Interactive Strategic Solution for Future Global Challenges: Multistage Systems Planning Methodology and New 8 M's Model for Economic Growth and Development

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Abstract

Growth and development have always been powerful and motivating forces for people, business and nations. One can say the old saying "you are either growing or shrinking, there is no middle ground. "The country development aims to create and implement strategies that achieve both economic and societal value for better future. One of the critical issues in learning, learning and learning, and the role of strategic thinking in the development process. Brainpower, the soft side of technology, is becoming an organizations most valuable asset and conveys a competitive edge in the market place only countries that make use of their technology, knowledge capabilities and expertise will succeed in a dynamically competitive environment and achieve desirable future development. The real challenge, however, is how to apply successfully the two side of technology (soft and hard) and focus on strategically on the priorities of development process. The 2004 Nobel prize winner in economics; professor Edward Prescott, Arizona state university, states that the difference among nations in development is on how to conduct their technology towards clear and specific objectives rather than wasting their time in criticizing the reasons for failure. Thus, Egypt, in its quest for success and desirable development, must face the real challenge of application of both sides (soft and hard) of knowledge, science and technology in the society. Life is no longer simple; one cannot anymore just hope that things will work themselves out. Egypt is challenged to become strategic thinker rather than wishful thinker, if it desires to achieve future development and ensures prosperity and modernization to its people. This research aims to provide a composite picture of the critical relationship between knowledge and technology and future development programs. In addition, an integrated strategic methodology is introduced to build the necessary requirements and what ought to be done for achieving future development of countries based on a new suggested model, the 8 M's model for economic growth that will help in identifying development composites and elements.

Introduction and Overview

The twenty-first century has begun and newly emerged challenges have shaped their forms and directions in our today's societies. Global competition has become a way of life. Change in technology, science and knowledge, international affairs, business practice, and organizational social responsibility are causing decision makers to reexamine their methods and objectives, as well as place increased emphasis on sustainable development programs, effective leadership and knowledgably brainpower. Economic development does not account only for growth but includes other factors that ensure prosperity in the country. These factors are technological, market, institutional, economic, ecological, demographic and political. All should contribute to sustain the prosperity of economic development in given society. Also, future development aims at the efficient proposion and use of instruments likely to create promising changes in the above factors through education, health care and jobs in relation to expansion of investment with the creation of a viable future development programs. (Driouchi and azelmad, 2004). Recent research has recognized the role of technology and science (knowledge) in future process of development by being a global public good (Sliglitz, 1998, 2003). The 2004 Nobel prize winner in economics; professor prescott, states that the degree of economic development stages of nations depends largely on how these nations conduct and apply their technology, science and knowledge in their societies. The future of development programs of a country are functions of its technology, science knowledge and management leadership modes. The success or failure of such programs depends, a great deal,on the capability and ability of management leadership, its behavior, the way of thinking and future outlook.

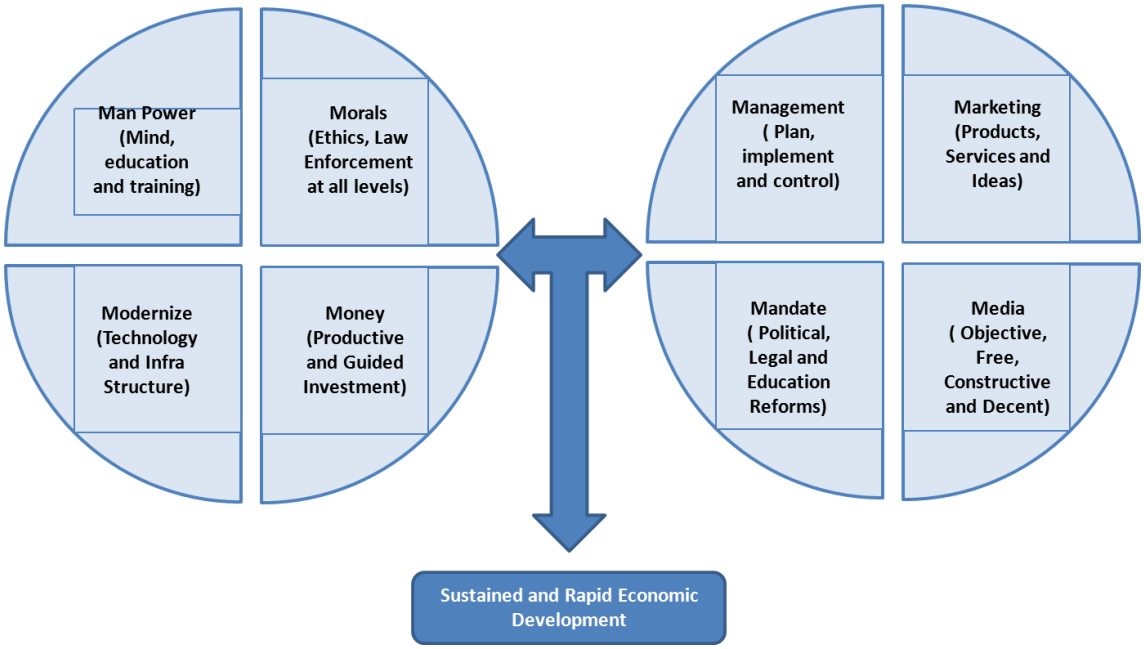
Leadership role is responsible for building learning climate, shared vision and challenge prevailing mental task. It is also responsible for building organizations where people are continuously expanding their capabilities to shape their future for desirable outcomes.Shakespeare once said: "some are born leaders, some achieve leadership, and some have leadership." Also strategic human resource knowledge is considered, these days a valuable asset and a competitive advantage factor for any sustainable development.
Thus, any country, in its quest for successful future development, must redesign its destiny through strategic thinking towards effective leadership and knowledgeable human resources, conducting appropriate technology and science to ensure the desirable prosperity of its people.

The Role Technology and Knowledge in Economic Performance

Driouchi and Anders conducted a regression analysis on the effects of knowledge (technology, science, etc.) on aggregate economic performance using data from the United National Development Program (UNDP) and the World Bank for four groups of countries during 1995 – 2001. The results indicated that knowledge is a key driver for economic growth for each group of countries. Also, variation in economic performance among these groups may be related to the timing of investment in education, R&D, and information technology, as well as economic policies that affect trade and foreign direct investment. (Driouchi and Anders, 2003).
In recent years, A great deal of research on the role of technology, science and knowledge in future development and its impacts on nation's growth and prosperity have been conducted by many scholars and top authorities in the interdisciplinary fields. The research findings are significant and useful for countries which want to enrich their knowledge, technological capability and ability profiles and adopt the appropriate market competitiveness factors for desirable growth, performance and prosperity. Factors such as infrastructure building, missing institutions establishment, human and natural resources investment, socio cultural development, image positioning, consumer driven, quality focused, motivation, ethics, communication, loyalty, etc. are critical for future development reality.

Major Trends in Technology (Knowledge) Components and Development Indicators

A number of cross-cultural empirical research in developing countries repealed that the overall development performance indicators are related directly to the role of science, technology and knowledge in societies. (Driouchi and Azelmad, 2004) Such indicators can be briefly grouped within a new 8 M's model which can be considered as of a base in order to describe and analyze growth and development indicators for an economic system or a country

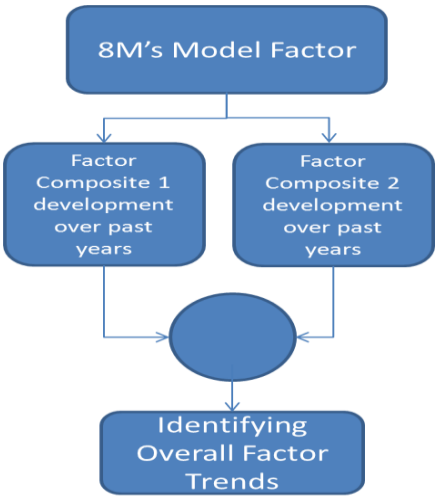


8 M'S Model Composite Elements

In order to have a precise overview about which elements will be studied throughout the multistage planning system, measure deviations of future scenarios, elements of the 8 M's model have to be studied thoroughly as they will be a key determinants towards measuring the overall growth of a social and economic system
Population and labor force, Life expectancy at birth and health issues in 10, 20 or 30 years, Income per capita, School enrollment, Secondary and tertiary enrollment, Gross tertiary science enrollment or Qualification of human capital, are all critical composites that have to be studied in order to have a fair view of Manpower,

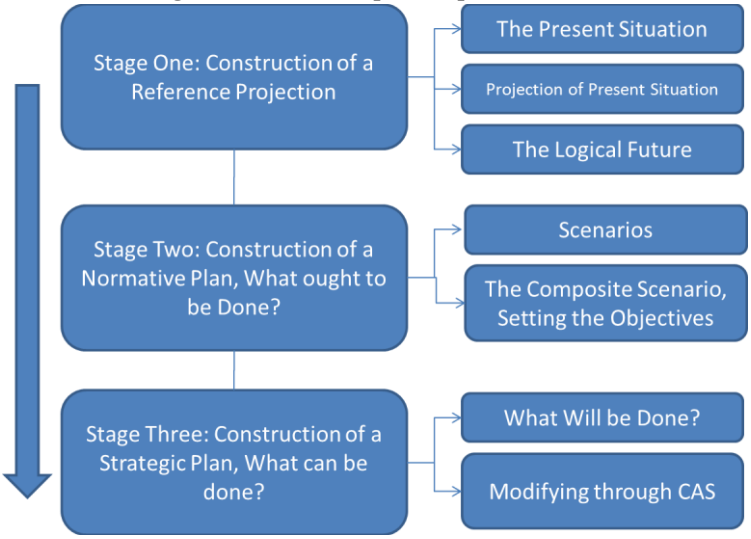
Researches in R&D, Patents granted to residents, Trade in high technology and technology achievement, Telephone network, Number of utilized computers, Internet hosts and users will be the composites of the modernize factor, which main objective would be to measure the modernization movement in communities. Quantifying the composites for each of these elements will give the opportunity to establish a holistic comparison system, through which a community can measure its own movement, whether it was towards growth or decline, other elements are easily measured, like Inflation rates, export and import numbers growth or decline, budgets and deficits value, monetary policies advancement and other economic dimensions, productive and guided investments that can be judged through financial policies a system or a country might and capable of having to guide investments that support specific sectors in specific time periods, measuring the return on guided investments and guided investments strategies affectivity, which will contribute to the overall growth of the economy, are all elements of the Money factor.

Capitalize on the ability of the country to manufacture its own products, services and market it properly in and out of the country itself, Marketing dimension of the model is really important because it measures the development achieved in marketing studies and auditing reports, consumer research, Number of competing business in a single sector in the market, Newly developed products and services, Average marketing staff members within a single business community. Marketing functions development can reflect an increased competitive environment which will lead to developing the quality of competing products and services, creating educated and well informed customer groups, increasing the overall added value of the economic system of the country. The Management factor on the other hand discusses overall productivity of the business community, management process, employees – management satisfaction levels, turnover rates within business communities, strategic overview, human resource policies, culture, style and communications systems and channels, organizational research and development. Factors composites can be efficiently used to identify overall factor trends precisely, hence, having the ability to forecast the and quantify how time periods, if no unplanned for interventions occur, would affect these composites



Strategic Multistage Systems Planning Methodology

The methodology consists of three stages and seven steps composed of various internal phases as follows



This research aims to provide a composite picture of the critical and close relationship between technology, science, knowledge and future development of a given country. Thus, a strategic multistage system planning methodology is introduced, combined with the 8 M's model mentioned before in order to build the necessary requirements, and what ought to be done for achieving a bright successful future development in a country.

Stage I: Construction of a Reference Projection

The initial planning task consists of the construction of a reference projection, whose basic purpose is defining the interactive problems that might be found in today's situation in a country for any of the 8 M's model elements or their descriptions

Step 1: The Present Situation

It will represent an extrapolation of present societal trends from the 8 M's Model and yield a picture of what a social system (e.g. a country, a city and company, etc.) will be like at various points in the future (10, 20, 30 years) if there are no planned interventions during its evolution, namely if growth and development remain uncontrolled. So, as we are speaking of Manpower element and its various projections at different points in the future, we come to study its basic composites which would help us create a precise outlook on its future, same goes for Mandates, Marketing, Management and the rest of the 8 M's model factors

Step 2: Projection of Present Situation

The basic projection can be constructed to show three future levels of events, Optimistic, Pessimistic and Logical future, as we have previously mentioned, composites of8 M's Model would help us defining current trends to help us create three future levels of events, The human development trends, The human freedom and democracy, Gender empowerment measure, Economic freedom and diversity, Corruption perception and practice, Human poverty prospected levels with the current economy growth, Urbanization rate, Health system performance indicators, all of these trends can be identified by taking a closer look at elements composites, thus generating an overview or a realistic projection for where things are heading towards for the different points of the future.

Step 3: The "Logical future" of the system which determines the Critical Continuous Problems

From the three future levels, one can determine the true nature of the critical continuous (chronic) problems that latent in the present i.e. those which are to remain severe problems far into the future which will require special attention. From such a map of the situation, it becomes possible, then to begin to design appropriate scenario, which will reveal in a general way the types of interventions (policies) that should be considered in order to handle chronic problems mentioned earlier.

Stage Two: Construction A Normative Plan: What ought to be done?

The following task is developing the normative plan, the formulation of such a plan consist in the setting of desired "ends", Objectives and goals, we always have to bear into consideration that some chronic problems are complex, and only an integrative solution that attacks several issues would help in solving these for the long run. Generating Pessimistic and optimistic future scenarios will prove in handy creating a great pool of various possible forecasts and future events that would help researcher and decision makers in identifying across which level of future are they proceeding, which events or trends contributed in towards heading to that level, what is needed to maintain or alter the current progress.

Step 4: designing Alternative future scenarios

The main procedure for end-setting is that visualization of alternative desirable futures that one is capable of conceiving in replacement of the logical future obtained by building reference projection. Once the reference projection has been constructed, the question becomes how to change it to gain desired or preferred outcomes. The vehicle that serves accomplish this procedure is called scenario, meaning judgmental definition and description of alternatives. If more than one scenario has been developed, then one obtains a set of alternative futures. Such futures differ from the logical future in the sense that they are willed rather than extrapolated; they represent the results of imagined voluntary interventions into the current situation

Step 5: the composite scenario and setting objectives

The next step can be taken by integrating the scenarios (alternative futures) that were found to be acceptable (desirable, preferable) in a composite scenario, this scenario attempts to bring together the major developments foreseen in the fields of politics,economic, attitudes, technology, science, urbanization and modernization patterns, and other similar dimensions of the generally accepted future insofar as they are relevant to the planning being done. The composite scenario needs to be worked on until it can be said that it represents the state or outcome toward which the decision makers want the whole.

System to evolve in analyzing the composite scenario, it will be also necessary to clarify the most important trade-offs i.e. costs to other values in terms of implementing any specific decision, that's why an integrative approach is advise, taking into consideration all composite elements in 8 M's model, this would allow decision makers to implement decision without damaging related values. There by clarifying for the decision makers the best options that are open to them, as well as, completion of this stage of planning is what called the normative plan, the composite scenario defines what ought to be done for every aspect and composite element.

Construction of the Strategic Plan: What can be done?

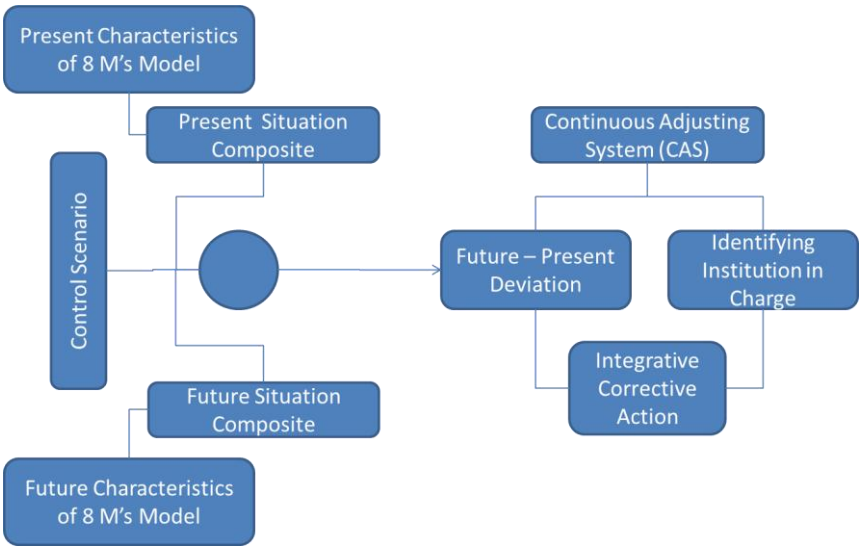
Once the overall image of the desired future has been clarified in terms of objectives to be pursued and of the situation that is relevant to them, planning enters the "how" phase. This generally consists of the determination of the means that will be needed to draw the path between present projection and goals using alternative scenarios, and the best – most efficient, most economical, most direct, etc – strategies that could be adopted to reach that goal. Thus, the guiding concept of a strategy is the goal. The development of alternative strategies, their selection and ordering under specified goals, is the core of the strategic planning. It is at this stage that the whole process begins to be bounded by analyses of what the system can do. The important aspect of strategic planning is the control scenario, wherein the characteristics of the future situation are then projected backward into the present illuminating the present situation from a new angle of vision.The control scenario both adjusts and enriches the feasible image that is taking shape as the planning process moves forward.

Step 6: designing the tactical and organizational plans: what will be done?

Tactics are often defined as activities needed to implement strategies. Either the system must be reorganized to define (at the tactical or operational level) interventions – i.e. policies – or a special instrumentally must be designed and set in place as a part of the system to carry out such policies and control their manifold short-run effects day-to-day. The design (and management) of these instrumentalities belongs to organizational planning which involves also the design of new institutions. In conjunction the phases of this task define what, under surrounding circumstances, i.e. reorganized constraints, will actually be done. The forgoing work will yield a general plan, which will organize the overall objectives and the trade-off relationships between them. In other words, it will tell to what extent one may pursue one objective at what cost to other objectives, and will thus enable one to seek a balanced policy for the maximum realization of all of our objectives taken together. Thus, an order of priorities in planning and implementation becomes established.

Step 7: modifying the plan through field testing and the continuous adjusting system (CAS)

It is both possible and highly advisable, after completing the entire above work subject the conclusions reached to a survey of selected sets of decision-makers chosen by the interest party. In light of the findings obtained in the survey and adjusted to what emerges as the real views and desires of decision makers. This method of adapting findings to authoritative options can be iteratively continued to change the basic plan as it is being implemented, thereby keeping it flexible and dynamic.



Summery and Conclusion

This research has provided a composite, integrated picture of the critical relationship between knowledge, technology and future development programs, using the new 8 M's model to build a composite standard elements which, and through the multistage systems planning methodology, decision makers are able to have a measurable forecast of growth opportunities through future scenarios,they are also able to measure present –

future scenarios deviationthrough the control scenario tool In order to identify responsible institution or organization and immediately apply corrective actions. "Perception is strong and sight weak. In strategy it is important to see distant things as if they were close and to take a distanced view of close things" (Miyamoto Musashi 1584-1645, legendary Japanese swordsman), because of the interactive nature of the multistage systems planning methodology, it has truly provided a solution tofuture global challenges, the main idea was to create an impenetrable system through which strategists can control the future and be way ahead of the curve rather than being re or pre-active when facing global challenges, the methodology with composite elements and factor trends provided by the 8 M's model, has also contributed in featuring a continuous adjusting system (CAS), powerful and flexible enough to enable decision makers to accurately achieve envisioned future positioning.

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