Environmental Issues:

A Trend in Industrial Growth and Industrial Retreat

Editors

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Preface

The present book is a collection of papers in a modified and developed form by well-known scholars drawn from various institutions.

India is the only developing country which has the potential to be the third most powerful nation in the world. This recognition is a result of its technological, industrial, and urban growth. However, advances in technology and industrialization, and recent trends in society are affecting our environment and it will continue to get worse. It is imperative that we understand the adverse effects, nation and causes of these factors which are continuously exhausting our natural resources.

The industrial sector occupies an important place in the development of our economy and it has been identified as a thrust sector for export during the seventh plan. While emphasizing the important of the growth of industry for its positive effects one is aware of the negative effects viz., environmental damage through the spoilage of the drinking water, water for farming and land fertility. So a trade-off occurs while emphasizing the growth of the industry and its environmental damage.

Pollution is an undesirable change that destroys the physical, chemical, and biological nature of our environment. These changes adversely affect human life, natural flora and fauna and in turn deplete nature resources which play an important role in our cultural life. In essence, the natural environment is no longer sustainable. This shift in environment causes many social, economic and political problems. Now is the time that all the stakeholders must make a concerted effort to preserve their environment.

Looking ahead, our generation has to make an immediate choice between building a sustainable economy and living with an unsustainable are till it declines.

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transnational, and the challenges in the field of occupational health are going to be enormous. Occupational health hazards of workers employed in sago factories should be properly monitored. Since there were no records mentioning the occupational health hazards of workers engaged in cassava processing, due to their exposure to cyanogenic glycosides present in cassava, an attempt should be made to monitor their health status.

Therefore, the Government, employers and employees have to wage a total war on occupational diseases through various multidisciplinary interventions and proactive strategies to promote occupational health and improve the quality of work-life of our working population.

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DETERMINANTS OF INDUSTRIAL PROFITABILITY BEFORE AND AFTER ENVIRONMENTAL REGULATION IN KERALA – AN APPLICATION OF DISCRIMINANT FUNCTION

R.S.SriPoorni & Dr.M.Manonmani

Introduction

The environmental issues in India become more serious every day and turning into a bit of a mess on this front but with a serious lack of education and over 1 Billion people, a huge amount of which are in dire poverty, it's hardly surprising. The recent boom in its industries is little or no environmental education, infrastructure nearly at bursting point.Mainly by the industrial boom that hit India a decade ago, the main problems being improper disposal of industrial waste like chemicals etc.

In 1980s, the Supreme Court of India has been pro-actively engaged in India's environmental issues. In most countries, it is the executive and the legislative branches of the government that plan, implement and address environmental issues; the Indian experience is different. The Supreme Court of India has been engaged in interpreting and introducing new changes in the environmental jurisprudence directly. The Court has laid down new principles to protect the environment, re-interpreted environmental laws, created new institutions and structures, and conferred additional powers on the existing ones through a series of directions and judgments.

The Court's direction on environmental issues goes beyond the general questions of law, as is usually expected from the highest Court of a democratic country. The Supreme Court of India, in its order, includes executive actions and technical details of environmental actions to be are applied in Kerala and development analysis in manufacturing sector.Indeed, some critics of India's Supreme Court describe the Court as the Lords of Green Bench or Garbage Supervisor. Supporters of India's Supreme Court term these orders and the Indian bench as pioneering, both in terms of laying down

new principles of law, and in delivering environmental justice. Public interest litigation and judicial activism on environmental issues extends beyond India's Supreme Court. It includes the High Courts of individual states.3

Manufacturing takes turns under all types of economic systems. In a free market economy, manufacturing is usually directed toward the mass production of products for sale to consumers at a profit. In a collectivist economy, manufacturing is more frequently directed by the state to supply a centrally planned economy. In mixed market economies, manufacturing occurs under some degree of government regulation.

India's manufacturing sector is vital for its economic progress. Its contribution to the GDP is 16 per cent, with the potential to grow more. The government has realized the importance of this sector to the country's industrial development, and has taken a number of proactive steps to further enhance the industry.Modern manufacturing includes all intermediate processes required for the production and integration of a product's components. Some industries, such as semiconductor and steel manufacturers use the term fabrication instead.

Profit tends to be an emotive word, and firms which make large profits are often frowned upon it. But usually there is little justification for this since it is through profits and losses that the market economy works. Normal profit indicates people to accept the risk, in other words risk bearers are rewarded with profit, and thus teach people that risk is important in the world of market. Moreover, super profit has a variety of functions in the economy. Firstly, it indicates whether an industry should expand or should contrast. When the demand of a product is high, profits are usually high and firms have the power to expand, but when demand of the product is falling then the production should contrast. Secondly, it encourages firms to increase production and provides the resources for expansion. Super profits not only indicate that consumers want more of the firms' product; they are also the motivated power to produce those goods. However, when they make loss they tend to go out of production and the industry contrast. Thus, losses are as important as profits in the

good operation of the economy. Finally, it can ensure that production is carried c y the most efficient business. In a competitive industry, the firm making the largest profit is the one whose cost is lowest. It is more likely to expand production and if necessary can afford to pay more factors to do so. On the other hand, small firms must follow the same plant, but to retained their factors. As a result any increase output of the more efficient firm will eventually lower the prise of product, leaving less efficient firms to make loss. Based on the above points an analysis is made to know the effects of environmental regulation act of India on the profitability level of Kerala state.

Methodology

The study was undertakenfor theaggregate manufacturing industries in Kerala. The reference period selected were between 1970-71 and 1984-85(before regulation) and between 1985-86 and 2011-2012(after regulation). The data used for the study such as profit, fixed capital, gross output and number of workers were collected from secondary sources. They were collected from the sources such as Annual Survey of Industries and Economic Survey.

Lagged Labourproductivity(LLP) was measured as a ratio of gross output divided by number of workers. Lagged Capital Productivity (LCP)was measured as a ratio of gross output divided by fixed capital.To identify the profitabilityof manufacturing sector in Tamil Nadu between pre and post liberalization period, the discriminant analysis was applied by takingprofit as dependent variable and Lagged profit(LP), Lagged capital productivity(LCP), Lagged labour productivity(LLP) and Number of workers(NW) as independent variables. Selected variables were used to find out relative contribution in discriminating the groups. Wilk's lambda and 'F' value were used to find out whether the means of the two periods differ significantly. Using canonical discriminant function, coefficient of selected variables in discriminating the groups was found out. The functional form is represented as follows.

$$Z = L1X1+L2X2+L3X3+L4X4$$

Z = Discriminant total scores for pre and post-liberalization period(0 for pre-liberalization period and 1 post- liberalization period)

Xi = Lagged profit(LP), Lagged capital productivity(LCP) Lagged labour productivity(LLP) and Number of workers(NW).

Results and discussion

The first step in the discriminant analysis was the estimation of univariate F-statistic and Wilkslamda. If the Wilkslamda approaches 0, it indicates significant mean difference between the pre and post liberalization period. If it approaches 1, it indicates absence of mean difference. Table -1 shows the estimated F-value and Wilkslamda.

Table-1: Wilks Lamda and Univariate F- Statistics

Variables	Wilkslamda	F- value	Sig
Lagged profit(LP)	0.569**	23.489	.000
Lagged capital productivity(LCP)	0.858	50138	.031
Lagged labour productivity(LLP)	0.840	5.902	.021
No.of.workers(NW)	0.901	3.422	.074

Sources: Calculations are based on ASI data
Note: ** significant at 5% level.

It was very clear that the Wilkslamda for the variableslagged profit(LP),lagged capital productivity(LCP)lagged labour productivity(LLP) and number of workers(NW)respectively 0.569, was0.858, 0.840 an.901d . Among the above said factors the co-efficient of lagged profit(LP) was significant

Canonical Discriminant Co-efficients

To identify the significant factors determining the level of profit canonical discriminant co-efficients were calculated. The magnitude of canonical discriminant coefficients indicates the degree of contribution towards the pre and post liberalization period which is presented in table-2

Table-2 : Canonical Discriminant Function for Profitability

Variables	Canonical discriminant coefficients	Ranks
Lagged profit(LP)	.001	1
Lagged capital productivity(LCP)	.005	2
Lagged labour productivity(LLP)	-.004	3
No.of.workers(NW)	-.009	4

Sources: Calculations are based on ASI data

Based on the standardized canonical discriminant function which represented a linear composition of the data variability the group variability was estimated as follows.

Z(P)=.001LP+.005LCP-.004LLP-.009NW

In the above function the variables such as lagged profit (LP), lagged labour productivity (LLP)had positive signs indicating that these variables had higher discriminating power. In other words these variables distinguished thelevel of profitability before and after after the environmental regulation act. The variables lagged capital productivity(LCP) and number of workers(NW) having negative sign implied that these variables acted as a suppressor variables.

Relative Contribution of Variables

The relative contribution of selected independent variables in determining the level of profit were calculated and presented in table-3.

Table-3: Relative Contribution of Variables for Profitability

Variables	Relative contribution
Lagged profit(LP)	50.65
Lagged capital productivity(LCP)	16.41
Lagged labour productivity(LLP)	35.43
No.of.workers(NW)	- 2.49
Total percentage	100

Group Statistics

Sources: Calculations are based on ASI data

Lagged profit (LP)was the first dominant factor to determine after environmental regulation profit level alone contributed 50.65 percent. The next dominant factor was lagged labour productivity (LLP) contributed 35.43 percent. The lagged profit (LP), lagged capital productivity (LCP) and lagged labour productivity(LLP) contributed positively but number of workers(NW) alone contributed negatively.

Conclusion

Maintaining or improving profit margins allows you to invest aggressively in marketing, expansion and business growth, which helps you continue to thrive rather than to fall back as a company. Falling

margins may lead to downsizing or budget reductions.Focusing on profitability of manufacturing sector would be the issue for encouraging further growth of the sector in Kerala.

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IMPACT OF WATER POLLUTION ON SUGARCANE CULTIVATION IN VANIYAMBADI TALUK

Dr. A. Royal Edward Williams & K. Jayagar

Introduction

Industrial pollution has been a major factor causing the degradation of the environment around us, affecting the water we use, the air we breathe and soil we live on. But of these, pollution of water is arguably the most serious threat to current human welfare is polluted not only by industries but also by households. Both industries and household wastewater contain chemicals and biological matter that impose high demand on the oxygen present in water. Polluted water thus contains low level of dissolved oxygen as a result of the heavy Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) place by industrial and household waste material discharged into water bodies and water systems both above and below the earth's surface. In addition to low levels of dissolved oxygen in water, industrial waste (effluents) also contains chemicals and metals that are directly harmful to human health and ecosystem.

In this context the industrial effluent released by dyeing and bleaching factoring in Tirupur has become a serious issue because it has severe impact on water bodies. The effluents released after semi-treatment or without treatment are let into Noyyal River. At present there about 800 dyeing and bleaching industries in Tirupur. The effluents released by these units are stored in Orathupalayam Dam, which was constructed during 1991 at the cost of Rs 1646 lakhs. At present the stored water in the dam is containing industrial effluent and it is not used for agriculture and human use. Due to this condition of water, the impact is severe on agriculture, fisheries, human health and livestock. Around 21,000 acres of land are affected directly and indirectly. Under these circumstances, it has become the need of the hour to study the impact of industrial effluent on agriculture and other activities. Hence, the present study was undertaken.

Leather industry is one of the highly polluting industries and could pollute land, water and atmosphere pollution is a worldwide