47 | 27.94 | 110.78 | | | | | | | |
| 1971 | 1.82 | 0.58 | 1.72 | 1.60 | 0.51 | 1.24 | 0.10 | 0.22 | 1.31 | 151.22 | 12.20 | 26.83 | 159.76 | | | | | | | |
| 1972 | 3.53 | 1.21 | 3.21 | 1.77 | 0.72 | 2.32 | 0.32 | 1.76 | 2.81 | 91.70 | 12.65 | 69.57 | 111.07 | | | | | | | |
| 1973 | 4.49 | 1.50 | 4.13 | 1.34 | 0.52 | 2.99 | 0.36 | 3.15 | 3.97 | 85.67 | 10.32 | 90.26 | 113.75 | | | | | | | |
| 1974 | 2.49 | 0.94 | 2.33 | 0.91 | 0.46 | 1.55 | 0.16 | 1.58 | 2.03 | 104.03 | 10.74 | 106.04 | 136.24 | | | | | | | |
| 1975 | 8.06 | 2.19 | 4.90 | 3.80 | 1.25 | 5.87 | 3.16 | 4.26 | 6.81 | 83.14 | 44.76 | 60.34 | 96.46 | | | | | | | |

TABLE 6.01 (CONTD)

| Year | DEGREE OF IMBALANCES (VIR) | | | | REDUCTION IN INEQUALITY DUE TO | | | | % REDUCTION IN INEQUALITY DUE TO | | | | |
|------|----------------------------|---------------------|----------------|---------------|--------------------------------|---------------------------|----------------------|---------------------|----------------------------------|---------------------|----------------|---------------|-----------------|
| | Before Transfers | Statutory Transfers | Federal Grants | Federal Loans | All Transfers | Statutory Transfers (2-3) | Federal Grants (2-4) | Federal Loans (2-5) | Total Transfers (2-6) | Statutory Transfers | Federal Grants | Federal Loans | Total Transfers |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1976 | 9.25 | 2.66 | 4.02 | 3.37 | 1.14 | 6.59 | 5.23 | 5.88 | 8.11 | 79.88 | 63.39 | 71.27 | 98.30 |
| 1977 | 8.64 | 2.56 | 5.42 | 3.89 | 1.40 | 6.08 | 3.22 | 4.75 | 7.24 | 79.58 | 42.15 | 62.17 | 94.76 |
| 1978 | 5.55 | 1.84 | 3.68 | 3.10 | 1.09 | 3.71 | 1.87 | 2.25 | 4.46 | 81.54 | 41.10 | 53.85 | 98.02 |
| 1979 | 7.75 | 2.23 | 3.58 | 4.58 | 1.25 | 5.52 | 4.17 | 3.17 | 6.50 | 81.78 | 61.78 | 46.96 | 96.30 |
| 1980 | 4.84 | 1.26 | 3.86 | 4.24 | 1.03 | 3.58 | 0.98 | 0.60 | 3.81 | 93.23 | 25.52 | 15.62 | 99.22 |
| 1981 | 6.61 | 1.74 | 6.00 | 5.56 | 1.49 | 4.87 | 0.61 | 1.05 | 5.12 | 86.81 | 10.87 | 18.72 | 91.27 |
| 1982 | 4.84 | 1.37 | 4.84 | 4.07 | 1.23 | 3.47 | 0.00 | 0.77 | 3.61 | 90.36 | 00.00 | 20.05 | 94.01 |
| 1983 | 5.09 | 1.96 | 5.09 | 4.42 | 1.82 | 3.13 | 0.00 | 0.57 | 3.27 | 76.53 | 00.00 | 13.94 | 79.95 |
| 1984 | 6.30 | 1.20 | 6.30 | 2.37 | 0.72 | 5.10 | 0.00 | 3.93 | 5.58 | 96.23 | 00.00 | 74.15 | 105.28 |
| 1985 | 5.41 | 0.94 | 5.41 | 2.35 | 0.60 | 4.47 | 0.00 | 3.06 | 4.81 | 101.36 | 00.00 | 69.39 | 109.07 |
| 1986 | 2.38 | 0.59 | 2.38 | 1.89 | 0.51 | 1.79 | 0.00 | 0.49 | 1.87 | 129.71 | 00.00 | 35.51 | 135.51 |
| 1987 | 3.18 | 0.82 | 3.18 | 3.18 | 0.63 | 2.36 | 0.00 | 0.00 | 2.55 | 108.26 | 00.00 | 00.00 | 116.97 |
| 1988 | 2.66 | 0.72 | 2.66 | 2.66 | 0.72 | 1.94 | 0.00 | 0.00 | 1.94 | 116.87 | 00.00 | 00.00 | 116.87 |

Source Calculated with the available data using the VIR formula cited in equation 28 of chapter two that is

VIR = $\frac{R}{IB-IA}$ See Section III of this chapter for details

Note

(1) Columns 3,4,5 show the effect of the particular transfer mechanism when only it is added to the states own revenue

(2) Percentage reduction in inequality has been calculated with the following formula

$$\%R = \frac{IB-IA}{IB-IA} \times 100.00$$

Where

R = reduction in vertical imbalances, IA = Degree of vertical imbalance (VIR) after a specific method of transfer.

IB = Degree of vertical imbalances (VIR) before transfers, 1 = the vertical parity ratio.

For example before and after statutory transfers for the years 1956 and 1988, the calculation is as follows

$$1956, IB = 4.40, IA = 1.03, IB - IA = 3.37, IB - 1 = 3.40, \text{ hence } \frac{3.37}{3.40} \times 100 = 99.12$$

$$1988, IB = 2.66, IA = 0.72, IB - IA = 1.94, IB - 1 = 1.66, \text{ hence } \frac{1.94}{1.66} \times 100 = 116.87$$

share in the expenditure and revenue stood at 60.40% and 90.58% respectively where the corresponding figures for the states were 39.60% and 9.42% respectively.

In a big contrast, however, the lowest and the highest VIRs of 1.82 and 9.25 respectively for the entire period of this study, as noted earlier, were both recorded in the second phase of this work, that is, in 1971 (for the lowest), and 1976 (for the highest). Thus it is noted that there was no definite trend in the vertical fiscal disparity within each of the three phases. However, the degree of the imbalance as noted was generally higher during the second phase than during the other two phases. It is, thus, this high degree of vertical fiscal imbalance that necessitates the federal transfers to the states.

It may also be necessary to point out that if VIR is greater than one a rise in its value implies an increase in the degree of vertical imbalance in favour of the centre. This shows that the disequilibrium the revenue and expenditure of the states has worsened. Hence, a more need for higher federal transfers to the states. On the other hand a decline in the VIR which is greater than one implies a decrease in the degree of vertical fiscal imbalance. This means that the gap between the revenue and expenditure of the states has narrowed down. Hence, a smaller fiscal need for the states in the form of federal transfers.

In Nigeria, as has been observed from column 2 of table 6.01, the trend of the pre-transfers VIR was very erratic. This means that the degree of vertical imbalances in Nigeria was not stable. This, in other words means that the fiscal need of the states as reflected by the disequilibrium between their revenue and expenditure fluctuated heavily over the years.

IV.2. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE AFTER STATUTORY TRANSFERS

The VIR after Statutory transfers is shown in column 3 of table 6.01. From here it is observed that there is a drastic reduction in the vertical fiscal imbalance as borne by a marked fall in the value of VIR after Statutory transfers vis-a-vis the same before transfers. Evidently, the post-Statutory allocation trend of the imbalance remained relatively stable

throughout the period under study although a higher degree and less stable behaviour of the same is noticed during the second phase.

Thus as against the lowest and highest pre-transfers VIR of 1.82 in 1971 and 9.25 in 1976 respectively over the entire period, the post Statutory transfers ratios ranged between 0.58 recorded in 1971 and 2.66 registered in 1976 (see column 3 of table 6.01). Thus it is noted that in 1971 the federal share in the total revenue of the federation which stood at 51.69% was less than its share of expenditure which was 64.69%. On the other hand, in the same year the states share of revenue was greater than its share of expenditure. While the former was 48.31%, the latter stood at 35.31%, (see columns 2,3,6 and 7 of appendix Table VI-01). The above results in the decline of VIR after statutory transfers (compare column 2 with 3 in table 6.01) -- therefore reflects the commendable role statutory transfers played in vertical fiscal equalization in Nigeria during the period under study. Nevertheless, the trend in the VIR after statutory transfers is characterised by fluctuations -- a rise when there was a tendency towards widening of the gap between revenue and expenditure of the states after statutory transfers, and a fall when the gap narrows down. Thus, after statutory transfers, the degree of vertical imbalance was higher in some years than in others.

Again, it is noted that whereas these lower and upper limits of post-Statutory transfers VIRs for the entire period of study occurred in the second phase. The range of the variation of the VIR for the first phase was between 0.86 recorded in 1957 (when the federal share of expenditure and revenue stood at 43.61% and 39.81 respectively while the same for the states were 56.39% and 60.19% respectively), and 2.04 which is observed in 1961, (when the share of the Centre in expenditure and revenue of the federation were 46.48% and 63.79% respectively as against the states share of 53.52% and 36.21% respectively). For the third phase, the range was between 0.59 recorded in 1986 and 1.96 which occurred in 1983. In the former case, the federal share in expenditure and revenue stood at 68.11% and 55.59% respectively as against the states share of 31.89% and 44.41% respectively. As for the latter, the figures for the centre were 48.37% and 64.78% respectively as against the states 51.63% and 35.22% respectively, (see columns 2,3,6 and 7 of table 6.01).

From the above, it is therefore interesting to note that after statutory transfers the VIR was drastically reduced to the extent that it fell below unity in some years; (compare column 3 with column 2 in table 6.02). The implication of such decline in the VIR, therefore, connotes that while statutory transfers redistributed the revenue of the federation such that each tier of government had a revenue that closely matched its expenditure obligations, in some years such redistribution caused the states revenue share to be greater than their expenditure share and thereby resulting in a reversed vertical fiscal imbalance, that is when VIR is less than unity.

IV.3 DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE AFTER GRANT TRANSFERS

Contrary to the above observation, that is, an immense reduction of the vertical fiscal imbalance by the virtue of Statutory transfers, grant allocation caused only a marginal impact on the Centre-State revenue expenditure disequilibrium. Column 4 of table 6.01 shows that the VIR of post-grant transfers (for the years in which this fiscal adjustment method was adopted) were more or less a semblance of column one - the pre-transfers VIR. This way it is observed that when federal grant alone is used to adjust the revenue of the Centre and the states, the vertical fiscal imbalance continued to be very high as was the case before the transfers (see column 4 of table 6.02 and compare it with column 2). The trend of post grant VIR was also very erratic. Thus from 4.40 in 1956, the VIR rose with fluctuations to 4.87 in 1967, declined to 2.61 in 1968 and rose with fluctuations to 3.58 in 1979, and to 3.86 in 1980. By 1988 it has declined with fluctuations to 2.66.

The lowest VIR of 1.72 was recorded in 1971 with the Centre controlling 75.91% of revenue and 64.69% of expenditure while the States with 35.31% of expenditure had only 24.09% of revenue, (see columns 2,3,6 and 7 of appendix Table VI-01). On the other hand, the highest VIR of 6.30 was observed in 1984. In this year the Centre's share of revenue and expenditure stood at 90.58% and 60.40% respectively. Corresponding figures for the States are 9.42% and 39.60% respectively.

However, the lower and upper limits of VIR for the first phase were 2.00 in 1957 and 4.87 in 1967 respectively. For the second phase, it was 1.72 in 1971 and 5.42 recorded in 1977. The third phase has a lowest VIR of 2.38 in 1986 and a highest of 6.30 in 1984.

The implication of the above results is that federal grants in Nigeria played a marginal role in the federal-states fiscal adjustment. This is unlike in India where the role of federal grants is quite substantial⁵. It may also be pertinent to note that between 1982 and 1988 the impact of federal grants in the intergovernmental fiscal adjustment was nil as these were discontinued during this period.

IV.4. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE AFTER LOAN TRANSFERS

The story of the degree of vertical fiscal imbalance after federal loans were disbursed closely followed what has already been observed in the case of post-grant transfers. Column 5 of table 6.01 reveals that just as the VIR after grant allocation largely reflected the pre-transfers VIR, the post-loan allocation VIR carries a similar picture for the first and second phases of this study. It was slightly different during the third phase.

So, the vertical imbalance remained high after loan adjustment with VIRs that clustered around 3.10 in 1978 and 4.73 in 1960. The trend was also inconsistent within its range of 0.91 and 6.00 recorded in 1974 and 1961 respectively for the entire period of the study. It varied between 1.93 in 1957 and 6.00 in 1961 during the first period, 0.91 in 1974 and 4.58 in 1979 during the second period and between 1.89 in 1986 and 5.56 in 1981 during the third period. Thus, it is noted that although the vertical fiscal imbalance continued to be very high when federal loans solely adjusted the revenues of the centre and the states, the same was lowest during the second period, 1968-79, than during the first and third periods. In other words this means that while the role of Federal loans in vertical fiscal equalization may not be overwhelming for the entire period of the study, it proved to be effective during

5. In India for instance non-statutory transfers (plan and non-plan discretionary transfers) accounted for 60.60% of Gross federal transfers (excluding loans) to the states between 1951 and 1984. For details see George, K.K. "Discretionary Budgetary Transfers" : A Review, in Centre-State Budgetary Transfers, edited by Gulati, I.S., Oxford University Press, Bombay, 1987, pp. 248.

the second period. Hence, we note that during this phase federal loans adjusted the disequilibrium between the revenue and expenditure of the Centre and the states such that the VIR fell drastically, (compare column 2 and 5 in table 6.01). This thereby implies a strong vertical equalization tendency of federal loans.

It is also interesting to note that the impact of federal loans in the vertical fiscal adjustment was greater than that of federal grants but far less powerful than that of statutory transfers.

IV.5. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE AFTER ALL TRANSFERS

We shall now, take a closer look on the net impact of the aggregate transfers on the vertical fiscal imbalance. The VIR calculated after all transfers had been effected is depicted in column 6 of table 6.01. From here it is observed that the post-transfers vertical imbalance is reduced tremendously. It is equally noted that the trend of the ratio was not definite throughout the entire period. It rose from 0.99 in 1956 to 1.27 in 1967, declined to 0.89 in 1968 only to rise to 1.25 in 1979. By 1980, it had declined to 1.03 and fell further to 0.72 in 1988. Its range varied between 0.51 recorded in 1971 and 1986, and 1.82 observed in 1983. The fluctuations in the value of the VIR (after all transfers) over the years indicate variation in the post-aggregate transfers vertical fiscal imbalance in Nigeria. Thus a rise in the VIR in a particular year vis-a-vis the previous year's implies an increase in the vertical fiscal imbalance, and vice versa.

The above result is also very interesting as the same shows that the aggregate transfers may not bring about a perfect vertical fiscal equalization. That is, a situation where the revenues of the centre and the states after all transfers would exactly match their respective expenditures. Hence, we observe from column 6 of table 6.01 that there is no single year where the $VIR = 1$. In all the years, it was either greater or less than one -- which implies the existence of vertical fiscal imbalance (in favour of the centre if it is greater than one, and in favour of the states if it is less than one). Thus, it could be said that in a federation, the

problem of vertical fiscal imbalance may continue to exist after aggregate federal transfers although its degree may be quite lower.

Therefore we note that whereas in 1971 the Centre controlled 48.35% of the post-transfers resources, its expenditure share remained as high as 64.69%, while the States with 51.65% share of revenue had just 35.31% of the expenditure obligations. On the other hand, in 1986, the federal shares of revenue and expenditure were 52.19% and 68.11% respectively, while the States with 47.81% of revenue share had 31.89% of expenditure share. In these two cases the lowest VIR of 0.51 was recorded.

In contrast, however, in 1983, the year of the upper- limit VIR, the federal share of the revenue and expenditure were at disproportionate figures of 62.99% and 48.37% respectively, while the States' revenue share of 37.01% was unmatched with expenditure function of 51.63%.

The first phase of this study as opposed to the above wild variation, recorded a more stable VIR with a lower and upper limits of 0.78 (in 1965) and 1.27 (in 1967) respectively. The range for the second phase was between 0.51 (in 1971) and 1.40 (in 1977) - which is relatively less stable than that of first phase but more stable than the third phase where the variation is also the same as for the entire period of the study as noted above, i.e. 0.51 (in 1986) and 1.82 (in 1983).

The above results carry the implication that the aggregate transfers in Nigeria have proved to be effective in bringing about equilibrium between the revenues and expenditures of the Centre and the States. It equally shows that statutory transfers have a dominating influence over federal grants and federal loans in Nigeria, as the VIRs of the aggregate transfers are similar to those of statutory transfers alone (compare column 6 with 2 in table 6.02) and VIRs of the latter are smaller than those of VIRs after post-loan and post-grant transfers. This tendency, however, is a welcomed phenomenon in fiscal federalism as statutory transfers are obligatory and unconditional and enable the states to enjoy more autonomy in the utilization of resources transferred from this pool.

The results also show that in many years, the VIR fell less than unity which implied that the share of the states in the total revenue of the federation after transfers was greater than their expenditure shares, and vice versa for the centre. This therefore indicates that the federal transfers to the states through the three channels - statutory transfers, federal grants and federal loans are not well coordinated. This view emanates from the fact that in a centralistic federalism like Nigeria, it would seem quite unlikely that the centre would deliberately devolve such enormous resources to the states that effectively gives them higher share in the total revenue of the federation when their expenditure share is less.

IV.6. REDUCTION IN VERTICAL INEQUALITY BY FEDERAL TRANSFERS

Having examined the degrees of vertical fiscal imbalances in Nigeria and the relative impact of each fiscal adjustment method on the same over the period of this work, it suffices the need to make clearer the equalizing tendency of these transfer pools, or rather, to capture the exact impact of these transfer channels in the reduction (or otherwise) of the vertical fiscal imbalance. This has been done by subtracting the value of the VIR after a specific fiscal transfer method has been applied in a particular year from the value of VIR before such fiscal transfer method has been used. If we divide this 'difference' by the "difference" which we get by subtracting the vertical parity Ratio (i.e., $VIR = 1$) from the value of VIR before the specific fiscal transfer method is used. The quotient shows the degree of reduction in the value of VIR (or otherwise) which thereby indicates the changes in the degree of vertical imbalances. These results are shown in columns 7 to 10 of table 6.01 in respect to all the channels of transfers i.e., statutory transfers, federal grants, federal loans, and aggregate transfers. The higher these values the higher the reduction in vertical fiscal imbalance and vice versa.⁶ When these quotients are multiplied by hundred, we get the percentage reduction in vertical fiscal imbalance. This is presented in columns 11 to 14 of table 6.01. The higher these percentages, the greater the impact of a particular fiscal transfer mechanism in vertical fiscal equalization, and vice versa.

6. It is felt that the percentage reduction in vertical fiscal imbalance would give a clearer picture than these absolute figures. Hence we have concentrated on the former in our detailed analysis.

It would be pertinent to point out that any reduction of inequality by 100.00% implies that vertical imbalance has been completely removed. This would therefore mean that the revenues of the centre and the states are respectively matched by their expenditures. In other words, each tier of government has revenues that is exactly equal to its expenditure obligations. On the other hand any reduction in inequality in excess of 100.00% entails a reversal of vertical fiscal imbalance, which in the context of the ongoing analysis implies a phenomenal shift from Federal Favoured Vertical Fiscal Imbalance to States' Favoured Vertical Fiscal Imbalance. In this case, the States' share of revenue from the total revenue pool of the entire federation becomes more than their proportionate expenditure share. A percentage reduction of less than 100.00% means that even after fiscal transfers through a specific channel, the revenue of the centre continued to be greater than its expenditures whereas the revenues of the states continued to be less than their expenditures.

Column 11 of table 6.01 reveals percentage reduction in vertical fiscal imbalance through statutory transfers during 1956-88. It is observed that vertical imbalance was mitigated to a minimum of 79.58% in 1977. In most other cases, it caused declines of more than 90% and it reached a peak of 151.22% in 1971. In this respect, it would be interesting to note that for the last four years of this study, 1985 to 1988, Statutory transfers were capable of removing more than 100% of the vertical fiscal disparity. This, in other words means reversing the revenue-expenditure disequilibrium in favour of the states in these years. Thus, after statutory transfers (between 1985 and 1988), the revenues of the states were greater than their expenditure, while that of the centre was less than its expenditure in the same years.

The above picture also indicates that although statutory transfers proved to be effective in removing the centre-state fiscal disequilibrium, the pattern of the same was not definite. Hence the fluctuations in the percentage reduction of vertical fiscal imbalances -- a rise, indicating a greater impact of the statutory transfers in vertical fiscal equalization in a particular year vis-a-vis other years and vice versa. This therefore means that statutory transfers as an instrument of vertical fiscal equalization was more effective in some years than in others.

The grant-in-aid and federal loans, no doubt, exerted relatively less influence on the vertical imbalance vis-a-vis Statutory transfers, as columns 12 and 13 show. That is, the percentage reduction in vertical fiscal imbalance consequent upon the application of federal grants and loans is small. These percentages varied between 0.00% in 1956-58 and 63.39% in 1976 for federal grants (see column 12 of table 6.01) between 1956 and 1979. It ranged from 0.00% in 1958 to 90.76% in 1973 for federal loan during 1956-88 -- the only exception being 1974 when the percentage reduction was 106.04% (see column 13 of table 6.01). Nevertheless, it has been noted that these two mechanics of resource transfers were relatively effective in the second phase of the study, 1968- 79 as the percentage reduction in vertical inequality caused by them were highest during this period. It varied between 1.47% in 1970 and 63.39% in 1976 for federal grants, and between 5.92% in 1968 and 106.04% in 1974 for federal loans.

Thus we interestingly note that in 1974, federal loan acting alone was capable of eliminating as much as 106.04% of the vertical fiscal imbalance.

On the side of aggregate transfers, the results are shown in column 14 of the table, 6.01. From here it is observed that the aggregate transfers erased a minimum of 79.95% of vertical fiscal inequity in 1983. It was as high as 159.76% in 1971, although most of the reductions clustered around 100.00%. This thereby implies that the aggregate federal transfers readjusted the revenues and the expenditure of the centre and the states in such a manner that substantially removed the vertical imbalances completely. That is, after the devolution of aggregate transfers, the vertical imbalances tended towards equalization. Hence, the gap between the revenue and expenditure of the centre and the states narrowed down reasonably.

As the ongoing analysis shows, the vertical fiscal imbalance was reversed in some years in favour of the states in Nigeria. The Statutory transfers alone were able to generate this fiscal disposition in the years, 1957, 1968, 1970, 1971, 1974 and 1985 to 1988. The percentage reduction for the above years being, 114.00%, 104.73%, 106.37%, 151.22%, 104.03%, 101.36%, 129.71%, 108.26% and 116.87% respectively.

The federal loan was also capable of creating this kind of impact in 1974 with a percentage reduction of 106.04%. When the effect of the aggregate transfers is examined, it is observed that it gave rise to this reversal vertical fiscal imbalance for the decade 1964 to 1974 except for the three years, 1966, 1967 and 1969. And, again, it resurfaced in 1984 and persisted throughout the remaining period of this study.

This interesting revelation raises the question as to what exactly the revenue devolution scheme between the vertical governments is sought to achieve in Nigeria. It further shows what havoc a poorly designed and uncoordinated fiscal transfer system can do - of transforming the Federal Favoured Fiscal Imbalance (FFFI) into a States' Favoured Fiscal Imbalance (SFFI). Hence, the problem of Vertical Fiscal Imbalance remained unsolved. This phenomenon created by the uncoordinated fiscal adjustment methods could translate into a disincentive factor on the revenue effort of the states. This argument stems from the fact that since the states know that huge federal transfers were assured, they may not see the need for a serious effort in increasing the level of their efficiency in the collection of revenue from their own sources. They may also not bother much about the need for efficiency in spending, hence the danger of the misapplication and malutilization of funds would be encouraged in the fiscal system.

V. VERTICAL IMBALANCE IN NIGERIA UNDER THE REDEFINED INDEPENDENT REVENUE OF THE GOVERNMENTS

V.1. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCE IN NIGERIA BEFORE TRANSFERS

In column 2 of table 6.02, the degree of vertical fiscal imbalance - the VIR - under the redefined concept of independent revenue i.e., after statutory fiscal adjustment of the governments has been shown. Since we have examined the same in section III.2, there seem to be no need to repeat the analysis here. However, it may suffice the need to reiterate the point that under the redefined concept of independent revenue of the Governments, statutory transfers form part of the independent revenue of the states while the independent

revenues of the centre excludes statutory transfers. Thus, under this redefined concept only the non-obligatory transfers - federal grants and federal loans -- are treated as federal fiscal adjustment measures.⁷ Hence the results presented in columns 3 to 11 of table 6.02 differ from those presented in table 6.01.

As has been pointed out earlier under the redefined concept, the disequilibrium in Centre - State fiscal disparity is very low. It ranges between 0.58 in 1971 and 2.66 in 1976. The VIR clustered mostly around the parity ratio. That is to say that each tier of government had at its disposal resources that closely matched its expenditure obligations. This thereby implies that under the redefined concept of independent revenue of the governments, the degree of vertical fiscal imbalance was low in Nigeria

V.2. DEGREE AND TREND OF VERTICAL FISCAL IMBALANCES IN NIGERIA AFTER GRANT AND LOAN ADJUSTMENTS

The degrees of vertical imbalance after a specific transfer method (Grants and Loans) has been applied are depicted in columns 3, 4 and 5 of the table 6.02. A closer look at column 3, especially, the decimal places, reveals that federal grants created a reasonable impact in mitigating the Centre-State fiscal disparity as reflected in the diminished value of the VIR, (compare column 3 with column 2). Hence it is noted that after federal grants have been devolved, the VIR ranged between 0.56 in 1971 and 2.05 in 1977 for the entire period of the study, 1956-88. Excluding the years 1956-58 and 1983- 88 when no federal grants were made to the states, the range of the variation was 0.96 in 1959 to 1.48 in 1967 in the first phase, 1956-67. The range in the second phase is the same as for the entire period as noted above, while grants were generally not made during the third period. The trend of the VIR was not definite in any of the periods.

Here, therefore, it is noted that in all the years when federal grants were made, the same adjusted the revenues of the centre and the states in such a manner that the revenue - expenditure relations of each tier of government moved towards equilibrium. This is

7. For details see section II.4 of chapter two.

TABLE 6.02
DEGREE OF VERTICAL FISCAL IMBALANCES IN NIGERIA AND ITS REDUCTION THROUGH VARIOUS
MECHANICS OF FEDERAL TRANSFERS (UNDER THE REDEFINED INDEPENDENT REVENUE OF
THE GOVERNMENTS), 1956-88

| Year | DEGREE OF IMBALANCE (VIR) AFTER | | | REDUCTION IN INEQUALITY DUE TO | | | PERCENTAGE REDUCTION IN INEQUALITY DUE TO | | | |
|------|---------------------------------|----------------|---------------|--------------------------------|----------------------|---------------------|---|----------------|---------------|---------------|
| | Before Transfers | Federal Grants | Federal Loans | All Transfers | Federal Grants (2-3) | Federal Loans (2-4) | All Transfers (2-5) | Federal Grants | Federal Loans | All Transfers |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1956 | 1.03 | 1.03 | 0.99 | 0.99 | 0.00 | 0.04 | 0.04 | 0.00 | 133.33 | 133.33 |
| 1957 | 0.86 | 0.86 | 0.83 | 0.83 | 0.00 | 0.03 | 0.03 | 0.00 | -21.43 | -21.43 |
| 1958 | 1.01 | 1.01 | 1.01 | 1.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1959 | 1.03 | 0.96 | 0.95 | 0.88 | 0.07 | 0.08 | 0.15 | 233.33 | 266.67 | 500.00 |
| 1960 | 1.26 | 1.17 | 1.12 | 1.05 | 0.09 | 0.14 | 0.21 | 34.62 | 53.85 | 80.77 |
| 1961 | 2.03 | 1.43 | 1.71 | 1.22 | 0.60 | 0.32 | 0.81 | 58.25 | 31.07 | 78.64 |
| 1962 | 1.35 | 1.21 | 1.29 | 1.16 | 0.14 | 0.06 | 0.19 | 40.00 | 17.14 | 54.29 |
| 1963 | 1.35 | 1.22 | 1.12 | 1.01 | 0.13 | 0.23 | 0.34 | 37.14 | 65.71 | 97.14 |
| 1964 | 1.28 | 1.09 | 1.10 | 0.94 | 0.19 | 0.18 | 0.34 | 67.86 | 64.29 | 121.43 |
| 1965 | 1.11 | 0.97 | 0.89 | 0.78 | 0.14 | 0.22 | 0.33 | 127.27 | 200.00 | 300.00 |
| 1966 | 1.32 | 1.17 | 1.24 | 1.09 | 0.15 | 0.08 | 0.23 | 46.88 | 25.00 | 71.87 |
| 1967 | 1.68 | 1.48 | 1.43 | 1.27 | 0.20 | 0.25 | 0.41 | 29.41 | 36.76 | 60.29 |
| 1968 | 0.92 | 0.90 | 0.90 | 0.89 | 0.02 | 0.02 | 0.03 | -25.00 | -25.00 | -37.50 |
| 1969 | 1.14 | 1.12 | 1.05 | 1.03 | 0.02 | 0.09 | 0.11 | 14.29 | 64.29 | 78.57 |
| 1970 | 0.86 | 0.86 | 0.78 | 0.78 | 0.00 | 0.08 | 0.08 | 0.00 | -57.14 | -57.14 |
| 1971 | 0.58 | 0.56 | 0.53 | 0.51 | 0.02 | 0.05 | 0.07 | -04.76 | -11.90 | -16.67 |
| 1972 | 1.21 | 1.14 | 0.76 | 0.72 | 0.07 | 0.45 | 0.49 | 33.33 | 214.29 | 233.33 |
| 1973 | 1.50 | 1.44 | 0.65 | 0.63 | 0.06 | 0.85 | 0.87 | 12.00 | 170.00 | 174.00 |
| 1974 | 0.94 | 0.91 | 0.48 | 0.46 | 0.03 | 0.46 | 0.48 | -50.00 | -766.67 | -800.00 |
| 1975 | 2.19 | 1.75 | 1.51 | 1.25 | 0.44 | 0.68 | 0.94 | 36.97 | 57.14 | 78.99 |
| 1976 | 2.66 | 1.77 | 1.58 | 1.14 | 0.89 | 1.08 | 1.52 | 53.61 | 65.06 | 91.57 |
| 1977 | 2.56 | 2.05 | 1.69 | 1.40 | 0.51 | 0.87 | 1.16 | 32.69 | 55.77 | 74.36 |
| 1978 | 1.84 | 1.47 | 1.33 | 1.09 | 0.37 | 0.51 | 0.75 | 44.05 | 60.71 | 89.29 |
| 1979 | 2.23 | 1.53 | 1.75 | 1.25 | 0.70 | 0.48 | 0.98 | 56.91 | 39.02 | 79.67 |
| 1980 | 1.26 | 1.10 | 1.18 | 1.03 | 0.16 | 0.08 | 0.23 | 61.54 | 30.77 | 88.46 |
| 1981 | 1.74 | 1.64 | 1.57 | 1.49 | 0.10 | 0.17 | 0.25 | 13.51 | 22.97 | 33.78 |
| 1982 | 1.37 | 1.37 | 1.23 | 1.23 | 0.00 | 0.14 | 0.14 | 00.00 | 37.84 | 37.84 |
| 1983 | 1.96 | 1.96 | 1.82 | 1.82 | 0.00 | 0.14 | 0.14 | 00.00 | 14.58 | 14.58 |
| 1984 | 1.20 | 1.20 | 0.72 | 0.72 | 0.00 | 0.48 | 0.48 | 00.00 | 240.00 | 240.00 |
| 1985 | 0.94 | 0.94 | 0.61 | 0.61 | 0.00 | 0.33 | 0.33 | 00.00 | -550.00 | -550.00 |
| 1986 | 0.59 | 0.59 | 0.51 | 0.51 | 0.00 | 0.08 | 0.08 | 00.00 | -19.51 | -019.51 |
| 1987 | 0.82 | 0.82 | 0.82 | 0.82 | 0.00 | 0.00 | 0.00 | 00.00 | 00.00 | 00.00 |
| 1988 | 0.72 | 0.72 | 0.72 | 0.72 | 0.00 | 0.00 | 0.00 | 00.00 | 00.00 | 00.00 |

Source Same as per table 6.01.

Note (1) Columns 3,4,5 show the VIR after the specified method of fiscal adjustment has been applied.
(2) See note (2) of table 6.01 on method used in calculating the percentage reduction in inequality and its percentage

indicated by the post-federal grants VIR (column 3 of table 6.02) which was generally less than the pre-transfers VIR (column 2 of table 6.02) between 1959 and 1981 - and, again, the same clustered around the parity ratio, one.

However, it may be pointed out that in the years 1968, 1970, 1971 and 1974, the VIR before federal grants (column 2) was less than one (which meant that the revenue of the states were greater than their expenditures in those years, and vice versa for the centre). Thus as the federal grants were disbursed (which implied making additional revenue available to the states), the VIR is reduced further (see column 3) in those years. This, again means that the revenues of the states became much greater than their expenditures while the revenues of the Centre became much lesser than their expenditures. This thereby implies an intensification of the states' favoured vertical fiscal imbalance. Similarly, one also observes that the VIR before transfers were greater than one in 1959 and 1965, 1.03 and 1.11 - respectively (see column 2) which meant that the revenues of the centre were greater than its expenditures in these years, and vice versa for the states. However, after the devolution of federal grants these ratios became less than one, 0.96 in 1959 and 0.97 in 1965 respectively, (see column 3). The reversal of the ratios here implies that after the application of federal grants, the revenues of the states became higher than their expenditure, and vice versa for the centre. For instance, in 1965, the revenue and expenditure shares of the centre before transfers stood at 51.81% and 49.22% respectively, with the figures of the states standing at 48.19% (for revenue) and 50.78% (for expenditure). However, after federal grants have been made, the federal share of revenue declined to 48.51% as against the unchanged expenditure share of 49.22%. On the other hand the states' share of revenue increased to 51.49% against the expenditure share of 50.78%. (see columns 2 to 5 of Appendix Table VI-02).

The impression created by federal grants as revealed in column 3 of the table under reference is more or less repeated by the federal loans. Thus it is observed that the Vertical Imbalance Ratio continued to fall in most cases clustering around the parity ratio, one, while in others it swung in favour of the States or got aggravated against the Centre. Nonetheless,

its trend still carried degrees of fluctuations. The range was between 0.48 and 1.82 for the entire period 1956-88 in 1974 and 1983 respectively. In the former, the revenue and expenditure shares of the centre stood at 58.63% and 74.80% respectively. The corresponding figures for the states were 41.37% and 25.20% respectively. In the latter case, the revenue expenditure shares of the centre stood at 62.99% and 48.37% respectively. The corresponding figures for the states were 37.01% and 51.63% respectively. The range was 0.83 to 1.43 in the first phase, 0.48 to 1.75 in the second phase, and 0.51 to 1.82 in the third phase.

It is thus observed that the degree of vertical imbalance after the devolution of federal loans alone was relatively low (as was the case in respect to federal grants). However, the VIR after federal loans was generally lower than VIR after federal grants (compare column 4 with column 3 in table 6.02). This thereby shows that the equalizing impact of federal loans was greater than that of federal grants in most of the years. Similarly, the impact of federal loans in intensifying vertical imbalance in some years (such as 1971, 1974 etc.) was greater than that of federal grants. It may be pointed out that the intensification of vertical fiscal imbalance as observed here was caused primarily by the uncoordinated fiscal transfers arrangement. That is to say that the allocation of federal grants and loans to the states seem not to be considered in relation to the volume of statutory transfers. As a result, we see that the states which already enjoyed a favourable revenue-expenditure relations after statutory transfers in some years also received additional resources in the form of federal grants and federal loans in those years. This thereby increased their revenue share at a much higher level than their expenditure, and vice versa for the Centre. Hence, an intensification of vertical fiscal imbalances.

The overall picture is borne by column 5 of the same table. Here, what is observed is a relatively low VIR - reflecting a more complacent vertical fiscal imbalance. The lower and upper limits of the ratio were 0.46 in 1974 and 1.82 1983. Again the combined picture here, vis-a-vis that of column 2 as well as those of columns 3 and 4 indicates a continuous shift in the revenue-expenditure ratios of the decision-making authorities in favour of the States.

In other words, the federal grants and loans - which in this redefined concept of the independent revenue of the governments form the instruments of transfer - have had the tendency not only of ensuring a mitigation of the intergovernmental fiscal disparities, but also of creating and changing the direction of this disease which it is suppose to mollify. Thus, whereas federal grants and federal loans were not effective instruments of vertical fiscal adjustment under the traditional concept of independent revenue of the governments, they turned out to be very active under the redefined concept. Hence, it could be said that the effectiveness of a particular method of vertical fiscal adjustments could depend on how the term, "independent revenue" of the governments is defined.

V.3. REDUCTION IN VERTICAL INEQUALITIES BY FEDERAL GRANTS AND LOANS

We now turn to the issue of the equalization impact of federal grants and federal loans under the redefined concept of independent revenue of the governments. Like under the traditional concept we have ascertained the reduction in inequality by subtrating the value of the VIR after a specific transfer (federal grants or federal loans) has been applied in a particular year from the value of VIR before such fiscal transfer method has been used. When we divide this "difference" by the 'difference' which we get by subtracting the vertical parity Ratio (i.e., $VIR = 1$) from the value of VIR before the specific fiscal transfer method is used,⁸ and multiply it by 100, we get the percentage reduction in inequality. The reduction in inequality (in absolute terms) are shown in columns 6 to 8 of table 6.02 while the percentage reductions in inequality are depicted in columns 9 to 11 of the table. As the percentage reduction in inequality throws clearer lights, we have concentrated on the same in our analysis.

From column 9 of table 6.02 it is noted that the percentage reduction in vertical fiscal imbalance resulting from the use of federal grants was high under the redefined independent revenue of the governments. This ranged from 12.00% in 1973 to 233.33% in 1959, and from -4.76% in 1971 to -50.00% in 1974. No grants were made during the years 1956-58 and

8. See section IV of this chapter for details.

1982-88, hence a zero reduction in inequality in these years. Thus, the only year when grant caused no reduction in vertical fiscal imbalance under this definition was in 1970.

Column 9 also shows that the grant operation in Nigeria is a double-edge sword. It not only worked towards a marked diminution in the vertical imbalance, but equally reversed the same as was the case in 1959 and 1965 with a percentage reduction of 233.33 and 127.27 respectively. That is to say that in these two years the 100.00% reduction in vertical fiscal imbalance (which is required to bring about parity in the revenues and expenditure of the centre and the states) was exceeded in these two years. This thereby implies that after grant allocation, the revenue of the centre became less than its expenditures whereas the revenues of the states became greater than their expenditures. The grant system also intensified the vertical imbalance in 1968, 1971 and 1974 with percentage reductions of -25.00, -4.76, and -50.00 respectively. The results in these three years, therefore, show that before the allocation of grants, the revenue of the centre was already lower than its expenditure while the revenue of the states' was already greater than their expenditure -- hence, the transfer of grants to the states further decreased the revenue of the centre while increasing that of the states. Thus, grants, therefore, widened the gap between revenue and expenditures of the two tiers of government in favour of the states. These results (as have been noted earlier) when resource transfers is of such huge magnitude that the share of the aggregate revenue of the states becomes higher their expenditure share. It may be noted that the intensification impact of federal transfers on the vertical fiscal imbalance, no doubt, is impressive exposition that could not emerge under the traditional concept of independent revenue of the governments.

Column 10 of table 6.02 also shows that federal loans proved to be effective vertical fiscal equalization under the redefined concept of independent revenue of the governments. The percentage reductions varied from 14.58% in 1983 to 266.67% in 1959, and between -11.90% in 1971 and -766.67% in 1973. Thus the impact of federal loans were similar to that of federal grants. That is, while in some years (when the percentage reduction is less than hundred) it could not equalize the revenue and expenditure of the centre and the states, it

reversed the disparity in favour of the states (in the years when the percentage reduction is greater than hundred). Yet, in few other years negative percentage reduction was recorded which implied increasing the gap in the already states' favoured vertical fiscal imbalances.

The combined impact of federal grants and loans which is borne in column 11 of the table carries the impression of the earlier observations - of reduction, reversion and intensification of the vertical fiscal imbalance. While the reduction was as high as 500.00% in 1959 (which implies a reversion of inequality by a formidable tone of 400.00%), the intensification of the fiscal inequity between the lower and upper tiers of decision-making reached a sky-high of 800.00% in 1974. However, in general, the percentage reduction varied between 14.58% in 1983 and 97.14% in 1963, and between -16.67% in 1971 and -57.14% in 1970. The above results, therefore, show that although federal grants and federal loans proved to be more active under the redefined concept of independent revenue of the governments vis-a-vis their role under the traditional definition, they could not bring about vertical equality in most of the years as the percentage reduction remained less than 100.00%. Nevertheless, in few years these transfers methods readjusted the revenues to the expenditures of the centre and the states in such a way that the percentage reduction exceeded 100.00%. Hence, the state favoured vertical imbalance was created in such years like 1959 as noted above. Yet in other years like 1974, 1985 etc when there were already state favoured vertical fiscal imbalance, a reduction percentage of -800.00% and -550.00% respectively simply meant that more revenue was made available to the states than their expenditure obligation required, and vice versa for the centre, hence the negative results. This phenomenon and its trend is, infact, a depiction of an unhealthy and freak design of a fiscal transfer operation.

APPENDIX TABLE VI-01
PERCENTAGE DISTRIBUTION OF REVENUE AND EXPENDITURE BETWEEN THE FEDERAL
AND STATE GOVERNMENTS OF NIGERIA (UNDER THE TRADITIONAL DEFINITION
OF INDEPENDENT REVENUE OF THE GOVERNMENTS) BEFORE AND AFTER VARIOUS
TRANSFERS 1956-88

| Year | Expenditure Distribution | | Revenue Distribution | | DISTRIBUTION OF REVENUE AFTER | | | | | | | | | |
|------|--------------------------|--------|----------------------|--------|-------------------------------|--------|---------------------|--------|-----------------|--------|----------------|--------|---------------|--------|
| | Federal | States | Federal | States | Before Transfers | | Statutory Transfers | | Grant Transfers | | Loan Transfers | | All Transfers | |
| | | | | | Federal | States | Federal | States | Federal | States | Federal | States | Federal | States |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | |
| 1956 | 52.91 | 47.09 | 83.16 | 16.84 | 53.69 | 46.31 | 83.16 | 16.84 | 82.01 | 17.99 | 52.55 | 47.75 | | |
| 1957 | 43.61 | 56.39 | 60.70 | 39.30 | 39.81 | 60.19 | 60.70 | 39.30 | 59.90 | 40.10 | 39.01 | 60.99 | | |
| 1958 | 50.51 | 49.49 | 78.90 | 21.10 | 50.84 | 49.16 | 78.90 | 21.10 | 78.90 | 21.10 | 50.84 | 49.16 | | |
| 1959 | 53.33 | 46.67 | 83.07 | 16.93 | 53.97 | 46.03 | 81.35 | 18.65 | 81.07 | 18.93 | 50.25 | 49.75 | | |
| 1960 | 49.13 | 50.87 | 84.89 | 15.11 | 54.92 | 45.08 | 83.07 | 16.93 | 82.03 | 17.97 | 50.25 | 49.75 | | |
| 1961 | 46.48 | 53.52 | 87.92 | 12.08 | 63.79 | 36.21 | 79.60 | 20.40 | 83.89 | 16.11 | 51.44 | 48.56 | | |
| 1962 | 47.43 | 52.57 | 81.76 | 16.24 | 54.91 | 45.09 | 79.09 | 20.91 | 80.71 | 19.29 | 51.20 | 48.80 | | |
| 1963 | 49.12 | 50.88 | 84.34 | 15.66 | 56.67 | 43.33 | 81.78 | 18.22 | 79.63 | 20.37 | 49.40 | 50.60 | | |
| 1964 | 55.30 | 44.70 | 86.20 | 13.80 | 61.25 | 38.75 | 82.27 | 17.73 | 82.56 | 17.44 | 53.67 | 46.33 | | |
| 1965 | 49.22 | 50.78 | 84.37 | 15.53 | 51.81 | 48.19 | 81.07 | 18.93 | 78.99 | 21.01 | 43.13 | 56.87 | | |
| 1966 | 50.75 | 49.25 | 86.12 | 13.88 | 57.63 | 42.37 | 83.07 | 16.93 | 84.52 | 15.48 | 52.98 | 47.02 | | |
| 1967 | 46.93 | 53.07 | 84.15 | 15.85 | 59.74 | 40.26 | 81.16 | 18.84 | 80.24 | 19.76 | 52.84 | 47.16 | | |
| 1968 | 71.77 | 28.23 | 87.23 | 12.77 | 70.05 | 29.95 | 86.89 | 13.11 | 86.82 | 13.18 | 69.29 | 30.71 | | |
| 1969 | 72.90 | 27.10 | 88.60 | 11.40 | 75.34 | 24.66 | 88.27 | 11.73 | 87.06 | 12.94 | 72.48 | 29.52 | | |
| 1970 | 73.27 | 26.73 | 89.28 | 10.72 | 70.34 | 29.66 | 89.19 | 10.81 | 87.15 | 12.85 | 68.13 | 31.87 | | |
| 1971 | 64.69 | 35.31 | 76.91 | 23.09 | 51.69 | 48.31 | 75.91 | 24.09 | 74.58 | 25.42 | 48.35 | 51.65 | | |
| 1972 | 62.24 | 37.76 | 85.35 | 14.65 | 66.63 | 33.47 | 84.09 | 15.91 | 74.44 | 25.56 | 54.37 | 45.63 | | |
| 1973 | 61.90 | 38.10 | 87.95 | 12.05 | 70.92 | 29.08 | 87.02 | 12.98 | 68.52 | 31.48 | 50.56 | 49.44 | | |
| 1974 | 74.80 | 25.20 | 88.07 | 11.93 | 73.62 | 26.38 | 87.38 | 12.62 | 73.08 | 26.92 | 57.95 | 42.05 | | |
| 1975 | 60.48 | 39.52 | 92.50 | 07.50 | 77.02 | 22.98 | 88.24 | 11.76 | 85.34 | 14.66 | 65.60 | 34.40 | | |
| 1976 | 61.94 | 38.06 | 93.77 | 06.23 | 81.24 | 18.76 | 86.74 | 13.26 | 84.56 | 15.44 | 64.99 | 35.01 | | |
| 1977 | 58.22 | 41.78 | 92.33 | 07.67 | 78.10 | 21.90 | 88.30 | 11.70 | 84.42 | 15.58 | 66.15 | 33.85 | | |
| 1978 | 60.93 | 39.07 | 89.65 | 10.35 | 74.18 | 25.82 | 85.16 | 14.84 | 82.87 | 17.13 | 62.92 | 37.08 | | |
| 1979 | 65.02 | 34.98 | 93.51 | 06.49 | 80.54 | 19.46 | 86.95 | 13.05 | 89.49 | 10.51 | 69.96 | 30.04 | | |
| 1980 | 57.48 | 42.52 | 86.75 | 13.25 | 63.03 | 36.97 | 85.58 | 16.42 | 85.15 | 14.85 | 58.26 | 41.74 | | |
| 1981 | 44.11 | 55.89 | 83.91 | 16.09 | 57.82 | 42.18 | 82.57 | 17.43 | 81.43 | 18.55 | 54.01 | 45.99 | | |
| 1982 | 50.41 | 49.59 | 83.10 | 16.90 | 58.16 | 41.84 | 83.10 | 16.90 | 80.52 | 19.48 | 55.58 | 44.42 | | |
| 1983 | 48.37 | 51.63 | 82.67 | 17.33 | 64.78 | 35.22 | 82.67 | 17.33 | 80.88 | 19.12 | 62.99 | 37.01 | | |
| 1984 | 60.40 | 39.60 | 90.58 | 09.42 | 64.63 | 35.37 | 90.58 | 09.42 | 78.33 | 21.67 | 52.37 | 47.63 | | |
| 1985 | 61.18 | 38.82 | 89.55 | 10.45 | 59.77 | 40.23 | 89.55 | 10.45 | 78.82 | 21.18 | 49.04 | 51.96 | | |
| 1986 | 68.11 | 31.89 | 83.58 | 16.42 | 55.59 | 44.41 | 83.58 | 16.42 | 80.18 | 19.82 | 52.19 | 47.81 | | |
| 1987 | 65.44 | 34.56 | 85.75 | 14.25 | 60.74 | 39.26 | 85.75 | 14.25 | 85.75 | 14.25 | 60.74 | 39.26 | | |
| 1988 | 67.88 | 32.12 | 84.91 | 15.09 | 60.44 | 39.56 | 84.91 | 15.09 | 84.91 | 15.09 | 60.44 | 39.56 | | |

Source : Calculated with the available data as per Tables 4.01 and 5.01

Note : The percentage division of revenue between the Centre and the States (Column 6 to 11) as shown in the table is after the specific transfer alone. This has been done in specific transfer mechanism in the vertical resource devolution.

APPENDIX TABLE VI-02
PERCENTAGE DISTRIBUTION OF REVENUE AND EXPENDITURE BETWEEN THE FEDERAL AND
STATE GOVERNMENTS OF NIGERIA (UNDER THE REDEFINED INDEPENDENT REVENUE
OF THE GOVERNMENTS), BEFORE AND AFTER TRANSFERS, 1956-88

| Year | DISTRIBUTION OF REVENUE AFTER | | | | | | | | | |
|------|-------------------------------|--------|------------------|--------|-----------------|--------|----------------|--------|---------------|--------|
| | Expenditure Distribution | | Before Transfers | | Grant Transfers | | Loan Transfers | | All Transfers | |
| | Federal | States | Federal | States | Federal | States | Federal | States | Federal | States |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1956 | 52.91 | 47.09 | 53.69 | 46.31 | 53.69 | 46.31 | 52.55 | 47.45 | 52.55 | 47.45 |
| 1957 | 43.61 | 56.39 | 39.81 | 60.19 | 39.81 | 60.19 | 39.01 | 60.99 | 39.01 | 60.99 |
| 1958 | 50.51 | 49.49 | 50.84 | 49.16 | 50.84 | 49.16 | 50.84 | 49.16 | 50.84 | 49.16 |
| 1959 | 51.33 | 46.67 | 53.97 | 46.03 | 52.25 | 48.75 | 51.97 | 48.03 | 50.25 | 49.75 |
| 1960 | 49.13 | 50.87 | 54.92 | 45.08 | 53.10 | 46.90 | 52.07 | 47.93 | 50.25 | 49.75 |
| 1961 | 46.48 | 53.52 | 63.79 | 36.21 | 55.47 | 44.53 | 59.76 | 41.24 | 51.44 | 48.56 |
| 1962 | 47.43 | 52.47 | 54.91 | 45.09 | 55.25 | 47.75 | 53.86 | 46.14 | 51.20 | 48.80 |
| 1963 | 49.12 | 50.88 | 52.67 | 43.33 | 54.11 | 45.89 | 51.96 | 48.04 | 49.40 | 50.60 |
| 1964 | 55.30 | 44.70 | 61.25 | 38.75 | 57.31 | 42.69 | 57.60 | 42.40 | 53.67 | 46.33 |
| 1965 | 49.22 | 50.78 | 51.81 | 48.19 | 48.51 | 51.49 | 46.43 | 53.57 | 43.13 | 56.87 |
| 1966 | 50.75 | 49.25 | 57.63 | 42.37 | 54.58 | 45.42 | 56.04 | 43.96 | 52.98 | 47.02 |
| 1967 | 46.93 | 53.07 | 49.74 | 40.26 | 56.75 | 43.25 | 55.83 | 44.17 | 52.84 | 47.16 |
| 1968 | 71.77 | 28.23 | 70.05 | 29.95 | 69.70 | 30.30 | 69.63 | 30.37 | 69.29 | 30.71 |
| 1969 | 72.90 | 27.10 | 75.34 | 24.66 | 75.02 | 24.98 | 73.81 | 26.19 | 73.48 | 26.52 |
| 1970 | 73.27 | 26.73 | 70.34 | 29.66 | 70.25 | 29.75 | 68.21 | 31.79 | 68.13 | 31.87 |
| 1971 | 64.69 | 35.31 | 51.69 | 48.31 | 50.68 | 49.32 | 49.35 | 50.65 | 40.35 | 51.65 |
| 1972 | 62.24 | 37.76 | 66.53 | 33.47 | 65.28 | 34.72 | 55.62 | 44.38 | 54.37 | 45.63 |
| 1973 | 61.90 | 38.10 | 70.92 | 29.08 | 70.00 | 30.00 | 51.49 | 48.51 | 50.56 | 49.44 |
| 1974 | 74.80 | 25.20 | 73.62 | 26.38 | 72.93 | 27.07 | 58.63 | 41.37 | 57.95 | 42.05 |
| 1975 | 60.48 | 39.52 | 77.02 | 22.98 | 72.76 | 27.24 | 69.86 | 30.14 | 65.60 | 34.40 |
| 1976 | 61.94 | 38.06 | 81.24 | 18.76 | 74.20 | 25.80 | 72.02 | 26.98 | 64.99 | 35.01 |
| 1977 | 48.22 | 41.78 | 78.10 | 21.90 | 74.07 | 25.93 | 70.18 | 29.82 | 66.15 | 33.85 |
| 1978 | 60.93 | 39.07 | 74.18 | 25.82 | 69.70 | 30.30 | 67.40 | 32.60 | 62.92 | 37.08 |
| 1979 | 65.02 | 34.98 | 80.54 | 19.46 | 73.98 | 26.02 | 76.52 | 23.48 | 69.96 | 30.04 |
| 1980 | 57.48 | 42.52 | 63.03 | 36.97 | 59.86 | 40.14 | 61.43 | 38.57 | 58.26 | 41.74 |
| 1981 | 44.11 | 55.89 | 57.82 | 42.18 | 56.47 | 53.53 | 53.35 | 44.65 | 54.01 | 45.99 |
| 1982 | 50.41 | 49.59 | 58.16 | 41.84 | 58.16 | 41.84 | 55.58 | 44.42 | 55.58 | 44.42 |
| 1983 | 48.37 | 51.63 | 64.78 | 35.22 | 64.78 | 35.22 | 62.99 | 37.01 | 62.99 | 37.01 |
| 1984 | 60.40 | 39.60 | 64.63 | 35.37 | 64.63 | 35.37 | 52.37 | 47.63 | 52.37 | 47.63 |
| 1985 | 60.18 | 38.82 | 59.77 | 40.23 | 59.77 | 40.23 | 49.04 | 50.96 | 49.04 | 50.96 |
| 1986 | 68.11 | 31.89 | 55.59 | 44.41 | 55.59 | 44.41 | 52.19 | 47.81 | 52.19 | 47.81 |
| 1987 | 65.44 | 34.56 | 60.74 | 39.26 | 60.74 | 39.26 | 60.74 | 39.26 | 60.74 | 39.26 |
| 1988 | 67.88 | 32.12 | 60.44 | 39.56 | 60.44 | 39.56 | 60.44 | 39.56 | 60.44 | 39.56 |

Source Same as per Appendix Table VI 01

Note The division of revenue as shown above is after a specified method of transfer alone has been applied.