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# TRAFFIC SOLUTION IN THE CONCENTRATION OF THE CASH WORK IN THE CITY OF GOSTIVAR AND THE EXCLUSION OF THE CITY OF THE LIFE WEIGHT

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## Abstract

Developed countries analyze the needs of the modern way of life and offer new solutions because modern lifestyles cannot be imagined without modern organized transport. When it comes to a modern transport process, it is primarily meant to select and apply modern methods and procedures that enable discovering new knowledge in the rationalization of transport, in the field of rationalization of transport technology of planning and designing these processes. Lately, the principles of logistics are being used more often and to a greater extent. Logistics constitute a system of activities that enable the design, direction, management and regulation of the flow of goods, energy and information in the system and between systems.
Joint operation of manipulation, storage, and transportation of work in a certain system of movement of goods should be more successful in overcoming space and time.
This paper will deal with the concentration of commodity work in the city of Gostivar and the liberation of the city commodity weight. It will give a description of the current situation of the city and assessment of the justification of the concentration of the warehouse and distribution, as well as the possibility of applying the new informatics and building a truck terminal with a distribution center.

*Keywords:* Transport, logistics, City of Gostivar, goods, movement

## 1. Performance Assessment of the Concentration of the Aspect of Competition and Distribution in the Purpose of Urbanisticity

### 1.1. Analysis of Establishments, Personnel Relationships to the Powerful Operations of the city of Gostivar

The city of Gostivar is located in the upper part of the Polog, and is located in the southern end of the Gostivar field. The city occupies a favorable geographical position for the settlements of the area, which gives it the opportunity to perform its central functions in the area of administrative, political, economic and cultural- educational activities.
The city of Gostivar in a traffic sense occupies a very favorable position in the area, which, due to its mood, is almost at the crossroads from the lowland towards the sloping part of the municipality, so it represents a traffic center on the roads from the south and southwest towards Tetovo, Skopje and Tetovo, Vratnica, Urosevac, and vice versa, to exit these roads to Kicevo, Prilep and Kicevo Bitola if and Kichevo Ohrid, and through Mavrovo for Debar, Struga, and Ohrid. The main traffic artery connecting the settlements of the Polog valley is the main road M-4 Skopje Ohrid. This road is the main communication through which all economic and other traffic flows to the city of Gostivar and the settlements of its region, and thus connects the city of Gostivar with all the centers and settlements in the Republic of North Macedonia and beyond. The importance of this road is even greater with the construction of the new highway Gostivar -Tetovo and the Tetovo highway to Skopje.

The traffic road Skopje Ohrid through Mavrovo, as a western tourist highway, connects the city with the Mavrovo and Ohrid tourist regions. The city of Gostivar is connected via a railway line with Kicevo and Skopje in the system of international rail lines north to the Republic of Serbia, and towards the South with the Republic of Greece.

The natural characteristics of the area of the city of Gostivar and its wider surroundings and geographical position, the city is located in the Polog valley in the northwest part of the Republic of North Macedonia. The valley is located in the mining of the river Vardar, starting from the spring near the village Vrutok to the north and northeast to the Dervenskata Klisura.

n the Upper Polog, the largest and most important settlement is the city of Gostivar, which is at the same time the largest economic, administrative and political center not only of the new municipalities of this part of Polog valley but also for the population and settlements of the Mavrovo and Gornorekanski Kraj.

The territorial distribution of the population from the municipality of Gostivar with the new territorial division of the Republic of North Macedonia is divided into nine (nine) Municipalities, one of which is the Gostivar Municipality. This municipality covers 50 km2 and 45740 inhabitants and is included in the small municipalities in the country. The average population density is 914 inhabitants per 1km2. However, if only the rural environment is taken, then the average population density is 305 inhabitants per 1 km2, which is one of the largest densities in relation to rural municipalities in the country, and this has certain repercussions of agrarian overpopulation.

In the composition of the Municipality together with the central place and the seat of the Municipality of Gostivar, there are settlements, such as villages: Çegrane, Forino, Çajle, Balin Dol, Turçane, Beloviste, Deberse, Stenche, and Volkovia.

The natural and mechanical movement of the population is basic constants, the natural movement of the population is the birth rate and the mortality, and their result is, as a rule, the natural increase.

Demographic economic characteristics of the population, population structure by sex, age. According to the 1994 census, of the total population of the municipality and the city, there are 16248 men, 16678 women, the Gostivar municipality has 22559 men and 23181 women, with the domination of the female population by about 1.3%.

According to the growing groups in the category from 0 to 14 years (inactive population), the male population prevails by 3.24% at the city level. The working population from 15 to 64 years in the municipality of Gostivar is 29387 and in the city 21496.

The contingent of a working-age population means total work potential, the active population contingent denotes the number of job positions, and the difference between these two sizes is the number of new jobs needed for full employment in a specific area.

According to the last census, the able-bodied population contingent at the municipal level is 28,516 or 62.30% of the total population at the level of the municipality, of which the active population is 10190 or 22.30% of the total population for the city of Gostivar.

Households and household structure increase the number of households that leads to the beginning of a fall in traditionally large families, and a decrease in the average number of members per household of 5.26.

The number of apartments to the households in the municipality of Gostivar and the city of Gostivar is higher. According to the census in Gostivar, 7710 aparments were registered and 7244 households were registered, while in the municipality of Gostivar there were 10051 apartments and 9470 households.

The city's construction system is mixed in a combination of individual and collective housing. The social standard in gratitude defines non-economic activities: education, culture, health, social welfare, social and political content.

The educational process of children and youth is divided into stages according to age: preschool education, primary education, secondary, higher and higher education.

Pre-school education in city-grading is carried out through three facilities, and these activities take place in the facilities of elementary education in 15 classes.

The primary education takes place in 4 (four) buildings, where about 6802 students study.

Secondary education takes place in 3 (three) schools, the city has a high school (SSD) with a capacity of 260 beds.

The health care in the city is carried out through a health center, which covers an area of 28881m2, and a useful area of 183889 m2.

The facility that provides social protection services is with a useful area of 446m2, and a total location of 618 m2.

In the area of culture, the activities take place in the building of the Culture center with an area of 2421 m2, another object of culture is the Worker's University with an area of 240 m2.

State administration and judiciary from the structure of government in the Republic of North Macedonia, consists of: legislative, executive and judicial.

From the administrative bodies in the city of Gostivar, there are district offices of the ministries as they are; Ministry of Defense, Interior Affairs, Agriculture, Transport and Communications, Culture, Labor and Social Affairs, Culture, Finance as for Education. There are also inspection services in the regional offices.

The Municipal Court has the following parts: Basic Court, Appeals Court, Public Prosecutor's Office and Public Attorney.

Administration, service activities have the following administrative buildings: administration of the municipality, post offices, banks, firefighter services.

Insurance companies that provide insurance for motor vehicles, real estate properties and more like pension-disability and health insurance.

The objects that serve traffic in the city are: the bus station, railway station, fire service as well as gas stations. The city has also several public enterprises such as: P.E. Komunalec, P.E. for arrangement of construction land, P.E. Macedonian Forests and J.P for parking.

There are also religious buildings in the city such as mosques, churches, and cemeteries. The physical culture in the city has facilities such as: a sports hall with 2000 seats for the public, city football stadiums. The gradual development of the city takes place on material production in the municipality in the past period is characterized by a tendency of decline. The reason for this is the general existing transport processes that were created after 1990, with the disintegration of the former Yugoslav community, and thus the economy in the Republic of North Macedonia is separated from the higher economic system. This process coincided with the process of privatization of social capital, namely a change in the ownership of capital.

According to the census data, of the total active population, the largest percentage is employed in private companies, while the level of the city, and at the municipal level, this percentage is very small, accounting for 27%, and therefore the population is forced to seek employment in the European industrialized countries.

Services and warehouses are currently grouped into urban unit number 12, which is located in the north-east of the city's urban reach. In this move on the north-east, the railway line Kicevo- Skopje provides traffic connections with other urban centers in the country of the P +1 act with a surface of 4550 m2. The total area of stores is variable and is in the central core of the city.

## 2. Shopping and Distribution in the Context of the Urbanian Purpose

Storage is one of the subsystems of the procurement process of the materials, the task of warehousing is to reduce the unevenness between the time and volume of the flow of goods that leave the production, that is, the goods that the trade procures and subsequently relinquish it to the clients. The most important issues related to warehousing are:

- Collar and what kind of goods and where it should be stored,
- Collar goods and where they should be used to fill the stock of warehouses.

The size of the commodity stocks in the warehouses depends on the quality of the delivery services of the depreciation of the warehouse:

- Delivery of goods from one central warehouse or several warehouses,
- In the larger spatial dispersion of customers,
- When there are a growing number of warehouses for delivery the transport of goods.

The influence of the storage system over the other marketing-logistics sub-registries is not as significant as in transport, they are of great importance, especially for the quality of the delivery service and the costs in the area of the ordering, commissioning and packing process. Security and security of warehousing, degree of mechanization and automation and volume of warehouse operations determine the speed and rationality of the process of order realization.

This means that in a warehouse with a large volume of operations (central repository), the process of completing orders can be instantaneously and cheaply realized with the help of non-technical computers. In a warehouse with a small volume of work (referral store), the lack of prerequisites for the application of the EOP prevents the rapid and rational implementation of the order execution.

The large volume of central warehouses enables the use of mechanized means of assistance such as welding devices for plastic foils, as well as other packing equipment. Also, the cost of delivery warehouses in relation to the cost of a central warehouse must be analyzed. In the delivery of customers from the warehouse for delivery there are additional costs, which are relatively fast depending on the number of warehouses, and therefore are:

- Large warehouses;
- Large volume of capital;
- Large space and work space expenses;
- Insufficient realization opportunities, which are conditioned by the small quantities of goods that are stored and loaded.

Consequently, the construction of warehouse for delivery is justified when, in the case, the requirements are so high when the cost of hiring is not greater than the realized savings from the transport costs.

The speed and rationality of the commissioning, as well as the process of order realization, depend on the degree of readiness, the degree of mechanization and automation, as well as the volume of warehouse sales.

In addition, when commissioning, it is important to move the places in the repository, which depends on the share and volume of the orders.

In the delivery of customers from the warehouse for delivery, there are additional costs, which are relatively fast with increasing depending on the number of warehouses, and therefore they are:

- Large total security stock;
- Large volume of tied capital;
- High costs for space and workforce;
- Insufficient realization opportunities, which are conditioned by small quantities of goods, are stored and overloaded.

The closely related question of the number of delivery depots is in question its locations. The selection of the place of the warehouse for inspection affects the speed of supply or delivery. The most important factors for determining the location of the fasteners for the delivery of the customer service area are:

- Delivery quality;
- Distribution of the service support beams;
- Development of shopping;
- Transportation and storage costs.

Bottleness and significance of the warehouse for delivery:

- The entry of goods;
- Transport of goods in the warehouse;
- Warehousing of goods;
- Commissions;
- The exit of the goods.

In order to carry out the stated five basic tasks, the location must be provided, as well as technical equipment and positioning of the places of individual goods in the building itself.

## 3. Assessment of the Application of Information and Information Technology in Communities on the City

The introduction of new technology in the production process, in a certain branch of industry, transport and the entire economic system of the country, following the unique dialectical work of its technical divisions, there are fewer common problems whose principles are always and everywhere the same. The man's work and power is much more expensive than the cost of machines or engines, regardless of their complexity and the energy they are moving, which is especially evident in mass production and manipulation in transport.

The human society and its economy, at the present stage of development, characterize the phenomenon of decreasing the direct physical participation of man in the contemporary processes of production, that is why he becomes an increasingly accomplished, organizer, operator, and controller of the production process, and less as a "worker "in the classical sense of the word. The newest modern machines, electronics, cybernetics and greater use of the zero (or some other) energy, increasingly change the place and role of man in the production and economy of the country.

Scientific disputes about the advantages and disadvantages of automation, as well as other industrial revolutions (as non-scientists name them), were intense in its initial phase, just before the start and after the end of World War II when their enormous opportunities took place.

Over time, the opinions about the advantages and glimpses of the contemporary and progressive types of production and of new technologies, which in our production companies (companies) and everyday life have led to rapid, revolutionary changes and an increase in the reproducibility and efficiency of the human work.

Automation is perceived as one of the basic elements and reasons for the further progress and development of the country and its economy. Therefore, in the plans for the promising development of our economy, introducing automation and electrical work should be given a special place, in accordance with their significance and opportunity.

Dynamic management development and logistics are inextricably linked to the application of modern data processing technology, which is an essential element in the logistics system. According to the flow of goods, information flows are not moving. One part of the flow of information is moving in front of commodity flows. This information announces the delivery of the goods and enables the performance of the ready-made items related to the take-over of goods, and so on. other types of information are moving together with the goods, and contain the necessary data for the goods themselves, the sender of the goods, the consignee and the owner of the goods. This information, in addition, warns of the dangerous properties of the other characteristics of the goods to which they do not apply.

In the discussion about the possibilities for rationalization of logistics areas, viewed from a transport aspect, in the past, the question of the physical transport process is in the first place. Today, however, in such thunderstorms, the questions and problems of information movements that are related to the movement of goods are more and more considered. Some scientists predict that the information will partially replace the transport itself.

The application of efficient and inexpensive information systems, which should be as voluminous as possible, can increase the radius of logistic control and management.

The analysis of this problem can be determined by electronic data processing (EDP), the field of logistics and management appears in the following two types:

1. As an instrument for managing the technological process (techno-management),
2. As a technical assistance tool in communication processes (commercial compartmentalization).

Computational machines allow multiple speeds, accuracy and full operation processing of information that can be realized by applying a human workforce. These characteristics of electronic calculators are especially evident in solving optimization problems (for example: when issuing a vehicle disposition) that are linked to the implementation of interactive processes. In addition, they can be very successfully applied to simulate an alternative that forms the basis for the planning of the area planning, as well as for examining the economic models of change.

The flow of material and information on the logistics chain in the companies (companies) is schematically shown in the Figure 1.

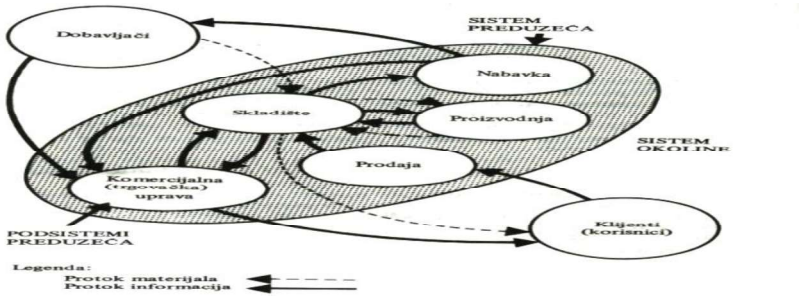


**Figure 1.** Flows of materials and information flow and logistic data (company)
Source: R. Perišić, Integral Transport Beograd (2000)

Modern technology in the field of informing and informatics opens up, in addition, new unforeseen opportunities for overcoming space and time. Thus, for example, the application of modern technique and technology can be collected, translated, and used data from an area that are interlinked. These characteristics of electronic data loggers are of particular importance in the application of the logistics area. In managing and controlling the operative logistics processes of an interactive dialogue with electronic calculators, one McHugh is an important tool for minimizing the response time of the control units. In the area of commercial logistic management, in larger cases, and the so-called storage processing is performed.

If the physical logistics chain is seen as a consequence of the initialization of a series of logistics basic functions (transportation, warehousing, etc.), then it can be established that with occasional physical logistic chains, information chains that maintain individualities from physical events, that is, physical events. Into that, information flows move in the same way as commodity currents and control of commodity flows. It is common for the logistics chain to be broken down into individual models (for example, models for input of materials, for extraction of materials from the warehouse, for processing, for storage of food products, distribution, etc.), which provide different degrees of automation and thus distinguishes the degree of possibility of using electronic calculators.

Therefore, it can be concluded that the high degree of automation of logistic chain models provides the provision of a vast amount of information that can be usefully used for management. The future is that logistics as one of the subsystems of companies (companies) with the dissemination of information on the application of the logistics and management domain depends on the level of EEP (electronic data processing) in other areas of the company (the company).

In this area of distribution, there are common connections and relationships between their own and external logistics systems, whereby the EOP opens and provides opportunities for the area of procurement and the area of sale of the forwarding system. In this way, the flow of information must be mutually connected (not only with two systems) already with three logistics systems. In doing so, the EOP represents a very important instrument for managing data flows. In this area of work in everyday practice, the problem of the common connection of different types of Hardware and Software, which is by no means necessarily mutually incompatible, often arises.

The development of the transport technologies application has shown that the needs in the information pane, both from the administrative and the economic repercussions are always increasing. This increase in information requirements is a consequence of the steady increase in the legal regulations of the international and national support, as well as the change in the quality requirements of all participants in the realization of transport.

It is necessary to use the modern information and communication systems among the users of transport services, the need for examining the gap between the joint connections of the processes of product procurement and sale (sale) has increased.

## 4. Assessment on Treatment for Construction of Trucks Terminal with a Distributive Center

Analyzing the previous points in this paper, as assessed the justification of the concentration of the work from the storage and distribution that the possibilities of applying a new information system in the joint service of the city, it was determined that the city needs such facilities. Above all, we can establish that the city of Gostivar also needs or justifies the assessment of the construction of a truck terminal with a distribution center. Several years ago, the city of Gostivar had such an object, however, by centralizing the works in the country, this service was abolished. At present, there is a need for the construction of a truck terminal with a distribution center. For the construction of such an object there should be a good project where it will be analyzed according to the current needs of the city and planned according to the needs and possibilities of the city of Gostivar, and it is planned for a long time and with more perfect elements or functions of the center which will fit for the needs of a more modern, secure transport of goods. The location for construction of this facility would be offered in the urban unit 10 of the city of Gostivar. A zone where the previous objects of this character were suggested would be a modern unit that will be more efficient and more functional.

Increasing work productivity can be accomplished as the flow of data, as with the help of standardized forms as well as on the exchange of data and the mediation of accompanying documents are realized using the new technology.

Analyzing all the data about the city of Gostivar and the parameters for the introduction of the computer machines as well as the optimization of the logistics and management process, we conclude that the city of Gostivar needs and opportunities for the application of informatics and informatics technology in the community service of the city.

With the application of the new informatics in the joint service of the city, all the information about the sale of the goods, as well as the information necessary for the purchase of the goods, are also received, as well as information on the need for transport needs for handling and satisfying these needs of the city and the wider area.

The use of electronic data processing machines in logistic chains has been always proven as a great asset. Therefore, once again we emphasize that the city of Gostivar needs the application of the new information and information technology for better communication of the users.

## 5. Conclusion

Traffic (transport) is one of the youngest subjects that work in our traffic system, especially in the safety of roads, road safety in the transport of passengers and goods. The Republic of North Macedonia does not have any developed system for the transport of passengers and goods, and Gostivar city has no organized system for transport and distribution of goods.

Having in mind the previously presented analysis, it can be concluded that the City of Gostivar has the need and the necessity to build, concentrate and apply some new features and build objects such as:

- *Warehousing and distribution as part of the urban planning unit of the city,*
- *The application of information technology and information technology in the common service of the city,*
- *Truck terminal with a distribution center on the stock.*

The previously stated significance is that the competent authorities of the city of Gostivar have to study and analyze the organizational, technological and financial possibilities to determine in which areas and under the systems the ability to satisfy the needs of the users of these services.

With the implementation of the above mentioned-measures, the transport system will be out of the city, and it will be possible to get greetings and clean living on the environment.

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