

## PROBLEMS OF SICK INDUSTRIES – BANGLADESH PERSPECTIVE

A.K.M Solayman Hoque<sup>1</sup>, S.K.Biswas<sup>2</sup>

<sup>1</sup>Ctg Dry Dock Ltd Patenga, Chittagong. Fax: 031- 740974, Tel: 031-740275  
e-mail: [solayman@spnetctg.com](mailto:solayman@spnetctg.com)

<sup>2</sup>Dept. of Mechanical Engg., CUET, , Chittagong-4349, Fax: 031-714910, Tel: 031-714953  
e-mail: [skbiswas@cuet.ac.bd](mailto:skbiswas@cuet.ac.bd)

### ABSTRACT

The problem of industries becoming sick, both in public and private sectors, has turned to be alarming in Bangladesh in recent years. Although the causes for closure or divestment might be many but in most of the cases continued loss played a major role. Thus the problem of industries becoming sick deserves to be treated more seriously at Government policy level as it is related to the national economy and development. Every industry can be seen as a system, which operates amongst many external and internal factors. Various combinations of external and internal factors are responsible for industries to become sick. But these too vary from country to country, economy-to-economy, etc. Definitely, causes for industries becoming sick shall not be similar in under-developed, developing and developed countries. In this paper an attempt has been made to identify the causes of industrial sickness in Bangladesh and to show how far the application of the theories and principles of Production and Operations Management play a role in the prevention of industries becoming sick.

**Keywords:** Sick Industry, Industrial Engineering, , Production and Operations management.

### 1. INTRODUCTION

There were only few industries in this region, presently known as Bangladesh, before 1947. Limited industrialization took place during the period 1947 to 1970. Many of the heavy industries were established during the period 1960 to 1969. Some industries in private sector on cotton, jute, consumer goods etc., typically known as small and medium scale (SMS) industries were also established during the period 1950 – 1970. After the birth of Bangladesh some heavy industries on manures, steel, energy, etc. were established. Due to the availability of cheap labor, establishment of export processing zones and BSCIC industrial areas many garment, ceramic, pharmaceutical, and other small scale industries (SSI) have been established in the last 2-3 decades. Just after independence of Bangladesh, some industries owned by private owners were taken over as nationalized industries.

Many industries, both in government and private sectors, have been closed down one after another due to many uncontrollable factors especially in the last few decades. Before the closure of these industries obviously they became sick, tried to overcome the causes of

sickness and being failed have been closed down. Bangladesh has experience of closing down of some of her heavy industries like Machine Tools Factory at Joydevpur, Chittagong Steel Mills, Adamjee Jute Mills, etc. Thus industrial sickness has become an acute problem in Bangladesh in the recent years. Statistics shows, in 1991 government first declared 1581 industries as sick [1]. The following Table shows the scenario in sector corporations of Bangladesh [2]:

<i>Name of the Corporation</i>	<i>Total numbers of established industries in '70s</i>	<i>Presently owned by the Corporation</i>
Bangladesh Jute Mills Corp. (BJMC)	77	23
Bangladesh Textile Mills Corp. (BTMC)	72	21
Bangladesh Sugar and Food Industries Corp.(BSFIC)	54	14
Bangladesh Steel & Engineering Corp. (BSEC)	54	12
Bangladesh Chemical Industries Corporation (BCIC)	13	42

## 2. WHAT IS INDUSTRIAL SICKNESS [3,4,5]

People become sick and industries also become sick. Sick people suffer from various problems and if this sickness continues sometimes the life becomes threatened. If proper care is taken, people can recover. Similar is the case with industries. The term 'Industrial Sickness' has become a buzz-word at present in industrial sectors particularly in underdeveloped or developing countries. It has become a cause of concern to investors, entrepreneurs and shareholders, policy makers, government and the society in general. If industries become sick, money and time are wasted; it brings down adverse effect on economy and social problems of various dimensions surface. So, national economy of developing or underdeveloped countries cannot afford large-scale wastage of wealth due to industries turning sick.

It is generally said that an industry is sick if it cannot pull on its normal activities, suffers continuous losses or if the gradual wiping out of its capital starts. A sick industry is one whose financial viability is threatened by adverse factors.

Many authors defined industrial sickness in many ways. As per financial bill of India, 1977, a sick industry is one whose 50 percent or more of capital reserve were wiped out by the losses [5].

R.V.Raman [3] summarized industrial sickness as (i) when the company has negative working capital and the unit continue to make loss, (ii) cash inflow during the last 3 years has been progressively going down in relation to revenue commitment, (iii) cumulative loss exceeds capital and reserve and (iv) when cash inflow is less than the operational commitment and inadequate for debt servicing.

Many more similar definitions available in related literatures. So it can be said that if an industry can not perform its normal activities like purchasing of materials and other resources, manage the required fund to run business, fails to generate surplus and remains dependent on external funds for survival, the concerned industry can be considered as a sick one. If this sickness persists for a few years, it is forced to close down. Then financial institutions or the concerned organizations come forward to recover at least some part of the money invested or given as loan. And if it is a government owned industry, government starts processing to close down or to sell it to private parties or gives option for BMRE.

It can be mentioned here that economically viable industries too became sick in some cases after nationalization and the same have been handed over to private sector again in later years.

## 3. CAUSES OF SICKNESS [3,4,5]

Industries might face various problems since its establishment or at early stages of life and sometimes they persist as the industry moves through the future.

Problems of sickness may be classified as internal or external or can be classified as financial, technological,

environmental, management and marketing related etc. This grouping and sub-grouping of problems can be extended. Whichever be the root causes, they too differ according to the type, location and availability of cooperation and non-cooperation of financial, governmental and other related agencies, organizations or institutions. If the factors of production i.e., man, machine and material (the famous 3 M's) and in addition management, money, method and marketing (other 4 M's) are not properly managed various problems arise. These factors are interrelated and the very survival of the industry depends on factors related to these. Thus, we can classify causes as:

- 1) **Management related:** (relating to all general management activities, personnel activities, marketing activities etc.)
  - a) Improper strategic management policy, lack of proper vision, determination of inappropriate path to reach goal,
  - b) Lack of proper training, experience and business outlook of entrepreneurs, investors, ecision makers etc.,
  - c) Improper manpower planning, over employment problems,
  - d) Improper organizational structure, absence of reorganizing process with business dynamics,
  - e) Poor managerial or administrative control,
  - f) Lack of continuous tracking of productivity indices and continuous tracking of forecasted and actual demands or sales,
  - g) Inappropriate handling of personnel problems, CBA activities, motivation and labor related problems,
  - h) Lack of market planning, market survey, defective or improper sales promotion activities, defective pricing, problem with recovery of cost of products sold on credit etc.,
  - i) Conservative attitude of managers: new managers do not try, in many cases, to take initiative to deviate from what was in the past, i.e., they try not to test anything new,
  - j) Improper (of course in some cases) delegation of authority and absence of accountability,
  - k) Non-availability of skilled labor force and management personnel, etc.
  - l) Absence of well developed organizational culture, etc.
- 2) **Financial:** (relating to money)
  - a) Poor financial (capital management) management policies,
  - b) Poor working capital management
  - c) Improper managing of accounts,
  - d) Lack of timely decisions form government, banks, financial institutions,
  - e) High interest rate on loans,
  - f) Improper tracking of financial positions, time delay of adjusting to changed local, global

economy and business environment prevailing outside,

- g) Improper analysis or time delay in taking decision with respect to product diversification, divestment, etc.
  - h) Improper financial analysis (in some cases) for investment, replacement of plants and machineries, etc.
- 3) **Technological:** (relating to production)
- a) Defective project planning, location, layout and material handing systems,
  - b) Use of defective forecasting data, use of inappropriate forecasting method,
  - c) Improper capacity planning,
  - d) Improper inventory management and management of supply chain,
  - e) Absence of application of Technology Management principles,
  - f) Inadequate quality control and delay in adaptation to Total Quality Management (TQM) and Quality Assurance programs,
  - g) Absence of use of scientific methods in Scheduling (determination of Master Production Schedule (MPS)) and in Production Planning and control, etc.
  - h) Improper or non-application of decision and optimization theories, etc.,
  - i) Improper process planning, absence of application of motion and time study, and ergonomic principles
  - j) Non-application of 'Reengineering' principles so as to adjust to the changed situation, etc.
- 4) **Environmental:**
- a) Change of local and global economic conditions, changes in money exchange rates, etc,
  - b) Lack of coordination between various ministries and government departments and delay in getting decisions,
  - c) Frequent changes in government policies with respect to investment criteria, tax determination, import and export policies,
  - d) Non-availability or irregular supply of required energy (electrical energy, gas), raw materials, labor force, etc.,
  - e) Strikes, hartals and other working day losses due to political and social problems,
  - f) Occurrence of Natural calamities like cyclone, flood, tornado etc.,
  - g) Attitude of mass media, etc,
  - h) Change of Technology and its lifecycle time.

Although many factors have been listed above, and even the list can be extended further, in actual situation a few but not all, play the main role in turning an industry to become sick. It is said that Chittagong Steel Mills became sick due to the liberalization of import policy, continuance of excess manpower even when production declined, failing to compete in market although there

might have many more important factors for the bad condition that occurred.

#### 4. SYMPTOMS TO BECOMING SICK [3]

Some industries grow born sick, some are made sick and some can be classified as thrust sick. Born sick industries are those, which are established with unclear vision, inaccurate forecasting of market, defective appraisal and implementation, and planning. Industries are made sick by the inefficient management, lack of dynamism, absence of effective monitoring, and delay in adopting preventive measures to avoid sickness. Environmental factors produce thrust sick industries [5]. Whatever be the causes of sickness, some of the symptoms of industrial sickness are as follows:

- 1) Reduced working capital, fall in sales / profit, rapid increase of debtors, frequent liquidity problems, wiping out of capital reserve,
- 2) High managerial and labor turnover, labor unrest,
- 3) Rise in complaints from staffs and customers,
- 4) Unfavorable market development,
- 5) Rise in finished product inventory,
- 6) Decline in productivity,
- 7) Difficulty in paying salaries, bills, loans, taxes, bank interests, etc.

Performances of some of the industries of BSEC have been studied based on actual past data obtained from the brochures of BSEC [6]. Following graphs will show that out of six industries two (BMTF and Chittagong Steel Mills) (Fig. 1 and Fig. 2) showed clear symptoms of sickness before they have been closed down. Conditions of two other industries (Progati Industries and GEM Co.) (Fig. 3 and 4) are not good and they have every symptom of sickness. They deserve attention of policy makers and preventive measures are to be taken immediately to avoid closure or being handed over to private owners. The last two industries named Gazi wires and Eastern Cables (Fig. 5 and 6) are fighting to remain in business but the present trend can not be considered as satisfactory one. These too deserve attention to avoid future catastrophe.

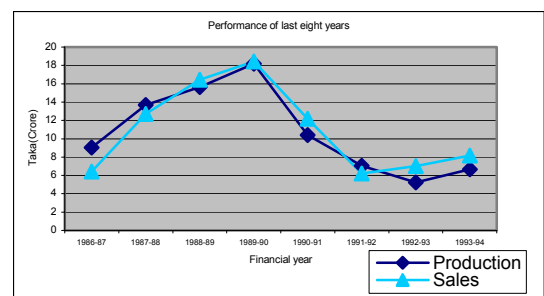


Fig 1: Bangladesh Machine Tools Factory

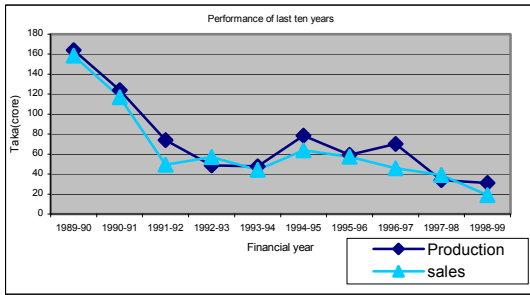


Fig 2: Chittagong Steel Mills Ltd.

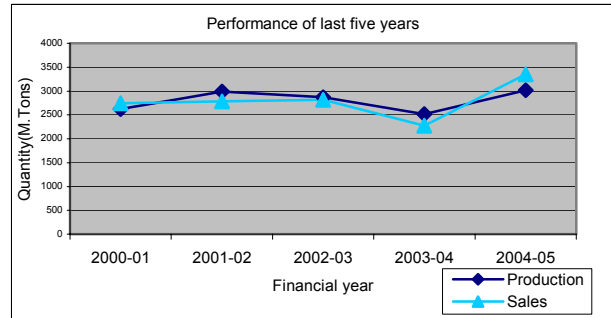


Fig 6: Eastern Cables Ltd.

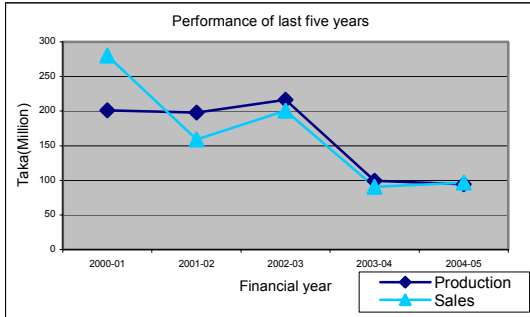


Fig 3: GEM Co. Ltd

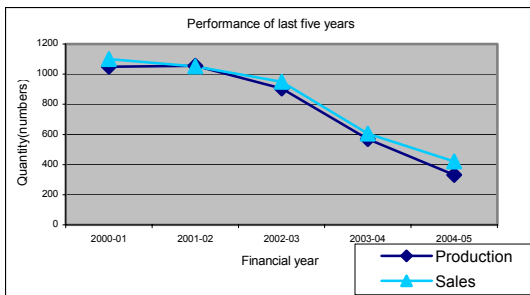


Fig 4: Progati Industries Ltd

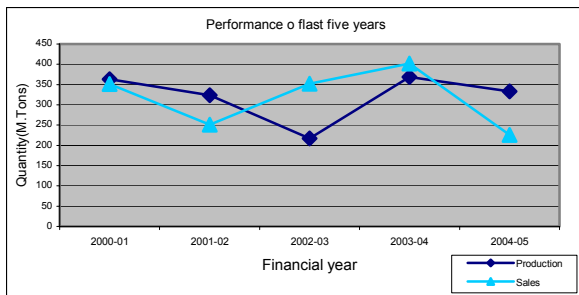


Fig 5: Gazi Wires Ltd.

## 5. IMPACT OF TECHNOLOGICAL FACTORS ON SICK INDUSTRIES [7 ~ 10]

It is sometimes possible to solve many of the management, financial related problems if proper care is taken and proper planning is done. On environmental factors the industry has either no control or limited control. We think, technological factors play a major role in industries becoming sick. Many of the technological factors can be solved if the problems are given due importance. Qualified technical persons should be entrusted with the job of solving the technological problems using standard and established methods. The concept of F.W. Taylor's scientific management theory should not be forgotten.

Continuous loss, decline in production and profit and problem of working capital management are some of the main symptoms of industries growing sick. If inventory management or supply chain management system is not properly practiced, then sizable portion of the working capital becomes blocked. If production planning and control system is inefficient, then production cost increases and thus loss increases, profit and also productivity declines. Effective capacity and manpower planning, efficient Master Production Schedule, efficient process design etc. should be given enough importance to overcome problems and to minimize loss.

In most of the papers on Sick Industries, management, marketing, environmental and finance related problems have been discussed. But the real horse behind the scene, the efficient and effective production methods, has been given less importance. In the following the effects of some of the important factors related to application of technology are discussed [7-10].

### 5.1 Location, Layout and Material Handling:

Selection of proper location, Layout and use of efficient material handling system is directly related to the cost of the product. If products become expensive with relation to those of competitors, it is difficult to survive in the market for long time. Chittagong steel mills experienced that. It is said that sometimes-material handling cost go even up to 30 % of the cost of production. Design of best layout and material handling system reduces production cost and proper location reduces transportation cost, ensures availability of manpower and other factors of production.

## **5.2 Inventory and Supply Chain Management:**

Inventory eats up the working capital. Excess inventory does not allow to surface the problems related to production. The supply chain is the network of organizations that are connected through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services to the ultimate customers [8]. Effective use of supply chain reduces uncertainties of supply of quality raw materials for production as well as in delivery of final products to the users. The concept though not very old, can be used to reduce the possible causes of sickness due to procurement and supply of products.

## **5.3 Technology Management:**

Every technology has its own life cycle. Before making investment in an industry and even after establishment, technology forecast is vital as it is correlated to the very survival of the industry. In this age of competition if any industry wants to survive, it must recognize the dynamic process of change of technology.

## **5.4 Total Quality Control (TQM) and Quality Assurance:**

The philosophical concept of involving everybody, in the organization and in the supply chain with an aim to improve the quality by trying to accommodate all types of opinions, helps in quality improvement, which ultimately ensures customers' satisfaction. TQM concept brings the concept of elimination of all types of wastes through the implementation of just in time [JIT] philosophy. TQM with quality assurance program like ISO certification decreases the loss of customers.

## **5.5 Re-engineering [10]:**

Any established method of production, layout and other planning and control activities, might not remain good or appropriate for long with the dynamic characteristics of various activities, technology change, new invention etc. Thus forgetting about conservative idea of not taking risk, appropriate changes are to be made wherever necessary to remain in competition.

## **5.6 Ergonomics and Motion and Time study:**

Products and processes are to be designed by considering the users' characteristics, health and safety measures. Many, health related, problems of workers are related to ill design of product or process. Nonconformities in man-machine system, give rise to health problems, accidents and even bigger catastrophe. This ultimately increases the cost of health insurance, health service and compensation. Costs are also increased through high labor turn over ratio.

Motion and time study is required to find the best method and time of doing a job. As product cost is directly related to time involved, this is to be made optimum by using best method and using ergonomic principles.

## **5.7 Capacity and manpower requirement Planning:**

Capacity planning is central to the long-term success of the organization. Too much capacity can be as agonizing as too little. Managers face problems of deciding: should we have one large facility or several small ones?

Manpower, one of the 3 M's of production, is to be planned so as to keep the level at optimum level. Manpower requirement declines if sales declines and vice-versa. Keeping constant number of manpower involves money, increases production and other related costs. In USA hire and fire system is well known. It is difficult to be applied here especially in government owned industries. American companies adjust manpower as per requirement although this is not true in the case of Japan where utilization of excess manpower is being used to do other jobs if production declines. Even in USA, through reorganizing process, sometimes levels in organization are reduced; departments are merged to bring back efficiency and dynamism, resulting in decrease in manpower. Although it is difficult to implement, for the very survival of the industry, this requires to be practiced if necessary. Both BMFT and Chittagong Steel Mills suffered from over manpower problem before their closure.

## **5.8 Scheduling and production planning:**

Determination of Master Production Schedule (MPS) and adjustment of schedule with the change of orders received, play an important role in determining the target supply date. So appropriate scheduling and production planning are related to better performance of industries.

## **5.9 Optimization Principles:**

Various optimization principles were developed during World War II. Use of the optimization principles brought benefits in war planning and ultimately saved money and time. Use of these decision-making tools will help managers in managing the affairs in more effective ways.

## **5.10 Productivity Analysis and Planning:**

Productivity is related to the performance of the industry. In a word, increase in productivity means better performance of the industry. Many factors: technology related, man related, product related, and production related, affect productivity. Continuous improvement of productivity is to be tried through continuous analysis and monitoring for the very survival of the firm.

In the above, an attempt has been made to show the relationship of production planning and control activities with time and cost. Industries start to become sick when its productivity declines, part of working capital is blocked, and various other problems arise. Proper use of the methods described above will definitely solve at least some of the industrial sickness problems.

## 6. REMEDIAL MEASURES TO PREVENT SICKNESS

Occurrence of industrial sickness might come up at various phases of business cycle. Although "survival of the fittest" is a very much well known proverb, but here in Bangladesh the industrial sickness problem cannot left over to the market forces as it will bring down adverse repercussions to the national economy. Moreover, industrial sickness might also become responsible for many social problems particularly in a developing or underdeveloped country. The following measures can be considered for combating the Industrial sickness:

- 1) Elimination or trying to eliminate the causes, which have been described earlier,
- 2) Cooperation of financial institutions in giving and recovering loans and interest, easier and acceptable loan disbursing policy and supply of working capital,
- 3) Favorable government policy with respect to import, export, project appraisal, tariff etc.,
- 4) Assurance of the uninterrupted power, water and gas supply and raw material supply,
- 5) Proper market planning through accurate forecasting and customer survey,
- 6) Controlling some of the environmental factors like labor unrest, strikes, political instability,
- 7) Conservative government policy to save the national industries, etc.

## 7. CONCLUSION

It will not be over-emphasized to say that industrialization and development of a country are closely related. Industries are established with a view to produce surplus. But there are many instances of industries becoming sick at some point of their life cycle. Although, such examples are many in underdeveloped and developing countries, it cannot be said

that no such examples are found in developed countries. In this paper an attempt has been made to identify the causes of industrial sickness and to show how far the application of the theories and principles of Production and Operations Management and Technology management play a role in the prevention of industries becoming sick.

## 8. REFERENCES

- 1) Report submitted by the "Sick Industries and Rehabilitation and Revival cell", Ministry of Industries, Government of Bangladesh, 1992.
- 2) Dey Ranjit kumar: "Introduction of new elements of cost to the method of Industrial prices in Bangladesh", Chittagong University Studies, Commerce-Vol. - 5, 1989, Page 327.
- 3) Decision : Special Issue on Industrial Sickness, Journal of Indian Institute of Management, Vol. 6, No. 1, January, 1979.
- 4) "Main paper on Sick Industries : Causes, Remedies and Prevention," web-site: EPP-Sick % 20 industries [1], html, page -14
- 5) Alam, S.M. Jahirul:" Industrial Rehabilitation Strategy Paper, Bangladesh", Prepared for the Ministry of Industries, August, 2003.
- 6) MIS Report, BSEC, 1998-99, '99-2000,2000-01.
- 7) Krajewski, "Production and Operations Management" , Addison Wesley, 1993
- 8) M, Christopher , "Logistic and Supply Chain Management", Pearson Edu., 2005
- 9) M. Anwarul Azim , "Technology Management and Development of Nations", UGC, Bangladesh.
- 10) Chase and Aqualino, "Production and Operations Management" , Addison Wesley, 1993