THE MOST IMPORTANT PERSONS IN THE MANAGEMENT SCIENCE: LITERATURE REVIEW

This article provides a deep research about the most known gurus of management: Henri Fayol, who invented the basic 14 Principles of Management, Michael Porter and his competition concept, at last Peter Drucker, the inventor of MBO system. Nowadays society is still using Fayol’s Porter’s and Drucker’s discoveries.

Research subject of this article is knowledge from the management founders. The objective of the article is to determine the main issues, which they tried to explain and solve. There were researched different sides of management: competitors, functions, methods and etc, but all of them are very important, because they cannot exist without each other.

For achieving the stated objective such general and special scientific methods were used as, systemic, morphological, structural and logical analysis, formalization, and analogy, comparative and integrative methods.

In the article the main features of scientific approaches of these management founders are given, ant the main critique is viewed. As a result, the main achievements were explained.

Keywords: management, management by objectives (MBO), Henri Fayol, Michael Porter, Michael Porter, 14 principles, books, researches, competition.

Many researchers have been trying to learn and analyze the phenomenon of such gurus of management, as Peter Drucker, Henri Fayol, and Michael Porter. We are not also an exception. In this article we tried to figure out the phenomenon of the management founders mentioned above, and to find the key to their success in management theory and practice. The main management experience of these authors and its critique were summarized in the article.
I. Peter Drucker (1909-2005) is one of the most famous scientists in the world and author of many books about management. His scientific works cover a lot of economical and political problems, but the main articles were written to understand the deep knowledge of management science and practice. P. Drucker invented the term *management by objectives* and it is not surprising that he changed the way to think about the usual management methods. Scientific approach was replaced by philosophical, in which the control problem is to solve the global tasks step by step. In that case goals are more important than functions [1].

Peter Drucker was born in 1909 in Vienna. His father Adolf Drucker was a leading Viennese lawyer and famous Austrian liberal; also he was one of the founders of the Salzburg Music Festival. Drucker’s family immigrated to the United States in 1938 after the annexation of Austria by Germany. In 1930s P. Drucker worked in Europe as a journalist and an expert on the economy before in 1937 finally settled in the United States. In 1942 he went to work at Bennington College in Vermont. Ten years later he moved to New York University, where he became a professor of the Department of Management. Since then, his main duties were teaching, writing books and consulting the leading American companies.

Before World War II the views of F. Taylor and G. Ford were dominated at the American management theory. They considered management as an exact science. However P. Drucker was a scientist, who strongly emphasizes the importance of a humanistic approach to the management problem. As the final result P. Drucker developed the concept of *management by objectives* (*MBO*), according to which the head mission is to establish the objectives and to create the plan to achieve them. He believes that top-managers of enterprises are playing the central role in the dynamics of their development. The main task of managers is to achieve the economic efficiency and, therefore, to increase public goods.

A visionary thinker, P. Drucker is also an excellent writer, orator and has an ability to influence the imagination of the audience. He is often criticized for being overly generalized view about the control problems. However his general approach to the problem of management has achieved the universal approbation [2].

*Responsibility*

From the opinion of P. Drucker all institutions exist to achieve certain goals; for business enterprises such purpose is economic efficiency. Head of the company should be responsible for: (1) ensuring economic efficiency; (2) ensuring efficiency of activity, so that efficiency is achieved in the simplest
way; (3) management of social impacts that the company has on the environment.

There is an indication of the importance of the role of leader. P. Drucker briefly stops at the problem in the implementation of management. Instead, he prefers to use the term *responsibility*; managers responsible for the contribution made to the work of the enterprise themselves and their subordinate employees. In fact, the management assumes a function, not power, and P. Drucker urges leaders to decline the idea that they are at the top and workers under them. Rather, he sees managers as organizations rod around which there are all other elements – work, resources, markets, and the external environment.

An important factor in all the works of P. Drucker is the need for managers to consider the social impact that they and their organizations are having on the environment. Managers should not be only technocrats; they must understand the social value of the activity. The larger and more powerful enterprise becomes, the stronger will be to provide them with social impact and the higher will be necessary to consider the social factor: “The requirement of social responsibility is the price of success” [2].

P. Drucker never loses sight of the common good, which is located within the organization in general and within the corporation privately. Corporations must be managed not only in compliance with a set of pragmatic rules, but also in the philosophical concepts that define the role of the organization in an industrial society.

According to P. Drucker philosophy of the ultimate goal of the company is to create public goods. The organization serves to convert the human effort in specific products and “personal efforts create social benefits”. This belief is at the core of its management philosophy.

*Practical skills*

Based on his philosophy of management P. Drucker defines, with the help of some practical steps managers can make their work more effective. He lists the following main characteristics of management:

− as a tool to achieve the goal;
− as an independent scientific discipline;
− a set of working individually and in association of people;
− as a public authority for the solution of vital problems;
− as a holistic, synthetic function in a complex and changing world.

P. Drucker insists that managers must be fully involved in its work, and often speaks of “emotion” that must necessarily accompany the management process. However, the involvement of itself does not imply a lack of disci-
pline and rigor. In the book The Effective Executive (Effective Manager, 1967) P. Drucker argues that efficiency is determined by a set of practical actions that can be learned. His definition of efficiency is based on five pillars:

1. Effective leaders know, what is spent their working time;
2. They are not focused on the work process and its results;
3. They build their work, drawing on the strengths rather than weaknesses;
4. They are directing their efforts on those areas where a great work will provide the outstanding results;
5. They shall take effective solutions, making the right steps in the right sequence.

Based on the allegation that the main task is to create a market leader, P. Drucker noted that the two main functions of management are the innovation and implementation of marketing activities. He pays relatively little attention to marketing, but the need for understanding and innovation is seen in almost all of his recent books. Scientist strongly criticizes the company believes that “innovation arise inspiration and success in business depends on luck” and argues that the introduction of innovations is a science that can be learned. He believes that innovation is primarily a management function, and stresses that managers must rely on technology rather than on anything else. One of his most famous phrases – “Computer is an idiot” – implies the need to use technology as tool for innovation and not as a means of replacing them [4].

The critique

P. Drucker has got a lot of critics and established his paradigm has often been the target for their arrows. At the same time his latest idea, apparently, never united with the rest of the themes of the scientist’s works. Chapters on the need for social responsibility are often obscure, not to mention the rest of the text books in which they appear. For readers who have grown up on the same ideas as P. Drucker thought of the need for social responsibility it seems quite clear. At the same time, the US post-war generation of managers, it seems far less obvious.

One of the side effects of P. Drucker’s theory was the creation of the concept of the ability to move a manager. Defining management as a set of basic functions, it is possible to inadvertently contribute to strengthening the belief that any trained manager can manage any company, regardless of its nature and purpose. P. Drucker himself has never thought so. On the other hand, he claimed that the manager should always be a thorough knowledge of the matter, which he held. But the idea that management skills are universal and can be applied equally well in different areas, has started up deep roots.
However, along with these objections, the undisputed fact remains that in the postwar period, P. Drucker, perhaps made the biggest contribution to the definition of the management nature. Generally it is believed that before the World War II, managers simply do not know that they are managers; P. Drucker also showed them who they really are. His management philosophy has penetrated all levels of management thinking – from top academics to managers of small business companies. Concept of controlled purposes is still widespread, despite the fact that sometimes it is used under different names.

II. *Michael Porter (1947 - nowadays)* is a Professor of the Department of Business Administration at Harvard Business School, a recognized expert in the study of economic competition, including competition in the international markets between countries and regions. He developed the *theory of competitive advantage*, which many consider a new paradigm in economic science.

Michael Porter was born on May 23, 1947 (Michigan) in a family of US Army officer. He graduated from Princeton University, after that received a master’s degree in Business Administration and a PhD from Harvard University. Also he has completed each stage of the training with honors. Since 1973 he has been working in the Harvard Business School, since 1981 as a professor. Now he lives in Brookline, Massachusetts.

Throughout his academic career, M. Porter studied the competition. He has been a consultant for a lot of leading companies such as *T&T, DuPont, Procter&Gamble and Royl Dutch/Shell*, and provided services to the *Directorate lph-Bet Technologies, Prmetric Technology Corp., R&B Flcon Corp., ThermoQuest Corp.* In addition, Porter worked as a consultant and advisor to the governments of India, New Zealand, Canada and Portugal. Now he is leading expert on the development of a regional strategy for the presidents of several countries of Central America.

Being one of the most influential experts in the management, Porter has defined the main directions of the competition research (especially in the global context). There were created new models and methods of the study. He was able to combine the development of business strategy and microeconomics, which had previously been considered independently of each other [7].


In his main book *Competitive Strategy* Porter produced a revolutionary approach to develop the strategy of the enterprise and the individual sectors
of the economy. The basis for this book is the experience of hundreds of companies in various business sectors. According to Porter, the enterprise has not got a competitive strategy without clear formulation of the main goals. Also there are tools and actions which are needed to achieve these objectives and the methods, through them the enterprise should achieve the competition. The science of Management has got a big and different terminology. Someone speaks of “mission” or “problem”, meaning “goal”, others – the “tactics”, referring to the “productive activities”. However, the main rule for the development of a competitive strategy is to differentiate the goals and means.

![Figure 1. The Wheel of a Competitive Strategy](image)

For each item of the wheel (Figure 1) M. Porter clearly identifies the key aspects of a business policy (depending on the nature of a business wording could be more or less specific). However, together the targets and directions are creating a concept of the strategy, which show to the top management the right way to go. “Sound strategy starts with having the right goal” – Michael Porter [6].

Michael Porter proposed a revolutionary approach to the development strategy of the enterprise by using a microeconomic laws. He began to consider a strategy as a basic principle that can be applied not only to the individual companies, but also to the whole sectors of the economy. Analysis of the strategic requirements in various sectors allowed the researcher to develop a model of the Five Forces (Figure 2):

1. New competitors. Competitors will invest new resources, which requires
other market participants to raise the additional funds; respectively, the profit decreases.

2. **Threat of substitutes.** There are some products which are competitive to others. They are forcing companies to limit the prices that reduces revenue and profitability.

3. *The customers* could defend their own interests. This entails additional costs.

4. The ability of *suppliers* to defend their own interests. It leads to increased production costs and a rise in prices.

5. *The competition between existing companies.* Competition requires additional investment in marketing, research, development of new products or price changes, which also reduces profitability.

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**Figure 2. M. Porter’s model of five competitive forces**

The impact of each of these forces varies from industry to industry, but all together they determine the profitability of the company in the long term.

There are a lot of prizes which Professor Porter was awarded. The most
famous are: three awards from McKinsey; Award George R. Terry from the Academy of Management; Adam Smith Award from the National Association of Industrial economists and seven honorary doctorates [8]. “If your goal is anything but profitability – if it is to be big, or to grow fast, or to become a technology leader – you will hit problems” (Michael Porter).

**The critique**

Porter’s model of Five Competitive Forces has been subject of much critique. Its main weakness results from the historical context in which it was developed. Besides that, there are some general points of criticism too.

1. General points of criticism. In general, the meaningfulness of this model is reduced by the following factors.

As stated above, the Porter’s Five Forces model is based on microeconomics. The underlying theories assume a classic perfect market. Accordingly, this basic assumption applies to the Five Forces model too. Most real-world industries are not perfect markets in an economical sense. They are, for instance, regulated and/or there are information imbalances among the market players.

Especially regulation limits the applicability of this model. In a highly regulated market, there aren’t many competitive forces at work. Hence, their analysis will reveal limited insights.

The model is best applicable for the analysis of simple market structures. A comprehensive description and analysis of all five forces gets very difficult in complex industries with multiple interrelations, product groups, by-products, segments and intermediaries. A too narrow focus on particular segments of such industries, however, bears the risk of missing important forces.

The model is based on the idea of competition. It assumes that companies try to achieve competitive advantages over other players in the markets as well as over suppliers or customers. With this focus, it is less suitable to analyze highly collaborative markets.

2. It does not match today’s market dynamics. In the 70s and 80s of the XX century, the global economy was characterized by cyclical growth and competition. Thus, profitability and survival were the primary corporate objectives. A major prerequisite for achieving these objectives has been optimization of strategy in relation to the external environment. The term “competitive strategy” was coined.

At that time, development in most industries has been fairly stable and predictable, compared with today’s dynamics.

Hence, the Porter’s Five Forces model assumes relatively static market structures. This is hardly the case in today’s dynamic markets.
The business environment has changed since then. The term *VUCA-world* describes a new external environment of *Volatility, Uncertainty, Complexity* and *Ambiguity*. Technological breakthroughs start-ups or market entrants from other industries may completely change business models, entry barriers and relationships along the supply chain within short times.

The Five Forces model may have some use for later analysis of the new situation; but it will hardly provide much meaningful advice for preventive actions.

Larry Downes stated in his article *Beyond Porter* from 1997 that these underlying assumptions of the model are no longer viable. He identified three new forces that require a new strategic framework and a set of very different analytic and business design tools: digitalization, globalisation, and deregulation.

Overall, Porter’s Five Forces Model has some major limitations in today’s market environment. It is not able to take into account new business models and the dynamics of markets. The value of Porter’s model is more that it enables managers to think about the current situation of their industry in a structured, easy-to-understand way – as a starting point for further analysis [12].

III. *Henri Fayol* (1841-1925) is French economist, the author of the direction of scientific management, entrepreneur, and organizer. As a theorist of management and the organizer of production he became an expert at Administration and the founder of the so-called administrative approach in the personnel management (also known as the school of administration or the theory of the administration, Classical school of management).

He was born in 1841 in a suburb of Istanbul (Turkey), where his father supervised the construction of the bridge across the Golden Horn. In 1847, his family returned to France. After graduating in 1860, the School of Mines of Saint-Etienne, he took a job in a mining company *Compagnie de Com- mentry-Fourchambeau-Decazeville*, where from 1888 to 1918 held the post of director. For 30 years he headed the largest mining and metals company in France. Taking it in a very unfavorable economic situation, on the verge of bankruptcy, Fayol by 1918 led the firm to the one of the most successful businesses.

In his main book *General Administration for Industry* (1916) he summarized the management experience and has created a logically systematic theory of management. Another of his book *The administrative state theory* came out in 1923 [9].

For the first time Fayol talked about the problem of organized management training. He considered that, management functions include planning,
organization, management, coordination and control. Also he claimed that the administrative management principles are universal, so they are applicable not only in economy, but also in government and institutions, the army, the navy, and so on.

“According to the dictionary, to administer is to govern, or to manage a public or private business. It means, therefore, to seek to make the best possible use of the resources available in achieving the goal of the enterprise. Administration includes, therefore, all the operations of the enterprise. But as a result of the usual way of organizing things to facilitate the running of the business, a certain number of activities constitute the special departments; the technical department, the commercial department, the financial department, etc., and the scope of the administrative department is found to be reduced accordingly” – Henri Fayol [10].

14 Management Principles by H. Fayol:

1. Division of work. Specialization allows the individual to gain experience and to continuously improve their skills. Thus, a person can improve performance.

2. Authority and responsibility. Authority is the right to give orders and the power to exact obedience. A manager has official authority because of her position, as well as personal authority based on individual personality, intelligence, and experience. Authority creates responsibility.

3. Discipline. Obedience and respect within an organization are absolutely essential. Good discipline requires managers to apply sanctions whenever violations become apparent.

4. Unity of Command. Each employee should have only one superior, and should receive orders from only one.

5. Unity of Direction. Organizational activities must have one central authority and one plan of action. Unity of command does not exist without unity of direction.

6. Subordination of individual interest. The interests of one employee or group of employees are subordinate to the interests and goals of the organization.

7. Remuneration. The salary is an important motivating factor. Salaries – the price of services rendered by employees — should be fair and provide satisfaction both to the employee and employer.

8. Centralization. The objective of centralization is the best utilization of personnel. The degree of centralization varies according to the dynamics of each organization.

9. Scalar chain. The hierarchy is necessary for the unity of direction. But
horizontal communication is also needed. Scalar chain refers to the number of levels in the hierarchy from the highest position to the lowest level in the organization. It should not be excessive and include too many levels.

10. Order. There should be material order and social order. The first minimizes downtime and material waste. The second is achieved through organization and selection.

11. Equity. The management of the business must be “a combination of kindness and justice”. Both equity and equality of treatment should be considered when dealing with employees.

12. Stability of tenure of personnel. To attain the maximum productivity of personnel, a stable work force is needed.

13. Initiative. Allowing staff to take the initiative is a major source of value to the organization.

14. Esprit de corps. Management should encourage the morale of its employees, and Fayol warns: “We need real talents to coordinate their actions”. Teamwork is fundamentally important to an organization. Work teams and extensive face-to-face verbal communication encourages teamwork.

The success of the Fayol’s company was linked with a consistent and systematic application in the management of a number of simple but important principles. Fayol first proposed to consider the actual management activities as an independent object of research. He identified five major elements (administration functions): forecasting, planning, organization, coordination and control [11].

In Fayol’s system, “Administration” is only one of the six management functions. It is important, but only after five other activities are exist – technical, commercial, financial, insurance and accounting.

### Table 1

<table>
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<tr>
<th>Class of Employee</th>
<th>Requisite Abilities</th>
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<td>%, Managerial</td>
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<tr>
<td>Workman</td>
<td>5%</td>
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<tr>
<td>Foreman</td>
<td>15%</td>
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<tr>
<td>Superintendent</td>
<td>25%</td>
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<tr>
<td>Head of Section</td>
<td>30%</td>
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<tr>
<td>Head of Dept Manager</td>
<td>35%</td>
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<tr>
<td>General Manager</td>
<td>40%</td>
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<tr>
<td>Minister MP</td>
<td>50%</td>
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<tr>
<td>Head of State - PM</td>
<td>60%</td>
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Source: [11].
The importance of requisite abilities of staff at enterprises.

H. Fayol was first refused to look at the management as “exclusive privilege” of the top management. He argued that the administrative functions exist at any level of the organization, even at the workers. Therefore, the higher is the level of the organizational hierarchy, the higher is the administrative responsibility, and vice versa. Functions are essential elements of the management process. Loss of one of these elements leads to disruption of the entire control technology. Whereas principles embody the subjective experience of the head, so they can be replaced or supplemented.

Fayol became famous thanks to his ideas, which, however, were taken too late. The work of Fayol Key features of the industrial administration was published only in 1916. This work is his main contribution to the science of management.

Henri Fayol has connected ideas of functional administration of Taylor and the old principle of unity of command. As a result it was created a new control scheme, which was a basis for the modern organization theory.

He is often called the “father of modern management theory”, because he was the first who has organized manufacture properly, summarized the principles and art of administration management in general. According to American historians of management, Fayol is the most powerful figure in science in the first half of XX century.

“Administration, which calls for the application of wide knowledge and many personal qualities, is above all the art of handling men, and in this art, as in many others, it is practice that makes perfect” – Henri Fayol.

The critique

Fayol’s theory has been criticized on the following grounds:

1. Too formal: Fayol’s theory is said to be very formal. However, in any scientific and analytical study facts and observations have to be presented in a formal manner.

2. Vague: Some of the concepts have not been properly defined. For example, the principle of division of work does not tell how the task should be divided. Again, to say that an organization needs coordination is merely to state the obvious. In the words of Herbert Simon, administrative theory suffers from superficiality, oversimplification and lack of realism.

3. Inconsistency: Principles of administrative theory were based on personal experience and limited observations. There is too much generalizations and lack empirical evidence. They have not been verified under controlled scientific conditions. Some of them are contradictory. For example, the unity of command principle is incompatible with division of work. The theory
does not provide guidance as to which principle should be given precedence over the other.

4. Pro-management Bias: Administrative theory does not pay adequate attention to workers. Workers are treated as biological machines or inert instruments in the work process.

5. Historical value: Fayol’s theory was relevant when organizations operated in a stable and predictable environment. It seems less appropriate in the turbulent environment of today. For example, present-day managers cannot depend entirely on formal authority and must use persuasion to get the work done. Similarly, the theory views organizations as power centers and do not recognize the role of a democratic form of organization.

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НАЙБІЛЬШІ ВАЖЛИВІ ОСОБИ В СТАНОВЛЕННІ МЕНЕДЖМЕНТУ: ОГЛЯД ЛІТЕРАТУРИ

Ця стаття містить глибокі дослідження про найбільш відомих гуру менеджменту, таких як: Анрі Файоль, який винайшов основні 14 принципів управління, Майкл Портер та його теорія конкурентних сил, Пітер Друкер, винахідник системи МВО. На сьогоднішній день суспільство широко використовує відкриття Тейлора, Портера та Друкера.

Дослідницька тематика даної статті є знання, добуті засновниками менеджменту. Метою статті є визначення основних питань, які вони намагалися розв’язати. Було досліджено такі сторони управління як: конкуренція, функції, методи та інше, але всі вони дуже важливі, тому що вони не можуть існувати один без одного.

Для досягнення поставленої мети були використані такі загальні та спеціальні наукові методи, як: системний, морфологічний, структурний та логічний аналіз, формалізація та аналогія, порівняльні та інтегративні методи.

У статті проаналізовано основні характеристики наукових підходів цих засновників менеджменту та розглянуто основну критику їх теорій. Як результат, основні досягнення науковців були виявлені.

Ключові слова: менеджмент, менеджмент за цілями (MBO), Анрі Файоль, Майкл Портер, Пітер Друкер, управління завданнями, 14 принципів, дослідження, конкуренція.

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КЛЮЧЕВЫЕ ЛИЦА В СТАНОВЛЕНИИ МЕНЕДЖМЕНТА: АНАЛИЗ ЛИТЕРАТУРЫ

Эта статья содержит глубокие исследования о наиболее известных гуру менеджмента, таких как Анри Файоль, который изобрел основные 14 принципов менеджмента, Майкл Портер и его концепция на основе конкуренции, Питер Друкер, изобретатель системы MBO. На сегодняшний день общество широко использует открытия Тейлора, Портера и Друкера.

Исследовательской тематикой данной статьи являются знания, добытые основателями менеджмента. Целью статьи является определение основных вопросов, которые они пытались решить. Было исследовано такие стороны управления как: конкуренция, функции, методы и прочее, но все они очень важны, потому что они не могут существовать обособленно.

Для достижения поставленной цели были использованы общие и специальные научные методы: системный, морфологический, структурный и логический анализ, формализация и аналогия, сравнительные и интегративные методы.

В статье проанализированы основные характеристики научных подходов этих основателей менеджмента и рассмотрена критика их теорий. Как результат, основные достижения были изучены.

Ключевые слова: менеджмент, управление по целям (MBO), Анри Файоль, Майкл Портер, Питер Друкер, управление задачами, 14 принципов, исследования, конкуренция.

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