C H A P T E R - IV

WORKING CAPITAL MANAGEMENT

        A study of working capital is of major importance
because of its close relationship with current day-to-day operations
of a business.   Inadequacy or mismanagement of working capital is one
of the causes of business failures.   Working capital should be
sufficient in amount to enable a company to conduct its business on
the most economical basis, without financial stringency and to meet
emergencies and losses without danger of financial disaster.   Excessive
working capital may be as unfavourable as its inadequacy.   "In fact,
the availability of excess working capital may lead to carelessness
about costs and, therefore, to efficiency of operation."[1]   The
shortage of working capital increases the risk of insolvency whereas
its surplus the risk of inefficiency and overliquidity.   To determine
the working capital requirements of firms no set rule or formulae can
be established or applied as a large number of factors of differing
importance that change over time influence the need for the working
capital.   The required magnitude of working capital hardly remains
constant as firms' requirement of its (working capital) is determined
by the size, nature as well as the efficiency and level of activity.

        The available size of working capital fund is the final
result of the inward and outward flow of funds.   Imbalance in the
optimum size of the working capital fund takes place when unfair and
uneven movement of the streams of inward and outward flows take
place.   Again, when the funds are imprudently allocated to business

requirements imbalance of fund is caused because of the imbalances in demand and supply of it. Therefore, a study of the size of fund and its imbalances helps in disclosing the inconsistencies and incoherencies contained in the current working of the industry. A meaningful analysis of finance function of an industry would remain inconclusive and incomplete unless a thorough study of the size, nature and flows of working capital fund is carried out with the help of analytical tools.

The expression 'working capital' is generally interpreted and used in two different ways, - "to signify not only resources in current form -- that is, the current assets -- but also the excess of current assets over current liabilities."[2] The former interpretation is quantitative in character, since it represents the total amount of funds used for current operating purposes. In this definition current assets are considered to be gross working capital and the excess of current assets over current liabilities as net working capital. The latter interpretation signifies that the working capital represents the excess of current assets over current liabilities i.e. "the fund of the current assets which would remain if all the current liabilities were paid assuming no loss or gain in converting current assets into cash."[3] In other words, "the working capital represents the fund of current assets that have not been supplied by current, short-term creditors. It has been provided by the long-term creditor or shareholders."[4] This difinition is qualitative is character, since it shows the possible availability of current assets in excess of current liabilities. It

represents an index of financial soundness or margin of protection for current creditors and future current operations. In our study the term working capital has been used to denote this qualitative aspect, i.e., the excess of current assets over current liabilities or net working capital.

The working capital fund (net) is a surplus at a point of time and changes with the change in time. It is inseperable from the flows of funds themselves i.e. inward and outward, and consequently the movement of working Capital as a fund is dynamic and never a static one.

If the current sources of funds are always meant for current uses, the working capital (WC) becomes a non-negative and non-zero variable that equilibrates the current sources to current uses. That is :

$$CA = CL + WC$$

or Total Current Uses = Current External Sources + Current Internal Sources.

Therefore, funds used in CA are either supplied externally by CL or by the internally generated fund styled as WC which has its backing from both the 'fixed zone' and 'current zone'. In the case of current zone, the sources are the NP and depreciation; and in the case of fixed zone the ways are the liquidation of fixed assets and the acquisition of 'long-term liabilities.'

However, in certain cases working capital might appear as a negative one; but that does not indicate the negative value of

the fund itself but of the parameter which discloses the excess of CL over CA and is indicative of the fact that external sources have not been properly and fully put into the uses of CA. In other words, a negative working capital is a negative liquidity and is disastrous for the firm.

WC fund is a non-zero non-negative variable and hence, it is a positive one but of short-term. Its size is influenced by any change, howsoever little, in the current zone or fixed zone of the financial premises. The size of the WC may fluctuate but unless such fluctuation is duly matched with the demand factor for it, it cannot be appreciated as over-supply of WC entails opportunity cost of funds. If turnover of WC is not properly geared up, though liquidity is strengthened the profitability is impaired. Similarly, its under-supply threatens the liquidity and thereby increases the risk of insolvency. These call for prompt decision and timely action to improve and correct imbalances. Hence careful planning and close control of WC in consonance with policy of sound financial management subject to exceptional measures is required. It is a necessary condition. However, in normal conditions, the matching principle 'long-term sources for long-term needs and short-term sources for short-term needs' need be applied.

In Terai Tea Industry, the efforts for planning the WC calls for a close scrutiny as it appears that WC have not been properly planned or controlled in an intelligent and efficient manner. There is not a single company in Terai, which has not experienced the sad plight of negative WC, and more than 50 percent

of the sample units experienced this sad plight throughout the period under our study.

TABLE - IV.1

Number of sample units showing negative WC

Year	1974	1975	1976	1977	1978	1979	1980	1981
Number of Sample Units.	12	13	15	14	14	15*	14**	13**

*Published annual report of one company could not be obtained as its Annual General Meeting did not take place till August 1983.

** AGM of two companies did not take place till August 1983.

The holding of excessive CL over and above the CA has been the predominant feature of not only Terai zone but of almost all tea units of West Bengal. The causes are technical, economical and financial. The predominant few of these are:

i) Expenses on cultivation and other routine heads including repairs are so high in the pre-operating and lean operating periods that cash expenses during this period cannot be met by limited balance of funds; and, hence, the management of firms has to resort to borrowings.

ii) The time gap between operating period and trading period causes delays in the inflow of funds needed to discharge the current obligations.

iii) Differentials had to be provided on ration to labou-
rers throughout the year. (The concessional rate comes to 20.02%
of government subsidised rate for the public in Terai).

To reveal the size and nature of WC conditions in Terai a
few ratios are tabulated below:

TABLE - IV.2

Working   Capital   Ratios

Year	NSWC	INVWC	NPWC	NWWC
1974	- 8.2383	- 1.9668	- 0.6036	- 2.9285
1975	- 5.1733	- 1.7086	- 0.1056	- 2. 5
1976	- 7.0486	- 2.0933	- 0.5265	- 2.4294
1977	- 9.3991	- 2.6149	- 0.6685	- 2.7577
1978	- 5.3428	- 1.8560	0.3862*	- 1.1245
1979	- 4.1623	- 1.6704	0.1901*	- 0.7445
1980	- 3.3589	- 1.5037	0.4611*	- 0.2362
1981	- 2.6794	- 0.7900	0.3104*	0.1489*
Mean	- 5.6753	- 1.7755	- 0.0696	- 1.5472

* Both the variables are negative.

The NSWC shows a asymetrical bi-modal distribution with
(5)
a negative co-efficient of Skewness   (-0.5579).   NS could not
stimulate WC as with the steady rise in NS (2.3393 times during the
period under review), the negative balance of WC (i.e. increase in
CL) also increased, but disproportionately.   Again, NS does indi-

-cate merely conversion of finished goods into cash or account receivables which are CA items; so, if CL could have been reduced from the proceeds of NS, the WC turnover might have gone up. In Terai the turnover of WC reveals the low generation of funds through sales (1974-77) and hence could not be applied to discharge the current liabilities. In the later period, the position worsened. NS contributed negatively in the way of fund generation for WC (1979-81) and thus the erosion of whatsoever available fund forced CL to swell resulting a decrease in the turnover itself.

As throughout the period the value of WC was negative, and as WC is a non-zero and non-negative variable the condition of WC of firms having only positive balances have been judged to test the validity of the aforesaid observations.

The validity of findings based on negativity of this parameter value (Table IV.2) have again been tested considering only those sample units that disclose positive balances of WC /¯Table-II.7, 'WCTR (new)'_7. The distribution of 'WCTR (New)' also indicates the same pattern i.e. negatively skewed (co-efficient of sknewness -0.5352) and disclose the same characters as have been marked above and before (Chapter II P.75). Unbearable strain was put on the inadequate amount of WC resulting overtrading in working capital fund, ultimately leading to an increase in CL.

Considering this more or less partly satisfied condition further tests to get a clear idea about the relativity of net sales with the working capital, which involves measurement of the response in WC that can be expected to result from a given change in the

independent variable NS have been carried out basing both on the negative values with respect to all the sample units and also on the positive values with respect to sample units that indicate only the positive values. The test concerns especially with sales elasticity, profit elasticity and net-fund-flow elasticity of WC.

<u>SALES ELASTICITY OF WC.</u>

The term 'elasticity' connotes measure of the rate at which dependent variable changes in response to changes in the independent variable. In other words "it is an indication of effect on the dependent variable of a change in the value of one of the other variables (independent)". [6] The sales elasticity of working capital (SeWC) provides a clear picture of the relativity of NS with the WC than that of a turnover ratio. In the relationship between NS and WC the former is independent and the latter is a dependent one. Hence the linkage becomes:

$$WC = f (NS)$$

Therefore, mathematically, it can be shown that :

$$SeWC = \frac{\triangle WC}{WC} \div \frac{\triangle NS}{NS}$$

$$= \frac{\triangle WC}{\triangle NS} \cdot \frac{NS}{WC} \quad \text{(As because WC and NS are expressed in the same unit).}$$

$$= \frac{\triangle WC}{\triangle NS} \cdot NSWC; \quad \underline{/}(NS/WC = (NSWC); \text{ a ratio} \underline{7}$$

$$= (\triangle WC/\triangle NS) (WCTR); \quad (NSWC = WCTR)$$

$$\text{(where} \frac{\triangle WC}{\triangle NS} \text{ is a co-efficient)}$$

The SeWC discloses the degree of responsiveness of WC with respect to a change in NS; and in the last line of derivation of the equa-

-tion WCTR has also been blended into this elasticity equation.

Based on elasticity theorem, the numerical value of the co-efficient helps to infer that:

(a) when SeWC $<$ 1,

    (i) the fluctuation in the value of NS is comparatively smaller between two points of time, t_o and t_1. As a result there would be very smaller addition to WC; for, per unit change in WC is lower compared to unitary change in NS. Thus there will be an increase in CR. But a higher rate of change in NS than that of the WC would cause decrement in the value of WCTR; and thus there is comparatively lesser addition to the CR.

(b) when SeWC = 1

    (i) The proportionate change in the value of NS is equal to proportionate change in the value of WC (i.e. Δ WC/WC = Δ NS/NS), and, thus, WCTR remains constant. Other things remaining the same, the selling activities will cause the CL to rise that will be equally compensated by an increase in CA thus WC will remain constant.

(c) when SeWC $>$ 1,

    (i) it discloses a rise in NS at higher levels causing the smaller size WC to increase sharply at a higher rate and at the same time, the numerical value of WCTR increases. But in such conditions the impact of the steady rise at higher level of sales will tend the CL to swell leading to an unfavourable CR.

The net effect of the change in NS (i.e. Δ NS) is ultimately being transferred and transformed into Δ WC (i.e. movement of funds generated through sales). Hence, how far NS affects the WC can be judged from SeWC (Table-IV.3) presented below:

TABLE - IV.3

Sales elasticity of working capital (SeWC)

Year	SeWC
1975	8,8123
1976	(-) 2,9213
1977	3,0401
1978	(-) 8,8956
1979	2,3510
1980	0,1591
1981	(-)14,3002

The NS is a powerful source of WC in tea industry but in Terai it needs a close scrutiny. The movement of the sales elasticity of working capital is topsy-turvy. The proportionate changes in WC in most cases have not matched proportionate changes in NS. In a given period, the increase caused by the marginal difference in prices and in the CA forces the WC to inflate by the profit margin; but during the same period increase in CL might be caused by the increase in the amount of interest payable to account payables. This improves the possibility of discharging the CL sooner or later. But in Tea industry account payable are directly linked to stock of tea by way of hypothecation to the crop to assure their discharge from the sale proceeds. Since both account payable and the stock relate to current liabilities and current assets respectively, the corresponding changes in these two elements control the size of WC. The negative sign of

of SeWC is indicative of the non-match of the movement of NS with that of WC. The higher values (both positive and negative) of SeWC (1975, 1978 and 1981) are because of a much disproportionate change in between WC and NS. Thus, the low value of SeWC moved comparatively much higher or lower, as the case may be. In Terai, the sales elasticity of WC in most of the times (three out of seven years) were below unity level. The funds from the current zone have been used to meet the long term liabilities instead of short-term one and even transferred to fixed zone for improvement of the cultivation, thus, causing a reduction in whatsoever available WC. As a result SeWC depletes even below unity level. Again, long-term funds have been used for current zone to run the operational activities and thus causing the WC to inflate. All these connote acute shortage of WC.

A further examination, adjusting the inflow of long-term funds to current zone and, likewise, outflow of current funds to fixed zone, discloses the similar topsyturvy movement of the sales elasticity of WC and reveals the impact on the flows from and to fixed zones (Table-IV.4) (EXHIBIT-IV).

TABLE - IV.4

Sale elasticity of WC (adjusted values)

Year	'SeWC (new)'
1975	7.1651
1976	0.0340
1977	5.0481
1978	2.9337
1979	(-) 0.9972
1980	(-) 1.5702
1981	5.8848

The differences in signs and values are because of the non-inclusion and the exclusion of funds that originate from and transferred to fixed zones. Again, the higher values are also because of the small changes in the higher NS, the denominator, resulting in a comparatively larger change in WC because of its smaller size in absolute terms except that of 1977 when increased sales with a favourable price had contributed fairly to CA and the WC touched its peak point.

NET PROFIT TO WORKING CAPITAL.

The net profit is the source of WC. However, in short-run NS increases the WC but the actual size of WC is determined precisely after the payments of non-cost items like interests, dividends and taxes. The relationship between NP and WC can be shown as:

$$NP + Depreciation = Inflow \ of \ WC.$$
$$NS - Cash \ Expenses = Inflow \ of \ WC.$$

Hence WC can be linked with NP to findout the significance of this source as well as its contribution in the generation of funds for the CA. It can be shown in the following way:

$$\frac{Net \ Profit}{Working \ Capital} = \frac{NP}{WC} = NPWC$$

The NPWC rises either because of rise in NP or fall of WC or if both moves in the same direction then, in the former case NP moves faster or in the latter case WC falls faster. The growth in this ratio is an indicator of the fact that FA are restricting the

level of CA that are necessary to carry out voluminous sales. In other words, NP is not properly backing-up the WC, but is being freezed in fixed asset zone. The resultant effect is the paucity and strain on the liquid funds.

Again, when NPWC declines, due to either fall in NP or rise in WC, or comparative higher fall in NP or comparative larger rise in WC, the impact of the NP as a source becomes much weak. This ratio climbs up during the boom periods of safer profit-taking. But such a tendency is not desirable as the funds generated because of higher margin of profits are directly streamlined towards fixed assets.

NPWC discloses (Table - IV.2) an equal distribution of the negative and the positive signs. The former is because of negative values of the parameter WC and, the latter, for the rest period (1978-81) is because of negativity of both the variables. As WC is negative throughout the period under review, a scrutiny of the NPWC, looking-over the negative signs, indicate a decline in the value of this ratio. The gradual fall after 1977 is due to fall in market price of tea in consecutive years and the peak (1977) was reached because of cyclical boom; the industry consequently deflated and diminished the potentiality to promote the flows in WC. It has been gathered that a number of firms are adding to the WC by selling part of the estates. Although Tea Board is providing subsidy and loan for replantation, rejuvenation and extension programmes, on an average 60.8 per cent of the WC requirement is to be met by the firms themselves.

PROFIT ELASTICITY OF WORKING CAPITAL

The ratio net profit to working capital provides a somewhat vague relationship. The theory of profit elasticity of WC (PeWC) does not hold good alike that of SeWC. The profit elasticity of working capital (PeWC) may be termed as the ratio of proportionate change in WC to the proportionate change in NP over a given period of time. The relationship can be shown as:

$$PeWC = \Delta \frac{WC}{WC} \Big/ \Delta \frac{NP}{NP}$$

$$= \Delta \frac{WC}{\Delta NP} \cdot \frac{NP}{WC}$$

$$= \Delta \frac{WC}{\Delta NP} \cdot \left(\frac{NP}{NS} \cdot \frac{NS}{WC} \right)$$

The PeWC is not only a function of profitability but also the working capital turnover. Thus PeWC will vary with a change in either (NP/NS) or (NS/WC) or both. If $\Delta WC > \Delta NP$, it indicates that funds have been obtained from sources other than NP.

When PeWC $>$ 1, it implies that proportionate change in WC bears little relationship with that of the proportionate change in NP. Thus, an increase in NP might be utilised for non-cost items, or it might remain, under-utilised or un-utilised contributing very little or nothing in the formation of WC; or funds have been supplied to WC other than from the fixed zone (i.e. FL) causing WC to swell up; or funds of WC have been diverted for the creation of assets in fixed zone causing the WC to deplete.

Again, when PeWC $<$ 1, it denotes quite opposite tendencies to the above.

The PeWC of Terai Tea Industry (Table-IV.5) reveals that the movement of this ratio is not an encouraging one.

TABLE IV.5

Profit elasticity of working capital.

Year	PeWC
1975	0.6796
1976	(-) 1.1376
1977	2.3224
1978	(-) 0.2364
1979	0.0997
1980	0.0268
1981	(-) 0.1620

The PeWC indicates an alternate rise and fall save that of the last year (1981) and reveals, by and large, a declining trend after reaching its peak value (1977). This is dramatic because of its accompaniment with pre and past years' negative values. The peak was due to spurt in price because of demand factor leading to an aggressive rise contributing largely to the CA through the differentials.

The PeWC in Terai has never kept pace with its mean value (0.2275). The co-efficient of variation (4.3578) clearly reveals how widely the values fluctuate. A continuous increase in losses incurred has reduced the values of this ratio to such an extent

(from 1977). It has never reached a value above unity except during 1977. To run the industry, therefore, the companies had to obtain funds externally as existing funds stood drained-out through sales mainly because of lower prices; decreased volume of output due to the long spell of draught had also its contribution. Thus, the NP did not support the WC. The ratio values fluctuate from its mean value (0.2275) by 0.9914 times and the co-efficient of variations (4.3578) is comparatively much larger.

A further test to the nature of profit elasticity of WC has been done by styling the new ratio as 'PeWC (New)' (Table-IV.6). It is also like that of the previous one (Table-IV.4) and has been worked out by taking cognizance of inflow to and outflow from CA to fixed zones i.e. transfer of long term funds for the use as CA and transfer of funds from CA for the creation of FA and for the retirement of FL. (EXHIBIT- III).

TABLE - IV.6

Profit elasticity of working Capital
(after adjustment)

- Year	'PeWC (New)'
1975	0.5525
1976	0.1325
1977	3.8564
1978	0.0780
1979	(-) 0.0423
1980	(-) 0.2239
1981	0.0667

This 'PeWC (New)' also reveals more or less the same character but is more categorical in pin pointing the movement of this ratio and indicates the actual impact of NP over WC. The peak value is in the same year (1979). The values of the variables fluctuate 1.3345 times from its mean value (0.6314) with a co-efficient of variation of 2.1135 and, thus indicate an external influence on inflow and outflow of WC from a different zone other than the current one.

NET FUND ELASTICITY OF WC.

Though the amount of depreciation is subtracted to arrive at NP to ascertain net inflow of funds in a given period it need be added back because of its non-cash nature. The depreciation as a source adds considerably to the size of WC. Usually depreciation is added back to the figure of NP to find out the total inflow of funds for a given period over time. This can be shown as:

$$WC = f \ (\text{Net Fund Flow}) \ t;$$
$$= f \ (\text{NP} + \text{Depreciation}) \ t;$$

The operational activities contribute to WC through the element of profit margin and by the liquidation of part of FA into CA. The sum total of NP and Depreciation can be linked with WC to measure the degree of influence of 'net fund' flows on WC. The net fund elasticity of WC (NFeWC) provides a measure of responsiveness of WC to net fund (NF).

$$NFeWC = (\triangle WC/WC) \quad (\triangle NF/NF)$$
$$= \frac{\triangle WC}{\triangle NF} \cdot \frac{NF}{WC}$$

The NF has direct bearing upon WC as the former represents the internal sources only and, therefore, under normal circumstances must be equal to the latter and, if there be any change in the former, that must correspond the changes in the latter. As a result NFeWC shall always be equal to unity.

When NFeWC $>$ 1, it implies that the size of NF is smaller than WC and change in WC does not correspond to the changes in NF. The latter element indicates the influence on the size of WC by elements other than those of the current zone.

Likewise, when NFeWC $>$ 1, it indicates just the opposite of the condition when NFeWC $<$ 1 and at the same time pin points that in the contribution to the size of WC, sources other than NF is prominent and other might have been diversion of NF towards fixed asset zone.

The NFeWC of Terai Tea Industry (Table-IV.7) is quite inelastic save that of three years (1975 to 1977).

TABLE - IV.7

Net Fund Elasticity of Working Capital

Year	NFeWC
1975	1.1618
1976	(-) 1.2634
1977	1.8653
1978	(-) 0.7239
1979	(-) 0.4243
1980	0.0061
1981	(-) 0.3225

The NFeWC of Terai Tea Industry widely fluctuates
(co-efficient of variation 23.7845) from its mean value (0.0427)
indicating its elasticity either above or below the unity level and,
thus, reveal that funds are being channelised to or pumped out from
WC for non-current zones.

The NFeWC signifies that depreciation as a source of
internal fund is comparatively much prominent as PeWC is comparatively
less elastic than NFeWC except that of 1977, 1979 and 1980. During
1977 the prominance of PeWC is due to profit taking because of market
demand factor caused by cyclical boom in Tea. In latter two years,
the value of WC was inflated because of injection of funds from long-
terms sources leading to a sizeable increase in the value of the
numerator.

To verify the actual condition of NFeWC a further test,
eliminating funds that were transferred to and from current zone to
fixed zones, either for operational activities or to retire out-
standing long-term debts or to improve the agro-activities (culti-
vation), has been carried out styling the ratio as "NFeWC (New)".
The following table (IV.8) incorporates these results.

(Please see next page)

TABLE IV.8

Net Fund elasticity of Working Capital
(after adjustment)

Year	'NFeWC (New)'
1975	0.9446
1976	0.1471
1977	9.0973
1978	0.2387
1979	0.1799
1980	(-) 0.0508
1981	0.1327

The 'NFeWC (New)' discloses a position different from that of the unadjusted one. Except for the year 1977 it is quite inelastic. A comparison of 'NFeWC (New)' with that of the 'PeWC (New)' makes it very clear that 'NFeWC (New)' is more elastic than the 'PeWC (New)' (Table IV.6) and by implication signifies that depreciation, a non-cash item has been a prominent source of internal funds. A much larger value in one year only (1977) is due to heavy contribution of NP on account of profit-taking. The mean value (1.0334) has been much influenced by the profit-taking (1977). However, the ratio values fluctuate about 1.5425 times from the mean due to the distribution pattern of NP /¯Annexure I (xxx)_7. Again, WC is closely related to sales, which involves internal conversion. Sale proceeds pruned and cut to sizes by the expenses involved give the true value of NP. Hence NP refers to final residue of sales revenue which obviously have little impact
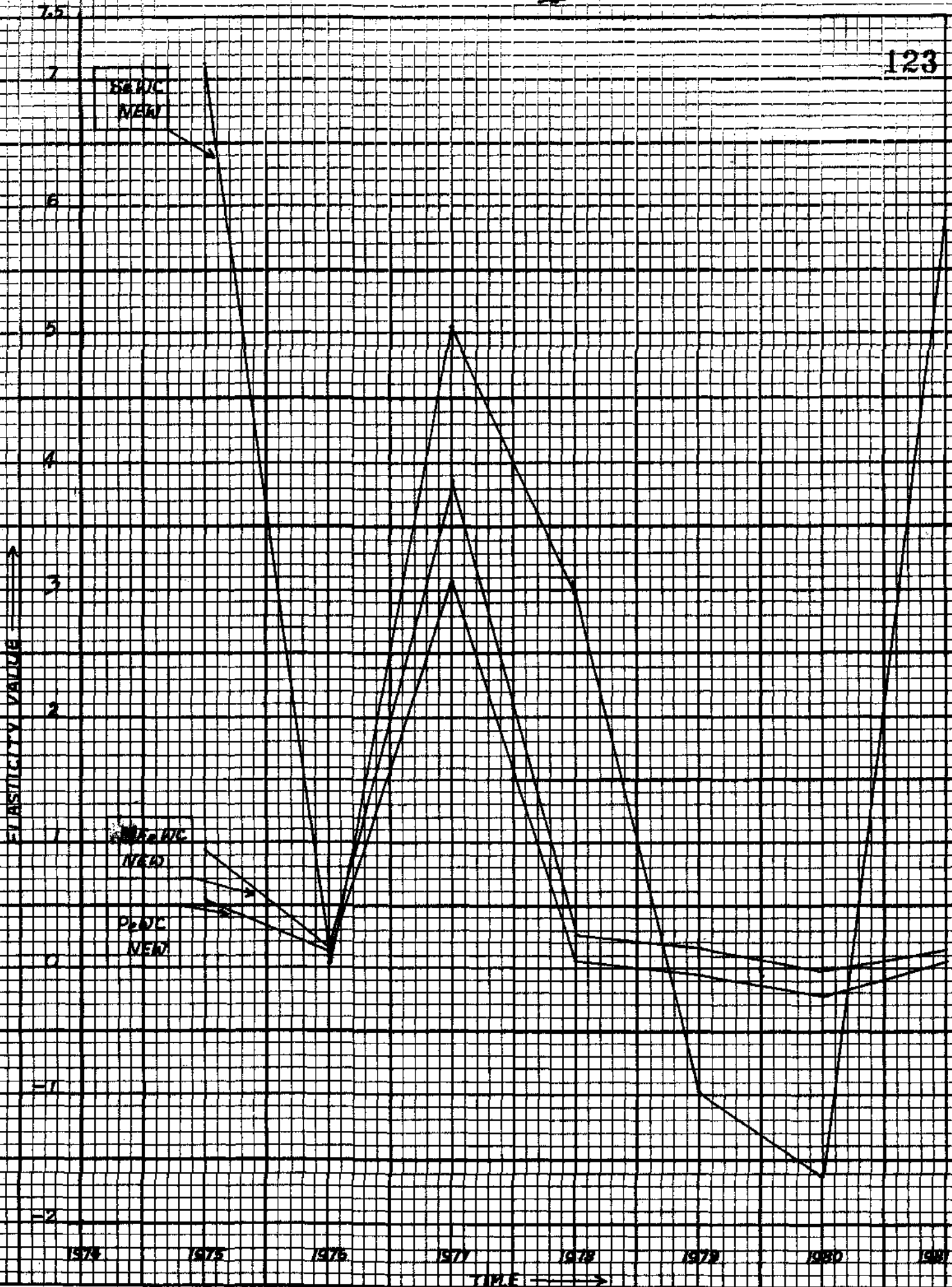
on WC. (EXHIBIT-XIV & XV).

The considerable gap between 'SeWC (New)' (Table-IV.4) and 'NFeWC (New)' (Table-IV.8) demonestrates that sales elasticity of WC is directly connected with the current funds and the NFeWC with the fixed zone funds; and WC relates to current zone directly and remotely with the fixed zone.
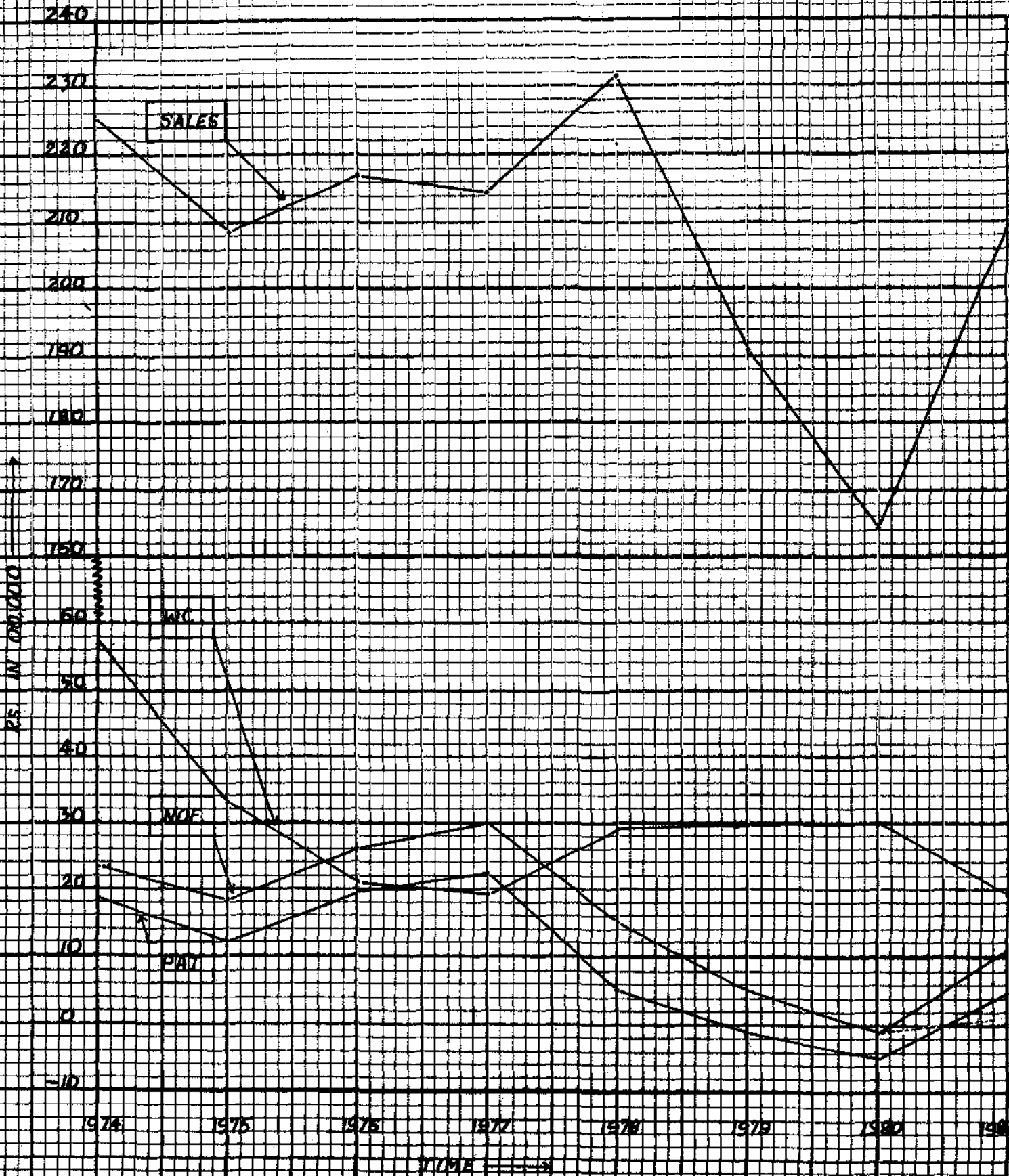
The study of elasticities leads us to conclude that the depreciation was a prominent source for internal generation of funds and the NP has never been a prominent source of WC. As internal generation of funds has been in-sufficient, external sources have been applied for the creation of funds in the current zone, as well as, WC have been applied to retire long-term debts.

In Terai Tea industry the possibility of balanced size of current fund is a distant hope, rather not possible. The practice of the management to divert WC, to which depreciation is the prime source, goes against the basic tenets of the 'wise use of funds' as there will be wider gaps between future value of depreciation fund and the replacement value itself; the present value of future funds is being reduced by diversion of funds. Considering the present shrink-age in the value of depreciation fund there will be serious problems to meet the future demand for funds for replacements. The tea Companies in Terai seem to be not much interested, and not keenly aware as well, of this fact.

NET WORTH WORKING CAPITAL RATIO.

The value of WC is determined as the excess of CA over

EXHIBIT No - IV

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Exhibit No. ▽

(Graph showing SALES, W.C., W.O.F., and P.A.T. over TIME from 1974 to 1981, with vertical axis "RS. IN 00,000" marked from -10 to 240)

CL. An increase in short-term assets through its counterpart CL does not improve the WC fund as they cancel out each other. Therefore, WC is dependent on the long-term sources — both external and internal. The former represents long-term debts and latter indicate the owners equity i.e. NW. Amongst these two the NW is the prime and original source of WC "A larger proportionate part, if not all, of the more regular or permanent working capital (WC) should be supplied by the stock holders, either through the sale of capital stock or through the reinvestment of earnings in the business"[7]. The re-investment of profit i.e. ploughing back, increases the size but proportionately becomes the part of WC also. However, the NW though containing both the Equity and the Reserve Funds does not normally contribute much to WC as Equity cannot be raised, every now and then, in terms of the needs of WC. Besides, the required fund for WC cannot be obtained from the profit-in-past that has already been merged with the WC indicating an utilized fund already included in WC.

Thus owner's equity as a source to meet WC requirements cannot be relied upon by any industry because of its inelastic character. Again WC created out of owner's equity cannot be utilised for repayments when there is abundance.

The relationship between NW and WC originates from the very essence of accounting conventions. The accounting principles lay down that:

Liabilities = Assets

Therefore,

$$NW + FL + CL = FA + CA$$

or $\quad NW + FL = FA + CA - CL$

or $\quad \dfrac{NW + FL}{WC} = \dfrac{FA + WC}{WC}$: (given, CA $>$ CL)

or $\quad \dfrac{NW + FL}{WC} = \dfrac{FA}{WC} + 1$

or $\quad 1 - \left(\dfrac{NW + FL}{WC}\right) = \dfrac{FA}{WC}$

or $\quad \dfrac{FA}{WC} + \dfrac{NW}{WC} + \dfrac{FL}{WC} = 1 \quad \dots\dots\dots\dots(a)$

or $\quad \dfrac{FA}{WC} = 1 - \left(\dfrac{NW}{WC} + \dfrac{FL}{WC}\right) \quad \dots\dots\dots\dots(b)$

The equation (a) represents structural combination of WC and the equation (b) is indicative of the proportional sources of fund for WC from fixed zone and long-term sources (external).

<u>TABLE - IV.9</u>

<u>Ratio of long-term (external) sources of Working Capital</u>

Year	'NWWC (New)'	'FLWC (New)'
1974	1.9798	0.4368
1975	3.0708	0.2907
1976	4.5493	0.1994
1977	5.2372	0.2065
1978	3.4589	1.1224
1979	1.8518	1.3323
1980	1.6910	2.0300
1981	4.6029	2.8785

The aggregate working capital of the sample units of Terai tea industry throughout the period under review discloses a negative balance ⎾Annexure-I (xxiii)⏌.   Hence, the ratios of NWWC would display negative values throughout the period, except during 1981 when both the variables of this ratio acquired negative values ⎾Annexure - I (xxxiii) and Annexure-I (xxiii)⏌.   Similar is the condition with FLWC (Table-II.3).   As the negative signs of WC indicate non-existence of the fund itself, hence only these sample units that disclose non-negative non-zero WC have been considered in working out 'FLWC (New)'(reference table II.5) and, net worth to WC as, 'NWWC (New)' (Table-IV.9).

It could be observed (Table-IV.9) that the fall (1974-77) and rise (1978-81) of the 'FLWC (New)' is equally distributed over the period under review whereas the 'NWWC (New)' assumed a trend of rise for the first half of the period (1974-78) and fall for the rest period except in the last year (1981) when it jumped sharply. The WC leaned by degrees and became 0.3357 times of its initial value (1974). It fluctuated from its mean by 11.5240 times with co-efficient of variation of 0.3890. Thus, the condition of WC in absolute terms become very much alarming. The FL and NW moved in opposite direction; while the former (in absolute terms) increased by 2.2122 times with a mean value of 28.6725 lakhs fluctuating by 72.00 per cent of its mean value, the NW (in absolute terms) decreased by 1.2813 times with a mean value of 87.5688 lakhs fluctuating 0.2428 times ⎾Annexures I (vi) and (xxxiii)⏌.   On the whole it could be observed(Table-IV.9) that 'FLWC (New)' and 'NWWC (New)' moved in opposite direction except

that of one year (1981) because of opposite movement of their numerators themselves. The higher values of 'NWWC (New)' clearly indicate its greater importance as a source of fund for WC. For every one rupee of WC, there was 3.3052 rupees of NW and 1.0620 rupees of FL. But the increasing FL compared with declining NW indicates that FL has been a prominent source of WC than the NW itself despite other internally generated funds, like depreciation and provisional reserves, were put to uses for current operations. The tea companies in Terai are found to be disinclined to adopt a meaningful policy to manage the working capital. To get rid of the pressing shortage of WC they usually prefer to use the funds from long-term borrowings. It hardly need emphasis that to avoid the risk of insolvency there is the need for rational policy and scientific decision for the management of working capital in Terai tea industry.

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<u>Reference and Notes.</u>

1. Kennedy, Ralph D., and McMullen, Stwart Y., Financial Statements — Form, Analysis and Interpretation", Fifth edition, Richard D. Irwin, Inc., Homowood, Illinois, 1968, p. 267.

2. Myer, John N., "Financial Statement Analysis", fourth edition, Prentice-Hall of India Private Ltd., New Delhi, 1972, p. 99.

3. Kennedy, Ralph D., and McMullen, Stwart Y., <u>op. cit.</u> p. 267.

4. Kennedy, Ralph D., and McMullen, Stwart Y., - <u>op. cit.</u>, p. 266.

5. The value has been estimated on the basis of Karl Pearson's formula j = 3(Mean - Median)/standard deviation.

"If mode is ill-defined, Karl Pearson is of opinion that its value should be estimated on the basis of empirical relationship which exist between the values of mean, median and mode in a

moderately asymmetrical distribution. We have seen in a moderately asymmetrical distribution (mean-mode) = 3(mean-median),

$$\text{Thus} \quad j = 3 \left(\frac{\overline{X} - M}{\overline{X}} \right)"$$

Elhance, D. N., "Fundamental of Statistics", Kitab Mahal, Allahabad, 1968, p. 242.

6. Baumul, William J., "Economic Theory And Operations Analysis", Prentice-Hall of India (Private Ltd.), New Delhi, 1966, p. 172.

7. Kennedy, Ralph D. and McMullen, Stewart Y., op. cit., p. 274.