

NEWER ASPECTS OF HIERARCHICAL, GENERIC AND HEURISTIC APPROACHES IN LAYOUT SOLUTIONS, DIMENSIONS OF CREATING A NORMATIV BASIS FOR SUSTAINABLE DEVELOPMENT OF PRODUCTION AND LOGISTICS

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Abstract: The presented scientific paper arises mainly in the context of solving current issues, problems of theory and practice of entrepreneurship. In particular, in the field of dispositional solutions, dimensions of the formation of normative basis of sustainable development in the field of production and logistics. It is an expression and continuation of the previous opinion, thought march, experiential expression of the authors on the issue. It focuses mainly on the current challenges associated with the development management of production and logistics, on the parameters that will need to be respected and, to a greater extent, applied in the future. It is also a response to the fact in the sense that the results of research, predispositions in the field are insufficient. Especially in terms of the approach to solving the problems of the normative base, not only in the responsible authorities, institutions in this area, but also in the business units themselves.

Keywords: innovations generics and heuristics access, production, logistics, development management, business

1 Introduction

Newer, participatory solutions are based more on knowledge, results and experiences that have been and are being applied today. They mainly talk about interpenetration and synergy, proportionality and parallelism, which ultimately also express a certain result, a degree of satisfaction, a desired marginal utility. Particularly in the very short term on the boom of innovative, technological, organizational, especially information development. Generically, hierarchically and multidisciplinary, this is perfectly fine. Contributing to this at the present time is the heuristic, which has been placed by Archimedes on the pedestal of the so-called active theory of the investigation of phenomena and processes.

In addition, there is also the topical aspect of sustainable development. Not only in general, but also on the parameters of its development in specific sectors, industries, other areas, also sustainable development strategies, which are related to the integration of objectives, policies, tactical and operational management in the field, programmes, integration of the information system, market and customer conditions. Priorities should be focused and strengthened especially in the area of "generational" responsibility, environmental limits, holistic approach in solving current problems, preference for prevention, reduction of material, energy intensity of systems in production, consumption, logistics processes. These are also permanent processes that touch the field of standardization, unification, standardization, inheritance of processes (elements) mainly in business units. But also in the policy of the authorities, supranational institutions, organizations, which "statistically" direct the measures for the improvement of the whole system in the field of sustainable development on our planet. Our researches so far have confirmed to us that anomalies and disproportionality exist in this field. Mainly in expertise, opinions, statements. How to unify, synergize this is a question of *Quotus quo*, but rather *Quo Vadis*?

The decisive problem of the topic of the scientific paper from our point of view to solve is the subsequent formation of the normative basis of sustainable development of production and logistics in the current business conditions, along with sustainable development of environmentalism. It is certainly true that there are currently available ISO series standards in the field of quality, creation and protection of the environment, safety, health, information systems. They are referred to as basic

conditions, principles, standards of documents created and based on the joint results of science, technology and practice, and aimed at achieving the optimal degree of organization in specific contexts.

Another category of standards is their procedural and institutional approach, the way they are applied in a particular company, business. The formal approach must be fulfilled, implemented, but the informal aspect of application is questionable. In terms of mandatory regulations, „legal norms“ are the rule. Informal organisation, rules especially in specific business cases, may not be respected especially in the case of external audits. A frequent problem arises: between respecting the system or taking it away. In our opinion, this is also a fundamental problem. The majority of business units today are more inclined towards the internal audit method, emphasising their own, voluntary tools, and development rules in the context of such decision-making. However, formal rules are crucial.

2 The current state of the issue

The text of the scientific paper in this chapter will be devoted not only to the circumstances that led us to its elaboration, but also to the current, dispositional, opinion platform in the theory, practice of entrepreneurship, professional opinions and experience in the area under study. Mainly, as it also follows from the title of the scientific paper, to emphasize the newer approaches in the intentions of the hierarchical, generic, also heuristic approach in the dispositional solutions, dimensions of the creation (improvement) of the normative basis of sustainable development of production and logistics. Not only at the supranational level, but especially in the conceptual positive solutions, possibilities of business units. Conceptualizing the state of the art in the researched area was quite challenging in that we realized the insufficient level of process, integrative, strategic, tactical, operational management, as well as the professional characteristics of research and quality. Also in other aspects, which in the scientific paper we will mention only in the following contexts (assumptions): computerisation (automation and digitisation), HR, marketing, innovative development, external and internal parameters of development.

The answer to the mentioned „insufficient level“ in the field of creating and improving the normative base, the conditions of implementation, is mainly that the pioneering works are almost already a thing of the past, and the newer views are quite or substantially different from the original, classical ideas in terms of parameterization. These, however, must be considered, in our opinion, as a substantial contribution, because they have created further prerequisites in the basic moments, the intentions of further development. Classical theory has confirmed that we can and must further develop the modern characteristics. This is certainly true; we must not forget it. The shift is whether we are able to assess and respect, to confront these conditions in a modern context. This shift has created quite a big gap between planning and reality, between a relative and pragmatic approach, between the degree of immediacy, the relative consistency of processes, especially in development applications.

Considering the topic and the verification of the scientific contribution in that the field of sustainable development (environmentalism) of production and logistics is one that deserves much more attention in the given intentions. Especially in the hierarchical structure, generics, heuristic approach. Our effort in this part of the scientific paper will not be the time horizon (although it is quite substantial), rather we will draw attention to the reality, predispositions, experiences, opinions, professional flexibility in the theory and practice of business. Especially on the categories *Status Quo*, *Quo Vadis* (to persist, to continue?). These are quite essential, determining clues at national and supranational level. We can say that none of the

mentioned issues, circumstances are close to the optimum in the field. At the supranational level, institutions, it is rather a way to determine the rules, conditions for further implementation of processes in the examined area. It is not related, in our opinion, to the time horizon. Parameters in terms of time horizon, forecasts, assumptions of realization are constantly changing. Although they are set for a longer period (2035, 2040, even 2050), and supposedly will bring changes, they are not substantiated in essence and at all. The forecasts, the development strategies, the tactical management are only defined in general terms for a given area of numbers, which is at odds with what it should look like in, say, forty years' time. Even in representative institutions, they cannot express more precisely the future situation, the solutions in the considered area of research and practice.

For the time being, we only wish to confront and give our views on the current essential state of dealing with the issue at home and abroad. We first assume that our views will be taken into account by the future opponent(s). Taking into account the classics, also modern conditions, initiatives in the field, we will first emphasize the positive, but we will also list the negative factors (indicators, parameters) of the rate or efficiency of the processes that are the subject of the investigation of our scientific paper. We have partially published them in the previous several scientific papers of the department, university textbooks, monographs. There are several of them, we refer in this case to the website.

1. Positive indicators (parameters) include:

- their previous justification, enrichment in favor of the laws of organization, arrangement of the production process and logistics, synergization,
- newer propositions in the change of the elements of the production system and logistics in the enterprise, business,
- degree of immediacy especially with regard to classical and modern factory,
- degree of usefulness, variability, the so-called "zero point" and its other propositions, optimal solutions, costs, efficiency,
- development processes, normative basis in production and logistics, sustainable development, environmental aspects,
- meanwhile, the question of "racia", which is being investigated, ranges between the hierarchical, generic and heuristic approach emphasized by us in the dispositional solutions, dimensions of the creation and improvement of the normative base of sustainable development in production and logistics.

2. Negative indicators (parameters) include:

- efficiency rate, profitability of processes at supranational, national level,
- conditions in terms of generic, hierarchical, heuristic approaches, solutions in the given area,
- inventory management, their capitalization and reassessment in terms of the existing approach, also the commitment of current assets, inflation,
- the relative consistency of the environment-production-logistics triangle that we have mentioned and emphasised,
- inertia versus future development,
- insufficient organisational solutions, organisational modelling.¹

3. Several underappreciated aspects are also touching from a professional point of view:

- the level, the method, the presented aspects, the solution of in-house management, production management,

consequently logistics, also the characteristics and development of the human factor, especially in connection with the ongoing automation, the digitalization of Industry 4.0 processes and the ongoing Industry 5.0,

- the tightening of the integration processes in the field of sustainable development, which undoubtedly includes not only production, but also logistics and environmental management in business development.

Drawing attention to this topic of the scientific paper, we would like to further state that few scientific, professional articles have been published in scientific circles in Slovakia in the context of science, research, and the creation of a normative basis for the sustainable development of production and logistics. Some of them only partially dealt with this issue, but not in accordance with the normative base, methods, assumptions of its solution. More recent views (see more details) of the solution are given in the paper in the authors' note or by citation 6. Obviously, we had a reason, also dispositional, to approach the problem not only in the research work but also in the pedagogical activity, to create a framework for the students who worked on the solutions, seminars, also in the normative field, based on their future profile.

As for the foreign authors, companies, they rather argue that the aspect of normative base is not crucial for them. They are guided (as in legal issues) by the fact that the multiplicity of states and institutions in the process is unlimited. While there are general rules for doing business, each business entity can adapt them (including in normative activity) according to its own rules. This applies to the continent, but also to the pillars of management, which include elements of the American and Japanese, but also the Chinese, as well as the management of the so-called Asian tigers. Also as a result of this, certain rules of normative bases will be judged in favour of behaviour in the intentions of business entities.

This is just to underline the idea that the creation and continuation of processes in this area can also be read in an international context, especially in conditions of globalisation of markets and customers. And in symbiosis not only with national, but also regional, national markets. We have deliberately focused the space in this paper only on the possibility of sustainable development of production and logistics. Suggestions and recommendations will be conveyed in the results and discussion section of our scientific paper. To the decisive idea in this part of the chapter we would like to add that the pioneering work in this field is the monograph by Tomek, J. – Tomek, G.: Normative basis of production management. Although it was written and published in a certain period of time, in our opinion it belongs to the pioneering literature in terms of not only classical but also contemporary understanding of processes. Unfortunately, at that time the authors were probably not yet familiar with such processes, disciplines such as logistics, sustainable development, environmental management. However, we are grateful to them for the fact that today we can move up the ladder on the basis of their initiatives.

3 Methodology and research methods

We have made an authorial agreement not to go beyond the predispositions that are set for composition, methodology, and rules that are expected of a scientific paper for its publication, although the requirements are different. We did not conceive of a paper with this title randomly. Especially in terms of normative activity, associated hierarchical, generic, heuristic approaches, dispositional solutions in the sense of sustainable development of production and logistics. Our perspective in identifying the main goal, participatory sub-goals and hypotheses will be rather narrowed in that it will provide opinions, thoughts on how to proceed further in terms of conceptual propositions. It will point out the existing shortcomings, especially in the field of rules, development and improvement of the normative base in the specific area: environment - production - logistics, synergisation of procedures. The main objective of the scientific contribution is to respond in an inspiring, professional and natural way not

¹ See more details:

Dupař, A.: *Logistika*. Bratislava: Sprint dva, 2019. 288 p.

Dupař, A. et al.: *Manažment výroby*. Bratislava: Sprint 2, 2019. 365 p.

Dupař, A. – Rakovská, J.: *Vnitropodnikový manažment výroby*. Bratislava: Vydavateľstvo Ekonóm, 2010. 199 p.

only to the current changes, issues of development of theory and practice of entrepreneurship at home and abroad, in the international context, on the basis of the collected body of knowledge in research, predictive and comparative analyses, with the possibility of proposing on this basis of their own views and experiences and directions for improving the processes in the area under study.

In the initiatives and coherence to the main objective of the scientific paper, we would also like to mention the following sub-objectives of the work:

- to maintain consistency in the classical, modern investigation of the development process in the field in question (hierarchy, generics, heuristics) in relation to the current problems of development in the field under study,
- to accept, in certain dimensions, also the previous experience, which was and is part of the permanent development,
- to point out that partial solutions are not decisive in the hierarchical structure for the fulfilment of synthetic, integrative development in a given area,
- the same applies to the development of processes,
- to confront our intentions and ideas with the current situation at home and abroad, especially in the initiatives on the topic of the presented scientific paper.

Given the topic of the paper, also the predisposition and consideration of time parameters, a spectrum that is essentially known to us, we will probably be more cautious in that the hypotheses and their formulation will not be what is crucial for us. Perhaps in another paper that will follow up on just this currently addressable aspect. The methodology and working methods of conceiving a scientific paper are determined by the propositions and rules that arise from the nature of the treatment imposed on this kind of work. We continue them by highlighting, for the time being, the methods of investigation that we have used in the following text. These include the following:

- First of all, the classical ones, which include: analysis, synthesis, induction, deduction, comparison of interviews, mind maps. They appear not only in the previous sections of the text, but are part of the subsequent results and discussion.
- Hierarchical and generic structures are also essentially classical. However, their significance and platform is in the organizational structuring. The organizational approach as a domain is also for us a way of expression, a guide to further solutions.
- We want to express the approximation approach mainly in cases where the approximation approaches the solution of a more complex problem.
- The heuristic way, or the way of joint ideas, dialectical paradox, pause, incompetence and so on.

4 Results and discussion

The normative basis in development, not only in terms of globalisation, internationalisation, markets and customers, but also in business, suddenly seems to have fallen away. There are attempts to bring it back naturally, through the emphasis on standardisation, unification, normalisation and the inheritance of processes. However, these are just words that experts (not institutions) say bring little to the functioning of the system. The unifying feature of the content articulated and the meaning important in this area are the general and fundamental principles. Also the formulas themselves, the indicators, which in fact cannot be corrected very much. As the experts put it, not even on a system with a target focus on automation, digitalization of processes (Rathouský, B. – Jirsák, P. – Staněk, M., 2017), but also before (Gibson, R. et al., 1998), on the economy. This dilemma is complexly conditioned by the increasing uncertainty, discontinuity, chaos and paradox of the post-industrial world, the

democratization of power, the transformation of large corporate organizations and their nation states into a global network.²

But there are other dilemmas that we will mention without quotation because they express our own abilities and feelings. We have already mentioned some of them in the previous text. On the basis of the above, our results of the work and discussion will be directed towards highlighting them:

- general rules of conception of the terms: norm, normative base, systemic behaviour in the field of sustainable development (environmentalism) in production and logistics,
- application tendencies, conceptual proposal of hierarchical, generic and heuristic approach in the processes of development of the normative base improvement in the field of our research.

The processes of change (of entities) in the normative sphere are constant, they need to be changed, improved. This thesis forces us to do what we have not yet emphasized. Mainly in that we need to define quite clearly what is a norm, a normative base, a set of norms. A standard is a prescription, a rule binding for use in some well-defined area in a legal form. Each sector uses valid standards developed for individual products (mechanical, chemical, food, etc.).³ We would like to note in this connection that already at that time standards were specified not only for trade unions, but for branches of industry. A standard is a document approved by a competent authority, providing rules, guidelines or characteristics for activities or their results for general and repeated use. It is based on the common results of science, technology and experience, and is optimally beneficial to the public. The types of standards are: (1) an international standard adopted by an international standardisation organisation and in the public domain, (2) a European standard adopted by a European standardisation organisation and in the public domain, (3) a Slovak technical standard which is in the public domain and valid in the Slovak Republic.⁴ There is indeed a shift in the platform of opinion, but again so general that business units are not focusing only on standardisation.

This ambiguity also creates a problem for us as authors in that the facts in the field need to be recertified, to be commented on responsibly. As we have also stated, especially at the level:

- international organisations, institutions that deal with this,
- at supranational level,
- at the level of national economies,
- at the level of the major business players at home and abroad.

A special treatment area in these contexts is environmental science and transport. The former is associated with standards that are overcome from day to day, not to mention the periodic shifts of years, of seasons. We dare to say that this is a so-called deadlock, compounded by the statements of European and other global institutions, which, even in prediction or in random processes, cannot responsibly assess and empirically justify the consequences for the development and life on our planet. What is lacking is not only decisive strategic decisions, tactics, but, above all, an operational approach. It is clear that even the 2030 Environment Strategy will not help us. Significant problems arise, particularly in the areas of environmental creation and protection, waste management, groundwater and surface water protection, and renewable energy sources.

Also for these reasons, every good opinion is very important. We believe that understanding should be sought at the level of national economies, of business entities, rather than at a

² See more details:

Gibson, R. et al.: *Nový obraz budoucnosti*. Prague: Management Press, 1998. 261 p.
Rathouský, B. – Jirsák, P. – Staněk, M.: *Strategie a zdroje SCM*. Prague: C. H. Beck, 2017. 272 p.

³ Michník, E. et al.: *Ekonomická encyklopédia*. Bratislava: Sprint, 1995. pp. 210.

⁴ Sivák, R. et al.: *Slovník znalostnej ekonomiky*. Bratislava: Sprint dva, 2011. pp. 210, 212.

supranational, international level. Especially not in ways of centralisation, but in decentralised approaches, informal organisation. Recent surveys confirm that a relatively large proportion of the population distrusts the laws, norms, rules, measures and regulations that have been and are currently being adopted by the institutions that “put them into practice”. We see the perspectives of hierarchical, generic and heuristic approaches in the dispositional solutions of creating a normative basis for sustainable development of production and logistics in the following levels:

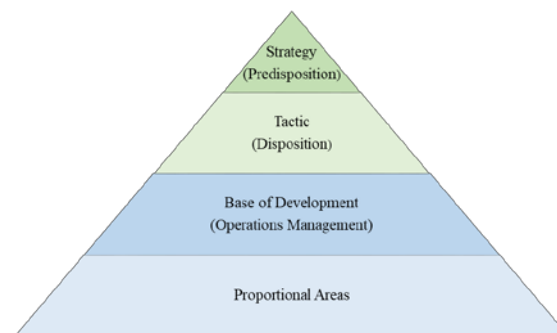
1. To retreat in the field of hierarchical structures (vertical and horizontal organization) to the position of flat organizational structures, especially in the sense of matrix, divisional or other type, for example, fractal and virtual enterprise or enterprise without borders.⁵ In view of the foregoing and the above, there is certainly a greater opportunity to address aspects of future normative activity in the areas we have presented. In this way, the principle, the way of decentralisation and decision-making can also be accepted.
2. To make and rethink the transition from Euro-American to Japanese management in that the element of decentralisation, management and especially motivation to work will be the decisive momentum of synergy (synergisation) between employees and top management.
3. Emphasize and increasingly apply the principles, methods, competencies, causal systems, management concepts of Kaizen, OPT, MRP, network analysis and others related to Industry 4.0 or Industry 5.0 in the theory and practice of business.
4. Of course, also in relation to heuristics (“I found, I discovered”) and its dispositions, which we have already mentioned, especially the method of pause, dialectical paradox, incompetence, postponed ideas. Moreover, also deriving from the classics, but included in this field: the Delphi method and also the organisational modelling favoured by us.

At the beginning of this part of the scientific paper we would like to mention that it was obviously essential for us to make the reader understand that standardization, unification, normalization, inheritance are natural attributes of development processes, entrepreneurship, also the basis for normative activity. Even in what we have not quite mentioned, this includes technical-economic standards, principles, assumptions and methods of their creation, predispositions, management by cost, control and their eventual „rebirth“. Also so-called change management, which, in the event of non-conformity in the production process, but also in other categories, pushes back all planned and other activities to the pre-production stages. This can also happen to large companies that have underestimated the subsequent normative basis and setting of any parameters in the pre-production stages. It is said that the so-called model coupling in this area is unlimited. This is mainly related to the constitution of parameters that are 'tailor-made'. An example is intradepartmental production management.⁶ Each business unit carefully protects its secrets (Bata management system). It is, after all, also the experience and knowledge of the work: Čuba, F. – Divila, E. (1989): *Paths to Prosperity*. Prague: Svoboda, 1989.⁷ The 2030 Agenda, with its 17 Sustainable Development Goals, presents a clear vision for industries and organisations to ensure economic, social and environmental well-being.⁸

The organisational model in Figure 1 is based on the refinement of parameters in the strategic, tactical and operational approach (research) in the field. We think it will be inspiring in what we

have also highlighted in the previous sections of our scientific paper. In particular, in that in the strategy, disposition (tactics) and operational management base we will also indicate the prerequisites, aspects of further comprehensive and integrative development of the transformation process in the studied area.

Figure 1: *Organisational model, pyramidal structure and hierarchy parameters, strategies, disposition, process development bases, integration of sustainable production and logistics development*



Source: own elaboration taking into account the views of prof. Dupař

1. Strategy (Predisposition): overall potential, classical and modern factors of sustainable development of production and logistics.
2. Tactic (Disposition): actual solutions and concepts with respect to time, parameterization of problems, predisposition of solutions at supranational level, institutions and with variation to the normative base in business units.
3. Base of Development (Operations Management): Adapting to the parameters of the formal or informal organization's initiatives, to the regulations of higher institutions, but also to the processes of creating one's own normative base, development and competitiveness to date.
4. Proportional Areas: legislation, transition from centralization to decentralized solutions, innovation, quality, technological development, setting own technical sustainable parameters of production and logistics of business units with the possibility of reasonable costs.

Using the organizational model in Figure 1, we want to express the consistency of our views, assumptions for further refinement of the normative base, also with respect to economic propositions. We see the complexity of the above model mainly in the following:

- in each of the areas we are studying (environment, production, logistics) there are a number of opinions, statements that can be generalized, but they lack a predisposition, an economic expression, a way and adequacy of their justification,
- it is rather presented with the term standardised, which we consider less adequate, and due to the fact that it focuses only on actual and potential problems in the field,
- business units, not to mention tradesmen in general, agricultural and food processing entities (although the Slovak Republic has some of the strictest standards in the European Union in this area), are essentially bypassing them,
- the legislative measures do not yet address even the method of communication, let alone the measures that are natural measures, the methods of implementation in the area we are studying.

There are other predispositions that we want to emphasize to this model, to indicate:

- To follow the idea of Status Quo or Quo Vadis? These are in fact two different counterpoints. However, we think that

⁵ Dupař, A.: *Logistika*. Bratislava: Sprint dva, 2019. pp. 225-236.

⁶ Dupař, A. – Rakovská, J.: *Vnitropodnikový manažment výroby*. Bratislava: Vydavateľstvo Ekonóm, 2010. pp. 7-20.

⁷ Čuba, F. – Divila, E.: *Cesty k prosperitě*. Prague: Svoboda, 1989. 254 p.

⁸ Richnák, P. – Fidlerová, H.: *Impact and Potential of Sustainable Development Goals in Dimension of the Technological Revolution Industry 4.0 within the Analysis of Industrial Enterprises*. Energies : [Journal of Related Scientific Research, Technology Development, Engineering, and the Studies in Policy and Management]. XV. issue 10. Basel: MDPI, 2022. pp. 1-20.

in a certain sense the processes need to be continued, to follow a continuum.

- A complex issue is the subsequent formulation and refinement of so-called standards, especially international auditing standards. That is to say, standards that have been radically guided in their development up to now and are still guided today by unwritten rules, directives and decrees that, for example, are no longer even in force. They even refer only to references or notes on the Internet.

5 Conclusion

The scientific paper (also with the opinions of our former supervisor prof. Dupař) was moved to a special level in that it is an expression of our long-lasting work and joint expressions and reflections also at the previous joint department. The world needs to be brought into other transformations, such as we have only recently dealt with (the coronal crisis) and are currently dealing with (war conflicts). They have cost us and are costing us enormous financial resources, which could be used, for example, for the development of the outlined issues under consideration. The spontaneity of our views at the end of the paper leads (also on the basis of the models presented) to the following statements:

1. The world, our planet in the area under study, also the institutions and bodies involved and their powers need to be brought into different transformations, conditions than are being addressed (proposed) at present. Mainly by changing the parameters that will respect the territories (regional development), the predispositions, the mass consequences, the initiatives in favour of globalisation and internationalisation of development in the area under study.
2. Long-term commitments in the area under review must be based mainly on strategic, tactical objectives, but also on operational research, initiatives and respect for their timeframe. We found that in the proposed time horizons, the predisposition was poorly forecasted, designed. Especially in climate, not to mention production, logistics, internal parameters. The same question comes back to how to organise it. Globally or regionally? Our proposal is more towards territorial integrity, towards regions which, in their resolutions, will respect the rules of quality, sustainability, process development.
3. Another and very serious problem in this area is market and customer ambiguity. It concerns not only uniformity but also standards, which, for example, are quite different in a nearby territory. The issue is not only the US, the EU, Japan and Asian countries, but also compliance with the rules of common practice in the areas of quality, sustainability, environmentalism, production development and logistics. Changing the rules over time must address these areas, especially probability theory.
4. The above-mentioned treatment of the common markets in this area does not give us any effect. It does not concern the unity, the norms of the states in the vicinity. It also includes the current standards of states, which, in the consistency of green transposition, do not apply, for example, in the area of waste management, the circular economy.
5. We are aware that our research results are only a fraction of the situation, which will contribute to the development of further reflection and debate in the field. Especially in the conditions of changing views in the triangle: environment - production - logistics, and especially in the synergy effect.
6. We also believe that artificial intelligence should be "excluded" in predicting future decisions in this process and the area under study. Especially its method, implementation, possible application. Especially regarding the characteristics of the original and modern factors and the development of the above-mentioned triangle.
7. The paper is crucial in that it dimensions the view from strategic, tactical management to operational research to the creation of a normative basis for sustainable production and logistics development.

Literature:

1. Čuba, F. – Divila, E.: *Cesty k prosperitě*. Prague: Svoboda, 1989. 254 p. ISBN 80-20500-07-3.
2. Dupař, A.: *Logistika*. Bratislava: Sprint dva, 2019. 288 p. ISBN 978-80-89710-44-7.
3. Dupař, A. et al.: *Manažment výroby*. Bratislava: Sprint 2, 2019. 365 p. ISBN 978-80-89710-50-8.
4. Dupař, A. – Rakovská, J.: *Vnútropodnikový manažment výroby*. Bratislava: Vydavateľstvo Ekonóm, 2010. 199 p. ISBN 978-80-225-2880-1.
5. Gibson, R. et al.: *Nový obraz budúcnosti*. Prague: Management Press, 1998. 261 p. ISBN 80-85943-80-8.
6. Michník, L. et al.: *Ekonomická encyklopédia*. Bratislava: Sprint, 1995. 630 p. ISBN 80-967122-2-5.
7. Rathouský, B. – Jirsák, P. – Staněk, M.: *Strategie a zdroje SCM*. Prague: C. H. Beck, 2017. 272 p. ISBN 978-80-7400-639-5.
8. Richnák, P. – Fidlerová, H.: *Impact and Potential of Sustainable Development Goals in Dimension of the Technological Revolution Industry 4.0 within the Analysis of Industrial Enterprises*. *Energies : [Journal of Related Scientific Research, Technology Development, Engineering, and the Studies in Policy and Management]*. XV. issue 10. Basel: MDPI, 2022. pp. 1-20. ISSN 1996-1073.
9. Sivák, R. et al.: *Slovník znalostnej ekonomiky*. Bratislava: Sprint dva, 2011. 434 p. ISBN 978-80-89393-45-9.
10. Tomek, J. – Tomek, G.: *Normatívni základna řízení výroby*. Prague: SNTL, 1981. 263 p.

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