ABOUT THE SUBJECT

Although the genesis and development of systems is the focus of ontological concerns of philosophy and religion since ancient times, science has approached it quite fearfully.

Considering that the general theory of systems and their current study enable at this stage their approach at a more systematic scientific level, this book presents some aspects of the unitary modeling of genesis and development of hierarchical systems used to prepare the strategies of industrial companies as working tools of strategic management.

The difficulty of the direct interdisciplinary approach of genesis and development of systems in nature and society has led to the need to primarily grant the aspects of time study genesis, substance and information field, based on the energy-information dualism, in the context where the information is issued and absorbed in determined quantities called quanta.

The evolution of the biological, genetic systems, along with physical, chemical, economic, psychological, etc. systems highlight unitary cybernetic aspects based on the action of the adjustments of systems and their symmetry properties.

In this context:

- Extending the range of applying the results of the scientific research along with unprecedented development of contemporary knowledge determines a number of essential mutations in the social-economic theory and practice, in the motivation and finality of the human action and activity. The current structures and particularly the virtual ones cannot exclude the overlap between phenomena and processes, the inter-conditioning of fundamental systems (resources, ecology, material production, culture, etc.), which along with the social and political order, condition the quality of life. Currently, the contemporary realities that managers face at various levels can no longer be mastered and directed by means of procedures based on intuition, experience, and common sense. In this context, the extrapolation becomes theoretically justified only for a short time. This is because the occurrence of some discontinuity factors or of some limit states caused by unforeseen and unexpected events have imposed the reconstruction of the whole depending on the actual situation generating new options and properties, as well as on the change of initial relations and connections between the components;
• After the science has been guided for centuries by the analytical primacy—isolating the parties and their separate extrapolation and, finally, the reconstruction of the behaviour of the whole from that of its components—the current evolutions no longer fall into previous patterns, radically changing the explanatory and methodological principles of classical disciplines. Thus, there is an increasing need to define their basic concepts and study the phenomena and processes closely related to the multiple interactions of the environment where the activity is performed;

• Without minimizing the decisive role which the objective laws have in the development of the society, the contribution of the subjective factor—man—should also be noted, especially since the managerial element entering into the structure of any system is only of human nature;

• The evolution of management poignantly highlights the trend of rapid expansion of the systematic vision – proclaiming the priority of the whole on the parts and inter-independent approach of the phenomena which the human being, the society, and economy at all its levels are faced with. Lately, the principles, methods, and techniques of the systems theory have gained a wide recognition and proliferation and have opened a wide field to interdisciplinary researches with positive effects on the efficiency of material production and society’s development. The penetration, the most spectacular of the systems theory, has been, however, registered in economic sciences, the approach particularly aiming at the systemic analysis, oriented directly towards the management of systems;

• The idea of designing the society as an indestructible whole is not recent. Exceeding the limitative point of view of reductionism, according to which the society appears as an indefinite lot—the population with a vague idea about the whole—it has been proven that the idea of society, as a sum of the defined relations is characterized by certain groups, called subsystems or partial systems (classes), fulfilling specific functions within a certain organization;

• One of the major trends of the systemic approach consists of shifting from the mechanical type systems to the organic ones, which highlight the multivalent methodological approach exceeding in the range of knowledge and the modeling of linear and univocal evolution, getting the science of management increasingly closer to the subtle field of art. The very society operates as a self-adjusting system – along with the conscious mechanism of management, self-driving spontaneous mechanisms also exist. In other words, the general laws act for the operation of the society according to their essence and without the intervention of people or institutions;

• Mankind is a network of streams, among which the material, intellectual, and informational ones are essential. Whatever the society’s objective, the social production systems have two subsystems, a technological one and an informational one of labour, and their optimal correlation is done by means of the management process. In this framework, the system for collecting, selecting, and processing the information plays a decisive role in taking managerial decisions to optimally use the human, material, and financial resources. In this regard, by using some means specific to cybernetics, informatics, and systems theory, the system analyst is meant to optimize the informational-decisional mechanism always subordinated to the basic objectives of the studied system.

The application of the systems theory in the study of the industrial companies leads us to the idea that the approach of strategic management is unthinkable without this theory.
Nowadays, strategic management appears as a direction well outlined by the development of the company’s overall management that has its own theoretical tools and a register of tools that significantly enrich the managerial thinking and practice with new components being added thereto, as the changes and challenges which the companies must currently cope with are amplified. Stronger than the general traditional management, strategic management interrelates with the other economic sciences, with the specific technology enabling the identification and fructification of many opportunities provided by the market specific to the industry where the industrial company belongs, as well as forecasting some internal and external changes of the company in favorable terms. The analysis of strategic management and of how it acts within the industrial companies enables them to make their activity more efficient.

Thus, the book highlights the system of strategies, which the industrial companies must elaborate in order to have a favorable evolution under the current globalization conditions. By its issues, the book is very helpful to production specialists, scientists, students, master students, as well as to professors.

**ORGANIZATION OF THE BOOK**

The arguments presented previously were the basis for preparing this book, which, throughout its 14 chapters, aims to analyze the application of the systemic theory both in the industrial company’s study and in that of the strategy and strategic management.

Thus, the 14 chapters of the book have been evenly divided on two big issues that form the content of the two sections.

The first section, “The Company Dealt with Systemically,” has six chapters wherein six major directions of the scientific research performed are dealt with, divided into 35 analytical subdivisions.

The issue of the first section is addressed in a unitary view.

Chapter 1, “Information in Systems Theory,” deals with the issue of information in systems theory. Thus, the following issues are dealt with: theoretical approach of the “system” concept; use of the analysis and synthesis method in systems theory; modeling and simulating the systems; automatic adjustment systems; automatic adjustment system – management system interdependence; systems management; etc. The role of information in the management of systems and possible distortions of information that can occur when it is not properly used in the system are emphasized at the end of this chapter.

Chapter 2, “The Risk in Systems Management,” separately analyses the theory of risk in general and the risk in systems management in particular. Special importance is given to managers’ attitudes towards risk and towards the industrial risk.

Chapter 3, “Use of Systems Theory to Deal with Industrial Companies,” is an application of the systems theory in the study of industrial companies. By using the theoretical scientific accumulations from the previous chapters, issues are addressed, such as: analysis of company as “cybernetic system”; production system – “the company” cybernetic system relation; applying the systemic theory to analyze companies’ functions; contemporary theories on companies’ structures; and full cycle of companies’ operations. The chapter analyses how the companies’ activities can be controlled.

Chapter 4, “Companies’ Operation Environment in a Global Economy,” is a systemic approach of the industrial company under the conditions of a globalised economic market. It deals with aspects relating to: competition and competitors; elements of companies’ external environment; companies’ internal environments and their components; companies’ ambiguous operating environments; etc. The decision-making process in industrial companies under the conditions given for them is analyzed at the end of this chapter in an ambiguous development environment.
Chapter 5, “Companies’ Activities in the Current Market Economy,” particularly deals with the industrial companies’ activities under the conditions of the competitive market economy, addressing aspects relating to: market under globalization; competitive development of companies under global economy; companies’ growth “in waves” under a globalised economy; companies’ internationalization under global economy; companies’ rating under the current market economy; etc. Attention is given to the analysis of communication models and to the influence they have on industrial company management.

Chapter 6, “Companies’ Organisation under Current Globalisation,” concludes the first section of the book by analyzing how the industrial companies are organized under the current global conditions. It deals with issues relating to: structural organization; factors influencing the structural organization; organizational structure design; organizational structure design – managerial communication interdependence; types of organizational structures; formal organization – informal organization relation; etc. At the end of this chapter and of the first section of the book, the advantages of the harmonization of the formal structure with the informal structure within the industrial companies are emphasized.

The last eight chapters of the book are just as many research directions divided into 41 research subdivisions to form the second section of the book, “Use of Systemic Theory in Strategic Management.”

This section covers the application of systems theory in preparing the strategies and in the strategic management techniques and methods.

This time it is a matter of scientific approach of the studied issues, meaning that to start with, the issues related to strategic management theory are researched, and then actual strategies of industrial companies are dealt with.

Chapter 7, “Companies’ Strategies: A Theoretic Approach,” is an approach of the theory of strategies and strategic management, and it deals with issues such as: companies’ strategies and policies; company managerial strategies; company strategy systems; strategic alternatives and their classification; evaluation and control of strategies; stakeholders and their role in preparing companies’ strategies; and companies’ sustainable development strategies. It is worth noting that an industrial company can have sustainable development only if it has its own strategy regarding its development.

Chapter 8, “Considerations on the Current State of Strategic Management,” analyzes some of the current strategies resulting from applying the strategic management in the activity of industrial companies. The following issues are specifically dealt with: European concept of strategic management; Japanese management, existence form of strategic management; Kaizen strategy in automotive industry; opinions on the strategic management process structure; industrial companies strategies under current globalization; and strategy as working tool of strategic management.

Chapter 9, “Communication in the Process of Elaborating Strategies on Company Development,” deals with the study of the communication process and the importance of this process in the industrial companies’ development processes. The following issues are dealt with: theoretical approach of communication in industrial companies; specificity of managerial communication in companies; companies’ diagnosis – starting point in developing industrial companies’ strategy; models used to analyze the industrial companies’ strategies portfolio. At the end of the chapter, both the strategy of industrial companies’ development under the current conditions in Romania and the identification of an appropriate portfolio of Romanian industrial companies’ strategies are covered.
Chapter 10, “Production Strategies of Companies in Machine Manufacturing Industry,” studies the production strategies of the Romanian companies in the machine manufacturing industry (industrial machineries and equipment). It is worth noting that besides the issues, such as complexity of production process in machine manufacturing industry, positioning the industrial strategy in regional development strategy, strategy of advanced production systems, the problem of elaborating some optimal strategic decisions is dealt with separately, by using econometric models. In this context, the use of IT, respectively of expert systems, is essential in developing some very good strategies for industrial companies.

Chapter 11, “Strategies Used to Improve Industrial Companies’ Production Quality,” deals both with theoretical aspects of the production quality and with the use of the Japanese management methods and techniques in the strategic management of quality. The following issues are dealt with: strategies in the production quality field; use of Taguchi method to improve production quality and strategies to improve the quality of production processes in industrial companies. The use of the Taguchi method is dealt with separately, as a technique of the strategic management of industrial production quality.

Chapter 12, “Budgeting Technique of Strategic Management,” deals with budgeting as a technique of strategic management. Thus, to start with, the fundamentals of budget are analyzed, and afterwards, based on them, the industrial companies’ budgets are elaborated. At the end of this chapter, the budgets thus elaborated are used as techniques of the industrial companies’ strategic management.

Chapter 13, “Use of Budgets to Elaborate the Strategy of Industrial Production Costs,” logically flows from the previous chapter and deals with an issue that is very sensitive for any industrial company, namely the production costs. After the theory of costs is dealt with at the beginning of the chapter, at the end of this chapter, a system of the production cost budget used to forecast the industrial companies’ costs is prepared.

Chapter 14, “Interdependence Relation between Industrial Companies’ Logistics and Commercial Strategies,” is the last chapter of the second section and also of the book. It emphasizes a distinct and very current issue, the industrial companies’ commercial strategies. Commercial activity enables the industrial companies to sell their products and therefore recover their resources used to achieve the production. In this context, the logistics of the companies’ industrial activity has an important role. In terms of the strategic management theory, the following issues are dealt with in this chapter: involvement of logistics in companies’ commercial relations; impact of logistics in organizing the manufacturers-distributors-customers relations; logistics – pilot of distribution networks; improvement of service quality at the customer – consequence of logistics; defining the commercial logistics system; designing and planning the commercial logistics system; means to monitor companies’ sales; system for monitoring the performances of companies’ commercial activities; logistics – commercial strategies relations.

TARGET AUDIENCE

This book is addressed to both theoreticians and practitioners in the field of strategic management of industrial companies. This equally concerns those who study—students, graduates, doctoral students—those who have experience in this field—researchers, professors—and those who work in production—engineers, technicians, economists, developers, company managers, presidents of the administrative board, etc. The intention of this book is to debate the theoretical and practical problems the operative management of strategic management of industrial companies are facing.

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