

Capital Structure, Liquidity and Profitability of Chemical Industry In India

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INTRODUCTION

The private corporate sector in India has been playing an important role in the industrial development of the country. During its growth from a small start to a multi-dimensional sector, it has passed through a varied environment from the liberal outlook of 1950s to a package of restrictions culminating in the promulgation of the Monopolies and Restrictive Trade Practice Act, 1969 and other controls in the 1970's. The main emphasis during the seventies was on reducing the restrictive and complex features of licensing policy and the process of reorientation of industrial policy gathered momentum in the mid-eighties. The process of liberalization got a fillip with the announcement of the New Industrial Policy of 1991. The liberalization and the programmes of accelerated industrialization have brought about a significant transformation of the Indian Industrial Economy. The chemical industry is a multifaceted industry and plays a vital role in the economic development of India. It occupies a pivotal position among all industries due to its indispensability in many industrial operations. The development of industrial fields like engineering, agriculture, automobiles, locomotives, fertilizers, plastics, cement, pharmaceuticals and printing hinges on the use of chemicals (directly or indirectly). A large population base resulting in a sizable domestic market, coupled with the Indian government's policies of self-reliance across the board and protection of domestic industry have helped to establish a large and diversified chemical industry in India. The chemical industry includes basic organic chemicals, producing different types of alkalis, e.g., caustic soda, sulphuric acid and soda ash, organic chemicals and petrochemicals and the fertilizer industry.

The Indian chemical industry comprises of both large and small units. The fiscal concessions granted to the small scale sector in mid-eighties led to the establishment of a large number of units in the small scale industry. During 2003-04, the production of major chemicals increased by 6.8 per cent and reached a record level of 7,062 thousand tones. With the shift in emphasis on product innovations, brand building and environmental friendliness, this industry is increasingly moving towards greater consumer orientation.

The Chemical industry is the second biggest contributor to the world GDP. The total chemical world trade at 400 B US\$ is close to 10% of the global world trade. Global Chemical industry growth has consistently been outpacing GDP growth factor of 1.5. With more than 70,000 commercial products, few other industries approach its degree of complexity and diversity. The Global chemical industry has been changing via consolidation, mergers and acquisition and restructuring. In the US, there are 12,000 firms contributing to 24% of the global chemical production. In Japan, there are 4,500 firms producing 16% of the global output. In India, we have a very fragmented chemical industry. For only 1.5% of global production, we have 6,600 firms. The Indian chemical industry will have to restructure itself to become globally competitive.

The Indian Industry is faced with multiple challenges. It is emerging from a protected environment into a highly competitive global market; at the same time, the domestic market is on path to maturity with a high demand potential for chemical end products.

IMPORTANCE OF THE STUDY

Capital is a limited productive resource in developing economies and proper utilization of this resource promotes the rate of growth, cuts down the cost of production and above all, improves the efficiency of the productive system. Fixed capital and working capital are the dominant contributors to the total capital of the industries. Fixed capital investment generates production capacity, whereas working capital makes the utilization of the capacity possible. The studies on fixed capital investment are in the fluid state. Studies on the behavior of fixed investment relating to the industries of public limited companies are limited in India. Further, the studies relating to the

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determinants and structure of working capital are scanty with respect to industries belonging to the public limited companies in India. Hence, an attempt is made in this study to analyze the behavior of fixed and working capital of the chemical industry of large public limited companies.

The study of corporate money demand function (liquidity preference) is crucial for the framing and implementation of financial policies for the chemical industry. The empirical researches on demand for money have been largely at the aggregate level. These are however, almost exclusively confined to the developed economies dealing largely with the demand for money for transaction purposes. Most of the studies were based on cross-section data. Few studies have been undertaken to analyze the business demand for cash holdings for industries of corporate sector in India. Hence, there is a need to study the demand for money, using time-series data for the chemical industry.

Profitability is considered as the best yardstick for judging performance of the corporate industries. Most of the empirical studies on profitability that were conducted during the last 50 years are mainly heuristic in nature. Based on conventional hypothesis of industrial economics, i.e. link between 'market structure - market conduct and market performance', certain structural or conduct variables were chosen in individual studies to find their impact on profitability. A few of them were devoted on industry-wise study of profitability. Hence, these reasons forced the researcher to make an analysis of the profitability of chemical industry of Large Public Limited Companies.

OBJECTIVES OF THE STUDY

1. To estimate the trend in the growth of fixed capital and working capital of chemical industry through turnover and capital structure ratios.
2. To trace the determinants of fixed capital and working capital by fitting appropriate regression models.
3. To study the determinants of corporate liquidity by estimating the models on business demand for money.
4. To assess the corporate liquidity position of chemical industry through liquidity ratios.
5. To analyze the growth and behavioral pattern of profitability of chemical industry.

SOURCES OF DATA

This study is based on secondary data obtained from Annual Reports of Company Finance of Industries of Financial Aggregates and Ratios published by the Centre for Monitoring Indian Economy (CMIE) containing the combined balance sheets and income and expenditure accounts statements at industry level relating to Large Public Limited Companies. The study is confined to selected chemical industries pertaining to large Public Limited Companies in private corporate sector in India. The present study covers a period from 1991 – 92 to 2005 – 2006. The other related data were collected from websites, journals, periodicals and books.

METHODOLOGY OF THE STUDY

In order to examine the various objectives of the study, several statistical techniques such as ratios, percentages, growth rates, coefficient of variation have been used in this study. The trend analysis has been made by OLS model. Correlation technique has been applied to examine the degree of association between liquidity and profitability. Further, simple linear, log linear and multiple regression techniques were employed to estimate the capital, liquidity and profitability models. The overall fitness of the models are verified by the estimated R^2 , 't' and 'F' values.

GROWTH OF CHEMICAL INDUSTRY IN INDIA

The chemical industry is the fourth largest industry in the country next to iron and steel, textile and engineering industries. Although it is of recent origin, it has witnessed a rapid growth. The chemical industry is responsible for producing a wide range of products like fertilizers, drugs, dyestuffs, pesticides, paints, plastics etc. It is a high capital-intensive industry¹.

The growth of number of chemical industries in India and its gross fixed capital, working capital, share capital, net assets, value of production, net sales, gross and net profits, total borrowings, current liabilities and gross value added for the period from 1991-92 to 2005-2006 are presented in Table 1.

TABLE 1
GROWTH RATES OF GROWTH INDICATORS OF CHEMICAL INDUSTRY
(Percentage)

S. No.	Factors	Growth Rate
1.	No. of Industries	3.77
2.	Gross fixed capital	16.50
3.	Gross working capital	9.99
4.	Value of production	15.40
5.	Net sales	15.70
6.	Gross profit	13.90
7.	Net profit	17.60
8.	Net Assets	13.90
9.	Share capital	8.21
10.	Total Borrowings	11.80
11.	Current Liabilities	14.10
12.	Gross value added	14.10

Source: Computed

CAPITAL STRUCTURE OF CHEMICAL INDUSTRY

Capital is the lifeblood of a business organization and can be broadly categorized into fixed capital and working capital. All fixed assets, intangible assets, investments and other assets which are retained permanently in the business are regarded as fixed capital. In other words, fixed capital is a part of capital which is invested in land and building, plant and machinery, furniture and fittings, good will and patents etc.

The term working capital refers to short term funds required for financing the duration of the operating cycle (normally an accounting year) in a business unit. It represents the funds which are required to carry on the day-to-day business operations. The efficient management of working capital requirement of the business enterprise is of strategic importance as the success of the enterprise greatly depends upon its optimum utilization.

ANALYSIS OF CAPITAL STRUCTURE RATIOS

In this section, an attempt has been made to study the capital structure ratios of chemical industry during the study period from 1991-92 to 2005-06. The important ratios are debt-equity ratio, net worth ratio, fixed capital to net worth ratio and internal allocation ratio. Fixed capital to net worth ratio is used to know the extent of net worth, i.e., share-holders' fund for the fixed assets of the industries.

DEBT-EQUITY RATIO

Debt equity ratio is an indicator of the soundness of the configuration of the debt-equity mix. A proper mix of debt and equity helps in improving the rate of capital formation in the long-run. Analysis of this ratio is helpful to see the glaring of the organization in comparison with the owner's funds. For the purpose of the present analysis, the term 'debt' represents total borrowings and the term 'equity' includes share capital, reserves and surplus. (i) A low debt-equity ratio may result in the higher claim of equity varies from industry to industry. (ii) A high ratio shows the greater dependence of debt funds by the industry for meeting various financial obligations. The controller of capital issues prescribes that debt-equity ratio of firms should not exceed 2:1. The ratio between the share capital and debt (debt-equity ratio) is generally 1:1 or 2:1. The annual average value of debt-equity ratio was 1.26 during the period from 1991-92 to 2005-06. Further, co-efficient of variation was found to be 18.86 percent during the year 1991-92 to 2005-06.

FIXED CAPITAL TO NET WORTH RATIO

Fixed capital to net worth ratio indicates the relationship between net worth (i.e., share holders' funds) and investment in net fixed assets. It measures the proportion of contributed capital that has been invested in fixed property. This ratio is calculated by dividing net fixed capital by net worth. In order to know the extent of use of net worth for financing fixed assets of chemical industry, this ratio is used in this study.

The fixed capital to net worth ratio of chemical industry during the period of 1991-92 to 2005-06 had touched the figure of 1.16 times. It indicates that the amount to fixed assets was more than the amount of net worth in this industry. It confirms that the fact that this industry used borrowed funds to finance the fixed assets. Further, co-efficient of variation was found to be 16.58 percent during the year 1991-92 to 2005-06.

NET WORTH RATIO (OR) EQUITY RATIO

This ratio expresses the Net worth of a firm as a proportion of its total net assets. Obviously, if the ratio is high enough, the company will be in a better situation because of lesser extent of the creditor's potential claim for its assets. The annual average value of net worth ratio was found to be 0.43 times in the case of the chemical industry. A lower value of net worth ratio implies that the shares of net worth equity are immensely low in total net assets. Further, co-efficient of variation was found to be 8.53 percent during the years 1991-92 to 2005-06.

INTERNAL ALLOCATION RATIO

Internal allocation ratio indicates the proportion of net fixed assets in total net assets of a firm. It is also called an 'organic composition of capital'. Through this ratio, the firm will get an idea about how its capital is being utilized. A high internal allocation ratio is not necessary a desirable situation since in this case, the firm may have shortage of funds for working capital. A low ratio is a reflection of higher weightage by the firm to current assets formation rather than fixed investment. The optimum size of the ratio depends on the nature of the business, manufacturing technology, efficiency of capital markets, the stability of earnings etc. The average annual value of internal allocation ratio of chemical industry during 1991-92 to 2005-06 was 0.50. This shows that nearly 50 percent of net assets were from fixed assets. Further, co-efficient of variation was found to be 16.27 percent during the study period.

ANALYSIS OF GROSS FIXED CAPITAL

The following multiple regression model was applied to analyze the fixed capital of chemical industry in India. The purpose of applying multiple regression models is to test the influence of net sales and borrowings on gross fixed capital of chemical industry during the study period 1991 to 2005-06.

$$GFC_t = b_0 + b_1 NS_t + b_2 B_t + u$$

Where GFC_t = Gross Fixed Capital, NS_t = Net Sales and B_t = Borrowings

The regression estimates of the models are shown in Table 2. The explanatory power of the model of Gross Fixed Capital is good (measured by R^2 and F-ratio). The R^2 statistic values exhibit 99 percent of variation in gross fixed capital which could be determined by the explanatory variables viz., Net Sales and Borrowing during the study period 1991-92 to 2005-06.

Table 2 shows the estimates of this model. The value of co-efficient of net sales (b_1) is less than unity in chemical industry. It indicates that increase in fixed capital stocks was lower than increase in net sales. The positive sign of b_1 indicates the fact that there is a positive relationship between gross fixed capital and net sales.

With respect to borrowing, its co-efficient value (b_2) obtains a positive sign in the chemical industry and is significant. The value of b_2 is less than unity (0.1). Chemical industry experienced a less than proportionate increase in gross block as a result of increase in borrowing.

TABLE 2
REGRESSION FUNCTION FOR FIXED CAPITAL OF CHEMICAL INDUSTRY
(1991-92 to 2005-06)
 $GFC_t = b_0 + b_1 NS_t + b_2 B_t + u$

Factor	Co-efficient of			R^2	F
	Constant	NS_t	B_t		
Gross FixedCapital	-1.98373	0.080308*	0.101186*	0.992777	824.7003*

Source: Computed

Figures in parenthesis indicate 't' values

* Significance @ 1% level

** Significance @ 5% level

ANALYSIS OF WORKING CAPITAL

With a view to test the influence of sales and inventory on working capital of the chemical industry during the study period from 1991-92 to 2005-06, the following multiple regression model has been employed. The model applied is

$$WC_t = b_0 + b_1 S_t + b_2 INV_t + u$$

Where, WC_t = Gross Working Capital, S_t = Net Sales and INV_t = Inventory

When we regress the working capital on net sales and total inventory, the explanatory power of the model is 87 percent in respect of chemical industry. As per the estimated value of F-ratio, this model is perfectly fit. The parameter associated with the total inventory assumes a negative sign in this industry. It reveals that filling up inventories would to decrease the requirement of working capital in this industry. It is evident that the negative sign of the co-efficient b_2 is not as per the priori expectations. But this variable has turned to be insignificant.

TABLE 3
REGRESSION FUNCTION FOR WORKING CAPITAL OF CHEMICAL INDUSTRY
(1991-92 to 2005-06)
 $WC_t = b_0 + b_1 S_t + b_2 INV_t + u$

Factor	Co-efficient of			R ²	F
	Constant	S_t	INV_t		
Gross WorkingCapital	3.485	0.727	-0.111	0.868	39.583*

Source: Computed

Figures in parentheses indicates 't' value

* Significance @ 1% level

** Significance @ 5% level

LIQUIDITY OF CHEMICAL INDUSTRY

The liquidity behavior of corporate industries is one of the testing grounds for theories of transaction (demand for money) and for developed countries, it has been a field of intensive research. The knowledge of factors which determines the demand for money by different sectors in a given economy is helpful in the correct formulation of monetary policy. Especially, the corporate sector is an important sector from the point of the operation of money and monetary policy and its role and importance in the economy is growing day-by-day. An attempt is made to investigate empirically the determinants of demand for money and economies of scale in holding of cash balance of the chemical industry. Further, liquidity position of the industry has been assessed by using some important liquidity ratios.

LIQUIDITY RATIOS

For analyzing the liquidity position of chemical industry belonging to public limited companies, the following liquidity ratios have been computed.

- i) Current ratio
- ii) Quick ratio

These ratios would be useful to know the ability of an industry to meet its short-term obligations and reflect the financial strength / solvency of the industry. The size of cash holding with reference to current assets investment, sales and total assets are analyzed.

CURRENT RATIO

Current ratio is measured by dividing current assets by current liabilities. A conventional rule, a current ratio of 2:1 or more is considered to be satisfactory. A relatively high value of the current ratio is considered as an indication of the firm not lacking liquidity of its assets and has the ability to pay its assets and has the ability to pay its current liabilities. On the other hand, it indicates that the firm faces difficulty in paying its current obligations.

The mean value of current ratio is found to be below the norm of 2:1 in respect of chemical industry during the study period from 1991-92 to 2005-06. It reveals that the margin of safety is less for current creditors. The solvency position is threatening and precarious in respect of this industry. In the chemical industry, the current ratio is 1.42 implying the better position in meeting the liabilities during the study period. The co-efficient of variation of current ratio was 21.72 in the chemical industry during 1991-92 to 2005-06.

QUICK RATIO

It is measured by dividing liquid assets by current liabilities. If quick ratio is less than 1:1 i.e., liquid assets are less than current liabilities, the financial position of the concern shall be deemed to be unsound and real cash will have to be provided for the payment of liabilities. On the other hand, if the ratio is more than 1:1, it means that the financial position of the enterprise is sound and good.

The average value of quick ratio of the chemical industry during the study period was 0.97. This shows that the current liabilities were low in comparison to liquid assets. It can be surmised that the financial position of the chemical industry is sound and good. The coefficient of variation of quick ratio was 15.85 percent in chemical industry during 1991-92 to 2005-06.

ANALYSIS OF CORPORATE LIQUIDITY

With a view to test the relationship between the demand for money (defined cash balances) and net sales, the following log-linear regression equation have been fitted.

$$\text{Log } M = \text{Log } b_0 + b_1 \log S + u$$

where M is cash in hand and bank balances and S is net sales.

The estimated empirical results of this model are given in Table 4. The values of co-efficient of determination (R^2) explain that 93 per cent of variations in cash balances being brought about by the corresponding variations in net sales, i.e. value of transactions. Elasticity co-efficient of cash balances with respect to sales (b_1) are found to be less than one (0.71) in this chemical industry.

TABLE 4
REGRESSION FUNCTION FOR DEMAND FOR MONEY TO NET SALES OF CHEMICAL
INDUSTRY (1991-92 to 2005-06)
 $\text{Log } M = \text{Log } b_0 + b_1 \log S + u$

Factor	Elasticity Co-efficient of		R^2	F	
	Constant	S			
Cash and Bank Balances	2.169*	.710*	0.934	183.214*	

Source: **Computed**

Figures in parenthesis indicate t values

* Significance @ 1% level

** Significance @ 5% level

PROFITABILITY IN CHEMICAL INDUSTRY

This section deals with the various measures of profitability from the point of view of sales and assets. Profitability in relation to sales is the best short-term indication of successful growth of corporate industries. On the other hand, profitability in relation to assets or investment is the measurement of soundness and strength of an industry's long run growth. The following important measures are used to assess the profitability position of chemical industry of large public limited companies during the study period 1991-92 to 2005-06. Measures in relation to sales are:

1. Gross profit margin
2. Net profit margin

These two ratios are short-term measures of profitability, measured in relation to assets / investments:

- a) Return on Total Assets
- b) Return on Capital Employed and
- c) Return on Net worth

GROSS PROFIT MARGIN

The gross profit margin reflects the efficiency with which management produces each unit of product. This ratio indicates the average spread between the cost of goods sold and the sales revenue. A higher gross profit ratio is a sign of good management. A low gross profit margin may reflect higher cost of goods sold due to the firm's inability to purchase at favorable terms, inefficient utilization of plant and machinery, or over – investment in plant and machinery, resulting in higher cost of production.

The gross profit margin of chemical industry was an average of 0.09 per cent during the study period from 1991-92 to 2005-06. Variability co-efficient of gross profit margin was 14.78 percent. Effects of some factors like low capacity utilization and excess demand conditions etc. caused higher variation in profit margin.

NET PROFIT MARGIN

Net profit margin measures the firm's ability to turn each rupee of sales into net profit and it measures the overall efficiency of production, selling, financing, pricing and tax management. If the net profit margin is inadequate, the firm will fail to achieve satisfactory return on owner's equity. A firm with high net profit margin can make better use of favorable conditions, such as rising sales, prices, falling cost of production or increasing demand for the product. It would really be difficult for a low net profit margin firm to withstand these adversities.

The average level of net profit margin of chemical industry works out to be 0.03 percent. During the study, their performance was measured on the basis of gross profit period of 1991-92 to 2005-06. The point margin was comfortable. This conflicting nature of the two measures of performance might be due to the fact that the net profit is arrived after deducting depreciation, interest and taxes. Of these three variables, only interest payment might have increased at a higher rate, since depreciation and taxes are governed by government norms. The co-efficients of variation of net profit margin are 30.60 percent of the chemical industry in the period of 1991-92 to 2005-06.

RETURN ON TOTAL ASSETS

The term investment refers to total assets. The profitability of the company should also be evaluated in terms of the firm's investment in assets and in terms of capital contributed by creditors and owners. If the company is unable to earn satisfactory return on investment, its survival is threatened.

The mean values of return on total assets are 0.10 percent in chemical industry during the study period from 1991-92 to 2005-06. The co-efficient of variation of return on total assets ratio was 12.77 percent in chemical industry during the study period. From the above discussion, it could be revealed that the rate of return on total assets of chemical industry indicates that this industry was using its assets efficiently during the study period of 1991-92 to 2005-06.

RETURN ON CAPITAL EMPLOYED

The term investment refers to net assets. The funds employed in net assets are known as capital employed. The mean value of return on capital employed was 0.14 percent in the chemical industry during the study period from 1991-92 to 2005-06. The variability co-efficient in return on capital employed was 13.6 percent. To conclude, the earning power of chemical industry was good and it indicates the efficient utilization of resources in this industry during 1991-92 to 2005-06.

RETURN ON NET WORTH

Return on net worth measures the profitability of equity funds invested in the firm. It is regarded as a very important measure because it reflects the productivity of the ownership capital employed in the firm. In general, for any profitability index, higher the ratio, greater the efficiency of the firm judged by it.

The return on share holder's fund (Net worth) of chemical industry during 1991-92 to 2005-06 at the average level of share holder's fund was 0.12 percent. Further, the coefficient of variation is 31.94. It is to be pointed out that return on net worth of share holder's investment were of low profit in this industry.

ANALYSIS OF PROFITABILITY

In order to find out the influence of explanatory variables viz. Borrowing (B_t) and Net Sales (S_t) on Gross profit, the following multiple regression has been estimated.

$$GP_t = b_0 + b_1 B_t + b_2 S_t + u$$

Where GP= Gross Profit, B_t = Borrowings and S_t = Net Sales

The estimated results of this model are given in Table 5. It is evident from R^2 that the two independent variable borrowings and sales have jointly explained 0.96 percent of variation in profit of chemical industry under the study period of 1991-92 to 2005-06. The co-efficient of borrowings (b_1) obtains a negative sign and turns out to be statistically insignificant. It is observed that over the study period, borrowing has not helped the chemical industry to earn more profit. In turn, it reduced the profitability. It might be due to the fact that borrowings were not effectively utilized. It implies that borrowed funds used as capital have not generated increased production; instead it increased cost and thereby reduced profitability. Alternatively, it may be argued that the cost of borrowed fund might be higher than the benefit accrued from it. The variable net sales (b_2) have a positive co-efficient in the chemical industry. It implies that increased sales resulted in increased profit. The overall significance of the regression depicted by F values is 131.404 considered to be insignificant.

TABLE 5
ESTIMATES OF PROFIT FUNCTION FOR CHEMICAL INDUSTRY (1991-92 to 2005-2006)
 $GP_t = b_0 + b_1 B_t + b_2 S_t + u$

Factor	Co-efficient of			R^2	F
	Constant	B_t	S_t		
Gross Profit	-1.132	-0.0978	.803*	0.956	131.404*

Source: Computed

Figures in parenthesis indicates t values

* Significance @ 1% level

** Significance @ 5% level

CONCLUSION

The number of companies in the chemical industry had increased from 492 in 1991-92 to 949 in 2005-06. During the study period, a number of companies of the chemical industry increased at an annual average percentage rate of 5.34 percent. The compound growth rate was found 3.77 percent during the study period. Gross fixed capital of chemical industry had increased at the annual growth rate of 18.13 percent, compound growth rate of 16.5

percent during the study period. The gross working capital of chemical industry had increased at an average growth of 12.22 percent and the compound growth rate of 9.99 percent during the study period from 1991-92 to 2005-06. The value of output of chemical industry during the study period increased at an annual compound rate of 16.18 per cent.

The fixed capital turnover ratio was found at 3.3 per cent in the chemical industry. The gross working capital turnover ratio was 2.99 and its co-efficient of variation was 32.9 per cent during the study period. The annual average value of debt-equity ratio was found at 1.26 in the case of chemical industry which is well within the norm of 2:1. It is clear that lenders had contributed more funds than value of fixed capital. The net worth ratio had the mean value of 0.43 times which implies a stagnant position in this ratio. Obviously, if the ratio is high enough, the industry will be in a comfortable situation because of lesser extent of the creditor's potential claim for its assets. It is concluded that the co-efficient of net sales is significant statistically. It implies that increase in gross fixed capital stocks was lower than increase in net sales. With respect to borrowing, it is significant in explaining variation in gross fixed capital. It implies that chemical industry experienced less than proportionate increase in gross block as a result of increase in borrowing. The result of simple regression on working capital reveals that net sales and total inventory explains 39.583 percent of variations in working capital. The overall significance of the model fits well.

From the assessment of liquidity position of chemical industry, it was found that the annual average value of current ratio was 1.42, implying the better position in meeting the liabilities. Regarding the quick ratio, its mean value was 0.97 which is more than the norm of 1:1. It shows that current liabilities are low in comparison to liquid assets. It can be surmised that financial position of chemical industry is sound and good during the study period from 1991-92 to 2005-06. Empirical analysis of liquidity preference of the chemical industry was that it was experiencing diseconomies of scale in holding of cash balances.

Chemical industry had registered a positive annual growth rate in gross profit margin during the study period. From the point of view of gross profit margin, overall performance is good in chemical industry. The net profit margin of chemical industry during the study period was found to be only 0.03 percent. The return on total assets, return on capital and return on net worth had increased at an annual growth of 0.10, 0.14 and 0.12 per cent respectively during the study period in the chemical industry. The result of multiple regressions on gross profit model reveals that the borrowings and net sales jointly explained only 131.404 per cent of variation in gross profit. The co-efficient of borrowings is negative and insignificant. It implies that borrowings had not influenced profit positively. The net sales on gross profit had positively influenced the chemical industry but it is statistically insignificant.

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(Contd. from page 32)

- iii. Maybe my boss thinks that I can quickly acquire the skills needed to perform the tasks assigned to me.
- iv. Maybe my boss thinks that I always try to do more than what is asked.
- v. Maybe my boss thinks that I never disappoint him/her by the quality of work done.
- vi. Maybe my boss thinks that I have sufficient technical knowledge to do the job.

Dimension-2: Self perception Regarding one's possession of habit and communication-

- i. Maybe my boss thinks that I have good communication skills to serve in this section/branch.
- ii. Maybe my boss thinks that my work habits are excellent.
- iii. Maybe my boss thinks that I have a feeling of readiness to accept assignments that have been allotted to me.

Dimension-3: Self perception of one's thoughts on as a performer

- i. Maybe my boss thinks that I always try to get things done on time.
- ii. Maybe my boss thinks that I am a good performer.

Dimension-4: One's confidence to face work related challenges and at the same time one's work ethics

- i. Maybe my boss thinks that I always try to do things better at work.
- ii. Maybe my boss thinks that I am confident enough to face work related challenges.

(Contd. from page 38)

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