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First Brainstorming Meeting for Industrialists

Nile Hilton – January 29, 1994

EGYPTIAN INDUSTRY & FUTURE CHALLENGES

Seminar hosting Egyptian Industrial Society

Organized by Al Ahram al-Ektissadi

Under the auspices of H.E. Dr. Ibrahim Fawzi

Minister of Industry & Mineral Wealth

Second session: 12:30 – 14:00 hr

Chairman: Dr. Eng. Amin Mubarak

Interlocutor: Dr. Eng. Nader Riad

Subject: Change as Necessity & Goal

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Change as Necessity & Goal

1) Introduction

2) Industry & Society – Industrial Society – Industrialists in Egypt

Man is Basis for Change

Industry & Society:

Along the ages, industry has proven to be the crucible for all theoretical and applied sciences, in its capacity as the actual realm of application and the major applicator of all functions.

In its course, industry plays the role of orienting development and mechanisms of change that govern inlets and outlets of such sciences, professions and functions.

Upon contemplating the matter, we shall find that industry is the major touchstone and target for all professions, including engineers, technicians, accountants, auditors, economists and financiers. It is a major client in banks and stock markets.

It is a principal consumer of energy, raw materials and all state utilities. In utilizing all this, it adopts the economic principles of rationalization.

From this perspective, we find that industry, in its permanent and diligent search for further success, is actually participating directly in a concrete development move within the surrounding society, whether at the level of human development and raising human skills and talents, or at the level of economic development and activation of services and market mechanisms.

Industrial Society in Egypt:

Egypt has witnessed lately many unprecedented positive phenomena, primarily a progressive legal personality that has proven itself in record time and that has assumed a leading role in influencing the society and - in turn - becoming influenced by it. This is the Egyptian industrial society.

The Egyptian industrial society started with a galaxy of pioneer industrialists, possessing progressive personalities and distinguished by sound industrial and economic visions and a great deal of acquired expertise at the international level.

From this launching point, it was possible to expand the base of the Egyptian industrial society, turning it into a fast-growing industrial boom. This gave rise to many positive aspects.

Among these was to vest the industrial society and its legal personality with the ability to act, behave, plan and perform, collectively, in line with a collective interest, surpassing the individual details of each institution, separately. This is considered a landmark of success within the scope of the industrial attitude in Egypt.

Industrialists in Egypt:

The use of the term Egyptian industrialists is attributed to Mr. Mohamed Farid Khamis, Head of Egyptian Federation of Industries, who is proud to state that he is head of “Federation of Egyptian Industrialists”. This very nomenclature holds a lot of updating to old-fashioned concepts, particularly in its significance.

Undoubtedly, industry, in its national nomenclature, expresses a physical state that is not related to standard, concerning size, degree of development, added value, yield at the institutional level and yield at the state level, in addition to the fact that a successful industry is not successful on its own, but due to leading personalities behind it, who possess exceptional talents and

future visualizations in fields of industrial management and engineering, performance measurement and sustainable development.

Hence, the term “Egyptian industrialists” elucidates the major role assumed by individuals, in rendering industry successful, and highlights the role of individuals, which has remained for long in the shadow.

3) Change as an old-fashioned concept

Strangely enough, the word “change”, as a term and concept handed down along the ages, is not quite different from its modern meaning that has recently evolved on tongues of experts of Management Sciences.

The latter consider change as an urgent need to keep abreast with development and to even prepare for it, beforehand. Here, it is worth mentioning a citation of Imam Ali Ben Abi Taleb:

“Do not bring up your children as yourselves,

because they belong to a different generation than yours”

Is this not what modern management sciences are all about? Are we not talking of continuity of generations and expertise?

Another Holy verse comes to mind within this context:

"Allah does not change a people, until they change themselves"

Here, we discover that the concept of change in its modern sense, as used in contemporary industrial societies, has been the same all along the ages: change is a goal and demand; change is the people's responsibility; God blesses such change.

4) Change as a modern concept

Why a change?

As long as life goes on and so long as success, particularly in the field of industry, is built on free and open competition before every diligent worker, then eventually, today's reality will differ from tomorrow's reality, whether for a cause, or as a consequence.

Today's quality will be confined to keeping pace with tomorrow's quality. Even the value of constants, such as distance and time, vary with time. Hence, it deems inevitable to anticipate the coming change on the short and long term and to try and meet it halfway.

Today's quality will be confined to meeting tomorrow's needs

5) Change as a goal and change as a necessity

If we adopt the progressive vision of change as one of the progressive industrial goals of an institution, then, in this case, we should seek change as a general plan that would bring its impact on all personnel at different levels and that would influence all institutional attitudes, plans, objectives and paths. Change, here, could be of a leading attitude, i.e. change as a goal, in order to anticipate the future and all its variables before its arrival.

Thus, we would be deploying all available potentials and capacities within the institution, such as future studies and projections, for the sake of a smooth stepping into the future and in order to achieve further successes.

However, if the institution fails to keep pace with change as a goal and finds itself entrapped with changes of the future, without having been prepared, beforehand, then it could only deal with such change as a necessity that has been imposed on it.

If an institution fails to realize this, the matter could be too costly and the obstacles insurmountable.

Examples of change as a goal and change as a necessity are very prominent in the realm of car industry. Many leading car industries, which are among the top notch, are keen on introducing innovations in every new model, in spite of their success.

Here, they are adopting the leading attitude, which is an excellent form of how to invest success.

Contrary to that, there are those who adopt the lagging attitude, which ends in their failure to keep pace with the move, and their falling out of the circle of

competition. Many car industries have closed down because of this within the past two decades.

Change should remain a strategic goal for the industrial institution

6) Cost of change and cost of not changing

If we follow the lifecycle of a product in all its stages, up to the climax of achieving its highest revenues, followed by the anticlimax, we shall see that each lifecycle has certain dynamic traits, in which cost elements and yields are linked to the degree of success of the institution in handling this product economically.

Undoubtedly, the lifecycle of a product with good traits will lead to higher lifecycles with better traits and better economic yields.

In paying heed to the policy of change and the related performance of material costs, we can detect the reaction on the lifecycle of the product, through venturing into the virtuous economic circles, because the success of every lifecycle is responsible for the success of the following one.

This is what we call the economic phenomenon that is described by the expression “the rich becoming richer”.

However, if we tackle the cost of not introducing change, its impact on the lifecycle of the product will be negative, so will the yield of this lifecycle, a matter that would place both product and institution in a vicious circle. Ultimately, this would affect the lifecycle of the institution itself.

Even among industrial institutions ..

the rich become richer .. & the poor poorer

7) Instruments for change and their cost

First: Facts about human development: at the state level / at the industrial institution level

Facts about human development at the state level

A- Today's child is half the present and entire future

The adult society should pave the way for the society of children, providing it with all guarantees and means of growing up, sound and strong, full of confidence in itself and in the adult society, sharing mutual confidence with others and capable of giving and taking;

B- Nurturing children is not a matter of differentiation or luxury

It is not acceptable any more to consider all that is related to children as an act of benevolence. This sacred duty assumed by insects and animals by instinct is not out of differentiation or luxury. Today's child is the one and only major link between present and future. Moreover, this child is the one to provide pensions for our generation.

If today's child is brought up in a strong and healthy fashion, with all the secrets of success in his hands, this will have its positive impact on a dignified life for the society of the elderly and pensioners in future.

C- Continuous change is the sole means of continuous generations

The state should adopt and encourage the occurrence of a continuous change in all fields of activities and services that fall under its command, allowing the different generations to survive the change, and encouraging creativity on behalf of its children.

This would bridge the gap between generations and extend bridges of affinity between them. This would also have its positive impact on prompting the march of development and progress in all walks of life.

Facts about human development at the industrial institution level:

It is uncontestable that investment in human development within an institution is a good means of investment that sometimes surpasses investment in fixed assets, such as machinery and equipment.

This is due to the fact that such investment guarantees phases of development necessary for the future of any industrial institution.

This matter opens the way, as well, for the discovery of innate talents and leadership skills within an institution. Human development plans help exhibit such talents and skills.

Probably, the following facts highlight this concept from more than one angle:

A- Unclean hands are incapable of giving clean products

B- A worker lacking his basic needs is incapable of learning. An empty stomach cannot assimilate ethics

C- A product of quality starts with a high-quality worker. Once a worker ignores quality requisites, negative consequences arise.

D- It is the responsibility and obligation of the institution to help promote its personnel, concerning their five basic needs, namely:

1- food & clothes

2- livelihood

3- housing

4- social needs

5- proving oneself in order to accomplish one's dreams

According to sciences of Sociology and Management, a worker cannot progress mentally, before fulfilling his basic needs.

Once a worker has fulfilled the first three basic needs, he can start grasping industrial and ethical concepts and can become a constructive element in his field.

Fulfilling the fourth need, namely social, is a prerequisite for assuming leading and supervisory positions among colleagues.

This is why many thriving industries have focused on providing social activities for their workers, in order to keep them away from non commendable paths that are sometimes trodden in the absence of awareness and guidance.

Sustainable training should be a fixed policy of the institution as an effective means of prompting workers to reach the highest hierarchal cadres

Second: Importance of training: Cost of training / Cost of skipping training

Example: a welder

Cost of good welding in comparison to bad welding

(Strangely enough, the cost of good welding is the same as that of bad welding, considering materials, equipment and pay of a welder)

A- Cost of fixing bad welding, once discovered within the factory

(Usually, bad welding renders the piece a total loss. Consequently, it is replaced by a new piece and welding is done all over again, at a new cost)

B- Cost of discovering bad welding outside the factory

(In this case, the client bears the consequences of his bad choice, while the manufacturer loses his reputation)

C- Cost of discovering bad welding after exportation

(This case, in particular, leads to higher costs, where the exported low-quality item mars the reputation of our industry at the entire national level, and where good industries are affected and share in bearing the consequences of bad industries)

Perfection of the industrial process should be from the start

A good product reflects well on its producer

A low-quality product leaves its bad impact on all industries

Third: Developing technical & engineering education to meet the needs of industry

Do graduates of engineering faculties & institutes meet the needs of industry?

Is there coordination between industry, engineering syndicates and faculties of engineering upon setting the curricula?

Does the realm of engineering and technical education extend to practical training in factories, a matter that would allow actual involvement in all fields of specialization?

We have seen examples, where aircraft industry and national airlines finance and orient aeronautic engineering studies.

We have seen railway authorities financing their field of specialization in faculties of engineering.

The same applies to medical engineering and to ship-building industry and its relation to maritime engineering studies. Again there is the car industry and the contribution of Armed Forces in financing and orienting car engineering studies.

Where are we from all this? Maybe it would be one of our target changes

Fourth: Graduates and Unemployment Crisis

Does it look like a plentiful harvest with no one to reap?

Is it bad planning, bad education or a deteriorating labour market, where supply and demand do not fall within the same context?

Do institutes and faculties realize that they have to assume a basic role that needs to be well-played in exhibiting their graduates to employers, within a dignified context that fits this sublime and abstract objective?

We have often seen, abroad, fairs held for this purpose, where job seekers meet with job providers in total freedom and transparency, a matter that leads to immediate and effective results in favour of both industry and graduates.

Actually, the American University in Cairo holds a festival each year for this purpose.

Fifth: Training & Rehabilitation

- For craftsmen
- For professionals
- For graduates
- Due attention should be paid to technical rehabilitation at the intermediary level, as well as technical specialization at the higher level for engineers
- Why do we not apply the system of code rehabilitation courses at the national level, same as in all industrial countries, unexceptionally?

This could put our technical labour on the first step of the right path towards vocational training, allowing both workers and employers to realize what they should attend from training courses with specific code numbers, in order to become qualified to do their work.

Example:

- a welder (3 courses)
- a master –welder (5 courses)
- a specialized welding engineer (a number of specialized courses befitting the nature of specialization)

Remark: He should sign on the job order of any specialized welding operation and could interfere in the technique applied.

- a welding expert (fulfilling the specialized training courses endorsed with appropriate practical expertise)

Remark: He should supervise and be constantly on site, checking all welding operations of high technical importance, such as construction of metal bridges, pressurized containers, fuel containers, gas tanks, etc.

- Undoubtedly, institutes and universities are a fertile field for technical and specialized training for engineers upon graduation. This matter could be invested for rehabilitation in various fields of specialization, providing graduates with alternative job opportunities within the fields that are more in demand.

Examples:

- Vertical transformation representing training
- Horizontal transformation representing rehabilitation
- Expanding in training labour that is seeking to raise its technical standard by allowing it to attend specialized technical courses, financed by industry

Examples: Mubarak-Kohl Project and expanding in it

- Involving untrained labour in rehabilitation programmes through funds from various syndicates, in collaboration with the Ministry of Manpower and Ministry of Social Affairs

There is no bad soldier, but a bad officer

There is no bad officer, but a bad commander

Sixth: Industrial Discipline & Vocational Discipline

A- Proper specifications

Resulting in the evolution of our local industry and protecting it from dumping policies

B- Abidance by specifications

C- Professional ethics & decorum

- List of what to do and what not to do

Examples:

Taxi driver – limits of commitment and limits of refrain

Qualified electrician – the duty of refraining from doing an unsafe or illegal electric connection

Qualified welder - when to refrain from doing a hazardous job without referring to his superior

D- Addressing the outside world in its own language and ideology

Meeting international standards

ISO 9000 and its consequences TQM as prerequisites of comprehensive quality management

Terms applied, worldwide, today are all concerned with establishing a fixed policy for the institution, based on continuous improvement of quality, and on the fact that the quality issue is the responsibility of one and all, starting from the simplest worker, this, together with the Zero Default (ZD) system, principle of full satisfaction of clients, etc.

The Japanese “Kaizen” system has also emerged and is being applied, in spite of its great divergence in theory and attitude from applied Western theories.

Although the practical field is not yet wide enough to allow differentiation between two systems, yet success achieved by each of the two systems remains indisputable.

Enclosed herein is a separate study on the change system at the institutional level that is widespread and applied in Japan under the name of “Kaizen”, in generalization of the aspired benefit.

Seventh: If we give vent to our ambitions, we would attain industrial creativity and innovation, which remains inevitable.

We all agree that it is necessary to possess a stock of creative and implemental ideas within industrial institutions, even if they are not fully exploited. Still, they remain as a strategic stock vis-à-vis upheavals and challenges that might confront the institution.

As an example: car industry and its large stock of inventions.

Universities and research centres are to be invited to set up banks for ideas, inventions and researches, financed by industry in its fields of specialization. Also, advertisements should be made on researches, with the aim of marketing them, as a mutual “supply & demand” service.

Eighth: Information Revolution

- Setting up an industrial information network at the national level, while providing its services at a reasonable price.

Ninth: International Presence of the Egyptian Industry

- Enhancing and encouraging Egyptian industries in international fairs and exhibitions

Finally, we hope that with this material we have managed to cover the most important aspects of the topic, concerning

Change as Necessity & Goal

Hoping that our material is fit for paving the way for a fruitful and constructive dialogue, in which all industrialists would be engaged, giving their opinions and putting in their efforts, for the sake of materializing a joint plan of action.

May God bless our steps!

Dr. Eng. Nader Riad

**** Translated from Arabic Original***
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