

# **POLLUTION AND INDUSTRIALIZATION: HEALTH AND ECONOMIC IMPLICATIONS WITHIN JALINGO METROPOLIS**

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## **ABSTRACT**

Industrialization is a part of a wider modernization process, where social change and economic development are closely related with technological innovation, particularly with the development of large scale energy and metallurgy production. Pollution is the introduction of a contaminant into the environment. It is created mostly by human actions but can also be as a result of natural disasters. Pollution has a detrimental effect on any living organism in an environment, making it virtually impossible to sustain life. This paper seeks to assess industrialization, pollution and analyze the socio-economic problems caused by pollution due to industrialization in Taraba state and it concludes by proffering possible solutions to the problems.

## **INTRODUCTION**

Industrialization is the period of social and economic change that transforms a human group from an agrarian society into an industrial one. Pollution occurs as an introduction of contaminations into the natural environment that causes adverse change. Industry occupies a key position and significant role in the development of a country. Its development raises national income, creates employment opportunities and improves the balance of payments position both by producing exportable goods and by substituting imports, and also supports and stimulates development in other sectors of the economy. As the country possesses the requisite natural and human

resources for industrial growth, the industrial policy would continue to be directed towards increasing the share of the manufacturing sector in the total economy. Emphasis would, however, increasingly be a shift towards deepening the industrial structure through an increase in the weight of high value-added, more sophisticated engineering, chemicals and other basic industries. The government would continue to focus its efforts towards improving the technical and financial performance of public sector enterprises through suitable administrative and institutional measures.

## **INDUSTRIAL POLLUTION**

Industrial pollution is a more complicated problem in developing

countries than in developed economies. There are greater structural obstacles to preventing and cleaning up pollution. These obstacles are largely economic, because developing countries do not have the resources to control pollution to the extent that developed countries can. On the other hand, the effects of pollution may be very costly to a developing society, in terms of health, waste, environmental degradation, reduced quality of life and clean-up costs in the future. An extreme example is concern for the future of children exposed to lead in some megacities in countries where leaded gasoline is still used, or in the vicinity of smelters. Some of these children have been found to have blood lead levels high enough to impair intelligence and cognition.

Taraba state in practice, capital is rarely available to invest in equipment to control pollution unless there is pressure from government regulation. However, governments are rarely motivated to regulate industry unless there are compelling reasons to do so, and pressure from their citizens. In most state of the country people are reasonably secure in their health and their lives, and expect a higher quality of life, which they associate with a cleaner environment. Because there is more economic security, these citizens are more willing to accept an apparent economic sacrifice in order to achieve a clean environment. However, in order to be competitive in world markets, many state of

this country are very reluctant to impose regulation on their industries. Instead, they hope that industrial growth today will lead to a society rich enough tomorrow to clean up the pollution. Unfortunately, the cost of clean-up increases as fast as, or faster than, the costs associated with industrial development. At an early stage of industrial development, Taraba state in particular would have very low costs associated with the prevention of pollution.

However, the state has the capital resources they need to do so. Industrialization is an essential feature of economic growth in developing countries; industrial practices may also produce adverse environmental health consequences through the release of air and water pollutants and the disposal of hazardous wastes. This is often the case in developing countries, where less attention is paid to environmental protection. Environmental standards are often inappropriate or not effectively implemented, and pollution control techniques are not yet fully developed. With rapid economic development, many state in this country like taraba and other other state of the country, face some additional environmental problems. One is the environmental pollution from technologies transferred from developed countries, which are no longer acceptable for occupational and environmental health reasons in developed countries.

## **AIR POLLUTION**

Air pollution in this country is derived not only from stack emission of pollutants from relatively large industries, like iron and steel, non-ferrous metals and petroleum products industries, but also from fugitive emission of pollutants from small-scale factories, such as block industries, bread industries, jalingo cassava industry, shoes industries and so on, where inadequate pollution control measures exist and pollutants are allowed to escape to the atmosphere.

## **WATER AND SOIL POLLUTION**

Inappropriate and often careless disposal of industrial wastes uncontrolled discharge into water courses and uncontrolled disposal on the land, which often causes water and soil pollution is another crucial environmental health problem, in addition to industrial air pollution, in Nigeria, particularly in jalingo Taraba state with numerous small-scale township enterprises, like those in jalingo. Some small-scale factories, such as textile dyeing, pulp and paper, leather tanning, electroplating, fluorescent lamp, lead battery and metal smelting, always produce a large amount of wastes, containing toxic or hazardous substances like chromium, mercury, lead, cyanide and so on, which may pollute the rivers, streams and lakes, and soil as well, when they are untreated. The soil pollution in turn may contaminate groundwater resources.

## **LAND POLLUTION**

The amount of waste produced by human society is increasing. Commercial and domestic solid waste is a great practical problem for many local governments. Industrial wastes are usually much smaller in volume but are more likely to contain hazardous materials, such as toxic chemicals, flammable liquids and asbestos. Although the total amount is less, the disposal of hazardous industrial waste has been a greater concern than of domestic waste because of the perceived hazard to health and the risk of environmental contamination.

The generation of hazardous waste has become a major problem worldwide. The root cause of the problem is industrial production and distribution. Land pollution occurs when hazardous wastes contaminate soil and groundwater due to inadequate or irresponsible disposal measures. Abandoned or neglected waste disposal sites are a particularly difficult and expensive problem for society. Sometimes, hazardous waste is disposed of illegally and in an even more dangerous manner because the owner cannot find a cheap way to get rid of it. One of the major unresolved issues in managing hazardous waste is to find methods of disposal that are both safe and inexpensive. Public concern over hazardous waste focuses on the potential health effects of exposure to toxic chemicals, and particularly the risk of cancer.

## **POSITIVE IMPLICATION OF INDUSTRIALISATION**

### **1. Increase in national income.**

Industrialization makes possible the optimum utilization of the scarce resources of the country. It helps in increasing the quantity and quality of various kinds of manufactured goods and thereby makes a larger contribution to gross national product. (GNP).

### **2. Higher standard of living.**

Industrialization helps in increasing the value of output per worker. The income of the labour due to higher productivity increases. The rise in income raises the living standard of the people.

### **3. Economic stability.**

Industrialization is the best way of providing economic stability to the country. A nation which depends upon the production and export of raw material alone cannot achieve a rapid rate of economic growth. The uncertainties of Nature, the restricted and fluctuating demand of the agricultural raw material hampers economic progress and leads to an unstable economy.

### **4. Improvement in balance of payments.**

Industrialization brings structural changes in the pattern of foreign trade of the country. It helps in increasing the export of manufactured goods and thus earn foreign exchange. On the other hand the processing of raw material at home curtails the import of goods and thereby helps in conserving foreign exchange. The export orientation

and import substitution effects of industrialization help in the improvement of balance of payments. In Pakistan, the exports of semi manufactured and manufactured goods showed favorable trend.

### **5. Stimulates progress in other sectors.**

Industrialization stimulates progress in other sectors of the economy. Development of one industry leads to the development and expansion of other industries. For instance the construction of a transistor radio plant develops the small battery industry (backward linkage). The construction of milk processing plants adds to its line of production of ice cream, cone cream plants etc. (Forward linkage).

### **6. Increased employment opportunities.**

Industrialization provides increased employment opportunities in small and large scale industries. In an agrarian economy, industry absorbs underemployed and unemployed workers of agricultural sector and thereby increases the income of the community.

### **7. Promotes specialization.**

Industrialization promotes specialization of labour. The division of work increases the marginal value product of labour. The income of worker in the industrial sector is therefore higher than that of a worker in agricultural sector.

### **8. Rise in agricultural production.**

Industrialization provides machinery like tractors thrashers harvesters, bulldozers,

transport, aerial spray etc, to be used in the farm sector. The increased use of modern inputs has increased the yield of crops per hectare. The increase in the income of the farmers has given boost to economic development in the country.

9. Easy to control industrial activity.

The industrial activity compared to agricultural is easy to control. The industrial production can be expanded or cut down according to the price cost and demand of the product.

10. Large scope for technological progress.

Industrialization provides larger scope for on the job training and technological progress. The use of advanced technology increases the scale of production, reduces cost of production, improves quality of the product and helps in widening of the market.

11. Reduction in the rate of population growth.

Industrialization leads to migration of surplus labour from farm sector to the industries mostly situated in urban centres. In cities improved facilities of sanitation and health care are available. People through the adoption of family planning measures, reduce the rate of population growth.

12. Increased saving and investment.

Industrialization increases the income of the workers. It enhances their capacity to save. The voluntary savings stimulate industrial growth and by cumulative effect lead to further expansion of industry.

13. Provision for defence.

If a country is industrialized, it can manufacture arms and ammunition necessary for the defence of the country. A nation which depends on other countries for the supply of ammunition will eventually suffer and may face defeat. The two wars with India should be an eye opener for Pakistan.

14. Lesser pressure on land.

The establishment and expansion of industries lessens the excessive pressure of labour force from the agriculture sector.

15. Development of markets.

With the development of industries the market for raw materials and finished goods widens in the country.

16. Increase in the Government revenue.

Industrialization increases the supply of goods both for internal and external markets. The export of goods provides foreign exchange. The customs excise duties and other taxes levied on the production of goods increase the revenue of the State. The income tax received from the industrialists adds to the revenue stream of the Government which eventually is spent for the welfare of the people as a whole

## **NEGATIVE IMPLICATIONS OF INDUSTRIALISATION**

1 Cities become crowded, smoky, with problems of slums, housing, sanitation, accidents and epidemics.

2 Women and child labour is badly exploited.

3 Workers suffer from long working hours,

low wages, and unemployment, unsafe conditions of work, with no rights to vote strike or form trade unions.

4 Society, become divided into rich and poor, the 'Haves' and the 'Have Nots'.

5 It led to wars of imperialism and colonization.

### **POSSIBLE SOLUTIONS**

Solutions to any problem are made more difficult by the lack of available resources and the sheer scale of the problems faced. Below are some examples of different policies attempted:

1. Site and service schemes: Popular in India and Brazil. This is a scheme whereby the government will provide a site (a small concrete 'hut') and basic amenities such as water and sewer facilities. The migrant is given rights of ownership and then expected to complete the work at his or her expense. This is often done as a cooperative between groups of migrants. In other situations, the authorities just provide the plot and building materials for the migrants to construct their own homes. These schemes are relatively cheap and give the migrants a sense of control over their future. They also encourage community spirit.

2. Rehabilitation: An alternative to this scheme is to provide the residents of shanty towns with the materials to improve their existing shelters. Residents are also encouraged to set up community schemes to improve education and medical services. Residents may also be given rights of

ownership whilst local authorities come in and provide electricity, water and sewerage disposal. This has been tried in Bolivia and Pakistan. It is a cheaper option than the site and service schemes but simply hides the real problems. The germs may not have been removed, the land still unsuitable and the water/sewer system still not adequate.

3. Housing developments: Some countries, such as Singapore, have embarked upon massive re-housing programmes, resulting in high-rise estates. Large areas of shanty towns were cleared, tower blocks built and the shanty town residents re-housed. Early apartment blocks were very similar to those found in the UK and faced many similar problems. One such problem was people using the lifts as toilets - this was stopped when lifts were made sensitive to urine and locked on the offenders. They then had to wait to be released, facing much embarrassment and a very heavy fine! Today, blocks are designed by architects and have management teams that keep them graffiti and litter free. This is helped by the strict rules enforced in Singapore, where dropping litter or selling chewing gum will result in a very heavy fine.

Each housing development is designed to be self sufficient, with shops and services and employment in light industry, such as clothing. They are also located close to Singapore's highly efficient rail system - the MRT or Mass Rapid Transport. This helps reduce traffic congestion, which is



further reduced by strict quotas on the number of licensed cars and regular tolls on all major roads. The housing and development board aims to provide every person with a home and has continued its building programme for the last 40 years.

4. Sewage rehabilitation: Several cities have taken on major projects to try and repair damaged water and sewerage pipes. This improves the safety and quality of the water in the city and would reduce mortality rates. The rehabilitation also goes some way to reducing the unemployment problem

5. Reduction in consumption or usage of pollutants or polluting products.

6. Treatment of wastes, discharges and disposal of pollutants. Waste treatment can only be effective if pollution is coming from a defined and accessible source.

## CONCLUSION

The importance of industrialisation in a country cannot be over emphasized as it creates employment opportunities, improves the standard of living of the citizens, boosts national income etc. Pollution as one of the negative impacts of industrialisation cannot be waved aside as it affects the health of both humans and animals. In the light of these, adequate measures should be put in place to dispose wastes released by industries, construction of industrial estates and the location of industries far away from human residences.

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