THEORETICAL, REGULATORY AND PRACTICAL IMPLICATIONS OF LOGISTICS

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ABSTRACT. Background: The logistics has its practical input in creating economical strategies as well as in creating modern economic environment. Processes of planning, designing and functioning of logistic systems must be based both on the theoretical knowledge covering various areas as well as practical experiences to provide the required support. To provide logistic services in the rational way, it is necessary to learn the complicated set of implications resulting from three areas covering the theoretical knowledge, practical ones as well as the regulation by the law.

Methods: The triad of three concepts: theory, practice and regulation is the main area of consideration in relation to tasks of the logistic support provided by any organization for any production process. The aim of this paper focuses on the necessity of taking into account implications among theory, practice and regulation during the process of analyzing, designing and implementation of systems of the logistic support. The lack of awareness of differences between various implications or ignoring them must lead to irrational behaviors.

Results: The implications among theory, practice and legislative regulation of logistics presented differently than usually, broaden the logistic knowledge and at the same time provide the tool of the rationalization of logistic services in all kinds of activities.

Conclusions: The correct identification of tasks and functions of the logistics leads to the recognition of its subject and tasks and correct identification of implications occurring among theory, practice and regulation. This knowledge is indispensable in the process of creation of projects of logistic services of each activity, both business and non-business one.

Key words: logistic support model, implications among theory, practice and regulation, rationalization of logistic activities.

INTRODUCTION

The triad of three concepts: theory, practice and regulation, being the main subject of this paper, creates the excellent platform for contemplation to learn the essence of the logistics as well as its functions in economic and social systems.

The implications describe logical relationships between phenomena (in pairs), where one of them implicates the other one. The implication means assigning a feature to something or resulting in something. Hence in relation to the subject discussed, it means that the logistic practice originates from the theory of the logistics as well as from regulations of legal, organizational, technical or technological nature, which determine the final scope and the character of possibilities of the implementation of logistics. Additionally, the theory, i.e. the logistic knowledge results from the experience and the practice as well as from accepted regulations, which determine the conditions of the logistics support for any activity (e.g. Highway Code, regulations for environmental protection). Therefore the concepts of theory, practice and regulation in relation to the logistics create pairs of mutual logical
relationships. The theory determines the practice, but also requires specific regulations by the law, which enables the implementation of the logistics. On the other hand, the practice implicates the development of the theory but also some agreements of the organizational and legal nature of logistic processes. Therefore the concepts of theory, practice and regulation create logical relationships, which could be expressed not only by a conjunction and but also by: also, but, although, despite, then. Due to occurring implications, the specific features can be assigned to the logistics.

The logistics has its own practical input in creating of economic strategies as well as modern economic environments. It is conducted by various applications of organizational, technical, technological and optimizing solutions of logistic processes and systems, directly based on the theoretical knowledge covering various scientific fields. The effective realization of logistic tasks in logistic systems cannot be obtained without legal regulations at every level of the social and economic system - starting from global level (e.g. interoperation issues in transport), especially at the level of international organizations, through national and regional regulations (existing economic and trade law), as well as legal regulations and procedures defined at the level of individual business and non-business organizations.

The aim of this paper is to point out the necessity of analyzing, designing and implementation of systems of the logistic support, which takes into account implications occurring between theory, practice and legal regulations. The methods of understanding of the essence of the logistics and its significance in the practice, is the foundation of the development of existing and creating of new more rational implications between theory, practice and regulation in logistics. Due to the restricted possibilities to present this subject (in the form of this paper) in broader context and all dependences, the aim of this paper is mainly to present the framework of this problem. The Author expresses the hope, that by adding his remarks and comments to the discussion on the fundamental basis of the logistics, he will increase this discussion by proposing to look at objects and functions of logistics through the mutual relationships of theory, practice and regulation.

AIMS AND FUNCTIONS OF LOGISTICS

Before making an attempt to interpret relationships given in the title of this paper, it is necessary to refer to some essential assumptions of the essence of the logistics, which are primary and fundamental to any other considerations, both of the theoretical and practical nature. Due to the fact, that they are already well described in other Author’s publications [Chaberek 2000, Chaberek 2002, Chaberek 2006], their presentation in this paper will be limited only to pointing out most important threads:

– whether each transport or warehouse activity can be treated sensu stricto as the logistic activity. The second question concerns the word right, which is used by describing aims of the logistics, because the aim of the logistics is: to provide right resources, in right quantities, in right locations, of right quality, in right time and with right cost (6R rule). Therefore, what determines the subject and the scope of features included in aims of the logistics, how the values of these “indicators” should be evaluated. These questions lead to the assumption that the logistic process can be discussed only as a process supporting other process, original to the logistic one. At first, there is a need, the fulfillment of which requires the production of a specific good or service. The intention to produce a specific good determines the kind and the quantity of resources required for the production of this good. As mentioned above, activities related to physical obtaining of specific resources are the subject of the logistic process. Therefore the relationship between the production process (described as a primary one) and activities supporting this process within the logistic process defines the conditions of aims of the logistics, described by word “right” as fully measurable and being able to be identified. Only using such definition of relationships between these processes, it can express costs, lead-time, required quantity of resources, etc. in a measurable
way. The subject of the logistics cannot and should not be identified only by the type of realized activities, especially as a sum of bigger or smaller numbers of such processes as transport, warehousing or handling, even if the postulate of the adequate level of their integration in one logistic process is taken into account.

− it should be pointed out, that such activities as transport, warehousing or handling are market goods themselves and therefore they are the subject of market exchange. Logisticians, owners of logistics processes of the company, responsible for the proper logistic support for production processes in their companies, have a choice: either to conduct tasks based on the sourcing model or to use the outsourcing solutions. In this way, the demand on the market of logistic services starts to occur. It is fully covered thanks to the rule of supply and demand for such services as transport, warehousing, crossdocking or even whole packets of such services. The behavior of suppliers of logistic services are of a classic type, like any other participant of the market. The utilization of economic situation and possible business is always the most important issue. Business effects depend directly on the level of the adjustment of these goods (realized logistic services) to clients’ requirements (real owners of logistic processes). The fundamental aims of the logistics, described as 6R, have a form of concrete expectations of recipients of logistic services. On the other side, providers of these services operating on the developed market, try to recognize the requirements of their potential clients and to adapt their logistic services to the market demand and even more, they try to create the competitive offer regarding the scope of services, their quality or the price. The logistic company acts as any other company on the market. The logistic operators do not create any real logistic functions, but only response to the demand and eventually they create this demand both in marketing and in real sphere.

− The logistic company, which conducts its own production process of logistic services, requires also the logistic support. Therefore we have an analagous universal model - there is a basic process (production of transport service, warehousing service, etc.) and it requires the logistic support according to 6R rule. These processes also require the analogical logistic support. For example, classical resources necessary to the production of the transport service are fuel, tires, loading devices, navigation devices, drivers, etc. The assurance of their provision determines the main process (in this case - providing transport services).

− The logistics has always a supporting function in the relation to other process, which is the main one (primary in the relation to the logistic process). There is no logistics, no need for logistic services without another process, which is primary to the logistic process. The main process determines the scope of required services, provided by the logistics. The supporting activities can be defined only in relation to the main production process. The supporting activities provide right resources, in right time, in right location, in right quantities, of right quality and in right prices (6R). The rule 6R without the main process and its requirements becomes only an empty slogan.

− Beside the service function, the integration function of the logistics is also an important one. Although it was already defined many times, the interpretations of this definition do not touch the crux of the matter. The integration function of the logistics can be rightly compared to the role of interfaces. The logistics can be compared to functions of interface between the main process and the process responsible for providing indispensable resources for the main process. This is a particularly important function of the modern logistics. The method and the range of its fulfillment forejudges about the competitiveness of many markets and economic systems. It is worth to mentioned, that the clear symptoms are observed, that this function undergoes also economic market rules. At present, the development of the new branch of logistic services can be observed. The good example of this situation can be the developing function of the logistic orchestrator, as a real logistic offer of the
complex logistics services, connected with providing the whole range of logistic services to the third party [Chaberek, Trzuskawska-Grzesinska, 2011].

Taking into consideration the above mentioned remarks, it should be declared that the logistics is a process, which provides services of any rational activity of human being, aiming to any given goal, and which consists in providing required resources in right place and time, in right quantities and of right quality and for right price in such a way, that the whole scope of activities aimed to reach the main goal is realized in effective, efficient and beneficial way.

To conduct each process, it is necessary to possess right tools, methods and techniques. So, looking at the logistic components from the system point of view, it can be stated, that the logistics covers both logistic processes as well as logistic systems, required to conduct these processes. They assure services to any human activity, resulting in the production of material and immaterial goods by providing right resources in right location and time, in right quantity of right quality and having the acceptable cost (price) of their production in the integrated method under condition that the whole scope of these activities should be conducted at minimum costs and giving the maximum satisfaction of the final consumer.

The subject and tasks of the logistics presented in this way, reflects the commonness of logistic activities. The reason of this commonness is logistic services for production processes (also in non-business area), in and outside the company and for each organizational structure: governmental one, local one, household or non-profit organization. The logistic support is indispensable in processes, which lead to cover any human demand. Each type of these activities requires specific resources, in right place and time, in right quantities and by acceptable cost (price). Moreover, this commonness should be related also to the fact, that logistics is necessary in every step of the main process, in case of the production process - also in the phase of supplying, production and distribution.

INTERDISCIPLINARY IMPLICATIONS OF LOGISTICS

As it results from above mentioned considerations, the service tasks of the logistics are conducted by planning and organizing of logistic processes. The structure of logistic processes is analogical to any other business production process. Therefore for the management and optimizing these processes, the broad range of tools is accessible: identification, description, modeling, rationalizing. This knowledge could and should be enriched and broaden together with the development of other sciences and theories. The logistics should utilize the whole range of the scientific output, which is its natural environment but also look for inspirations in other sciences. It is a fundamental condition of the development of the logistics. The significant remark of M.Ciesielski [2004] should be cited here, that the logistics uses the knowledge from various scientific areas (praxeology, economy, management, cybernetics and IT) and theory (network theory, transaction costs theory, relations theory, system theory, resources theory).

There are many subsequent features of logistics, specific for other sciences and theories [Dlugosz 2000]. The assumptions, contents and methods of individual concepts penetrate each other and therefore create a set, difficult to be split out. This set could be described by a specific interference. Logistic processes must be conducted in an effective and efficient way and therefore the whole knowledge covering various areas must be used in the integrated way. The praxeology provides the polarization of these multi-aspect relationships. From the praxeology point of view, the logistic activity will be more effective when it will be more adjusted to the main process. Therefore the efficiency of the logistics support can be presented as a sum of various detailed indicators like: efficiency, economy, productivity, savings, and rationality. These indicators always compare some values but at the same time they are always in relation to the goal (in this case - to goals of logistic support of specific main process) [Pszczołowski 1982]. The acceptance of praxelogical foundations of the scientific description of the logistics allows creating
a few important conclusions, very significant both of theoretical and practical points of view [more information in Chaberek, Karwacka 2011]:

− the decision whether the logistic activity was successful or not, can be evaluated only when the goal of this activity is strictly defined and the real effect of this activity was obtained. Therefore the activity is efficient when it leads to the intended goal [Pszczołowski 1982, Kotarbiński 2000]. If the intended goals of logistic activity are not reached, it means that the appropriate resources for the given main process were not provided in right qualities, in right time and place, which means, this activity was not successful. Therefore it can be concluded, that the measure of the efficiency is the progress of reaching goals (reaching or allowing reaching them). But this criterion of efficiency cannot be used in case of logistic activities. If the logistic support of a specific main process, does not fulfill the criterion of providing indispensable resources in time, place and quantity required for the main process (in defined conditions), then this activity is not sensu stricto a logistic activity (from a point of view of the logistics’ definition), because it will have always a negative (improper) influence on the main process. The above mentioned conclusions are not referred to the estimation of the efficiency of the main process. The production process, realized even with not full logistic support, can create a good, which finally is able to cover a specific demand. The effectiveness of the main activity can be gradated, but the gradation of the effectiveness of the logistic support cannot be considered on its merits. Any other than effective activity, cannot be described as the logistic activity due to the fact, that it does not fulfill the conditions of the definition of the logistics and does not secure the realization of all logistic goals (6R).

− The 6-criteria evaluation method of the management efficiency includes also the criterion of costs of the logistic support. This cost covers the value of used resources: place, time, materials, tools and energy [Ison, Wall 2007]. The resources can be used “...in more efficient way, i.e. the less resources can be used to obtain a specific goal, if the used method would be different or more efficient. It means, with less resources involved, the better results could be reached [Kotarbiński 1975]. The rule of efficiency means, people lead to more economic behaviors, i.e. obtaining more savings or bigger effectiveness. It means also to reduce costs or to increase effects. Regarding the logistic support, only one economic rule can be applied, the rule of savings, due to fact, that the main process requires only specific and limited resources (quantity and quality), therefore the activity will be rational, if it will assure the required resources by the lowest cost. Maximizing effects (providing more materials and raw materials than required for a given production task) has no sense. The efficiency rule can only be used in relation to the logistic system (or some of its subsystems) as a set of specially selected components, enabling the realization of logistic processes. The production capability of the logistic system should have the biggest possible productivity. In such situation, the unit fix cost decreases and the effectiveness of the whole system is bigger.

− The aim of the logistic support can be obtained with various benefits [Pszczołowski 1982]. Jan Zieliński analyzed various variants of the economization and noticed that in case of similar increase of results and costs, the economic results are the same but the advantage of such situation is the achievement of better results. Therefore he introduced a new concept connected with economic results for describing such cases. In case of evaluation of economic results, costs are subtracted from results. In previous case of the economization, the effects are divided by costs. Therefore the methods of logistic activities should be changed in such way that each subsequent variant of a given family will be more efficient and economic than the previous one. The economization of logistic activities consists of their improvement, which leads to the increase of economic indicators [Zielieniewski 1981].

Beside the effectiveness and the economization, the general concept of the efficiency includes other characteristics of the
practical behavior, like simplicity, preparation, cleanliness, neatness, accuracy and others. These characteristics could be connected with the aim of logistic support called “right quality”.

PRACTICAL IMPLICATIONS OF LOGISTICS

The commonly accepted opinion is that the logistics is a type of the practical knowledge. It means that the whole logistic knowledge is focused on its practical application. At the same time, the practice, experiences and real logistic processes are the sources of the original information. The theory of the logistics is created and broadened on the base of this information. There are many examples of rational practical behaviors in the logistic area, which were not initiated by already existing theory. The observation and experiences suggested e.g. how to calculate lead-times of orders for raw materials, how to determine the order quantity, how to organize the work in the warehouse, etc. The modern information systems specialized to solve optimizing problems in logistics are in many cases the computer reflection of methods already used in the practice.

The language of logistics, passing from the practice to its theory, shows the significant influence of the practice on the development of the logistic theory. There are many words and concepts of describing or of comparative nature in the publications about logistics, which create almost a kind of logistic slang. The concepts of the logistic channel and the distribution channel are treated synonymously in many publications. The similar situation is with concepts of the logistic centre and the distribution centre. The concepts of the supply chain and the logistic chain in theoretical publications are treated also synonymously or have specific imprecise interpretation [Gibson, Mentzer, Cook 2005]. They are imprecise concepts, even unscientific one, due to the fact that they are undefined both in Polish and in foreign literature. Gibson and other authors, describing the problem of the cohesion of definitions related to the management of supply chains, found more than 20 such definitions. To check how the definition of the supply chain is understood, they conducted a questionnaire research among members of the Council of Supply Chain Management Professionals (CSCMP) [Gibson, Mentzer, Cook 2005]. The lack of the language precision influences directly the rationality of logistic activities as well as an efficient and effective use of the logistics in order to improve the competitiveness of business systems. This situation makes an impression of the eclectivity of the whole discipline.

The practical logistic goals become almost paradigms of modern business strategies [Chaberek 2011]. The concept of a strategy based on equivalent and simultaneous leading to an optimum of production costs, quality and time was created during nineties especially in the American economy. The time criterion is treated here multi-dimensionally. The time is a resource, which is specially limited. It could be used or not. Time prejudges the costs of freeze up of the production factors. The more efficient the production the smallest cost of it, because there is the shorter time of freeze up of production factors. The problem of the lack of the substitution of the time factor in the production is underlined especially by P. Dracker [2002]. All three main criteria (costs, time, quality) of modern business, appear in a natural way in business logistic strategies. Therefore the primary questions of modern business are practical logistic questions: what? (to provide), how much? when? They appeared much earlier before the logistic theory was created and originated by e.g. localization decisions. The correct localization of the decoupling point between dependent and independent demands allowed to have more benefits, even before the time, the decoupling point obtained its scientific name. The same situation occurred with such choices as trade off ones, which were practically solved long before the theory and optimization algorithms on this subject were prepared.

REGULATORY IMPLICATIONS OF LOGISTICS

The second function of the logistics, beside the service function, is the integration function. Its implications in the practice and the theory of logistics are multi-level and multi-threads. It
concerns the right integration of the main process with the logistic process as well as the right integration of internal components of the logistic process. The various range of integration is available, from the coordination through the synchronization up to the full integration. The aim of the integration of logistic systems of companies, towns, regions, countries and groups is the creation of conditions for the smooth flow of resources. Logistic processes gained the significance due to the development of populations, urbanization, agglomeration processes, economic development and occurring specially recently deglomeration tendency. Therefore logistic systems, due to their economic and social character, are the subject of interest of both local authorities, national authorities as well as international ones. The various regulatory tools (legislative, economic, technical, technological) are used to achieve the required level and range of the integration at all above mentioned levels.

The problems of the integration of national logistic components are already mentioned in Treaty on European Union or in Union decrees. The legislative integration activities, conducted in last century, were sufficient in the situation, when the logistic tasks and logistic providers had only national, regional or local character. At present, the more spectacular actions could be observed covering the global scale. On the other hand, it is not possible to characterize sufficiently the whole range of undertaken integration actions in one paper as well as to discuss all regulatory tools used and to show effects of their implementation. Therefore only three selected integration actions, realized at the EU level, will be presented. It will allow signaling the variety of necessary integration actions in the European logistics as well as the wide range of needed transpositions of regulatory solutions at the national level.

The review of White Paper from 2001 year “European transport policy 2010, time for decision” indicated that the logistics has a significant meaning to secure the balanced mobility and contributes to the realization of such goals like cleanliness of environment, security of energy supplies, etc. The Union report “Europe in movement - balanced mobility for our continent” [COM 20006] presented initiatives, which influence the liberalization of business activities in the area of logistics, harmonization, development of the infrastructure, standardization of logistic solutions and their promotion. One of the most important initiatives is the assurance of the security of the supply chain together with the demand that solutions, connected with the security, do not collide with the idea of the free flow of goods and services.

The interoperational activities problem deserves underlying, when analyzing all integration tasks in the logistics and realized by the logistics [Chaberek, Karwacka 2012]. The big undertaking both at the European and national level is connected with the above mentioned concept. The example of train transport as the European logistic subsystem is used to present the sense of this undertaking. This system is not unusually integrated from the point of view of possibilities to realize efficient flows of resources, due to the fact, that each transit of goods between different countries is connected with various technical problems: various gauge of rail, various voltage, various rule of organization of train traffic, etc. The plan covers the development of interoperational activities and removing or at least reducing these limitations. The interoperational activity is a new approach to the technical harmonization and standardization. It is also a global approach to researches and the certification of components of the logistic system as well as a mechanism of the transposition of components of discussed activities at the national level. It concerns also the notification of norms and regulations. The scale of undertaken activities to secure such functionality of systems within European Union is big.

The regulation area in the range of transport services (of public character) is an example of a little other type of the integration of logistic systems. This case is connected with long-term investment processes. Such investments are undertaken by operators only if they have long-term contracts for the realization of transport services of public character and they receive surcharges covering the difference between profits from tickets and real service costs plus benefits. Therefore there is a question, how to deal with such expectations together with the rules of the free
competitiveness and a method of a choice of suppliers of public transport services? The decree of European Parliament of Council of European Union on public services in rail and road passengers’ transport was published on 23rd of October 2007, after many years of preparations. Based on this document, the act determining the rules of organization and functioning of the system of public transport services in Poland was created. It defines the regulatory rules and the rule of the use of implications related to the organization and the realization of transport services of public character.

CONCLUSIONS

The most important areas related to the integration at EU level were defined as a conclusion of the research on implication interactions of logistics on its practice and theory. They are:
- elimination of all bottlenecks in logistic systems and processes,
- information and telematics technologies,
- integration of statistical data and information data about logistics,
- integration of the logistic infrastructure, especially in the range of sea highways and rail transport,
- increasing the quality of logistic services,
- supporting and simplification of multimodal chain and loading units.

REFERENCES


**TEORETYCZNE, REGULACYJNE I PRAKTYCZNE IMPLIKACJE LOGISTYKI**

**STRESZCZENIE. Wstęp:** Logistyka ma swój jednoznaczny wymiar praktyczny w budowaniu strategii gospodarczych, w kształtowaniu współczesnego porządku gospodarczego. W celu zapewnienia pełnej funkcjonalności i racjonalności systemów wsparcia logistycznego, procesy ich planowania, projektowania budowy i funkcjonowania muszą bezpośrednio czepać ze źródeł wiedzy teoretycznej wielu dziedzin i dyscyplin naukowych, jak również z dotychczasowego bogatego już doświadczenia. Uwarunkowania wynikające właśnie z tych trzech obszarów: wiedzy, praktyki i obowiązujących regulacji prawnych tworzą skomplikowany spłat implikacji, poznanie których jest warunkiem realizacji wszelkiej obsługi logistycznej w sposób racjonalny.

**Metody:** Główną płaszczyznę merytoryczną rozważań zawartych w artykule stanowi triada pojęć: teoria, praktyka, regulacja, odniesiona do zadań wsparcia logistycznego dowolnej organizacji, dowolnych, lecz celowo realizowanych procesów wytwórczych.

Celem artykułu jest zwrócenie uwagi na konieczność uwzględniania w procesie analizowania, projektowania oraz wdrażania systemów wsparcia logistycznego, na charakterystyczne dla logistyki implikacje pomiędzy teorią, praktyką, i sferą regulacyjną. Brak świadomości co do odmienności niektórych implikacji, lub ich ignorowanie prowadzić musi do nieracjonalności zachowań.

** Wyniki:** Przedstawione, w sposób odmienny od powszechnie uznawanych, implikacje pomiędzy teorią, regulacją i praktyką wsparcia logistycznego, poszerzają wiedzę o logistyce, stanowiąc tym samym narzędzie racjonalizacji obsługi logistycznej wszelkich celowych aktywności.

**Wniosek:** Właściwa identyfikacja zadań i funkcji logistyki jest podstawą prawidłowego rozpoznania jej przedmiotu i zadań oraz poprawnej identyfikacji implikacji zachodzących pomiędzy teorią, regulacją i praktyką. Wiedza ta jest niezbędna w procesie kreowania projektów obsługi logistycznej każdej aktywności tak biznesowej, jak i niebiznesowej.

**Słowa kluczowe:** model wsparcia logistycznego, implikacje pomiędzy teorią, regulacją i praktyką logistyczną, racjonalizacja działalności logistycznej.

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**THEORETISCHE, REGULATIVE UND PRAKTLISCHE IMPLIKATIONEN DER LOGISTIK**


**Methoden:** Die Hauptebene für die betreffenden sachlichen Erwägungen im Rahmen des vorliegenden Artikels bildet eine Triade von Sachbegriffen: Theorie, Praxis, Regulation, die auf die Aufgaben der logistischen Unterstützung einer beliebigen Wirtschaftseinrichtung oder beliebiger, aber zweckmäßig betätigter Produktionsprozesse zurückgeht.
Das Ziel des Artikels ist es, auf die Notwendigkeit der Berücksichtigung der logistikunterstützenden Systeme bei der Analyse, Projektierung und Einführung eines Vorhabens sowie auf die für die Logistik charakteristischen Implikationen zwischen der Theorie, der Praxis und der rechtsregulativen Sphäre hinzuweisen. Der Mangel an Bewusstsein bezüglich der Eigenart mancher Implikationen oder deren Ignorierung müssen zu irrationellen Verhaltensweisen führen.

**Ergebnisse:** Die anders als allgemein anerkannt dargestellten Implikationen zwischen der Theorie, der Regulation und der Praxis der logistischen Unterstützung erweitern das Wissen über die Logistik und werden zum Werkzeug für die Rationalisierung der logistischen Dienstleistung innerhalb jeglicher, zweckmäßig betätigter Aktivitäten in diesem Bereich.

**Fazit:** Die richtige Ermittlung von Aufgaben und Funktionen der Logistik bildet eine Grundlage für die richtige Erfassung deren Gegenstandes und Aufgabenstellungen sowie für die fachgerechte Identifikation der vorkommenden Implikationen zwischen der Theorie, der Regulation und der Praxis. Dieses Wissen ist unentbehrlich im Prozess der Ausgestaltung von logistischen Dienstleistungsprojekten für die sowohl kommerzielle, als auch nicht kommerzielle Betätigung.

**Codewörter:** Modell für logistische Unterstützung, Implikationen zwischen Theorie, Regulierung und logistischer Praxis, Rationalisierung logistischer Aktivitäten.