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**PRODUCTIVITY AND QUALITY  
THE TWO SIMULTANEOUS  
IMPERATIVES FOR PAKISTAN**

**BY  
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## PRODUCTIVITY & QUALITY THE TWO SIMULTLANEOUS IMPERATIVES FOR PAKISTAN

Dr. S. M. Naqi

### ABSTRACT

Pakistan in all sectors of economy is lagging behind in the productivity process. The result is that , for instance agriculture, which is large, does not produce enough, industry which is rather small also, does not produce enough, the service sector, employing nearly 50% of the workforce, does not know how even to measure its productivity.

Pakistan is thus left to import massively its wheat and edible oil requirements. There is a deficit on foreign trade account. Our currency has been sinking and the foreign debts have been mounting.

In addition, the quality of our products and services are rated as poor on an overall basis.

As a result. Almost none of our products secures premium in price. In fact, Pakistan has lost many of the established markets abroad. And even at home, smuggled goods are dominating and are sold at a quality premium.

There is, therefore, an urgent need for mounting a massive effort in raising the productivity and quality of the products and services. This is an imperative for not only growth but also for survival in the present global environment.



## INTRODUCTION

Under the 2010 programme of the Government of Pakistan, the prime minister has declared the year 1999 as the "Year of Productivity & Quality".

This measure is not without reason. Pakistan's various sectors of economy suffer from low productivity and at the same time, quality image of Pakistani goods and services is nationally and internationally very poor. And this position has persisted ever since the days of Independence in 1947.

The decadence has been pronounced and persistent. The result is that Pakistan has all along continued to lose established markets abroad. At the same time the country has continued to remain a member of the, so-called, Third World, the author would like to deal with in some detail.

## MEMBERSHIP OF THE THIRD WORLD

In order to be able to appreciate the context of this paper, one has to understand Pakistan and more so the "Third World" of which Pakistan has opted to be a part, thus keeping company with countries like Ethiopia, Nepal, Bangladesh, Ghana, Zambia, etc.

The unbalanced distribution of the world's wealth is demonstrated in the Third World by a range of social and economic indicators such as poverty, low per capita income, poor literacy levels, high infant mortality rates etc. However, The gape between development and underdeveloped, rich and poor, is a dominant feature of the modern world.

Almost all the Third World countries do share these common characteristics, most wide spread of which is poverty.

The poverty problem in Pakistan like all the other Lesser Developed countries (LDC's) is because of a low gross national income stemming from low Gross National Product. There is not enough production and its consequent income to go around so that no one would have to live in poverty.

To deal with the problem, programmes need to be designed to increase productivity of the people.

In addition to poverty, like other Third states, Pakistan has :

- Weak economic structure;
- A high proportion of population employment in the primary sector;
- Low agricultural productivity ;



- Fragmentary industrialization;
- Limited application of technology;
- Over-dependence on a small number of exportable cash crops;
- Dependence on foreign loans, aids and grants; and
- Almost total dependence on import of capital goods, such as machinery because of failure to produce them locally arising out of the lack of emphasis on engineering industry.

In the rural areas of Pakistan, the low productivity, poor infrastructure and small holdings are forcing people to live, largely, below the subsistence level. Farmers and workers alike tend to move in a steady stream to urban centres to seek employment and opportunities for work, without of course, possessing any skill or aptitude to work in the urban industries and businesses.

Someone has very aptly observed that "Development in the Third World means the over-development of material objects and under-development of people."

#### THE POSITIONING

In the price-quality matrix Pakistan has positioned itself in the Low Quality – Low Price quadrant as illustrated below:

**Positioning**

		Price	
		III	LO
QLTY	III	Germany	Japan
	LO	USA	Pakistan

For being in the Low Quality range, Pakistan goods compete only on the distinction of price. And there are many cost penalties from which the Pakistani industries suffer, for instance, like high price of low quality electricity, adhoc increases in labour cost, costs imposed by the various laws, high taxes on raw material imports and all pervading corruption, Price competitiveness, under these circumstances, becomes increasingly difficult. As a consequence, the trade bodies like All Pakistan Textile Mills Association



(APTMA) and the like continue to clamour for devaluation of the currency to attain price competitiveness overseas. No wonder that Pakistan rupee has all along been sinking in value as illustrated in the table below :

#### DOWN SLIDE OF PAK RUPEE

YEAR	RATE PER \$ (Rs.)
1947	0.470
1972	09.90
1983	13.17
1987	17.70
1990	24.00
1991	25.00
1994	30.62
1996	40.36
1997	44.31
1998	46.00
1999	51.70
	54.00

This devaluation process has had other adverse effects on the national economy apart from the general rise in prices and cost of living of the people. The rich have become richer and the poor, leading further to crime and social uneasiness.

From the matrix of positioning above, it will also be seen that the countries that have collectively positioned themselves in the Low Quality quadrants have consistently been deficit in international trade.

Even a country like the United States of America, a super power, merely by being on an overall basis a low quality producer of consumer goods has been posting massive deficits on current account. As an example according to the World Merchandise Trade, in 1998, USA posted a deficit of US \$: 261.6 million. Such has been the case of Pakistan, even though at a smaller scale in proportion to the economy but still unbearable.

These deficits have to be made up by borrowings. In consequence the foreign debt of Pakistan, for instance, is now nearly 4-1/2 times the total foreign exchange earnings of the country by exports viz. 7.718 Billion Dollars in the year ending 30<sup>th</sup> June, 1999.

The countries that have positioned themselves in the high quality segments of the matrix enjoy surpluses on current account.

Take the case of the two countries mentioned in the "Positioning Matrix", viz. Japan and Germany, despite recessions, these countries posted in 1998, the following surpluses in their foreign trade:



Japan	US\$	107.5 Billion surplus
Germany	US\$	73.1 " "

This data alone might, at a glance prove to a casual observer that it is High Quality that makes for national solvency and prosperity.

The issue of quality will be discussed in more details later in this paper. But to start with, the author would like to deal with the subject of productivity and the macro issues that provide the setting in which productivity takes its roots.

### CULTURE

Mankind's social heritage is called culture. This heritage has a tremendous impact on the mode of production and use of products.

In this sphere, the crops and commodities grown by people, the products made in small cottages as well as in the factories, the innovations of technology, the bundle of products that keep the wheels of civilization turning; all of these have an impact upon the economic condition of the people. In some respects, these products shape the nature of employment, of survival, growth and material progress. In other respect, they stimulate the patterns of like-style.

Whether in a free market or in a controlled market, the imperatives of investment, of demand and supply, of production, of trade, of consumption have a specific impact on society and its economic culture.

The culture of commerce has come to increasingly transcend political differences. The USA continues to give the Most Favoured Nation status of China despite abiding differences on issues such as human rights and systems because national interests and the culture of commerce outweigh all other consideration.

### SELF-RELIANCE

Self-reliance means self-sufficiency in all fields of like. It requires investment with sizeable initial capital outlays in areas where returns are long-term. Loans and aid do not lead to self-reliance. Self-reliance is a way of life. It demands self discipline and productivity in all fields.

There are two vital areas of self-reliance: finance and technology. A nation should live within its resources and debt is a trap that must be avoided. Wealth must be produced before it is consumed. Technology is vital for self-reliance because it turns the wheels of the nation. Self-sufficiency in food is vital and technology can play an important role in increasing the per acre yield.

There should be a three-pronged attack to achieve national self-reliance; education, economy and technology. Education is the building block of a nation, economy ensures



resources and technology turns the wheels of progress. Educated individuals achieve individual self-reliance which leads to national self-reliance. Economic self-reliance leads to investments in the advancement of technology. Technology needs team work between academia, R&D centres and industry to achieve self-reliance. Technology also needs accountability and monitoring. Technology is an evolutionary process that grows incrementally step by step, with occasional spurts of great inventions.

In the ultimate analysis, self-reliance will be assured only if our industries, our agriculture, our Research Organization, our Universities and Schools, our Services, etc. become more productive. There seems to be no other way.

## PRODUCTIVITY

In order to be able to position a product or service on the low price axis of the quality-price matrix and still remain profitable, the secret lies in raising the productivity of the systems. This assures production at a low cost. The fundamental and crucial input in the productivity process is the human effort based on knowledge, skill and motivation. To the human element is added technology, finance and management. In addition to these factors of production the Relations of Production which constitute the super structure and the umbrella under which these factors of production mingle and develop their interplay are the social, cultural and political factors. These relations of production provide an environment in which people deliver the output in terms of goods and services needed by the community. This means producing goods and services, which have an exchange value in the domestic and the international markets.

A time now has come that the markets have becoming global and it's only highly productive systems which can compete and flourish. Inefficient, lazy, incompetent systems will have to die. There is thus a compulsion for raising productivity of the organization in a country as a whole, to guarantee survival.

## PRODUCTIVITY DEFINED

Productivity is the measure of efficiency and is mathematically expressed as

$$P = \frac{O}{I}$$

Where P = productivity

O = output

I = input

The ILO has defined productivity in the following terms :

Products are produced as a result of the integration of our major Elements : Land, capital, labour and organization. The ratio of



These elements to the measurable units of production is productivity.

Other have used several other definitions like : productivity is the degree of the effective utilization of each of the most critical or scarce inputs.

On the philosophical level, productivity has been described in certain other ways

. Samples :

- Productivity is the mentality of progress, of the constant improvement of what all that exists;
- It is the certainty of being able to do better today than yesterday'
- It is the will to improve on the present situation, no matter how good it may seem, no matter how good it may really be;
- It is constant adaptation of economic and social life to changing conditions;
- It is the continual effort to apply new techniques and new methods;
- It is the faith in human progress;
- ABOVE ALL ELSE, Productivity is an Attitude of Mind.

### PRODUCTIVITY SCENE IN PAKISTAN

Looking at the 3 main sectors of economy in Pakistan, the position is not a very happy one in the context of productivity. Take for example the case of Agriculture sector.

#### AGRICULTURE SECTOR

Pakistan has been priding itself as an agricultural country with flat land, alluvial soil, Sweet water, sunshine and abundance of human labour. On the productivity front we find that not enough staple food is produced to feed the expanding mass of population. Enormous quantities of wheat have had to be imported every year to meet the domestic needs. This is as a result of the fact that the per acre productivity of grain in the country is one of the lowest in the world. It has been started that the per acre production in Pakistan is half of that in a neighbouring country with similar land and climatic conditions.

It is ironical that the area which now constitutes Pakistan was known as the granary of the entire sub-continent but now the neighbouring countries of the subcontinent have surpluses and are offering wheat to Pakistan for sale.

On the food industry scale prepared by the World Bank, Pakistan is one of the most vulnerable countries of the world. Nearly 17% of the imports of the country constitute



food items. And 17% is the highest for any country in the world. According to Dr. Anwar, the ex Director General of Agriculture Research Council of Pakistan, the food industry in Pakistan is likely to collapse in 5 years and there would be perpetual famines in the country. These are frightening predictions, which are likely to materialize unless something radical is done. There is thus an emergency on this account and the 46% of the work force employed in agriculture sector has to deliver atleast a productivity level of the land at the international level to avoid food riots and collapse of the system. The productivity in other areas of agriculture in the country is also equally poor, be that cotton, oil seeds, non-crop products, like live stock, etc. The productivity of this sector has to be increased at any cost and the national management has to heed the alarm and take emergent action in this context.

Almost similar is the case of Industry.

### INDUSTRY

On an overall basis, the industrial productivity is not very high. The result is that on price competitiveness our products cannot hold on their own in the export markets. Textile industry for instance, is the biggest sub sector of Industrial sector in Pakistan. The productivity of Textile Industry is so low that it cannot internationally compete on the basis of price. And because the productivity is low the apex body of the Textile industry viz. All Pakistan Textile Mills Association (APTMA) has all along been clamouring and pressurizing the Government of Pakistan to devalue the currency to enable it to quote competitive prices in the international markets. The result is, as already explained above, that value of rupee with reference to international currency namely US dollar has been adversely affected. The countries where industry is productive and quality produced is good, do not find need to devalue their currencies. On the contrary their currencies have been appreciating over a long period of time. Textile sub sector apart, other sectors

of industry, on an over all basis, have had about the same fate. What then is left is the service sector about which the author has the following comments to make.

### SERVICE SECTOR

A large sub-sector of the service sector of economy is the Government. Let alone improving the productivity of this sector, it is not clearly even known as to how to measure its productivity.

It is clarified, to start with, that the productivity of each individual and each organization can be measured and analyzed. It is also to be known that the mere act of measuring and analyzing alone increases the productivity by at least 10% because of the consciousness it creates. This fact has been empirically proved.

The government has an enormous impact on the productivity of a country. The State apparatus can help or hinder productivity in many ways.



This truth has been realized, for instance, by a City State called Singapore. Rising from a shanty town, Singapore has become a country. A mere population of 3 million, by the last count, has become a high income economy with per capita income of 26,730 U.S.dollars which is comparable with the United State of America. A country that has almost no material endowments and not even enough land and people, Singapore has built up a powerful economy through sensible policies and management.

They have, in the past, created a tight link between the annual increment in the salary of the state employees with the growth in GNP. If for instance the growth in GNP is 3 percent in a year, the increment in pay that the state employees get, is, say about 80% of the 3% or 2.4% and not 35% or 20% as we do in Pakistan. Increase in manpower cost has to lag behind the growth in productivity.

All functionaries of state in Singapore find that they have a stake in the economy and they become at every step a facilitating mechanism for those who directly contribute to the economy. The productive processes thus move with speed.

#### COMPARATIVE NATIONAL PRODUCTIVITY DATA

The overall value of National production is reflected by the Gross National Product (GNP). This is irrespective of the total number of workers contributing towards that production, but the efficiency of the whole national production systems is measured by the per capita income.

On the global level it is seen that the value of all the goods and services produced in the world is nearly 25 trillion US dollars. And the average per capita income shared by nearly 5.7 billion people of the world is thus nearly 4380 US dollars.

As against that the position of Pakistan and some other selected countries is presented below for comparison. This data is according to the World Development report 1998 published by the World Bank.

#### VALUE OF PRODUCTION (1997)

Country (Million)	Production (US\$ Billion)	G.N.P Income (US \$)	per capita
Switzerland	7.0	305	43,060
Japan	126.0	4,812	38,160
Germany	82.0	2,321	28,280
USA	268.0	7,783	29,080
Singapore	3.0	102	32,810
Italy	58.0	1,160	20,170
United			



Kingdom	69.0	1,231	20,870
Israel	6.0	94	16,180
Korea Rep.	46.0	485	10,530
Malaysia	22.0	98	4,530
Turkey	64.0	199	3,130
Thailand	61.0	166	2,740
Pakistan	128.0	64	457

SOURCE ; World Development Report 1998

It may be observed from the above data that against the highest per capita value of production of US\$ 43,060 and world average of US\$ 4,380, the per capita productivity of Pakistan is only a pathetic amount of US\$ 457.

On the overall basis the efficiency of production viz. Productivity per person in Pakistan is abysmally low i.e. 10% of the world average.

There is thus an urgent need to create full awareness and raise the productivity of our people.

#### PRODUCTIVITY ORGANIZATIONS

Asian Productivity Organization (APO) was formed in 1961, with headquarter in Tokyo, by certain member countries of the Asia Pacific Region to increase productivity, and consequently accelerate economic development in the region. This activity contributed enormously in the member countries that created National Productivity Organization by law as statutory bodies.

Pakistan was one of the original member of this 18 country organization but did not create a statutory body in the form of a National Productivity Council till only this year in April, 1999, under Gazette notification No.1(7)91-FO(NPC)Vol.IV dated April 14, 1999.

The names of all the member countries of APO, which now have statutory organizations to promote productivity, are :

Bangladesh  
 Republic of China  
 Fiji  
 Hong Kong  
 Japan  
 Republic of Korea  
 India  
 Indonesia  
 Islamic Republic of Iran  
 Malaysia  
 Mongolia



Nepal  
Pakistan  
Philippines  
Sri Lanka  
Singapore  
Thailand  
Socialist Republic of Vietnam

The functions of National Productivity Council of Pakistan will include :

1. To stimulate and generate productivity consciousness at macro and micro levels in the country.
2. To measure, evaluate and improve productivity of various sectors of economy.
3. To encourage and promote innovative methods for enhancing productivity and competitive edge.
4. To prepare master plan at national level to address needs of Human Resource Development (HRD) in the field of productivity;
5. To take steps to set up information collection and dissemination system;
6. To secure full benefit of Pakistan's membership of Asian Productivity Organization (APO);
7. To establish linkage between wages and productivity; and
8. To examine and suggest ways and means towards improving existing mechanism for higher productivity.

With this recent move stemming from the 2010 Programme for 1999 viz. "Year of Productivity & Quality" it is expected that Pakistan will proceed with some seriousness on the road to raising productivity and for this purpose, adequate resources will be allocated to the National Productivity Council formed this year (1999).

By raising productivity, the unit cost of production is reduced and thus a country becomes price competitive in the international markets without having to devalue the local currency. Also high productivity not only makes available exportable surpluses but also replaces the food items and other products that erstwhile continue to be imported from abroad.

#### THE SECOND IMPERATIVE "QUALITY"

Having dealt with the productivity, the first imperative, we move now to another subject of great importance . And that is "Quality".



## WORLD HISTORY OF QUALITY MOVEMENT

In the preindustrial – revolution era, skilled craftsmen produced products and, a person or a small group was responsible for the quality of the entire product. Industrial revolution brought with it, amongst other things, the division of labour, whereby each worker had responsibility for only a small part of a product. Foremen were responsible for coordination and quality control. Inspections were haphazard. In some cases, 100% inspection was carried out.

As pioneering move on the road to modern scientific quality management, Walter Shewhart of Bell Telephone Laboratories of USA introduced in 1924 through a Company Memorandum, the concept of statistical control charts, that could be used to monitor product quality. Around 1930, Shewhart, along with some other engineers of the Bell Labs. Introduced tables for acceptance sampling.

Much of Shewhart's thinking on these subjects was later published in his book, "Economic Control of Quality of Manufactured Products" (1931).

During the World War II, US Government, as a pioneering move, began to require vendors and supplies to use statistical quality control procedures and it was then that these concepts began being widely used in USA and then in other countries.

American Society for Quality Control was founded just after the war, and it has since then, continued to popularize quality control through publication, conferences and training programmes in USA. Other countries followed similar moves.

Armand Feigenbaum's book "Total Quality Control", was published in 1961. Up to that time, quality efforts were limited to inspection and correction. Feigenbaum expanded the concept of quality control to include the entire chain of production from design to sales and preventive as well as corrective actions.

W. Edward Deming is credited introducing statistical quality control methods to the Japanese manufacturers during the 1950s. An octogenarian, he is the foremost quality guru, widely accepted for placing Japan in its world leadership position in the quality of its manufactured products.

### PAKISTAN DRIVE TOWARDS QUALITY CONTROL

The history of "Quality" with reference to Pakistan, is briefly as follows.

For assuring quality of products the Government of Pakistan established "Pakistan Standards Institution (PSI) under Ministry of Industry in 1951. The charter for the PSI required the Institution to frame standards, implement them, promote standardization and control quality.



In 1958, the PSI was made an autonomous body under Societies Act 1960. More than 1400 standards were laid down. Industries did not, however, show much interest .

In 1961, the Government of Pakistan promulgated Certification Mark Ordinance. The purpose was to bring about uniformity in products for export and domestic markets.

In 1966, certification was made compulsory but so far only very few items were brought under Compulsory Certification.

In 1980, an ordinance was promulgated amending Import & Exports (Control) Act 1950. Under this ordinance, commercial courts were to be set up to deal with complaints on exports. These courts, however, were never established physically.

The lack of emphasis on the quality has adversely affected the export potential of Pakistan products and the country has, over a period, progressively lost markets.

Acute awareness is being now created about the value of quality and all the industrial organization, propelled by the trend of ISO 9000, are gearing up for installing systems to assure consistent high quality of their products and services. Pakistani exporters, so far, have positioned their products at "low price – low quality" and now an endeavour is being made to reposition the products of the country at "low price – high quality". This repositioning will help to raise the export revenues in the course of time.

#### DEFINITION OF QUALITY

Quality means different to different people. The thinkers, known as Quality Gurus and others, have defined Quality in the following ways :

- Quality is a predictable degree of uniformity and dependability, at low cost and suited to the market (Deming).
- Quality is fitness for use (Juran).
- Quality is conformance to requirements (Crosby)
- Quality is the (minimum) loss imparted by the product to society from the time the product is shipped (Taguchi);
- Quality is in its essence a way of managing the organization (Feigenbaum);
- Quality is correcting and preventing loss, not living with loss (Hoshin), and
- Quality is the totality of features and characteristics of a product, service, or process, which bear on its ability to satisfy a given need, from the customer's view point (British Standards Definyopm).



The above definitions generally captured the spirit of the concept of quality but at the core of any quality programme the key requirement is "Customer's satisfaction or satisfaction of the user of goods and services produced.

### INPUT AND OUTPUT RELATIONSHIP

The quality is eventually an output of a certain set of inputs. These inputs broadly can be listed as follows :-

1. Design;
2. Raw materials intake;
3. Material Specifications;
4. Quality of raw material, used;
5. Plant and machinery;
6. Technology;
7. Instrumentation;
8. Labour skill;
9. Supervision; and
10. Management Method and System, etc. etc.,

The quality of output will depend on the quality of inputs. The higher the quality of raw materials, design, etc. will be the output in terms of product quality. And conversely if the quality of inputs is poor, the quality of outputs will be low. In the inventory of these inputs the last set of inputs are the skill, competence and the motivation of the people involved in the production process. These are more crucial than all the others put together because all the rest are subordinate and incidental to the knowledge, skill and commitment of the people involved in the productive processes.

### ISO 9000

ISO 9000 quality is now being insisted upon as a pre-requisite for export of goods and services to Europe and other allied countries. The ISO 9000 certification only tends to guarantee standardization of the systems and holds and assurance to the customers, clients and consumers that the products delivered are of a consistent quality.

This standardization of the systems involving massive documentation obviates the possibility of bulk supplies being inconsistent with the samples shown and approved at the time of securing the orders.

### CURRENT JAPANESE EXPERIENCE

The Japanese, upto the Second World War did not have much reputation in terms of quality products. But they learnt statistical quality control and quality management methods from the American experts and implemented these concepts in letter and spirit.



The result was gradual and surefooted improvement in the products and services till the Japanese reached the level of quality management to the point of fine art. The result now is that anything carrying the label of "Made in Japan" is excellent in quality. The seven techniques, the Japanese learnt from the Americans, and now regularly use, are as follows:

1. PDCA (Plan,DO,Check,Act) Deming Cycle
2. Check Sheets
3. Pareto Diagrams
4. Cause and effect diagrams
5. Histograms
6. Scatter diagrams
7. Control charts

The statistical quality control instruments are constructed in systematic manner and used for diagnosing the weaknesses in the products with a view to finding solutions eradicate defects that lead to rejections. They have refined their processes to such an extent that "Zero Defect" is now almost the norm in the Japanese Industries.

### QUALITY IN JAPAN

In 1946, Magil and Sarashn of General Headquarters of U.S. Occupation forces gave lectures on QC to the Japanese engineers and people concerned in electrical and communication technologies. The textbook used was American War Standard Z.I.

In 1945, JSA, (the Japanese Standard Association), was established to propagate JIS (the Japanese Industrial Standards), and in 1946, JUSE, (the Union of Japanese Scientists and Engineers) was established to spread management techniques of QC (Quality Control), IE (Industrial Engineering ) and OR (Operation Research).

QCRC (QC Research Group) consisting of Professor Ishikawa, Mizuno, Asaka, etc. was born in JUSE to study theories of QC and their practical application in industries in order to rationalize Japanese companies, improve people's standard of living and enhance quality of export items. For that purpose, first QC Basic Course was held in 1949. The seminar, covering thirty working days over a span of six-months period, has been repeated until today. Other than this, QC Top Management Course, MC Course, Beginners Course, QC Course for Salesmen, and other courses on OR, sensory test, and QC Circle Leaders' Course have been held until today. JSA also publishes a periodical magazine called "Standardization and QC", while JUSE publishes magazine called "Statistical QC", "FQC (QC for the Foremen)" as well as the magazine "Hinshitsu ("Quality"), for the Japanese Society for QC.

JUSE invited from USA, Dr. Deming in 1950 and Dr. Juran in 1954 for lectures on QC, which impressed the Japanese audience deeply. In 1951, JUSE established the "Deming Prize" System. The "Deming Application Prize" has since been very instrumental in



improving the product quality as well as the quality of Japanese companies in the process of making efforts to receive the prize.

Although, in the beginning, the Japanese people learned QC from the American people, they developed it into QC which suited better to the Japanese climate and nature of the people with unique concepts and techniques. The traditional Japanese enthusiasm in education helped the development. Historically, the Japanese have always been keen on education. Literacy is over 99% graduate from high schools and 36% from colleges or universities. The general education practice in Japan seems to be better than in western and other countries. And the fact that QC education was given to the people at all levels from top management to the foremen, facilitated development of CWQC (Company-wide Quality Control) involving all the people in all the sections as led by the top management. As a result, even foremen started activity for analyzing and improving processes, leading to the birth of QC circles (Small group activity) in 1962. QC circle is one of the major characteristics of quality movement in Japan.

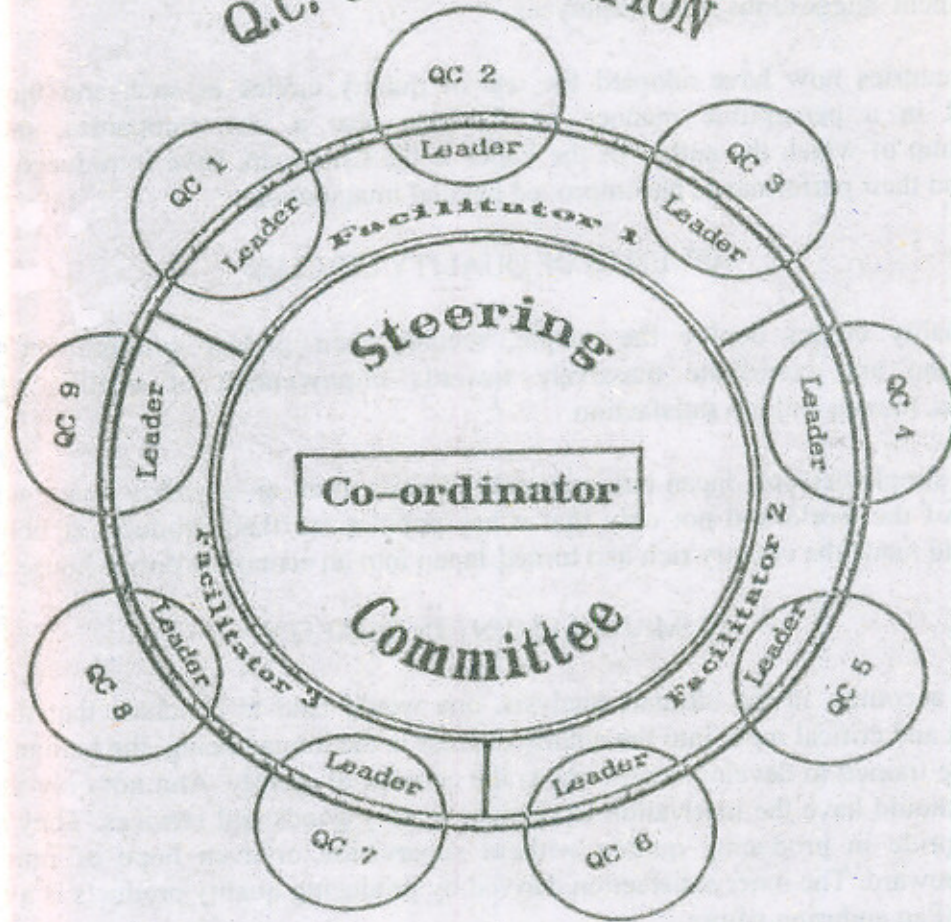
### QUALITY CIRCLES

As a part of the implementation of the Statistical Quality Control mechanism, the Japanese devised, as mentioned above, quality circles. The first quality circle was helped to be set up by Dr. Karou Ishikawa of Tokyo University in 1962. This circle was so successful that now almost all organizations have quality circles. Even the government departments and services in the private sectors have set up quality circles. It is a simple collection of interdisciplinary group from amongst the workers who sit in a meeting periodically to think in a systematic way to analysis and improve the quality of the products and services that they deliver. They also attend to items like productivity improvement, safety, environment, etc.

The general organization of the quality circles in a company is graphically given below:-



## Illustration Q.C. ORGANISATION



The duties and functions of circle members, their leaders, facilitators, coordinators, steering committee, etc. are all laid down and faithfully followed.

### QUALITY CIRCLES IN OTHER COUNTRIES

Quality circles are not entirely a new idea. Problem-solving groups like them have existing in other countries since the 1930s. Productivity improvement groups, which are part of many gain-sharing plans, strongly resemble quality circles. For decades there have been reports of the successful use of productivity improvement groups by many well-publicized companies.

The current popularity of quality circles in the various countries has been stimulated, as explained above, by their widespread use in Japan, where much of their development



was due to the early work of Edward Deming and Joseph Juran. Both Deming and Juran made frequent trips to Japan in the 1950s. Deming emphasized statistical quality control while Juran emphasized the advantages of good group process in getting quality improvement suggestions from employees.

Many countries now have adopted the use of quality circles as such and they have benefited in a perceptible manner. In Pakistan also a few companies, including SPELGroup of which the author of the Paper is the Chairman, have introduced quality circles and their performance has improved beyond imagination.

### BENEFITS OF QUALITY CIRCLES

The quality circles deploy the people, secured their greater commitment to the organization and contribute massively towards improvement of quality, working conditions, morale and job satisfaction.

By these simple devices, Japan has, on an overall basis, built up a quality image which is an envy of the world and not only that it has popularized their products at home and abroad and made the country rich and turned Japan into an economic power house.

### HUMAN ELEMENT IN QUALITY

From all accounts, in the ultimate analysis, one would tend to conclude that the most important and critical input into the quality process is the human being, the human beings have to be trained to develop sensitivity to the concept of quality. And not only that, the workers should have the motivation to produce quality goods and services. They should develop pride in producing quality without supervision or even hope of immediate extrinsic reward. The inner satisfaction derived by producing quality products is a reward by itself of an enduring nature.

### QUALITY CULTURE

Culture is a human concept. It is the way people work and live. It is the process driven by values which the people imbibe from their elders, parents, teachers, preachers, and leaders of the society. Japan somehow has developed this culture and since no one in isolation can deliver quality in a total system, where every one is interdependent and interrelated, a country wide culture is necessary. This is what Japan seems to have done. They have created not only the company-wide quality culture but also the country-wide quality culture. All the inputs that each organization draws from its environments, is on quality and therefore, whatever is produced, ultimately carries the stamp of quality. At the same time, the Japanese society is also driven now by a concept like "Kaisen". This word in Japanese means "Continuous improvement". Simply stated, all the time, every one continues to bring improvement in every aspect and sphere of life including the products and service people produce. And improvement has no limits.



## QUALITY AWARDS

In order to introduce quality culture into the entire society as a whole, certain countries have introduced National Quality Awards for which the entrepreneurs large and small compete, to win.

For instance, Japan's highest national quality award is named after the American expert who taught management of statistical quality control to the Japanese. This prize is called the Deming Quality Award.

There is Deming Prize for individuals. There is a prize for application of Company Wide Quality Control(CWQC) and there is an award for factories.

Similarly, the Americans confer Malcolm Baldrige National Quality Award for American Manufacturing Industries,

There are awards for business excellence even in countries like Scotland to recognize business leadership, customer satisfaction, impact on society, people satisfaction and business results.

The planning Commission of Pakistan has also lately been thinking of introducing some such awards to recognize quality of management, quality of products and services and above all to recognize an organization endeavouring to secure customer satisfaction at home and abroad.

While making this last observation, it may be stated that in the ultimate analysis, "Customer Satisfaction" is at the centre of all quality improvement programmes.

## CONCLUSION

From this paper, it would be seen that Pakistan has a gap of immense proportions between the actual performance and compulsions of the modern global markets in terms of Productivity and Quality of goods and services that create wealth for people of the country to share. An acute consciousness, in this regards, needs to be created so that the country could get quickly out of its present state of dependency and resignation and break the shackles of bondage that foreign debts and the all pervading poverty impose.

The route to salvation lies in raising productivity of the people and creating quality standards which should be the envy of the world.

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#### BIBLIOGRAPHY

Aguayo, Refael, 'DEMING; Who Taught the Japanese About Quality'. And article published in World Executive Digest/June, 1992.

Amu Gruppen, "Training for a World of Change". Sweden.

Asian Productivity Organization, "Directory of National Productivity Organizations in APO Member Countries", 1996.

----"Comparative Information on Productivity Levels and Change in APO Member countries, 1992.

--- "Cooperation and Productivity for Growth", 1993.

--- "Top Management Forum – Human – Centred Management, 1993.

--- "Asian Dynamism Through Human Resources Development", 1989

--- "Comparative Information on Productivity Levels and Changes in APO Member Countries, 1993.

Aziz Ahmed (Ed.) "Report of the Sixth Management Convention- Feb. 8-9, 1992".  
Lahore: Management Association of Pakistan.

Bajwa, Muhammad Yaqub, "Search for Islamic Work Ethic", An article published in The Nation daily, Lahore April 26, 1992.

Bashir, Misbah, "Production management Assignment" – a research assignment ; student IBA, Punjab University, Lahore, 1995. Courtwright,

Courtwright, William E, "Quality Circles Successes and Problems at Hughes Aircraft", An article published in "Improving Competitiveness Through Quality Circles", By Lahore University of Management Sciences, December 27-28, 1993.

Domingo, Rene T. "Quality Means Survival", an article published in World Executive Digest/June, 1992.



- Eul Yong Park, "Management of Human resources and Korean Industrialization"; 1960-90. Korea Development Institute, June, 1944.
- Farr, Alan, "Establishing a Quality Control Circle Programme" An article published in "Improving Competitiveness Through Quality Circles", by Lahore University of Management Sciences, December 27-28, 1993.
- Faseeh, Subeen, "Production Management Assignment"- a research assignment; student IBA, Punjab Univerasity, Lahore, 1995.
- Fletcher, Dick, "Quality Circles at Wedgwood", An article published in "Improving Competitiveness Through Quality Circles", by Lahore University of Management Sciences, December 27-28, 1993.
- Greshner, Oleg "Reasearch Why QCCs Do Not Attain Expected Results", An article Published in "Improving Competitiveness Through Quality Circle", by Lahore University of Management Sciences, December,27-28, 1993.
- Hasan, Mahrukh, "Production Management Assignment"- a research assignment; student IBA, Punjab University,Lahore, 1995.
- Hutchins, David, "Quality Caircles – The Missing Link",An article published in "Improving Competitiveness Through Circles", by Lahore University of Management Sciences, December 27-28, 1993.
- "How Quality Goes Round in Circles, An article published in "Improving Competitiveness Through Circles", by Lahore University of Management Sciences, December 27-28,1993.
- ISO 9000 – "Quality Assurance and Quality Management Standards", Pakistan Institute of Quality Control, Lahore 1994.
- Khalid, Syed Mohammad, "Pakistan Stel – The New Look", An article published in Business Recorder daily, Lahore: June 23, 1994.
- Lodhi, Maudood Ahmad, "Human Resources Development", An article published In Business Recorder daily, Lahore May 30,1994.
- "Moudular and Individualised Training System and Preparation of Teaching/Learning Material", Sweden: Swedish International Development Authority.
- Naqi, S. M. APO Survey Report on Wages, Incentives and Productivity Linkages for Pakistan, 1992.
- Nasir-ud-din, "Higher Education: Social and Economic Implications", An article



Published in The Nation daily, Lahore: June 24, 1994.

Ndala, Roney, "Establishing The Climate for Quality Circles", An article published In THE CENTURION, a half yearly publication of Century University, New Mexico, 1989.

Rooney, Jim, "Quality Control Groups at Rolls-Royce", An article published In "Improving Competitiveness Through Quality Circles", by Lahore University Of Management Sciences, December 27-28, 1993.

Sasaki, Naoto, "Cases of QC Circle", An article published in "Improving Competitiveness Through Quality Circles", by Lahore University of Management Sciences, December 27-28, 1993.

Sheikh, Faisall Azhar, " Self Reliance", Letter to the Editor, published in THE NATION Daily, Lahore: July 22, 1999.

"Total Quality Environmental Management", Global Environmental Management Initiative, Washington DC, 1992.

Walton, Mary, "The Deming Management Method", The Putnam publishing Group, New York : 1986.

World Bank. "World Development Report", 1998.

Youssef, Nadia H. "Education & Female Modernism in the Muslim World", An article Published in Business Recorder daily, Lahore: June 9, 1994.

---"Education & Female Modernism in the Muslim World", An article published in Business Recorder daily, Lahore: June 23, 1994.