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# Quality and Productivity in the 21<sup>st</sup> Century

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# QUALITY AND PRODUCTIVITY IN THE 21<sup>ST</sup> CENTURY

by

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## INTRODUCTION

**I**ntroduction of the principles of Frederick Winslow Taylor's "Scientific Management," at the dawn of 20<sup>th</sup> century, had a great influence on productivity which enabled the United States to take world leadership in industrial production. The productivity movement continued and still is a major part of long-term plans and programs in all countries.

Establishment of Asian Productivity Organization (APO) in 1961 was a cornerstone for enhancing productivity movement in Asian countries, and APO has played an important role in the region since then. Although there has been always a demand for quality products, it seems customers, till 1970, did not have so many choices due to low competition till 1970.

During 1970s, quality began to become the determining factor for purchasing goods and services, and organizations paid more attention to the quality of their products. The national broadcaster NBC put to air a documentary program titled "If Japan Can Why Can't America?" Exactly from July 24, 1980, featuring Dr. Deming and the principles he had taught the Japanese to raise the productivity and quality of their output is known as a turning point in the history of quality development. At that period a considerable change in demand for quality happened, which can be considered as a world movement, and even a revolution, due to its widespread impact on all over the world. It is noticeable that formation of TC 176 in ISO to develop quality assurance and quality management standards also dates back to 1979.

In 1980s, the discussion turned to the relative importance between productivity and quality and questioning which one should be tackled first. However, this is obvious that history of quality is far longer than that of productivity, but regardless of this historical fact, considering their true meaning, they are not separable. Quality and productivity are the main performance indicators of any organization. An organization with high productivity but without quality products cannot be imagined. On the contrary, quality products necessarily entail productivity of the organization. This is why organizations like APO, and the national bodies, started to include quality explicitly in their scope of main activities in order to enhance the productivity of their organizations. Most notable examples are Thailand, Philippines, Mongolia and Singapore.

If we go through classic definitions of quality, e.g. from quality gurus such as Dr. Shewhart, Dr. Deming, A.V. Feigenbaum, and the others, the productivity aspect can be observed more clearly. Definition of quality and especially, that of quality improvement in international standards shows

clearly their close relationship. Besides, in all definitions of TQM the same is true with more or less emphasis on their correlation.

Viewing quality management international standards can reveal this argument, especially if we note the two new definitions in ISO 9000:2000- effectiveness and efficiency.

In some quality and productivity literature a combined term, qualitivity, is recently introduced which bear both meanings at the same time.

In recent 2-3 years, the definition and understanding productivity have changed and have been converged into quality. All these remind the famous brilliant saying of Dr. W.E. Deming's: "Productivity goes up as quality goes up. This fact is well-known, but only to a select few."

This paper is intended to elaborate the historic and natural relationship between quality and productivity and to review the insights of quality leaders and standards. Also it will endeavor to show that serious adoption of quality projects will result in productivity improvement too and finally some examples and success stories of quality and productivity initiatives in the 21<sup>st</sup> century will be introduced.

## EVOLUTION OF PRODUCTIVITY

Initially, it was supposed that productivity is the ratio of output to input considering the four factors, customers' satisfaction, employees' satisfaction, making use of the appropriate technology, and the optimum utilization of all available resources. Although many methods and schemes are developed for productivity improvement, it is a cultural issue which needs change in mindsets and the way one thinks about work and in the broader sense, about life. The general aim is to enhance effectiveness and efficiency for a better life and prosperity for human being and its society. Many definitions for productivity are presented. Most of them are centered on the relationship between the input and output of the products.

Looking at the history of productivity in the last 4-5 decades, it reveals that, in 1970s the emphasis of productivity was on cost reduction, in 1980s it shifted towards quality and in 1990s speed and flexibility were points of stress. In the new era, stress is mainly on value creation. As we proceed in time, new challenges for productivity are needed. Generally, productivity is viewed as a process of optimization. This approach ignores the value added in products. It is essential to recognize that productivity consists of a double approach to usage optimization of resources and enhancing the value of the output. This is a very important dimension of productivity. Value of products is determined and judged by the customer, although the benefits of all stakeholders should be considered and should be taken into account. Low defects, timely delivery, and minimal cost, are the factors which always remain as the key elements of business.

Many people consider innovation and mass customization as the most likely future trends. In the early 1970s, countries started from industrial engineering techniques and enhancing productivity awareness then technology transfer in the late 1970s to enable manufacturing industry to produce more sophisticated products and to increase diversity in their products. Then it started to pay more attention to research and development, product and process development, improved design, brand name marketing, quick prototyping, improving in time- to-market, and finally component sourcing and production. In 1990s, the service industry accounted for over 80% and productivity put emphasis on it. Naturally all productivity activities should be reviewed for its appropriateness with the change trends and activities planned. It is the economic and social environment that shapes the

productivity movement. Today, productivity is improvement of quality of life for all people of the society in response to such issues as environment, globalization and world competition.

## EVOLUTION OF QUALITY AND RELATION WITH PRODUCTIVITY

The most common and conventional definition of quality is responding to needs and expectations. Definition of quality, as a concept, has had a similar journey.

Quality was previously defined as conformance to standards and specifications. Quality control was limited to the separation of conforming from nonconforming product. Due to the development of needs and expectations, definition of quality has evolved. Statistical quality control, statistical process control, quality assurance systems, quality management systems, total quality management and business excellence models have been formulated and implemented in many organizations. Those countries, which have already established schemes for national quality awards, have now become numerous. Still many others are endeavoring and are in the way. The well-known definition for quality as “fitness for use” has now evolved into “full customer satisfaction” and delighting customers by “attractive quality”, which is linked to creativity and innovation. According to new requirements, quality may be defined as the “realization of total capabilities of the organization to achieve its strategic objectives to the benefit of its customers and all other interested parties”. Today, quality is “quality of performance”, having in its core the quality of products and of processes.

In order to have some ideas about the relationship between quality and productivity, one may verify well-known definitions related to the issue. Let's have a look at the definition of TQM according to BSI:

“A management philosophy embracing all activities through which the needs and expectations of the customer, the community and the objectives of the organization are satisfied in the most efficient and cost effective way by maximizing the potentials of all employees in continuing drive for improvement.”

Also, definition of Professor J.M. Juran in this connection is considerable:

“TQM is set of management processes and systems that create delighted customers through empowered employees, leading to higher revenue and lower cost.”

Among quality gurus those who have pointed out explicitly the economic aspect of quality after Shewhart are A.V. Feigenbaum and Kaoro Ishikawa. Feigenbaum, in his definition of TQC emphasizes for most economical levels: “Total Quality Control is an effective system for integrating the quality development, quality maintenance, and quality improvement efforts of the various groups in an organization so as to enable marketing, engineering, production, and service at the most economical levels which allow for full customer satisfaction”. Also, it seems Ishikawa knows the price of the product as one of its quality features in his famous work, “What is Total Quality Control? The Japanese Way”.

There are two new terms defined in ISO 9000:2000 standard, which are very relevant to the issue, effectiveness and efficiency.

Effectiveness: Is the measure of the extent to which planned activities are realized and planned results achieved.

Efficiency: The relationship between the results achieved and resources used.

These two key words represent the focal point of any of the two consistent pair of quality management standards ISO 9001:2000 and ISO 9004:2000, respectively. In ISO 9001:2000, the aim is to provide confidence as a result of demonstration, in product conformance to established requirements. In ISO 9004:2000, the aim is to provide benefit for all interested parties through sustained customer satisfaction.

In these standards these points are clearly indicated:

ISO 9001 focuses on the effectiveness of QMS in meeting customer requirements

ISO 9004 focuses on continual improvement of an organization overall performance and efficiency as well as its effectiveness.

It goes without saying that, to be successful, companies must meet requirements in an efficient way, which means to reduce waste, rework, etc. in order to remain competitive. Reducing costs is only meaningful when the requirements are met first. Without meeting requirements first, a company has defective products, dissatisfied customers, and as a result, reduced sales and profit.

Some have correlated these with “Doing the things right” and “Doing the right things”. I think the complete meaning lies in “Doing the right things right” which means having both effectiveness and efficiency at the same time.

And finally, definition of quality improvement in International Standard ISO 8402:1994 gives some ideas about close relation between quality and productivity:

“Actions taken throughout the organization to increase the effectiveness and efficiency of activities and processes in order to provide added benefits to both the organization and its customers.”

This definition is changed to the following statement in the new standard ISO 9000:2000:

“Part of quality management focused on increasing the ability to fulfil quality requirements”.

All these are based on this well-known saying of W.E. Deming: “Productivity goes up as quality goes up. This fact is well-known, but only to a select few.”

In the early years of 50s, productivity was given the utmost attention. Deming started to explain the determining role of quality for productivity improvement. His famous “production chain” analysis was the principal discussion he always presented to top managers in the world during his seminars for many years.

The chain shows that if quality improves, cost can be decreased, hence, productivity will improve and helps capturing more market share. Also company will stay in business. The price of any product is driven by profit and the cost to produce ( $\text{Profit} = \text{revenue} - \text{expenses}$ ). Voice of the customer (what the customer wants) and portfolio optimization (what we produce to meet customer needs and expectations) can affect revenue. Expenses are affected by the Cost of Poor Quality.

It is shown that COPQ is due to high cycle time, long development time, high defect rates, poor productivity, excessive inventories, and training without ROI, lack of customer focus, and many other non-value-added activities. Lowering COPQ is a difficult strategy in short term, but it is the only way for long term profitability, competitiveness, and the ability to weather hard times. Profit

cannot increase for long without a focus on improving quality in terms of what customers want, plus how much they are willing to pay and the costs associated with producing what they want.

Dr. J. M. Juran has the same point of view:

“Assuredly, the quality managers will not come up with proposals for improving the company's business strategy until they learn to be at home in the business department and among business problems.”

It is evident that compared with late 1970s, parallel with the evolution of definition of quality, the scope of quality assurance has widened from products to processes and now to the overall performance of the organization. Quality management has also evolved and carries a strategic meaning now. Today, managing for quality is more and more linked with strategic deployment and strategic planning, which in turn, needs careful optimization of business items in long term, i.e. integration of financial goals with quality goals. Organizations should identify their key performance indicators, KPIs, and align their strategy with it. Quality is one of the most important indicators. When ISO 9001:2000 starts with this sentence: “The adoption of a quality management system should be a strategic decision of an organization”, it means quality is necessary for strategy and also, quality should be viewed strategically.

## NEW AGE, NEW REQUIREMENTS

The new age is marked by two clear trends, namely, rapid changes, many times at lightning speed, and greater volatility brought about by rapid technological advances and globalization. Competition today is intensified by developments in new products which are replacing old ones at an accelerating rate. Product life cycles have drastically shortened and the market place is no longer local. For business to survive, it is crucial that they devise new ways to leverage on resources wherever they are available, and recognize that their value lies in product innovation. Therefore it is necessary to align with the change and recognize the speed at which it is happening. Considering this perspective, countries are faced with main challenges. In the period of rapid transition, the managers have to learn to look for change and see it as an opportunity. Needs and expectations of market in general and those of the customers in particular are changed and shall be fulfilled for the success of the organization.

In addition, in recent decades, due to fascinating changes in IT and “information explosion” as P.F. Drucker points out, knowledge is going to be the dominant building block of economy and business. His recent works explain the idea in detail and are convincing enough. Socio-economic researchers believe that the post-capitalist societies will form on the basis of knowledge. Singapore as a good example, is experiencing this transformation. Their strategy for socio-economic development is to build a knowledge – based economy. They have defined paradigm shifts for such a society:

- from resource – based growth to innovation – driven growth,
- from scarcity of resources and diminishing returns to abundance of knowledge and increasing returns,
- from perfecting the known in stable environment to imperfectly seizing the unknown in an era of rapid discontinuous change.

Deepening and broadening specialization on one hand and, on the other hand, IT and globalization have caused dramatic changes in the supply and demand for “work”. Due to development in information technology (IT), and changes in employees' culture and expectations, manpower,

compared with machine and equipment, plays a more effective role and is known as the most vital asset of any organization.

As, the main value of any organization is in its skillful employees, suitable response to this requirement enables organizations to increase their capabilities for satisfying the ever-increasing needs and expectations of their customers. This, in turn, brings more competitive power, more market share and finally, long-term success. In this regard, the main responsibility of managers, which helps achieve these goals, is effective training and educating of the employees. The most important duty of any organization is the maintenance and empowerment of its employees through training and education. Considering the trend of knowledge-based economy, the organization's capabilities will enhance and its potentials, realized. The ultimate purpose of management is to make human energies productive for the common good. . Whether one makes soap or runs a hospital, the ultimate purpose is a human achievement.

Actually, due to globalization, problems encircling organizations have also enlarged. It is possible to overcome these obstacles by liberating the inherent capabilities of employees in its true meaning. It is necessary to motivate, train and educate attitudes and align them with the strategic goals of the organization. It goes without saying that the main asset of any organization is its human resources and success depends on how the organization makes use of this advantage.

The following table shows some main points as a comparison:

<b>Yesterday</b>	<b>Today</b>	<b>Tomorrow</b>
Quality Control	Quality Management	Innovation and Quality
Incremental Improvement	Continuous Improvement	Breakthrough Improvement
Cost Reduction	Cost Management	Value Creation
Use of Data	Use of Information	Use of Knowledge
QCs at Rank and File Level	QCs Across Departments	QCs Across Organization
Committed Workforce	Quality Workforce	World-class Workforce
Training for Employment	Training for Development	Training for Employability
Problem-solving Mindset	Quality Mindset	Innovation Mindset

Today, and with more emphasis tomorrow, value creation is the core of quality. As it was noted, value can be defined only by the customer. The essence of business is creation of value for the customers. It is this customers' focus and value creation, and also process re-engineering, which link productivity to total quality improvement.

Every organization consists of systems, and systems are formed by processes. Every process has a role in the supply chain and it is assumed for intended added-value in the overall process of product realization.

It is expected that organizations would be enough intelligent to adopt business processes with more added-value for the customers. This needs continuous re-design and re-engineering of processes. Employees are the most important part of these processes. In the final analysis, they can bring about success or failure. The saying, "Company is its people." is more true today

The art of management is to specify and establish the required processes appropriate to the objectives and managing them effectively. For this purpose, every process needs to have an owner, with assigned responsibilities and necessary authorities. For quality and productivity improvement, analysis of processes and their interaction are necessary. With process ownership and delegation,

employees are more satisfied and they feel being effective in achieving objectives of the organization. Employees' involvement has an effective impact on motivation and process improvement.

Achieving goals and objectives is only possible with employees' full participation and involvement. It is clear that the extent of success depends directly on human resources development (HRD) and human resources management (HRM). Both leadership and the institutionalization of leadership play a very decisive role here, and are very important to make the intended changes happen.

It is necessary to emphasize that a breakthrough improvement in organizational performance is only possible with development in creativity and innovation. To satisfy the above, an increase in knowledge and culture is essential. It is feasible to motivate employees of an organization, and as a result the whole organization, in order to be creative and innovative for the realization of quality strategies.

As much the organization values creativity, producing more added-value will be possible and hence, the more productive the organization will be. That's why in modern organizations, even up to 25% of employees' time is paid for and left free for their personal innovation. He can utilize the facilities of the organization for his own leisure and act at his own will. In some organizations, employees are rewarded for any new idea regardless of its usefulness. In these organizations, managers appreciate those who think and generate ideas for improvement.

During the last decades, quality tools and techniques are widely used for productivity improvement. It is notable that a combined term "quality", was introduced in some quality literature, represents both meanings of quality and productivity at the same time.

One may argue that productivity is broader than quality but regardless of this view point, It is clear that an organization which is merely productive is not necessarily appreciated by its customers, but the opposite is always true, that an organization with top quality products can enjoy customers loyalty and stay in business. In other words, productivity is subject to quality and as a matter of fact, it is proved that the way to productivity passes through quality.

There are many examples in the Asian countries, which support this idea. The following are some:

- Six Sigma and learning organizations are recently included in the six thrust areas of Asian Productivity Organization (APO) for the years ahead.
- APO Secretary General, in his new year message 2001, stressed on quality, cost and delivery as the factors necessary for economic development and pointed out that the goal of productivity is "a better quality of life".
- The APO official newsletter, "APO news", started a column called "Productivity Showcase", in Feb. 2001, the first report of the series was about Maeda Corporation, a construction company involved in dams and hydroelectric power plants, winner of Deming Prize in 2000 as a success story of productivity improvement.
- Cooperation agreement between APO and ASEAN for implementation of TQM in ASEAN countries, taking help from Japan Standard Institute for TQM knowledge and expertise.



- From 1999, APO decided to encourage member countries to try for quality and business awards. It is believed that productivity and quality awards that recognize excellent organizational performance have emerged as a significant component of productivity promotion and enhancement strategy. Two special meetings in Japan and Fiji are held. It is intended to enable APO member countries to gain new insights from the various national strategies for quality and business excellence awards, and from emerging trends in the design of such awards.
- In Mongolia, during the recent years, they have demonstrated placing high value on HRD. This is considered as an investment for infrastructure augmentation for longer-term development. They are eager to learn new ways to improve the productivity of people's life. They are adopting intensively quality control circles and ISO 9000 standards highly recommended for both manufacturing and service sectors. They estimate a substantial quality and productivity growth at all levels and consequently in quality of life. The implementation program includes from 5S, the industrial housekeeping to Six Sigma, as the most recent and advanced philosophy and technique for quality excellence. The thirst for knowledge, the drive to excel, combined with the young and enthusiastic population suggest this chance for Mongolia to emerge in the next 20-30 years as one of the notable small economy success stories.
- In Thailand, the story is more impressive. Establishment of Thailand Quality Award (TQA), in October 2000, by Thailand Productivity Institute (TPI) is an important incentive for companies to improve their quality and productivity. It is confident that TQA will help to speed up the country's productivity and quality movement resulting in increased competitiveness in the future. Also, TPI believes benchmarking as the most effective tool for enhancing organizations' competitiveness through improving quality and productivity. They decided to perform a benchmark study on strategic planning and also to design a self-assessment tool for Thai industries based on MBNQA Criteria. A center called "Center of Excellence on Benchmarking" is established since Oct. 2000 and the issue is considered as one of the major areas for providing training and consulting services to equip organizations with benchmarking capabilities and emphasizing on using statistical techniques to improve quality and productivity. To build its in-house capabilities in benchmarking, they started to train staff as well as developing casebooks of the best successful practice programs of leading companies in Thailand. In year 2000 another outstanding initiative was launched by TPI for teaching youth productivity called "Think Smart, Act Smart". The campaign was designed for high school students. The goals were to enable students to develop analytical and creative thinking habits as well as a mindset for constantly seeking ways to improve themselves and their environment. The program included teaching PDCA, 5S, flow charting, Pareto analysis, fishbone analysis, pulling techniques and project management. This has brought very interesting fruits.
- In Malaysia, productivity, quality and environment are combined in management initiatives taken in the leading organizations. Improvement tools and techniques which are widely used are brainstorming, process flow chart, walk-through survey, plant layout, Eco-mapping, material and energy balance, fishbone chart, process control chart, benchmarking, Pareto analysis and FMEA.
- There are many other cases as schools of learning.

## QUALITY. PRODUCTIVITY AND PEOPLE

Actually, there are not so many organizations which have discovered that making jobs more rewarding is the best and most efficient way of motivating people for quality and productivity improvement. By introducing variety into the workplace in the form of skills and responsibilities, emphasizing the importance and the significance of the job employees have, providing a degree of autonomy and showing regular feedback, organizations have given employees more control over the processes they are involved in and as such, have nurtured real empowerment.

Studies performed by APO in recent years, reveal that the successful organizations were competitive without having to sacrifice their employees' welfare, their strategies were actually anchored on raising the productivity of the organization, which is possible only if employees are content with their jobs. It implies that enhancing the quality of jobs is essential to an organization pursuit of competitiveness.

It is very notable that Deming Prize Committee has modified its mission statement from 1997 and instead of stressing just on customer satisfaction, stressed on both "customer satisfaction and employee satisfaction". This is also emphasized by W.E. Deming in his work "Out of Crisis" about "a transformation in management thinking" that, "if management has no commitment for the welfare of the employees, it would be impossible to have their contribution for quality and productivity improvement". Unfortunately, though many organizations profess to know and understand these concepts, few of them follow through and implement this for job enrichment and empowerment as a foundation of their management philosophy. It is necessary to have in mind that one of the major duties of managers is to support employees (and not vice versa), then job satisfaction and its benefits are a natural outcome. In other words, management must see its role as a support function for employees and do everything in their power to make them happy and successful in their role of satisfying the customer. Kaoro Ishikawa has put this in this recommendation that: "In management the first concern of the company is the happiness of the people connected with it. If the people do not feel happy and cannot be made happy, the company does not deserve to exist."

It is necessary to have an environment in which the employees are encouraged for the work and pride for their work. Generating such an environment takes about 10 years time and needs serious effort. This is the eighth of fourteen principles introduced by W. E. Deming for organizational change. In one of European companies only this point has been targeted as a project for the third interval of its 20- year development plan.

A specific example is a manufacturing company in power meters equipment in the central north of Iran called Kontor Sazi Iran (KSI). In KSI, top management launched a project to enhance quality and productivity of the organization by motivating the employees with job satisfaction. Management found that the employees, as human being, have an everlasting desire to grow and fulfil their potentials. To achieve this, the company wanted to provide an opportunity for the employees to obtain personal growth in their work. The result of such activities would be a happy and enthusiastic workplace, which would lead to company's growth through high quality products, which in turn will lead to happy employees. The management team established a policy for suggestion system and also for quality control circles. They set four major points to be considered in all activities,

- should provide infinite growth for everybody,
- should make the workplace full of vitality,
- should promote mutual trust, and
- should encourage everyone to take part in the management of the company.

For this to happen, KSI management set two sets of goals. The first set was for human aspects and the second set was for improvement in the work environment.

After 5 years KSI achieved the planned results more than what had been estimated and especially, dramatic change in quality of products and productivity. They received more customer satisfaction and stability in the market. This company in Iran is very outstanding from quality culture point of view.

As emphasized, to be competitive in the 21<sup>st</sup> century, it is needed to have a creative organization. An organization can be creative if the employees are creative. It should value creativity of its employees. Such an organization has the following features:

- where all individuals enjoy their work and pride in that they do,
- where people are free from fear of punishment if they do the unexpected,
- where each individual can learn and develop full potentials,
- where people willingly cooperate with each other to accomplish a common purpose, and
- where everyone feels like a winner.

It is necessary to emphasize that change in management culture is an absolute must and a prerequisite to develop a creative workplace. In short, responding to latent customer expectations, and delighting them, is only possible with a creative organization which in turn, needs creative and innovative employees who are totally motivated for self- fulfillment, to satisfy their human needs. Deep satisfaction of internal customers for full satisfaction of external customers. Both are inter-related and inter- dependent.

## CONCLUSION

The most important competitive factor cannot be altered overnight, especially where this factor itself, by nature, is the most complex creature of the world! Besides, there are some other factors that need attention and change. For example technological infrastructure, interactions with governmental organizations and administration, and culture and quality of education of the society. Productivity of the workforce can only be improved through long-term action. However, that is no excuse for not starting action today.

Human resources development is changed to human resources management which in turn, is transforming to human resources leadership. With institutionalizing leadership, a total quality employee will be born. Such an employee does the following actions:

- accepting ownership and responsibility to solve problems,
- actively seeking opportunities to make improvements,
- actively seeking opportunities to enhance their competencies , knowledge and experience,
- freely sharing knowledge and experience in teams and groups,
- focusing on creation of value for the customers,
- being innovative and creative in furthering the organizations objectives,
- better representing the organization to customers, local communities and society at large,

- deriving satisfaction from their work, and
- be enthusiastic and proud to be part of the organization.

In Sep. 2001, in Singapore there was a massive rally with about 8000 attendees. The theme was "Dare to Dream, Dare to Do and Dare to Make Difference". In that great gathering, they exercised a national mass brainstorming. The objective was to disseminate this message that everyone is creative and able to contribute ideas to create value. More than 450000 ideas were gathered in just one hour, one suggestion per person per minute. They were considered as a major national idea bank. The rally was to highlight the achievements of the productivity movement, stressing the importance of innovation, as a key determinant of the country's future prosperity and also honor the organizations and people who had contributed to the progress made by the movement in the last decades.

This is an excellent example of the people needed for the new century. In the International Productivity Conference held in Singapore with the theme "Productivity in the new millenium: enhancing competitiveness through people and value creation" a declaration was issued in which the following points are highlighted regarding people:

- 1- People's potentials and capabilities should be continuously developed to enhance competitiveness, creativity and innovation.
- 2- Free and fair competition along the entire value chain of economic activities should be encouraged to satisfy needs and expectations of customers.
- 3- Cooperation and collaboration in all sectors should be promoted.

To have such a fortunate time, it is absolutely needed to focus on the main asset of the organization. Organizations have to change the way they are thinking and working. In a continuing process they need to delearn old useless skills, learn new ones and keep on relearning.

I hope with the emphasis on human resources, as the infinite source, all people seeking quality and productivity improvement in their business, and even in their lives, can achieve the planned objectives and can have a very effective contribution in changing their societies and the global community.

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