The Influence of the Factor of Savings on the Equation of Equilibrium in Macroeconomics

The subject of the research is to study the impact factor of saving the equations on economic equilibrium in macroeconomics. The aim is to study the impact factor of saving the equation of macroeconomic equilibrium in the economy that allows you to practice calculate indices system of national accounts with considering the savings in the economy in order to rate the economic situation in the country and adoption of the government making appropriate decisions for sustainable development of the economy.

At the research we used a mathematical method, by determining and bringing the additional aggregate (savings) in the equation of macroeconomic equilibrium. The result of the scientific research is a new equalization of equilibrium in macroeconomics with taking into account the factor of savings in economy. This equation is used in practice to calculate indicators of national accounts system.

An important factor of influence on macroeconomic processes inside a state is savings. They carry out the double function of total expenditures increase through investment and consumer loans, and as a factor accumulation “dead money” in the form of savings in the hands of the population, in the safety of the enterprises with the purpose of making purchases or other transactions in the future, and is not involved in the economy by means on accounts of financial institutions. In the scientific article it is formulated in a new economic equilibrium equation in macroeconomics taking into account the factor of unused savings.

classical economics theory, Keynesian economics, total revenues, total costs, savings

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The Historic Evolution of the Science of Management: Organization Management

The development of the scientific thought in the field of management of organizations from its origin till present time has been analyzed in the condensed form. Substantial emphasis has been placed on current and future features of this aspect of the science of management, which is currently facing new challenges and changes due to the emergence of various new factors arising from the realities of the 21st century.

development of management thought, main approaches and schools of management, organizational perspective of management, scientific management, change management, international styles of management

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Историческая эволюция науки управления: менеджмент организаций

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В сказаній формі проаналізован процес розвитку науки менеджменту в області менеджменту організацій з моменту її заснування до нашого часу. Сделан сучасний акцент на сьогоденних і бутих особливостях даного аспекту науки управління, які в наш час в часі стаються з новими викликами і змінами в зв'язку з появою різних нових факторів, обумовлених реаліями 21-го століття.

**Development of knowledge and the role of schools and universities in this field.**

**Statement of the problem.** The issues of the history of management have long been investigated and discussed among scholars of many countries. At the same time the representation of these aspects of the science of management in Ukrainian textbooks on the history of economy and economic thought is quite insufficient. Moreover we can state that the coverage of the modern period of the development of management thought with the newest challenges and changes it faces nowadays is constantly lagging behind the latest processes in real world economy, particularly relating to the organizational aspect of management. This article is an attempt to close the above mentioned gap.

**Analysis of recent research and publications.** On the whole the historic aspect of the development of the science of management has been explored by many scholars. The most distinguished contemporary authors among them are Gerald H. Graham, Martin J. Gannon, Harold Koontz, Cyril O’Donnell and a host of other modern researchers. Besides among those whose publications may be considered as the most recent and topical, to mention just a few, are Andreas Kaplan, David B. Balkin, Robert L. Cardy, David Legge, Pauline Stanton, Anne Smyth, Lawrence S. Kleiman, Prachi Juneja, Dan S. Cohen, L. K. Stroh, G. B Northcraft, A.I. Kravchenko and others.

At the same time these and many other authors, including the domestic ones, have not paid due attention to the issues of the management of organizations concerning the problems of the countries, which at the beginning of the 1990s stepped on the path of transition from the command-type economies to the democratic market societies. Hence there arises the necessity of further elaboration of the topic.

**Statement of the objective.** To present the short essence of the development of the organizational aspect of management thought from ancient times up to the present day. To concentrate on modern issues and tasks of the science, exploring which factors – external or internal – play the main role in the changes and adequate adjustments to the science and practices of organizational management. Alongside with the attainment of definite research goals by the author, this article may serve as an additional learning material for students majoring in a variety of economic and business specialties.

**The main material.** The earliest mentions of the art of management date from antiquity. Scholars note various records relating to the recognition of the significance of organization and administration in the bureaucratic states of ancient Egypt (papyri, dating back to 1300 B.C.), China (e.g. the parables of Confucius suggest practical recommendations of proper public administration and pieces of advice to promote candid, unselfish, and gifted public officers), Greece (e.g. Socrates’ interpretation of management as a skill which should be treated separately from technical knowledge and experience), Rome (the very existence of ancient magistrates, with their functional spheres of authority and degrees of importance, signifies a scalar relationship peculiar to organization). Furthermore, it’s worth mentioning the knowledge and practices of administration of the Catholic Church, various military formations, and the camerists of the 16th – 18th centuries (German and Austrian public administrators and intellectuals who generally expressed the same propositions as the British mercantilist and the French physiocratic schools of political economy, and advocated systematic administration as a source of strength). Besides it is worth mentioning some
precursors to Frederick Taylor, such as James Watt, Jr., Mathew Robinson Boulton, Robert Owen, Charles Babbage and Henry Varnum Poor, possibly the earliest persons to develop and use a scientific approach to management [8, 29-34].

Paying due tribute to all above mentioned predecessors of the development of management thought we must be aware that the epoch of truly scientific management starts at the beginning of the 20th century. And it was primarily due to several researchers and practitioners who proved to be successful to systemize the previously developed thoughts and assemble a carcass of knowledge on management which got the name of scientific management group. Its founder Frederick Taylor combined his stopwatch time study with Frank Gilbreth’s motion study methods. Thus they both eventually developed the so called time and motion study.

Human Relations Approach was one of the spinoffs of the scientific-management thought and practice. The main assumption of the scholars within the Hawthorne studies was that the aspiration to be a secure, accepted member of the work group was probably more essential than the incentive system in providing greater productivity. Those empirical studies advocated the significance of the work group as a social system, underlined the role of group pressures, attitudes, and psychological aspects of tiredness. They also stressed the essential role of noneconomic motivation in work groups.

Classical Management Theory stems from the above mentioned approaches - scientific management and human relations – and emphasizes definite spheres of management at the level of a worker. Mooney, Riley, Mayo, Rolithsberger, Dickerson (USA), Urwick (UK), and Fayol (France) treated management from the top organizational levels and tried to evolve an administrative framework for an organization as a whole. These researchers apportioned the assignment of manager into such functions as planning, organizing, staffing, directing, and controlling the work of others to achieve the targets of an organization. They also compiled a list of management principles. Fayol in particular elaborated 14 principles of management: division of work, authority and responsibility, discipline, unity of command, unity of direction, subordination of individual interest to general interest, remuneration of personnel, centralization, scalar chain, order, equity, stability or tenure of personnel, initiative, and esprit de corps (i.e. the group is expected to work as a team, and every employee must do his best to attain the goals of an organization).

The formation of the science of management is also characterized by the emergence and development of certain schools of management thought. There is a rather numerous variety of groupings and classifications of such schools. Some researchers distinguish up to twenty various management schools, but the majority of scholars share Harold Koontz’s classification [7, p. 178-180] of at least six schools of management:

1. The Operational School, which is sometimes treated as the one based on traditional or functional approach, it strongly gravitates towards classical management theory. Adherents of this stand claim that managers’ functions can be identified. Fayol and some other his supporters assert that management is quite a ubiquitous process and general principles can be deduced.

2. The Empirical School. It reminds the operational school because of its emphasis on generalizations and principles that can serve as guidelines for future thoughts and practices. At the same time the representatives of this school underline the superiority of experience and the study of real cases as a basis for these generalizations. We may consider Ernest Dale with his comparative approach as a typical representative of this school. But the empiricists place a premium upon experience and the study of actual cases as a way of developing these generalizations. Their aim is to study examples of failure to glean generalizations from empirical data for the basis of management thought. Ernest Dale’s comparative approach typifies the attitude of the empirical school.

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3. The Human Behavior School. Its proponents focus primarily on the sociopsychological aspects of human behavior. The school concentrates on such issues as leadership, unofficial relationships, need satisfaction, personal motivation, and interpersonal relationships. The Hawthorne experiments provided great impulse for the research within this school.

4. The Social Systems School. Chester Barnard, the founder of the school, treats the organization as a cooperative social system functioning within a larger system. The ideas of this school stem from behavioral disciplines, and it unites this school with the previous one.

5. The Decision Theory School. The economic basis of this school is presumably a rational choices theory. This approach concentrates on rational analysis as the basis for devising, assessing, and choosing alternate options of performance.

6. The Mathematical School is characterized by extended use of mathematical models and processes. The proponents of the school proceed from the assumption that management is a logical process, hence it can be denoted through mathematical relationships. Among the contributors and adherents of the school are William Newman, J.D. Mooney, Harold Koontz, Summers, McFarland, Henry, Lyndell Urwick and A.C. Railey. Scholars have long been discussing the merits and flaws of each school for their bounded perspectives. They think it is short-sighted to view management separately from exclusively this or that particular point of view. That is why they acknowledge that these, as well as other, schools are not fully isolated from each other, and they therefore try to base themselves upon systems theory as a means of combining the essential ideas of each school into an integral comprehension of current and probably future management thought.

The Current and Future State of Management. In order to understand the gist of this phenomenon we should embrace a very wide scope of historical changes in philosophy, technology, workforce mix, education, society, global integration, and organizational structures that have taken place lately and which substantially affected management theory and practice. Modern manager should be ready to cope with all these challenges and changes to survive in the competitive struggle today and secure successful performance in the future. And latest decades have demonstrated the accelerating dynamics of all these processes in almost every sphere of our life.

For example in Ukraine and other post-communist countries the crucial changes in philosophy of management have been primarily associated with the transformation of the basic concepts of property.

Significant role in the modification of the organizations’ management belongs to technological change. During recent decades, technological changes have been introduced in many organizations at an increasing pace.

Obviously in recent years the most important technological innovation for the management is the computer. It has radically revolutionized the information processing.

Alongside with computerization the communication technologies, including mobile means of man-man and man-machine technologies, have been developing with an accelerating rate. Internet and gadgets that capture the imagination of people in the last decade, become commonplace. At the forefront are gradually emerging technologies, which only recently seemed an absolute fantasy. Smartphones will soon become history. On the threshold is a new era - the era of wearable gadgets. The device allows you to apply additional image over the real image of the world that the user sees. Due to the constant access to the Internet people can check email, use social networks and search on Google. The gadget is also equipped with a camera and microphone, provides photo, videotaping is controlled by voice commands, and generally gives the impression of an absolutely futuristic device [4; 11]. The widest introduction of electric driverless cars of Tesla Motors and other similar vehicles threatens to compete with the largest automobile giants and make a revolution in the world.
energy. According to many scientists, ahead are private space exploration for mining purposes and artificial meat grown from stem cells. Many experts believe that 3D-printers will lay the foundation for the next Industrial/Post-Industrial Revolution. Already by 2020, the market of 3D-printing is expected to reach impressive $7 billion. People will be able to print virtually any items in practically all spheres of production for the broadest consumption needs [11].

Nowadays a consortium of Japanese companies, research institutes and the government is working on the gadgets, which could be on the market in as little as a decade. The devices would use advanced versions of existing brain-machine interface technology and would allow a person to change a television channel by thinking or send a text message composed through thought. Work on brain-machine interfaces dates back to the 1970s, but has taken off in recent years. The technology uses sensors within a helmet to monitor a person's brain waves and the flow of blood in the brain that is stimulated by thought. By identifying the person's wish, the robot can then carry out the action [9].

Changes in the Work Force. For years, management researchers devoted more attention to industrial organizations. Nowadays the management of nonindustrial organizations is regarded even more significant. It is now rather important for Ukraine which was lagging behind the developed countries in such post-industrial transformation of the economy structure. This movement of workers out of industrial jobs into service and governmental work has resulted in decline in the percentage of blue-collar workers. This trend seems to continue, and it means that still smaller number of managers may be working in industrial organizations. Hence managers are and will be trying to inspire a work force of more complicated mix. Behavioral processes may thus come to the fore making managers care about the elaboration of new methods for the motivation of employees.

Education. Alongside with the new job mix of workers their educational level has also increased greatly in recent decades, which means that the job of a manager has become noticeably more complicated. Now modern manager is obliged to direct the work of subordinates who are better educated than some years ago, and who therefore must be governed and stimulated differently. In the main, today workers prefer challenging jobs but simultaneously they would enjoy more independence in the performance of their duties. Taking into account such preferences, management cannot count on giving orders and expect their fulfillment without dispute or critique. One does not have to be a technology buff to manage a technology-driven workplace. It is not only possible to manage people who are unlike you, but it is also important to include managers with varying viewpoints. An effective executive is one who is capable of managing a variety of employees and not just those who think and act as he does [10]. Today’s manager must inspire members of more educated work force through a diversity of techniques, among which the preference should be given to more democratic than authoritarian.

Changes in Organizational Structures. At earlier stages very many organizations had a rather rigid and centralized hierarchic structure. In course of time many new organizational structures have become significant: the decentralized structure, project management and the matrix organization, and the conglomerate. In years to come, scholars predict that a variety of different structures will be build on to solve new problems and challenges. Already today we observe many new organizational structures as a response to the technological changes, partly mentioned above. Paperwork and completed assignments are telecommunicated to work grounds far off the central office and contrariwise. Managers and employees are now able to process a large part of their work in their own homes.

The specific trends and kinds of organizational structures that already exist in reality and, according to specialists in management, are probable in the future are as follows.

Organizations must be flexible, adaptable and dynamic lest they face the risk of insurmountable pressures and problems, current and in the future. Organizations have been
acquiring a free-form format, that is they are becoming flexible and responsive to changes. The free-form organization should be ready to perform in a turbulent environment. The latter implies constant change and adaptation.

Organizations will proceed enlarging their boundaries and domain, becoming bigger and more complicated. Organizations demonstrate the tendency to differentiate their activities and face aggrandized problems of integration and coordination as the flip side of the phenomenon.

Organizations will still have substantial problems in the competitive accumulation and use of knowledge. Intellectual activities by all members of the organization will be subjected to constant tension.

The focus will continue shifting to suggestion and persuasion rather than to compulsion based on autocratic dictate as the methods of coordination of employees’ work and the performance of functions within the organization. Employees in various positions in organizations have been acquiring more influence.

There is a tendency for the increase of problems of coordination among organizations. As the remedy for solving this problem new means for effective interorganizational coordination appear during recent years, and they are mainly of the mentioned above technological character.

One more obvious tendency is the increase of the number of professionals and scientists and their influence within organizations. We observe a decline in the percentage of independent professionals, while the proportion of salaried professionals tends to increase.

Objectives of complex organizations will expand. The stress will be on reaching a number of targets rather than maximizing any one.

Assessment of organizational performance is becoming more complicated. Many new administrative techniques will be introduced for assessing performance in all spheres of work.

Such innovations demand that management should make a new design for the organization. It sometimes requires great efforts to overcome the resistance of employees and managers to changes because the staff considers the redesigning of the organization as a threat for their positions and status. That is why it is very important for current and future management to suggest acceptable means of introducing technological and other sorts of change. Otherwise the organization’s future may be threatened, because its rivals may introduce the new technology to produce competitive and comparable goods and services.

One of the most promising approaches to transitioning individuals, teams, and organizations to a desired future state is change management. In a project management context, change management may refer to a project management process wherein changes to the scope of a project are formally introduced and approved.

Organizational change is a structured approach in an organization for guaranteeing that changes are painlessly and successfully realized for the sake of attaining durable positive effects.

Among reasons for change the most obvious nowadays are globalization and the constant innovation of technology. They entail a permanently changing business environment.

Change management has been brought into being by social media and mobile adaptability which have revolutionized business. It resulted in an ever increasing need for change, and consequently change management.

The development of technology has also been accompanied by the increase in the availability and therefore accountability of knowledge. Easily approachable information has led to unprecedented examination from stockholders and the media and pressure on management.

As far as the business environment undergoes permanent change, organizations also have to master the art of getting comfortable in the atmosphere of constant changes. That is why the ability to manage and adjust to organizational change is nowadays a critical necessity.
for every company. Nevertheless, essential and fast organizational change is extremely difficult on account of many reasons. Organizations’ structure, culture, and routines frequently keep the inertia of past practices eradication of which is sometimes quite a problem because of fierce resistance to rapid radical change on the part of employees and managers. Due to the growth of technology, modern organizational change is largely motivated by exterior innovations rather than internal moves. When these developments occur, the organizations that adapt quickest create a competitive advantage for themselves, while the companies that refuse to change get left behind. This can result in drastic profit and/or market share losses. Organizational change directly affects all departments from the entry level employee to senior management. The entire company must learn how to handle changes to the organization [1].

International Styles of Management have recently also become quite topical for Ukraine as well as for nearly all Post-Soviet countries. During two recent decades, a number of suchlike companies have begun operating on an international/global level. Today our managers working in another country or operating within the domestic branches of foreign and joint venture companies should be sensitive to the unique needs, customs, and values of this or that nation. Some of these may not be instantly evident, but it is significant for our managers to learn and respect them. Otherwise the manager may well face resistance that later will be difficult to overcome, and may seriously impede the organization. Our business administrators must take into consideration numerous research studies that have analyzed the management styles of thousands of managers in very many countries. The purpose of such studies is to see how managerial styles differ internationally. Such information obviously can be useful to our executives who are and will be operating in some of these countries or at the domestic affiliated/joint venture companies. Our managers should, for instance, mind that the Nordic-European managers are less positive than the other managers about the capacity of the average person to exercise leadership and initiative. However the Nordic-European managers are about equal to the other managers in their feelings about the sharing of information and the value of employee participation, as many of them are quite different from, say, the United States in important ways. The managers from the Anglo-American countries are more democratic than autocratic in orientation. However, except for believing that the individual has an adequate capacity for leadership and initiative, the managers from the developing countries are more autocratic than democratic [3, p. 413-415]. Hence lest our managers experience some culture shock when they become executives on an international/global level they should master various styles of management to become competitive and successful.

Conclusions and prospects for further researches. The history of management thought has come a long way since the inception of the first civilizations to the present day. But scientific reflection of management principles and processes, especially in the light of organizational management began at the turn of 19th - 20th centuries. Since that time various approaches, principles, scientific schools, numerous experiments have been investigated and conducted. The modern era is characterized by the new stage in the development of management thought. For understanding the essence of the current and future state of management we should take into account a very wide range of alterations and modifications in philosophy, engineering, workforce, education, social transformations, internationalization of all spheres of life, and in the forms and structures of organizations that have radically influenced the theory and practice of management. Hence the capability to quickly and adequately adapt to all these changes and challenges for those who manage organizations is a vital necessity. To create a competitive advantage modern Ukrainian managers have to get rid of the inertia of past practices and consider the newest circumstances to handle changes to the organization and learn the international experience and try to integrate into the global world of organizational management.
In this regard, domestic researchers while constantly studying the experience of foreign and domestic practicing managers should continue exploring the dynamic processes taking place in all areas and aspects of life in the most advanced societies, because it is external, rather than intra-organizational factors that determine the vector of development of the theory and practice of management of organizations. Accordingly, the Ukrainian authors should monitor these trends and processes and reflect them in the textbooks on the history of economy and economic thought promptly and adequately.

References

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Історична еволюція науки управління: менеджмент організацій

Метою дослідження є стислий виклад сутності історії розвитку управлінської думки в сфері менеджменту організацій з найдбавніших часів до наших днів з огляду на необхідність розвитку науки та розробки навчальних матеріалів для студентів різних економічних та управлінських спеціальностей. Увагу зосереджена на сучасних проблемах і завданнях науки, в процесі дослідження, які чинники - зовнішні чи внутрішні - відіграють більшу роль у змінах і адекватних реагуваннях в науці і практиці управління організаціями.

Обґрунтовано, що історія управлінської думки пройшла довгий шлях з моменту створення перших цивілізацій до наших днів, але наукове осмислення принципів і процесів управління, особливо в галузі менеджменту організацій, почалося на рубежі 19-го - 20-го століть: саме з того часу були виконані і запроваджені різни підходи, принципи, наукові школи, проведено численні експерименти. Сучасна епоха характеризується новим етапом у розвитку управлінської думки. Доведено, що для розуміння сутності поточного та майбутнього стану менеджменту необхідно взяти до уваги дуже широкий спектр змін та модифікацій в філософії, технологіях, складі робочої сили, освіти, соціальних перетвореннях, інтернаціоналізації всіх сфер життя, формах і структури організацій, які кардинально вплинули на теорію і практику управління. Обґрунтовано, що здатність швидко і адекватно адаптуватися до всіх цих змін і викликів для менеджерів організацій є критично важливою необхідністю, а щоб створювати конкурсну перевагу, сучасні менеджери організацій повинні позбутися інерції застарілих звичь і практик та

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розглядати найновіші явища й процеси для запровадження змін в підприємствах, використовувати міжнародний досвід та інтегруватися в глобальний світ організаційного менеджменту.

В результаті проведенного дослідження доведено, що вітчизняні вчені, постійно вивчаючи досвід зарубіжних і вітчизняних менеджерів-практиків, мають продовжувати досліджувати динамічні процеси, що відбуваються в усіх областях і аспектах життя в найбільш розвинених країнах, тому що саме зовнішні, а не внутрішні для організації чинники визначають вектор розвитку теорії та практики менеджменту організацій. Українські автори повинні відслідковувати ці тенденції і процеси та відображувати їх у підручниках з історії економіки та економічної думки оперативно й адекватно.

Розвиток наукової думки в області менеджменту, основні підходи і школи менеджменту, менеджмент організацій, науковий менеджмент, менеджмент змін, міжнародні особливості менеджменту

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