

# **IMPACT OF TECHNOLOGY ON THE COMPETITIVENESS OF SMALL SCALE SECTOR WITH SPECIAL REFERENCE TO THIRUVANANTHAPURAM DISTRICT**

## **Abstract**

Key words: TQM, Value of Production, Working capital, Competitive Strength, Globalization, Liberalization.

The world over, small scale industries (SSIs) are acclaimed as the most effective means of producing in a relatively less, or even nil, pollution of any kind, a wide range of consumer products and other items and services on reasonable costs, with minimum investment but utilizing more manpower, for the well being of all sections of society, using available entrepreneurial skills or ingenuity or expertise and of entrepreneurs using whatever low-cost and efficient technology has been developed and thrown open by the expanding branch of applied science. Thus special attention is being paid by the policy-makers to encourage enlightened entrepreneurs to undertake SSI units in a big way and expand and develop them, keeping always in view their capacity to convert even scarce resources in a static economy to something abundant in a dynamic economy.

The SSI sector has special relevance to developing countries like India which are confronted with the problems of low per capita income, mounting unemployment and underemployment, adverse balance of payment position, and scarce raw materials like petroleum (ore). In a State like Kerala which continues to experience financial crunch in undertaking industrial development activities within a short span of time and to correct for the distortions, like the problem of colossal unemployment among the educated youth, and slow pace of capital formation that have crept into the economic system over a period of years, rapid growth of the SSI sector is of paramount importance to resolve such problems effectively. Special attention is needed in Kerala to nurse back to sound health all the existing SSI units which have suffered badly due to the globalization and liberalization policies of Government of India since 1991. Many units which were operating under Government support and patronage have closed their

shutters and / or reached the verge of extinction in spite of their efforts to utilize whatever expertise and resources are available and to survive.

The district of Thiruvananthapuram where the State capital of Kerala is situated is the seat of political power, and the location of the head offices of a number of Government offices / Agencies, truly reflects the explicit manifestation of the industrial culture, whatever, prevailing in the State. These explain for the logic behind the selection of the sample SSI units, numbering 25, as against 15 as initially envisaged, to examine their overall performance in the existing market scenario with a view to arrive at some meaningful conclusion on the impact, if any, of technology on their competitive strength or efficiency and on the efficacy of quality control measures being used by them in any form, to ensure their products acceptability.

The 25 units consist of four public limited companies, six private limited companies and 15 others with State registration; seven of them have received loan assistance from KSIDC and Banks, seven others have taken loans from KFC and Banks, and the remaining 11 have been benefited from Banks with their loan assistance; six units are managed by women entrepreneurs and the balance 19 by men; 12 units are set up and managed by professionals with experience and the other 13 units are managed by non-professionals with experience; and six units employ foreign technology and equipment while the other 19 are based on indigenous technology and machinery.

For the purpose of a comprehensive analysis, the units have been categorized into 10 groups according to the nature of their operations thus: (1) textiles -2; (2) metal products-5; (3) chemical / plastic products-2; (4) ceramic / glass products-2; (5) food products-3; (6) electronic products-2; (7) computer / stationery items-2; (8) Ayurvedic preparations-2; (9) paper products-1; and (10) printing works-4.

One important finding is that the relationship between output (value of production) and input (working capital) as measured in terms of the correlation coefficient is stronger in the case of the units employing foreign technology / equipment than the others using indigenous technology / equipment, which explains for the better performance of the former units. Similarly, the

relationship between the above two variables for the units managed by professionals with experience is stronger than for other cases. Again, the relationship between the sales and working capital for the units which have set up quality control facilities is much stronger than the other units with quality check being exercised by supervisors. The units which follow Total Quality Management (TQM) approach, at least indirectly, have, performance-wise, an edge over others.

The units managed by professionals are better placed in regard to technology, competitive efficiency, quality maintenance, production and sales than those involving non-professionals. Again, the performance of the units involving foreign technology / equipment is found to be better and more sustaining than the other units.

There is no evidence to suggest that all the SSI units implement the concept of TQM in all its essentials, as being done by MNCs, but some units are found to follow it, indirectly, as evidenced by their keenness to check quality at every stage, right from selection of raw materials to the final products.

The field experience suggests that new entrepreneurs select the best technology available in the market for their products, as far as they could afford to have it. Otherwise, they may hesitate to launch the project, and as a result there has been a decline in the number of new units registered in the recent periods.

Technology is a fast-changing commodity and the technology currently being used may turn out to be obsolete in the near future, when a new environment emerges. Hence, it is for the enlightened entrepreneurs to follow the TQM approach as well, and incorporate flexibility in their existing operations to facilitate introduction of innovative schemes, as and when found to be absolutely necessary for existence or survival.