

Time component in praxeology

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Abstract: The time component is important in all human activities, especially in economic and administrative activities and the management of these activities. Hence, in management research, a lot of space has been devoted to planning, organizing and effective time management. The capitalist economy has made it a specific commodity subject to the rules of the market (time has its price). The work of management theorists was the basis for the creation of time management principles. It can be assumed that in practice it is impossible to eliminate the loss of time, especially in the case of economic activity. The reason for the time gap (understood as unjustified waste of time) in the decision-making process is most often errors in the management of the company. Some attention has been paid to the problem of time by researchers of praxeology. Time is today an important and fundamental praxeological component; with significant connections with agility, efficiency, effectiveness, and ethics, i.e. with the praxeological components of actions, including decision-making activities. Proving this thesis is the aim of the article.

Keywords: praxeology, time component, time ethics, time gap, time management.

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Introduction

Reflections on the subject of time have accompanied people for a long time, as it is a category present at every stage of its existence. Even ancient scholars presented their thoughts on the subject, and throughout history, great philosophers (e.g., St. Augustine, Kant, Ockham) or scholars of science (e.g., Einstein) have developed theories about time, its passage and the way it is perceived. Time plays an extraordinary role in human functioning – every phenomenon and every mental process is temporal, and time cannot be turned back, although it can be spared. Therefore, this category has also aroused the interest of praxeologists.

In the new civilization, time has become a particularly valued and scarce commodity, and the capitalist economy has made it a specific commodity subject to the rules of the market. The resources of time are rationally managed, and control over them is a new form of power.

Because of the existing relationship between the value of economic time and the speed of civilizational processes, the increasing value of time can be measured by the increasing scale of resources used to accelerate economic development. Such measurement is made with the use of information technology – a key field enabling the modern acceleration of civilization; including increasing temporal effectivity. A good example of this is the derivatives market.

It is evident that every action; including the making and implementation of managerial decisions, is located in a specific time and lasts for a certain period of time. So, is time a category of praxeology? Nowadays, time is a basic and important praxeological component; In addition to agility, efficiency and effectiveness as well as ethics of actions – this thesis is the subject of consideration in this article.

Various theoretical approaches can be used to analyze the phenomenon of time, including psychological, sociological, economic, legal, and philosophical approaches. The methods used in this article are literature analysis, comparative analysis, deduction and induction.

1. Different theoretical approaches to the category of time

As a result of human labor, time is transformed into capital. Both are indispensable, so neither time nor capital should be wasted. While it is sometimes possible to recover lost money, in the case of time the loss is irretrievable; therefore, one must learn to use time even to the limit; time can be more valuable than the money that has been earned in a given time.¹

There are different approaches in the literature as to the meaning, function, and value of time in human activity. Approaches from the point of view of financial market theory, management theory and praxeology theory are important for modern economic activity.

Selected theoretical approaches to the category of time are presented in Table 1.

Table 1. Selected theoretical approaches to the category of time

Lp.	Analytical area	Theories and their selected contributors
1	Time socially necessary for production (time as cost, effectivity of use of time, life of labour force)	Theory of capital (K. Marx)
2	Time as a means of regenerating the productive forces	Theory of capital (K. Marx)
3	Time as a factor in changing people's attitudes and views	Theory of chronopsychology (P. Zimbardo, J. Boyd)
4	Time as a measure of work processes/competencies	Theories of human capital (T. W. Schultz, G. S. Becker)
5	Crisis as a component of the company's life	Theories of enterprise crisis and life cycle

¹ R. Banajski, *Temporalne aspekty odpowiedzialności*, Prakseologia PAN, nr 142/2002; Petri F. *The Passage of Time, Capital, and Investment in Traditional and in Recent Neoclassical Value Theory*, *Oeconomia* no 7-1/2017; M. Łagosz, *Marks. Praca i czas. Wartość czasu w ekonomii i moralności*, Wydawnictwo Naukowe PWN, Warszawa 2012; M. Krajewski, *Czas społeczny*, Wiedza Powszechna, Warszawa 1976; M. Pietraszek, *Czas to pieniądz. Jak oszczędzać czas i pieniądze*, Onepres, Warszawa 2016; *Time in Economics*, *Oeconomia*, no 7-1 and 7-2, 2017.

	cycle	theory (L. Greiner, C. F. Hermann)
6	Change in the value of goods and the value of enterprises over time	Theory of enterprise value (A. Rapaport, A. Slywotzky, F. Petri)
7	Change in the value of money over time (inflation, deflation)	Theory of the value of money (J. Fisher, J. M. Keynes, P. Schaal)
8	Trades/speculations (in milliseconds) on the foreign exchange market	Theories of financial markets (E. Fama, P. J. Welfens, P. Krugman)
9	Up-to-date information resources	Information theory
10	Timeframe for judicial procedures	Theories of law (W. Broniewicz, M. Sorysz, W. Wolter)
11	Time as a component of human action	Theory of praxeology (T. Kotarbiński, R. Banajski, M. Łagosz)
12	Time management (planning, rationalization, etc.)	Theories of organization and management (P. Drucker, R. W. Griffin)
13	Moral aspects of time	Theory of praxeology (R. Banajski, M. Łagosz)

Source: Author 's own elaboration.

Analysing the sociological aspects of time, M. Łagosz states that: "one of the basic organizing principles of modern society are the principles of time, which include: the principle of synchronicity, the principle of sequence (of actions and obligations), the principle of economy (of time)."² I would add to this list the principle of planning; in practice, the current and future activities of individuals and organizations are constantly predicted; and planning improves the agility and effectiveness of activities.

According to M. Łagosz, "However, in capitalism, which is focused on profit, realized, among other things, in exchange, time plays an exceptional role. Capitalist production and the capitalist way of distributing commodities are subordinated to time, which is also reflected in the sphere of non-economic human relations."³ It should be noted here that the entire economic analysis of companies (including profit and loss analysis) is located in specific periods of time.

In legal theory, the category of time plays an important role, especially in the case of judicial procedures, the size of judgments and legal sanctions. R. Banajski notes that "The law does not work retroactively. Criminal prosecution must take into account a certain period of time from the time of the offence. (...) The penalty is expunged (...) after the expiry of the time specified by the

² M. Łagosz, *Marks...*, *op. cit.*, p. 456.

³ *Ibidem*, p. 453.

Act. These are just some examples of how time manifests itself in the legal system."⁴ Time management in the justice system has a significant impact on the economy.

Time also plays an important role in economics and management. Referring to economic research. K. Kuciński notes that in economics there is "a strong connection between the past, the present and the future".⁵ In his opinion, time as a good should be studied more broadly by modern economics.

Time management is a sub-theory of management, of great practical importance, created by P. Drucker.⁶ According to L. Seiwert, time management is the consistent and goal-oriented application of proven working techniques in such a way that managing oneself and one's surroundings is effortless and the time available is used meaningfully and optimally.⁷

In crisis management theory, time management and managers' attitudes and behaviors are considered to be particularly important. Butcher and Clarke define a crisis as the occurrence of three components, i.e.: time pressure, significant threat and surprise (primarily for managers), and the circumstances in which the threat occurs. A crisis means that the key values that underpin action are threatened.⁸ Short decision-making time as an important component of crisis management is also pointed out by A. Zelek.⁹

The work of management theorists was the basis for the creation of time management principles. These rules are as follows:

- 1/ the principle of time planning (scheduling and controlling),
- 2/ the principle of concentration of activities,
- 3/ the principle of estimating (predicting) the time necessary for a given action,
- 4/ Ocham's razor principle,
- 5/ selection of tasks according to the criterion of urgency and preparation of decisions (justification of urgency, access to information and analysis, etc.), including the Eisenhower method (decision matrix: priorities: urgency, importance, urgency with importance),
- 6/ selection of activities according to the adopted main objective (the principle of purposefulness of actions).

Figure 1. Types of management decisions in temporal terms

⁴ R. Banajski, *Etyka wobec problemu czasu*, [w:] Stosunek do czasu w różnych strukturach kulturowych, red. Z. Cackowski, J. Wojczakowski, ITKiPK ANS, Warszawa 1987.

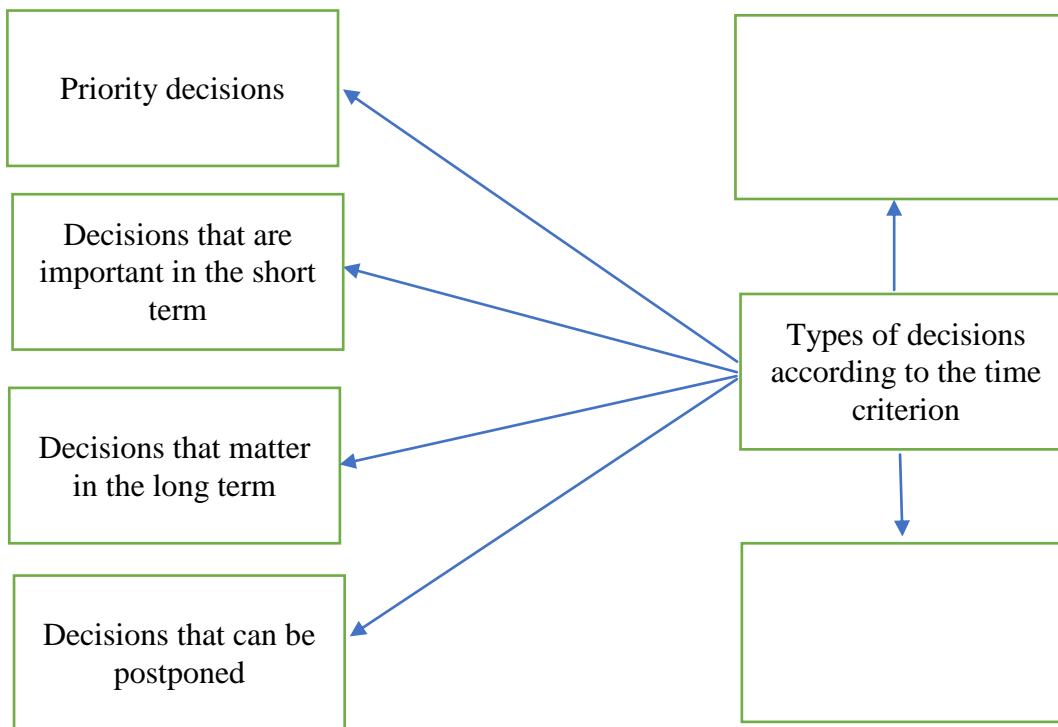
⁵ K. Kuciński, *Czas w ekonomii*, Kwartalnik Nauk o Przedsiębiorstwie nr 2/2010.

⁶ S. Czaja, *Czas w ekonomii*, Wydawnictwo UE Wrocław 2011.

⁷ L.J. Seiwert, *Zarządzanie czasem*, Placet, Warszawa 2001, p. 115.

⁸ D. Butcher, M. Clarke, *Smart Management*, ed. 2, Palgrave Macmillan, UK, 2008.

⁹ A. Zelek, *Zarządzanie kryzysem w przedsiębiorstwie. Perspektywa strategiczna*, IOiZP Orgmasz, Warszawa 2003, p. 40.



Source: Author's own elaboration.

The literature also cites the classification of management decisions according to the temporal criterion (Figure 1).

Characteristics of crisis management in the context of the time component include:

- The necessity to submit to drastic time pressure and limited room for manoeuvre. Managers who act agile and efficiently in the good condition of the company, when strategic matters dominate, are often unable to make decisions during a crisis, because a "crisis manager" needs a tough character, experience in such specific conditions, negotiation skills, and others.
- In a crisis situation, time is a critical factor and the scope for action is extremely limited (lack of financial resources, aggressive creditors, key employees fleeing to competitors, tax arrears, etc.). Due to the significant losses that a company may incur during restructuring, it is necessary to make decisions with great caution, i.e. in the case of crisis management, experiments are rather risky.
- Managing an organization in crisis conditions is one of the most difficult and demanding situations. Every company encounters crises in the course of its development. Crises cannot be ruled out, but they can be prepared for. The experience of managers determines whether the company will survive the crisis and come out of it stronger, or whether it will enter the bankruptcy zone.

In general, the basic factor in the quality of decisions made in management is the time of decision (in static and dynamic terms); including the reaction time of managers. It means the number of units

of time elapsing between the receipt of an impulse by a given system (company) and its reaction; At the same time, it is usually more difficult to determine the reaction time of the one that is determined by a series of impulses acting on the company.¹⁰

2. Business time gap rule

It can be assumed that in practice it is impossible to eliminate the loss of time, especially in the case of economic activity.¹¹ The reason for the time gap (understood as unjustified waste of time) in the decision-making process is most often errors in the management of the company. Such mistakes include: late decisions, asymmetry of information, outdated databases, fear of making decisions, pressure from the trade union lobby, opposition of part of the management board when making decisions, moral hazard, etc.¹² The causes of the time gap can also be external (e.g. disasters – natural catastrophe).

Insufficient awareness of the costs of the time gap among managers sometimes results in underestimating this phenomenon. The types of time gap factors in enterprises can be as follows:

- delays in access to leverage,
- delays in payment of receivables (payment gridlocks in the economy),
- delay of court judgments on the company's receivables,
- delays in the payment of compensation,
- late deliveries of supplies,
- decrease in the effectiveness of employees' working time (decrease in productivity, absenteeism at work, strikes and others),
- low utilization of the working time of machines and equipment,
- machine park failures,
- catastrophes (technical, climate, pandemics),
- forced production stoppages (e.g. as a result of a drop in demand).

Table 2. Potential time gaps and B2C business agility

Lp.	Time gap for commercial and marketing decisions and activities. Some examples	Rank/Weight; 5 – max rating
1	Speed to market	5
2	Delivery time (e.g. Japanese just-in-time method)	5
3	Speed of distribution of new products	3
4	Relevant promotion periods	4
5	Price changes in space-time	3

¹⁰ *Encyklopedia organizacji i zarządzania*, PWE, Warszawa 1981, p. 81.

¹¹ S. Czaja, *Czas w ekonomii...*, op. cit.

¹² W. Gasparski, *Decyzje i etyka*, Poltext, Warszawa 2022.

6	Customer service time	5
7	Customer complaint handling time	3
8	Opening hours	5
9	TV ad time (viewership rate)	5
10	Downtime periods (shutdowns, overhauls)	2
11	Period of sponsorship activities	2

Source: Author's own elaboration.

The size of the company's financial losses as a result of the time gap can be significant and it has an impact on other praxeological components such as agility and effectiveness (Table 2). There is a need for monitoring of the time gap and efficiency actions to reduce this gap in enterprises.¹³

In addition to the economy, in some other areas of society, the time gap has significant economic consequences. The time gap in the justice system has been widely criticized in recent years by both academic researchers and the media. A comparative analysis of the time of legal procedures and the costs and losses incurred by the companies subject to these procedures (as well as the financial situation of citizens) indicates a significant impact of the institution of the judiciary on the standing of business and the existing reserves in this area. The following areas of the Polish justice system, characterized by a significant time gap, are of important cost importance for economic activity:¹⁴

- civil lawsuits; including economy lawsuits,
- debt collection, including bailiff collection,
- restructuring processes,
- insolvency processes.

A clear example of the above phenomena was the bankruptcy of Roman Kluska's Polish IT company.

Significant reforms of the justice system are expected in the context of the time gap phenomenon.

3. Time as a component of action in praxeological terms

The temporal function of any activity means that it is located in a specific time, lasts a certain time, assumes a rational use of time and time planning; as pointed out by the praxeologists quoted below.

¹³ K. Kubik, *Czas jako kapitał*, [w:] Aktualne problemy zarządzania organizacjami, ed. W. Kowalczewski, W. Matwiejczuk, Wydawnictwo Szkoła Wyższa im. Jańskiego & Difin, Warszawa 2008.

¹⁴ P. Banasik, P. Masiukiewicz, *Czynnik temporalny w sądowych procesach gospodarczych a utrata wartości przedsiębiorstw*, [in:] Budowa wartości wymiaru sprawiedliwości, ed. P. Banasik, Wydawnictwo Kowalewski & Wolf, Gdańsk 2015.

According to L. von Mises, "The category of action is the fundamental category of human knowledge. It includes all the categories of logic, regularity, and causality. It includes the category of time and value."¹⁵

In T. Kotarbiński's monograph one can find a number of references to the category of time (as the essence of every human activity), including working time, free time and rational use of time.¹⁶ It also examines the concept of labour productivity over periods of time. In his opinion, one should "try to do more than one activity in a given period of time, use time in a multifunctional way."¹⁷

Time is also a criterion for choosing the objectives of the action and the means of implementing the action. H. Hoppe takes the view that „it is not automatically clear that, as a result of the necessity to choose and prioritise one objective over another – the inability to achieve all objectives at the same time – each action entails a cost (loss of value attributed to the highest-valued alternative objective which cannot be achieved, or which must be delayed)“.¹⁸

The praxeological approach to human activity, including economic activity, is currently based on four components: agility, efficiency, effectiveness, and ethics, only in a few publications does the component of time also appear.¹⁹

From the point of view of decision-making activities; managers are guided by the following praxeological criteria:

- the effectivity criterion means achieving the assumed rate of return (or limiting losses), limiting costs over time, estimating the level of risk of achieving an annual profit, obtaining a surplus of net cash flows over time, and others,²⁰

- the criterion of agility means the appropriate selection of means and activities at a given time, acting in accordance with the law, speed of action (taking into account the temporal factor, the possibility and costs of changing the decision in a given time,²¹

- the criterion of efficiency of activities (time component in relation to the goal, to the plan, etc.),²²

- business ethics criterion (ethics of business, ethics of capital markets and others),²³

¹⁵ *The Ultimate Foundation of Economic Science*, pp. 35-36; [in:] Hoppe H. H. *Ekonomia i etyka własności prywatnej*, Fijor Publishing, Warszawa 2011, p. 291.

¹⁶ T. Kotarbiński, *Traktat o dobrej robocie*, Ossolineum, Wrocław-Warszawa, 1958, p. 380, 382, 431, 467, 511.

¹⁷ *Ibidem*, p. 385.

¹⁸ H.H. Hoppe, *Ekonomia i etyka własności prywatnej*, Fijor Publishing, Warszawa 2011, p. 288.

¹⁹ R. Banajski, *Temporalne aspekty odpowiedzialności*, *Prakseologia PAN*, nr 142/2002.

²⁰ T. Kotarbiński, *Traktat o...*, *op. cit.*, pp. 112-114; A. Szpaderski, *Podstawy prakseologicznej teorii zarządzania*, *MBA* nr 3/2008; P. Masiukiewicz, *Racjonalność ekonomiczna a brzytwy Ockhama*, *Prakseologia i Zarządzanie*, nr 2/2015.

²¹ T. Kotarbiński, *Traktat o...*, *op. cit.*, pp. 12, 117-118, 372-373; P. Masiukiewicz, *Sprawność zarządzania w ujęciu prakseologicznym*, *Ekonomika i Organizacja Przedsiębiorstwa* nr 4/2018.

²² T. Kotarbiński, *Traktat o...*, *op. cit.*, pp. 21, 106, 372-373.

²³ W. Gasparski, *Decyzje i etyka*, Poltext, Warszawa, 2022; P.J. Engelen, L.V. Liedekerke, *The ethics or insider trading revised*, *Journal of Business Ethics*, Vol. 74, Issue 4, No. 2/2007.

- temporal criterion, which means, among other things, planning activities in a given time and the effectivity of using time.²⁴

The time component, as a determinant of human action, can be used in two dimensions, i.e. assumed (given) time or maximum of activities or given (planned) activities in the minimum implementation time.

W. Ockham's philosophical reflections on time are an important point of reference for praxeology. W. Ockham (14th century) was a follower of radical subjectivism and an extremely subjectivist conception of time, in which he clearly said that time does not mean anything outside the soul ("tempus nullam rem significat extra animam").²⁵

The multiplicity of goals, the multiplicity of criteria of economic effectivity and the fear of personal consequences of the decision created a decision-making conflict that causes the decision to be postponed until it becomes obsolete (superfluous, after some time). Therefore, it is necessary for the decision-maker to self-limit in this respect. The criteria of economic rationality in decision-making in a company can and should be selected according to the principle of Ockham's razor, i.e. a kind of economy of thought. According to this author, the principle of economy of thought is: 1) "Unnecessary multiplicity should not be assumed without necessity;" (2) "It is not worth doing with many what can be done with less;" (3) "When a proposition of things is to be verified, and two things are sufficient for its truth, it is not necessary to assume a third."²⁶ This principle may demand a limitation of both an excessive number of assumptions and entities; it may therefore have epistemological and ontological significance. Effective application of the principle of economic rationality in managerial decision-making should therefore be based on transparent criteria (including the temporal criterion) adopted by the decision-maker. According to Ockham's philosophy, multiplicity is treated as unnecessary, therefore it requires explanation and justification.

4. Time and ethics

Reflections on the ethical aspects of time have been scarce in literature; among others, in the works of R. Banajski and M. Łagosz. O. Lange also wrote about the connections between time and economics and praxeology (which also contains an ethical component): "Under conditions in which economic activity is rational, the economic laws of human conduct constitute a concretization of the rules of conduct adapted to given conditions."²⁷

²⁴ R.A. Block, *Models of Psychological Time* [in:] R.A. Block (ed.), *Cognitive Models of Psychological Times*, New York: Psychology Press, 2014; R. Banajski, *Etyka wobec...*, *op. cit.*; M. Łagosz, *Marks...*, *op. cit.*

²⁵ M. Łagosz, *Koncepcja czasu Wilhelma Ockhama w świetle niektórych ustaleń współczesnej filozofii czasu*, *Studia Philosophiae Christianae*, nr 3/2012.

²⁶ W. Ockham, *O czasie*, Wydawnictwo WAM, Kraków, 2007 oraz Masiukiewicz P. *Racjonalność ekonomiczna a brzytwa Ockhama*, *Prakseologia i Zarządzanie*, nr 2/2015.

²⁷ Quoted in: M. Łagosz, *Marks...*, *op. cit.*, pp. 352-353.

According to M. Łagosz, the dictatorship of time in contemporary capitalism manifests itself in a tendency to constantly shorten the time socially necessary for production through automation (also through digitization), which significantly changes the temporal relations governing society.²⁸ It also raises the question of the ethics of such actions.

Regulations, the reach of markets, methods of transactions and financing, codes of ethics – all this changes over time in modern practice, and new moral risks arise.²⁹ D. Hausman, et al, writing about the moral limits of the market, argue that "morality limits and should limit the use and reach of markets."³⁰ They also note that "some goods are better distributed through non-market mechanisms or highly regulated markets because of their characteristics."³¹

It is also possible and necessary to analyze and evaluate changes in ethical principles in particular individuals and social groups over a given period of time, as well as the problem of time as a moral value (e.g. converting time into money, wasting time) – as pointed out by R. Banajski.³² Christian doctrine recognizes the immutability of moral principles – which has never been questioned. It should also be noted that the internalization of certain ethical norms may last for some time, and this time will vary from one social group to another. The sociology of morality draws attention to the dependence of the object of moral evaluations in aspects such as the present and the past, that is depending on the dynamics of a given society (for example, an immaculate past is not a trumps).³³ R. Banajski pointed to practical aspects, i.e. also to the introduction of periodic professional and moral evaluations of employees and managers; both in business, administration and politics. Nowadays, such assessments are mandatory, among others, in financial institutions of the European Union member states.

There is also a dilemma in space-time: economic value vs. moral value, described by D. Hausman, M. McPherson and D. Satz.³⁴ The apparent dichotomy of profit or ethics has been given a lot of space in the literature.³⁵

To morally negative actions; especially in business management, we can include, among others:³⁶

- wasting time,
- stealing other people's time,

²⁸ *Ibidem*, p. 466.

²⁹ P.J. Engelen, L.V. Liedekerke, *The ethics or insider trading revised*, Journal of Business Ethics, Vol. 74, Issue 4, No. 2/2007.

³⁰ D.M. Hausman, M.S. McPherson, D. Satz, *Etyka ekonomii*, Copernicus Center Press, Kraków, 2019, p. 185.

³¹ *Ibidem*, p. 187.

³² R. Banajski, *Temporalne aspekty...*, *op. cit.*

³³ *Ibidem*.

³⁴ D.M. Hausman, M.S. McPherson, D. Satz, *Etyka ekonomii...*, *op. cit.*

³⁵ W. Gasparski, *Decyzje...*, *op. cit.*, R. Banajski, *Temporalne aspekty odpowiedzialności*, Prakseologia PAN, no. 142/2002.

³⁶ P. Masiukiewicz, *Morality of Debt Repayment in the Light of Current Research*, Journal of Applied Management and Investments, vol. 6, no. 3/2017.

- delaying decision-making without justification (including late decisions),
- delays in payment of receivables
- overexploitation of employees at a certain time,
- manipulation of time (dates), inside trading,
- appropriating free time from employees.

Managers should be expected to internalize norms such as: respect for the value of time, adherence to time norms specified in legal regulations, monitoring of time management, planning activities in time, and others.

Summary

The time component is important in all human activities, especially in economic and administrative activities and in the management of these activities. Hence, in management research, a lot of space has been devoted to planning, organizing and effective time management. Some attention, though definitely not enough, has been devoted to the problem of praxeology.

The category of time is both the object of study and the tool of study. It should also be a point of reference for praxeological considerations. When studying the interactions between the past, present and future, it is necessary to take into account the subjective perception of time, because the way it is understood in research on human activity, including the economy, can be subjective. In research, it is worth considering how time is understood, whether its passage and impact on the subject of the study, but also on the researcher himself, has been properly analyzed.

Time is nowadays, next to the classical components, an important praxeological component; significant links to agility, efficiency, effectiveness, and ethics.

To sum up, time is nowadays an economic good, and next to traditional components, an important praxeological component.

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