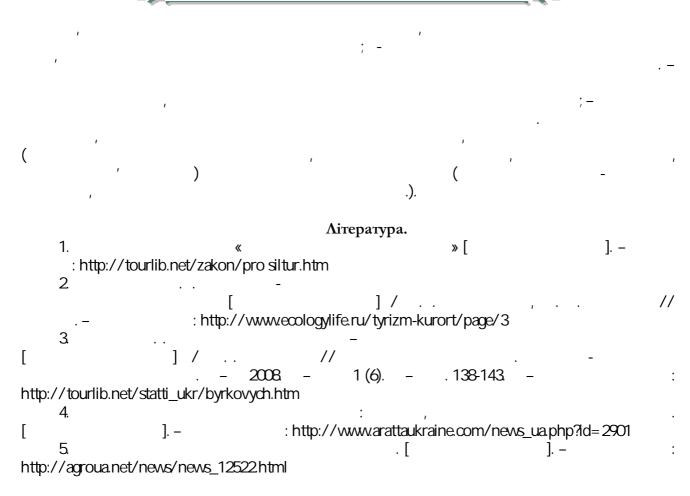
#### ВІСНИК СНТ ННІ БІЗНЕСУ І МЕНЕДЖМЕНТУ ХНТУСГ





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## QUANTITATIVE, SYSTEM AND CONTINGENCY MANAGEMENT APPROACHES SUCH AS MODERN MANAGEMENT THEORIES

Quantitative or Mathematical Approach or Management Science Approach. The mathematics, statistics, engineering sciences and the related fields of knowledge have made an essential contribution to the theory of management.

The Mathematical School or "Operations Research School" or "Management Science School" gives a quantitative basis for decision-making and considers management as system of mathematical models and processes

Indicators of this school consider management as system of logical process and consider that all stages of management can be expressed in quantitative expression for the analysis. Various mathematical and quantitative methods or tools, such as linear programming, simulation and sequence, are even more often used practically in all fields of management for studying of a wide range of problems

It should be noted that mathematical methods of the quantitative analysis provide tools for the analysis, but to them it is impossible to treat as independent system of an administrative thought. Besides, mathematical models help with the systematic analysis of problems, but models don't replace common sense.

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This approach has the following limitations

- Such approach does not give any age to a human element which plays the dominating role in all organizations
- In real life executives have to make quickly decisions, without waiting for the complete information for development of models.
- Different mathematical tools help with decision-making. But decision-making is a part of management activities. Management has many other functions except decision-making.
- This approach assumes that all variables for decision-making are measurable and interdependent. This assumption is not realistic.
- Sometimes the information available in business to development of mathematical models are not correspond to date and can lead to the wrong decision-making.

Systems Approach. At system approach is used the theory of systems in management, that is studying of complex through search of simple. System approach in the 60-70th years of the 20th century becomes universal ideology of management, and the system analysis - the conventional tool.

System approach considers processes and the phenomena in the form of set of elements, structures, relationship and interrelations.

System approach is first of all a way of thinking on the organizations and managements

The system is defined as a set of the elements or parts functioning as a unit directed to achievement of a common goal and interconnected. Systems are characterized by hierarchical construction, horizontal and vertical communications. Distinguish the closed systems functioning separately (independently) of the external environment, and opened, the affected factors of the external environment, are characterized by entropy, synergy and interdependence of subsystems. Heads usually in the activity face open systems as all organizations work in such mode.

Assessment of system approach:

- System approach has advantage over other approaches as it is very close to reality. This approach helps with studying of functions of the complex organizations and is used as a basis for new types of the organizations
- This approach is called abstract and uncertain as it can't be applied to the large and complex organizations easily.

Contingency or Situational Approach. Situational approach studies the solution of separate management situations, that is a concrete set of circumstances which influence the organization during certain time for the purpose of the most effective achievement of the objectives. Situational approach has gained distribution in the 80-90th years of the 20th century. Sources of this approach are based on the thesis that the successful solution of specific problems in the concrete organizations depends on ability of managers to identify the main characteristics of a situation. Situational approach defines a possible way of thinking of rather organizational problems and development of ways of their decision. It agrees situational approach, the executive has to use special methods of management for effective achievement of goals of the organization. Situational approach is often used in unusual situations when in the conditions of uncertainty it is necessary to react to changes in the external environment of business. This approach demands from managers of flexibility in decision-making, skills of the objective analysis and forecasting. Situational approach is used for overcoming crisis state when there are no ready algorithms of management decisions. Thus, situational approach combines concrete administrative receptions and theoretical concepts with the current situations for effective achievement of the objectives of the organization.

The methodology of application of the situational approach consists of the following factors

- The manager has to possess modern technology of management, understand features management process, individual and group behavior, system analysis, methods of planning and control, quantitative methods of support the adoption of administrative decisions
- The manager has to be able to expect probable consequences of application of a certain administrative technique or the concept as each of them has strengths and weaknesses.
- The manager has to be able to interpret correctly a situation, to reveal the major factors in a concrete situation, to define probable effect of change of one or several factors.
- The manager has to be able to apply the corresponding management skills in concrete situations, providing achievement of goals of the organization in the most effective way according to available circumstances

### ВІСНИК СНТ ННІ БІЗНЕСУ І МЕНЕДЖМЕНТУ ХНТУСГ

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