



## Organised Manufacturing Sector of Punjab: Performance, Potential And Constraints

### KEYWORDS

elasticity, employment growth rate, output.

**Dr. Manjit Sharma**

Assistant Professor, Dept. of Economics D. A. V. College, Sector 10, Chandigarh

**ABSTRACT** Organised manufacturing sector recorded higher trend growth rate of fixed capital in post reform period as compared to pre-reform period, But the growth of fixed capital failed to generate higher growth rate of output and employment during post-reform period i.e. period of 'jobless growth'. Same momentum of growth rate of output was not maintained in post-reform period. Labour and capital are complementary in nature for organised manufacturing sector in post-reform period. Positive employment elasticity indicates labour-intensive nature of organised manufacturing sector. Organised manufacturing sector observed 'jobless growth' and same momentum of output was not maintained in post-reform period. Growth rate of emoluments in organised manufacturing sector is higher than that of its employment level. It implies that existing skilled labour force has been paid higher wages and perks rather than creating new employment opportunities for organised manufacturing sector of Punjab. Positive employment elasticity indicates labour-intensive nature of organised manufacturing sector. Labour and capital are complementary in nature for organised manufacturing sector in post-reform period.

Economic theory states that the development pattern of any economic set up is dominated by agricultural sector in the initial stages of its development and gradually when the process of growth starts rising, the manufacturing and service sector attain the greater share (Kuznet, 1973). In this context, Punjab state is not an exception. No doubt, Punjab has enjoyed the fruits of green revolution and had attained the highest level of per capita income. However, in most recent years, the state has failed to maintain its highest position in per capita income, and has lagged behind Goa, Maharashtra, Delhi and Haryana (Economic Survey, 2004-05). Moreover agriculture, which is mainstay of the state economy, has been experiencing stagnation, as it has recorded negligible growth during last decade (Singh and Singh 2002). The cropping pattern of the state is dominated by wheat-paddy rotation and seems to be unsustainable due to increasing costs, irrigation and environmental problems. Attempts made by the government to change this cropping pattern in favour of new and commercial crops through contract farming could not bear fruits. Economic growth which the state is experiencing is less than the national average and has failed to generate enough employment opportunities for rising army of unemployed people. Under such circumstances, the development of the manufacturing sector can provide some respite to the already decelerating economy of Punjab to regain its past glory.

Gill (1994), Dhese and Ghuman (1982), Singh (1992,2005), Singh (2001), Raikhy and Sethi (2001), Singh and Singh (2002), Kumar (2005) and Singh and Jain (2007) discussed manufacturing sector of Punjab in detail. In this paper an attempt has been made to analyse the trend growth rates of important variables, employment and output elasticities' of organised manufacturing sector of Punjab.

### Scope, Data sources and prices

The scope of study is confined to organised manufacturing sectors of Punjab. Major source of data for the study is Annual Survey of Industries (ASI). For making price corrections, wholesale price index has been used. Wholesale price index for transport and machinery has been used to adjust the data on fixed capital. Consumer price index has been used to deflate the emoluments. Every deflator has 1993-94 as a base year.

### Period of study

This study covers the period of 1980-81 to 2002-03; it has also been divided into two phases, pre-reform period (1980-81 to 1990-91) and post-reform period (1991-92 to 2002-03) to capture the impact of change in policy regimes.

### Methodology

Trend growth rate of important variables is calculated with the help of semi Log linear relationship. Employment and output elasticities are calculated by regression method. Present study has been divided into four sections.

### SECTION - I

#### Trend Growth Rate of Important Variables

Table 1 reveals that the organised manufacturing sector of Punjab experienced 5.69 per cent per annum significant growth rate of employment in pre-reform period, but negative growth rate in post-reform period i.e. period of "jobless growth". Higher growth rate of emoluments as compared to employment level implies that existing skilled labour force has been paid higher wages and perks rather than creating new employment opportunities in organised manufacturing sector of Punjab. Same momentum of growth rate of output was not maintained in post-reform period.

**TABLE - 1**

**Trend Growth Rate of Important Variables of Organised Manufacturing Sector of Punjab**  
Percent per annum

VARIABLES	1980-81 to 1990-91	1991-92 to 2002-03	1980-81 to 2002-03
EMPLOYMENT	5.69* (13.01)	-2.03** (-2.00)	1.87* (3.69)
OUTPUT	9.50* (12.22)	5.13* (7.60)	7.02* (21.11)
GROSS VALUE ADDED	9.86* (8.08)	3.41* (3.61)	6.90* (13.75)
EMOLUMENTS	9.62* (20.27)	0.56* (5.27)	4.31* (6.15)
FIXED CAPITAL	0.78 (1.38)	13.00* (8.89)	5.49* (7.00)

Source: Calculated from various issues of ASI

Note: Figure within bracket are t values

\* 1% level of significance

The growth rate of fixed capital of organised manufacturing sector is higher in post-reform period than that of pre-reform period. Most surprisingly, high growth of fixed capital failed

to achieve higher growth in employment, output and value addition. One possible reason may be low marginal productivity of factor of production or production process was going through a phase of external diseconomies.

## SECTION - II

### Employment and Output Elasticity Pattern

Employment elasticity with respect to output describes how far output of an industry has been able to generate employment in that industry. It is clear from the table 2 that employment elasticity with respect to output in organised manufacturing sector is low and positive (<1) but significant in pre-reform. Positive employment elasticity indicates labour-intensive nature of organised manufacturing sector.

The employment elasticity with respect to capital indicates whether an extra unit of capital leads to decrease in employment of labour or increase it. In the former case capital acts as substitute for labour and the latter implies complementary between two. Employment elasticity with respect to capital for organised manufacturing sector is 0.36 and significant, in the post-reform period, which indicates that labour and capital are complimentary to each other. This is a good sign for Punjab industry because organised manufacturing sector uses labour and capital in such a proportion that more use of capital generates more labour.

**TABLE - 2**  
**Employment and Output Elasticity of Organised Manufacturing Sector of Punjab**

Manufacturing Group	Employment Elasticity				Output Elasticity			
	Output		Capital		Capital		Labour	
	T1	T2	T1	T2	T1	T2	T1	T2
Organised Manufacturing Sector	0.58* (1.84)	0.52 (1.87)	-0.14 (0.57)	0.36* (3.12)	0.14 (0.34)	-0.44* (5.21)	1.62* (11.84)	0.53 (1.87)

**Source: Calculated from various issues of ASI**

Note : T1 - 1980-81 to 1990-91, T2 - 1991-92 to 2002-03

\* 1% level of significance, \*\* 5% level of significance

Figure with in bracket are 't' ratios.

Output elasticity with respect to capital and labour provides a measure for relative importance of the factor of production. Labour has remained the important factor of production during pre-reform period and capital variable has played secondary role i.e. its value is turned to be low positive but statistically insignificant. Positive output elasticity with respect to capital for organised manufacturing sector (during pre-reform period) implies marginal productivity of capital is positive.

## SECTION - III

### Potential and Constraints

Higher growth rate of fixed capital during post reform period will ultimately reflect in generation of employment and output in the coming years. Higher growth rate of employment, emoluments, output and gross value added may be achieved by raising partial productivities and total factor productivity. Positive impact of capital intensity during post reform period signifies the degree of mechanization. Organised manufacturing sector is of labour-intensive nature, so have the capacity to absorb large reserve army of unemployed technical skilled and non skilled labour force. Complementary nature of labour and capital for organised manufacturing sector is good sign for Punjab economy, which implies labour and capital will be used in such a proportion that more use of capital will generate more employment opportunities.

Lack of world class infrastructure, irregular supply of power, non availability of timely finance, tax concessions given to neighbouring states like Himachal Pradesh, Uttranchal and lack of social security system are major constraints of Punjab economy. Research and development which demands immediate attention remains most neglected area. All these factors are the causes of internal and external diseconomies, which raise the cost of production.

## SECTION - IV

### Summing up

Organised manufacturing sector recorded higher trend growth rate of fixed capital in post reform period as compared to pre-reform period, But the growth of fixed capital failed to generate higher growth rate of output and employment during post-reform period i.e. period of 'jobless growth'. Positive employment elasticity indicates labour-intensive nature of organised manufacturing sector. Labour and capital are complementary in nature for organised manufacturing sector in post-reform period. Punjab's industry was and continues to be export based. The situation demands for the restructuring of industrial pattern and process, which can help to resolve the structural problems of the existing model of growth.

## REFERENCE

- Dhesi, A. and Ghuman, R.S.(1982), "Productivity Trends and Factor Substitution in Manufacturing Sector of Punjab, Implication for Planning," PSE Economic Analyst, Vol. 3-4, Dec. 1982- June 1983, pp.40. | Gill, S.S.(1994), " Dynamics of Industrial Development of Punjab: Industrial Structure and Policy Issues" PSE Economic Analyst, Vol. 23, No. 42, pp.76. | Hinghes, H. (1978), 'Industrialisation and Development: A Stocktaking' Industry and Development, No. 2, pp.1. | Kaur, K. (1982), 'Industrial Structure of Haryana 1966-78' Margin, Vol. 14, No. 2, pp.68. | Kumar, Rakesh (2005), "Growth Patterns Productivity Behavior and Technological Change In the Manufacturing Sector of Punjab, Productivity, Vol.46, No.1, pp. 44. | Kuznet (1973). Modern Economic Growth: Rate Spread and Structure, Yale University Press, New Haven. | Raikhy, A.S. and Sethi, A.S. (2001), "Structural Analysis of Punjab Economy – Implications for Policy," Punjab Economy : Emerging Issues. Guru Nanak Dev University, Amritsar. | Singh, L. (1992), "Aspects of Growth and Structural Change in Industrial Sector of Punjab," Man and Development, Vol.14, No. 2, pp.85. | Singh, L. (2005), " Deceleration of Industrial Growth and Rural Industrialisation Strategy of Punjab," Journal of Punjab Studies, VOL.12, pp. 271-284. | Singh, L. and Singh, S. (2002), " Deceleration of Economic Growth in Punjab: Evidence, Explanation and a Way Out," Economic and Political Weekly, Vol. 36, No. 2, pp. 931-40. | Singh, I. (2001), "Structural Change in Punjab Economy, A Study in the Input-Output Framework," Punjab Economy : Emerging Issues. Guru Nanak Dev University, Amritsar. | Singh, L. and Jain, V. (2007), "Growth and Dynamics of Unorganised Industries," International Journal of Business and Globalisation, Vol. 1, No.3. |