

Stipe Lovreta\*  
Siniša Milošević\*\*  
Ljiljana Stanković\*\*\*

## COMPETITION POLICY AND OPTIMAL RETAIL NETWORK DEVELOPMENT IN TRANSITIONAL ECONOMIES

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**ABSTRACT:** *The choice of retail store location is a very complex process, with many different stakeholders having interests in both the micro and macro locations. The goal of this work is to contribute to the better understanding of the different interests of corporative and public policies in choosing retail store locations, in order to enable more efficient and effective trade network development. After having slowed down as a consequence of the global economic crisis, the retail sector is experiencing strong expansion*

*in the markets of transitional countries. Insufficient engagement of public policy in planning trade networks can violate market competition. An active government role in carrying out the policy of retail network development in transitional countries is necessary to maintain the level of competition and prevent big market players abusing their dominant position.*

**KEY WORDS:** *competition; retail location; corporative interest; public interest.*

**JEL CLASSIFICATION:** K21, L81, M19, D71

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\* Faculty of Economics, University of Belgrade, Serbia. E-mail: slovreta@ekof.bg.ac.rs

\*\* Belox Advisory Services d.o.o., Serbia. E-mail: sinisa.milosevic3@gmail.com

\*\*\* Faculty of Economics Subotica, University of Novi Sad, Serbia. Ministry of Foreign and Internal Trade and Telecommunication, Republic of Serbia. E-mail: ljiljana.stankovic@mtu.gov.rs

## **1. INTRODUCTION**

Current tendencies in retail trade development are caused by keen competitive pressure, which is causing the retail sector to develop rapidly in many countries. The most important process in retail trade is the choice of retail chain location. Optimal retail network distribution should enable even consumer provision on the one hand, and business efficiency of individual retail stores on the other. In order to achieve this it is necessary to satisfy the interests of the many different stakeholders who directly or indirectly influence retail chain distribution.

The subject of this research is the proper selection of retail store location in terms of competition policy. It is expressed through the analysis of the different developmental strategies of trading companies on the one hand, and through the basic goals of competition policy on the other. The participation of regulatory bodies in the market limits its freedom, raising the question of justifying such participation from the standpoint of competition policy. In order to test this, the following hypothesis is presented:

*Efficient application of competition policy has positive effects on retail development in transitional countries, and thus an active role of the state in implementing retail chain development policy will be necessary.*

The test results of this hypothesis should show that efficient application of competition policy is justified in properly functioning markets and has positive effects on retail trade development. From this standpoint an active role of the state and its regulatory bodies in the location selection process and in trade network development is necessary.

Apart from the introduction and conclusion, the research is divided into six parts. The first part presents the research methodology. The second part clarifies the existence of pressure in retail trade. The third part is dedicated to the analysis of numerous factors which determine the selection of retail store location and to defining the different stakeholders who participate in the process of selecting retail store locations. The fourth part deals with spatial planning in competitive development, as well as the goals of competition policy. The last part is dedicated to testing the set hypothesis.

## **2. METHODOLOGY**

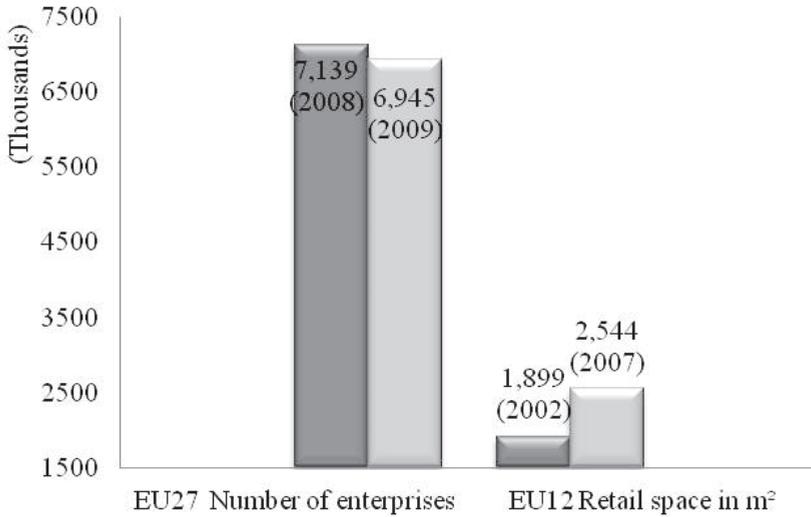
The subject of this research is multifunctionality in choosing retail store locations in competition policy. The complexity of the defined problem and the set hypothesis demands the use of different methods and techniques. The hypothesis of the positive influence of the efficient application of competition policy on retail development is tested using the quantitative methods of correlation and regression analysis. The indirect effect of the efficient application of competition policy on the optimal distribution of retail stores is to prevent potential abuse of dominant market position by leading participants. Therefore one of the indices used was turnover per capita. The data used was taken from the Internet portals of the official statistical offices of the observed countries and the European Bank for Reconstruction and Development (EBRD).

## **3. DEVELOPMENT PRESSURE IN RETAIL TRADE**

Modern retail trade is characterized by an exceptionally dynamic environment and a high level of market competition. Retail companies are constantly under pressure to reduce costs and be more efficient. Therefore they are forced to look constantly for new models and forms of development and to widen their retail network. In earlier stages of retail development stores were located mostly in the central areas of urban districts. In time potential retail store locations in these areas became full. However, this did not stop the pressure from retail trade development. For this and many other reasons, new forms of retail store location appeared on the outskirts of urban areas. In these locations many large stores were built where consumers were offered a bigger assortment of goods with lower prices. The UK government supported this concept of retail store location in the 1980s (Adams et al. 2002).

To analyse retail development it is necessary to emphasize the appearance of first supermarkets and then hypermarkets, which have enabled rapid retail expansion and development. These new retail formats were more efficient than traditional retail formats because of economy of scale. Higher efficiency enabled them to offer consumers lower prices, a price strategy which increased concentration in the lowest marketing channel (Monteiro et al. 2012). The current trend is for the number of retail companies to decrease as the total sales space of all market participants increases.

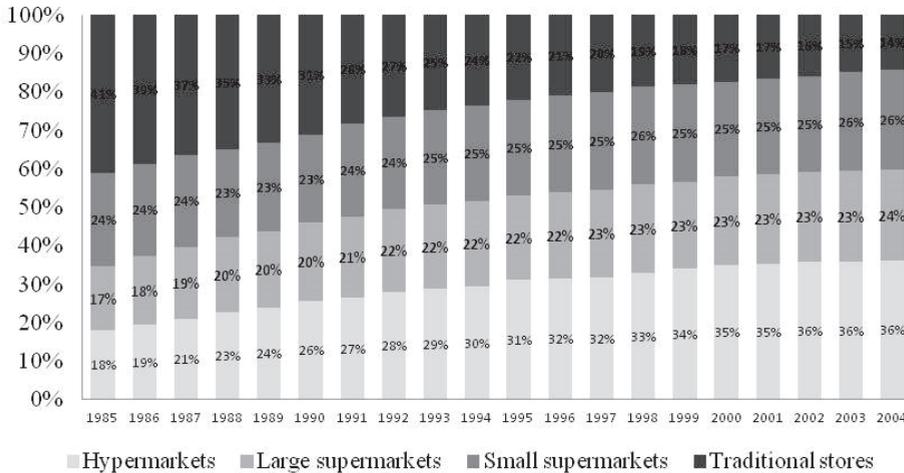
**Figure 1:** Number of enterprises and retail sale space in EU



**Source:** Eurostat, 2012.

Figure 1 illustrates the trend of the number of enterprises and sales space in EU retail trade. We can see that the number of enterprises reduced by over 194,000 in 2009 compared with 2008. Because of the limited availability of data we are not able to analyse the same period for sales space, but we compared 2007 and 2002. In these five years sales space in the EU12 retail trade increased by almost 650,000 m<sup>2</sup>. Based on the illustrated analysis we can conclude that retail sales space in the EU is increasing, while the number of companies is shrinking. It is assumed that this trend is the same in transitional countries, bearing in mind that some of them are included in the previous analysis. As well as an increase in concentration there is also an increasing number of participating retail formats, as is shown in the following figure.

**Figure 2:** The value format share in Western Europe



**Source:** Labus and Cullen, 2008, p. 30.

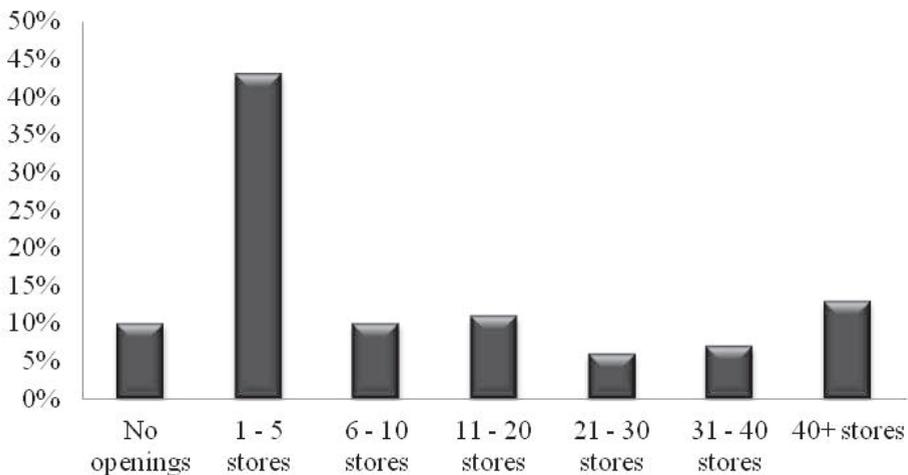
Modern retail formats also form the significant part of retail trade in transitional countries. Research on purchasing habits in 11 transitional Central and Eastern European countries carried out in 2009 shows that on average 27% of consumers buy in hypermarkets, 31% in supermarkets, and the rest in discount centres and small traditional stores (PMR, 2011).

Supermarkets appeared in the U.S.A. and Canada in the 1920s and 1930s. During the twentieth century their participation in food retail increased and currently amounts for over 80% of the market. The expansion of supermarkets in developing countries has been more intensive. They appeared in the 1990s and now constitute 60% of retail trade (Reardon et al. 2010). The reasons for this very fast expansion can be found both in retail demand and supply. The basic factors of demand are increased urbanization, greater participation of women in the labour market, increase of households having a car, and growth of average per capita income. The key factors of supply are the retail revolution connected to the development of technology and logistics, competition policy, market liberalization policy, and foreign direct investment in the retail sector (Faiguenbaum, 2002). All these factors characterize developing countries as well as most transitional countries. Therefore supermarkets in these countries experienced huge growth in a relatively short period.

In the literature three waves of the development of supermarkets and hypermarkets are cited (Reardon et al. 2010). The first wave of expansion of modern retail formats was at the beginning and middle of the 1990s in the countries of South America, East Asia (except China and Japan), Northern and Central Europe, the Baltic countries, and South Africa. In these countries 60% of food retail takes place in these formats. The second wave in the middle of the 1990s included Mexico, most countries of South-East Asia, Central America, and South and Central Europe where these sale formats cover 30%-50% of food retail. The third wave at the end of the 1990s was in the countries of East and South Africa, some countries in Central and South America, China, Vietnam, Russia, and India. In these countries 5%-20% of food is purchased in modern retail formats.

Contemporary trends in retail development are the result of increasing competition and changes in consumer habits. In recent years we have seen the constant development of large retail chains. In autumn 2011 CBRE Consulting carried out research on leading retail companies in Europe, the Middle East and Africa (EMEA). At the time of the research these regions were experiencing the consequences of the world economic crisis. However, as the research results show, the world crisis did not stop the pressure of development in retail trade.

**Figure 3:** The development plans of leading retail companies in the EMEA region



**Source:** CBRE, 2011.

In this figure we can see that retail companies continued to expand their development strategies in spite of the world economic crisis, the new challenges facing consumers, and the increase in online purchasing on the Internet. According to the research, 90% of polled companies planned to open new retail stores before the end of 2012. The total index of retail expansion in 2012 obtained during the research was 27.5, which means that the leading companies in the EMEA region planned to open on average 27.5 new retail stores up to the end of 2012. Thus it can be seen that the world crisis has not stopped the pressure in retail development.

#### **4. MANY STAKEHOLDERS ARE INTERESTED IN MACRO AND MICRO LOCATIONS OF RETAIL NETWORKS**

Decisions about the location of retail networks in an exactly determined geographical area are carried out in two sequential steps (Danne and Lusch, 2008). First the target market is determined, and then the different alternatives and ways in which it is possible to realize retail network development. Many factors influence the choice of retail store location and retail network development. The most significant are population size and characteristics, availability of labour, proximity of supply sources, promotional facilities, economic base, competitive situation, availability of store locations, and different forms of regulation (Berman and Evans, 2007). These individual factors are the combination of many sub-factors. The types of retail store that should be built in the process of retail network development depend on the characteristics of the local market, as determined by the above factors.

The literature of retail trade and location theory often cites the existence of a significant connection between retail turnover and population size in the determined market area (Mazze, 1972; Craig et al. 1984; Ghosh and McLafferty, 1987; Gonzales, 2005). Therefore it is important to consider in detail the sub-factors, such as total size and density, age distribution, trends, average educational level, percentage of residents owning homes, total disposal income, per capita disposal income, number of car owners, occupation distribution, etc. The purchasing power and total potential of the observed area are determined based on these data.

To plan the building of retail networks it is necessary to consider the availability of labour and proximity of supply sources. The structure of highly skilled and low skilled labour supply is of great importance. Proximity to supply sources

influences the competitiveness of a location: if there are a large number of producers and merchants in the area transport costs and delivery times will be lower, enabling higher competitiveness of the retail store.

Promotional facilities are important for marketing activities to effect and influence the perception of the target group of consumers. In this group of factors the most important are availability and frequency, as well as advertising costs. The economic base is important when choosing retail network locations as it is essential that there are different economic activities in the area so that planned economic growth for the target market area does not depend exclusively on one or two economic branches. It is very important to determine the dominant economic branch and degree of economic diversification and to analyse market growth projections and the availability of credit and financial benefits.

The most important factors in choosing the macro and micro locations of retail stores are the presence of competition and location availability. It is important to determine the size, number, weaknesses, and strengths of competitors. To create a complete picture of the competition it is necessary to calculate the saturation and concentration levels in the determined market.

The analysis of location means collecting data on the number and types of available location, transport infrastructure and access, renting, legal limitations ruling the market, leasing costs, whether the location is on a main or side street, the average number of cars and consumers passing per day, as well as the tourist potential of the narrower gravitation area.

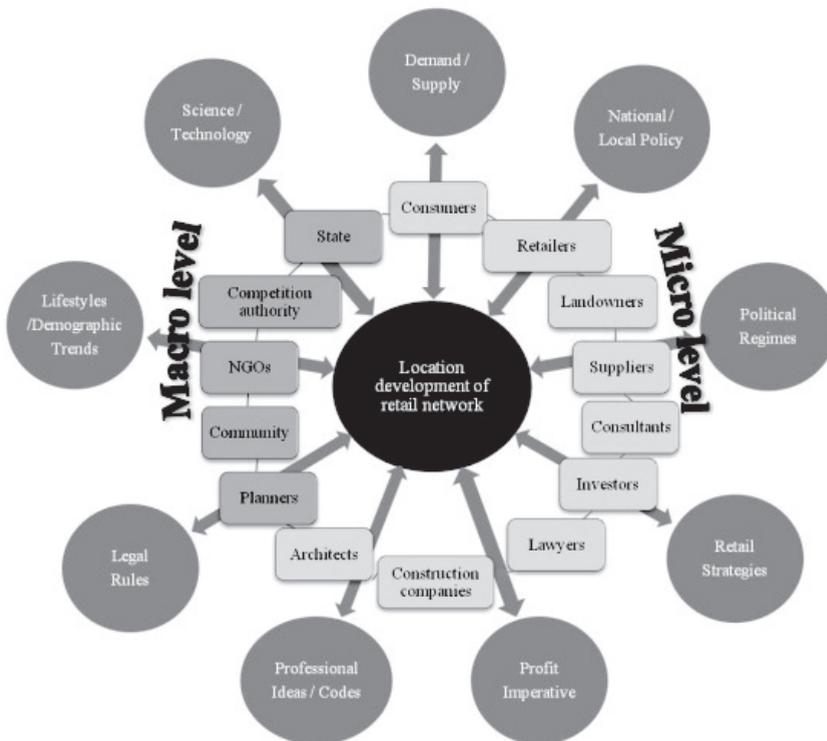
To make the final decision concerning the exact retail store location the current regulatory policy and public services must be taken into consideration. The most significant forms of regulation are the level of taxes, conditions for licenses and work permits, minimal earnings of the employees, limitations of gross margins, price control, competition policy, etc. Public services are primarily reflected in an adequate education system that is in accordance with labour market needs, general security and safety provided by the police and fire services, and the availability of public transport.

The many factors that influence the choice of retail store location, as analysed in the previous section, have resulted in many stakeholders. A stakeholder is defined as any group or individual having direct or indirect interest in the retail store location at the exact determined location and/or able to exert influence directly or indirectly on the choice of retail store location (Antonini,

2009). The most significant stakeholders are consumers and owners of trading companies, but there are other stakeholders with strategic expectations and operative requirements relating to the location of retail network. There are always agreements and disagreements between different stakeholders that culminate in conflict. Businesses and the location and optimization of the retail network are most successful when all stakeholders behave as a team, trust one another, have mutual respect and work together to attain the joint goal.

The development of a retail network location is a combination of economic, social, political, and physical processes and phenomena constantly adapting to one another and to their broader environment (Doak, 2009).

**Figure 4:** Flows of stakeholder interaction in the process of developing retail network location



Source: Adapted from Doak, 2009, p. 305.

As we can see in Figure 4, the development of a retail network location is influenced by many factors, among which are supply and demand relations, national and local development policy, ruling political regime, strategy of retail company development, possibility of realizing profit in the retail sector, professional ideas of retail management, regulations, demographic trends, level of development, and the possibility of applying science and technology in retail trade.

When developing retail network locations it is necessary to pay attention to the need to include a great number of stakeholders, which can be divided into two groups. The first group is more interested in micro locations, while the second group is more oriented towards macro locations. Their requirements are as follows (Lovreta, 2008).

Dominant interests in retail network micro locations:

- Consumers want better approach and availability of goods and services.
- Retailers want favourable locations that provide security and trust in the market, and also the possibility to improve competitive positions in order to realize bigger profits for owners and investors. The employees in retail trade also require a share of profits, primarily in the form of salary increases and business conditions.
- Suppliers include producers and wholesale and logistic firms. They require public investment in the infrastructure, which will enable easier access to retail stores in order to be able to realize optimal competitive performance in rendering commercial services to retailers.
- Construction firms, as contractors, are very interested in retail network development when building retail networks.
- Landowners want the new stores to be located on their land.
- Other individual stakeholders such as lawyers, consultants, and architects, are also very interested in development of retail networks at the micro level.

Dominant interests in retail network macro locations:

- The urban sector wants retail networks to be built in accordance with city planning and spatial planning.
- Local communities want to attract as much investment to their area as possible, which means building and opening new retail stores.
- Non-governmental organizations mostly want retail network development in accordance with the principles of environmental protection and ecological standards.

- Commissions for competition policy ensure that retail network development cannot reduce or limit the level of competition in the relevant market.
- The state requires a balance between consumers' demand for high-quality choice of goods and services and companies' demand to do business efficiently and profitably.

We can therefore conclude that retail network development exerts great influence on both the economy and on consumer behaviour that is connected with socio-economic factors and widely defined economic aggregates within the social community, because there are many stakeholders interested in macro and micro locations.

## **5. THE EFFECTS OF SPATIAL PLANNING ON COMPETITION DEVELOPMENT AND THE GOALS OF COMPETITION POLICY**

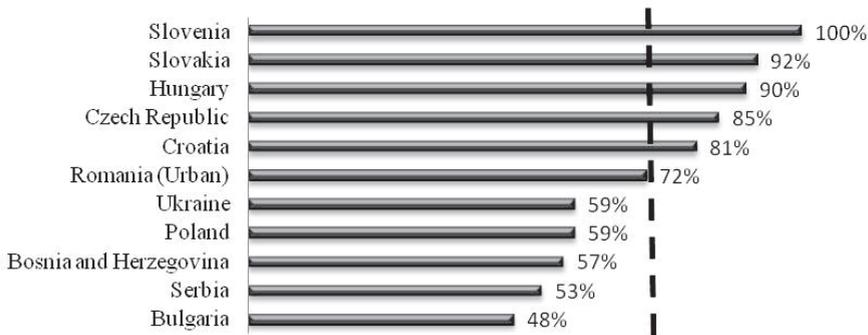
Defining planning policy and making essential decisions must be based on previous analyses that have considered and measured local, regional, and national interests, environmental protection, and economic growth and population trends. Planning policy is the regulation that reacts in situations where the market cannot provide sustainable development in an economy. Spatial policy plays an important part in planning policy. Spatial planning has an indirect influence on population and the quality of life in an area. This indirect influence is the result of the direct influence of spatial planning on the quality of the urban environment, the possibility of employment of the local population, the price of housing and business space, the price of goods in retail stores, and other factors that directly influence the population and quality of life (Barker, 2006).

Every planned process, including the process of planning and building retail networks, must be based on an overall analysis of the interests of all the stakeholders (Nunn, 2001). The spatial planning of individual retail network locations means considering consumer needs on the one hand, and the material, financial, and organizational possibilities of satisfying consumer needs by building retail stores on the other. The planning of spatial development should integrate special, individual, and general interests in order to provide an even level of saturation and a greater level of competition in individual retail trade areas.

Development plans in urban areas directly influence competition in the retail trade sector. Adequate spatial planning results in a higher level of market competition

and the constant competitive pressure makes enterprises more efficient and provides consumers with more choice. Market concentration has increased both in the world and in Serbia due to fast-moving consumer goods (FMCG). A small number of enterprises realize a large share in the overall turnover. In 2006 the rate of concentration of the four leading enterprises in the retail market in Belgrade was 51% (Djuricin et al. 2008), when it was 65% in England (Barker, 2006). The high concentration level of retail enterprises in Central and Eastern Europe is confirmed by consumer behaviour, as illustrated in the following figure.

**Figure 5:** Participation of the ten leading retailers in overall consumer purchases in 2009



**Source:** PMR 2011.

The trend of increased concentration in the retail market and the domination of a few market participants can endanger competition in individual local markets, so the efficient application of competition policy is very important in the economic growth of all countries.

The focus of competition policy is consumers and their prosperity (European Commission, 2011; The Official Gazette of the Republic of Serbia, 2009). The essential elements of competition policy are prohibiting abuse of dominant position, prohibiting restrictive agreements, and controlling concentration. The goal of competition policy is economic progress and the wellbeing of the whole society. To understand competition policy better it is necessary to distinguish between competitiveness and competition.

Definitions of competitiveness differ depending on the level at which it is considered. It is important to establish if competitiveness relates to an individual

company, a certain economic branch or region, or the overall economy of the country. We will illustrate the different definitions of competitiveness by two extreme cases, that of an individual enterprise and that of an economic community.

The basic difference between the definition of the competitiveness of individual firms and the competitiveness of economic communities is that the different levels of individual firms' competitiveness and their changing market position always result in a zero-sum game, while the competitiveness of an economic community results in a positive-sum game. To understand the competitiveness of an economic community it is necessary to apply the microeconomic approach, i.e., to start by understanding the competitiveness of individual firms and then consider the subsequent levels. Individual companies' competitiveness is mostly measured by their market participation. The bigger the market participation, the more competitive the company is. The zero-sum game is the result of interactive moves by market competitors and is explained by the fact that it is not possible that a competitor, i.e., a company, increases its participation in the relevant market without other competitors' participation decreasing. On the other hand the competitiveness of economic communities most frequently takes the form of business conditions and the total ambience of business activity development. The increase of competitiveness in a country does not cause the reduction of competitiveness in other countries (Snowdon and Stonehouse, 2006).

Market competition exists when two or more enterprises are fighting for bigger disposal of their products, whether a struggle over price or quantity. This kind of struggle creates competitive pressure that stimulates the economic efficiency of market participants. Competitive pressure is the basic driving force of economic progress; therefore where there is keen competition there is a powerful economy (Begovic and Pavic, 2010). Different market structures depend on different levels of market competition. Market structures are defined as the behaviour of market enterprises vis-a-vis pricing, offered quantity, sale location, etc. The stronger the market competition the less possibility there is for some enterprises to behave independently of other market participants, i.e., independently from their competitors and consumers.

Market structures are classified into two categories: 'perfect competitive' and 'imperfect competitive' (Shy, 2005). A perfect competitive market is where there are many enterprises in the market that determine the size of the offer, while the price is taken as given and the price is fixed by the relation of market supply and demand. Such a market is rarely met in practice, but the theoretical definition is

very useful for understanding other market structures. Imperfect competitive market structures include the monopoly, the duopoly and the oligopoly. Under monopoly conditions only one enterprise is able to choose both the sell price and the quantity to offer on the market. If there are two enterprises it is a duopoly, and if there are several it is an oligopoly.

The competitiveness of an enterprise is based on productivity. In retail companies productivity can be expressed in the form of realized turnover per employee. The realized turnover greatly depends on the location of the store. The competitive advantage of a location is in the quality of the provided ambience (Porter, 1998). Stores located in attractive places will have bigger turnover, i.e., the predisposition to realize higher productivity in relation to stores of the same format in less attractive locations. Location is essential to realize a high level of productivity, as well as in the competitiveness of individual retail enterprises. The high level of productivity and competitiveness of individual enterprises reflects on the overall market retail sector, so creating the basic prerequisites to attract new investment. New investment should be directed to attractive locations in order to realize high productivity and protect the competitiveness of the whole sector.

The goal of competition policy in retail trade should be the optimal distribution of retail stores and the provision of as high a level of competition as possible between different companies in the market. Competition pressure between them will first appear in the positive effect of lower commodity prices for end users. In the long run it is possible that prices will be lowered as a consequence of lower costs and the greater business efficiency that is the unavoidable consequence of competition pressure. Besides the basic goal of competition policy in this field - attaining greater efficiency in retail trade - other goals originating from the primary goal are the free flow of goods, the protection of independent retail stores, market liberalization, free access to retail markets, etc.

## **6. THE DIFFERENT INTERESTS OF CORPORATIVE AND PUBLIC POLICY IN CHOICE OF RETAIL STORE LOCATION**

Retail store location is an important decision in long-term retail company management plans. The importance of the problem has caused location to be the subject of much research in developed market economies, resulting in numerous models and research procedures. They have all tried to answer the question of the importance of an attractive location to retail activity (Lovreta and Petković, 1993). The choice of location is connected to the principle of effectiveness, meaning that

work must be done in the right way; i.e., retail stores must be located in the right place. If the store is not located where the basic criteria are satisfied, even perfect internal organization and efficiency cannot give the desired results.

The process of choosing retail store location consists of several phases. First, the overall corporate strategy of a commercial enterprise is analysed. Then the local or regional market area is selected and analysed. In the next phase all potential micro locations are analysed and anticipated in detail. The next phase is dedicated to the optimization of the retail network and the choice of an optimal number of retail stores. The last phase includes the consideration of different scenarios in the form of market changes, consumer behaviour, and competition (Ghosh and McLafferty, 1987). The strategy for choosing retail store locations results from this multi-phase process.

The strategy of location choice is a constituent and exceptionally important part of commercial enterprises' overall corporative strategy. Within the marketing elements of promotion, price, place, and product, place (location) is the least flexible, so commercial enterprises must consider carefully how to invest in order to identify the best retail store location. In the current economic climate all commercial enterprises consider strategically which market to target and how many new retail stores to open. As a result different strategies of commercial enterprise development appear, and then different strategies for choosing retail store locations.

In the strategy of location choice, first the macro location is decided on, and then the concrete micro location is chosen (Lovreta et al. 2011). Companies first determine the local or regional area for starting the new retail store and then the demographic, socio-economic, and other characteristics of the considered areas are taken into consideration. The indices of purchasing power and retail saturation are analysed as some of the most important market indicators.

The most attractive areas become the target market and within them all potential micro locations for the store are considered, bearing in mind their physical and competitive environments. Individual micro locations are ranked based on the numerous factors analysed above and the evaluation of turnover for each potential location. The analysis uses different methods and models, of which the best known are the control list, the analogy model, gravitation models, and regression models (Craig et al. 1984; Berman and Evans, 2010).

The control list evaluates the different factors influencing sales potential and costs for the determined retail trade area. These factors often include information about the sociological and demographic structure, the level of competition, consumer habits, and other factors that characterize the observed location and retail trade area, such as traffic, parking possibilities, easy access and departure, visibility, transparency, etc. The control list is a systematic procedure for evaluating information which standardizes the data collecting procedure and provides a certain degree of comparability of received information from different potential locations. However this method neglects the interactive and mutual influences of different factors, which is its basic deficiency. The problem is specially expressed when it is necessary to locate many retail stores in one trade area.

The analogy model identifies current similar stores located in the same trade area. The strength of consumer attraction to these stores is considered, measured, and used to evaluate the market area and expected sale potential of the location. The area with the best expected performance is chosen for the location of the new retail store. Although easy to implement, the analogy model has two significant deficiencies. The first problem is that the results are dependent on chosen individual stores. The second is that the model does not depend directly on the competition environment: competition is considered only through the selection of retail stores.

Gravitation models are based on the supposition that consumers visit retail stores that are more attractive and nearer than the competition. This model includes the following elements: distance between consumers and competitors, distance between consumers and given location, and store image.

Regression models allow analysers to identify different factors influencing the performance of a retail store. Much research has used multi-regression analysis to evaluate the retail performance of potential locations (Davies, 1976; Ghosh and Mc Lafferty, 1987; Kraus et al. 2998; Berman and Evans, 2010). The performance of retail stores in regression models can be explained as a linear function of location, retail store characteristics, market characteristics, price, competition, and other relevant factors (Craig et al. 1984).

Regression coefficients show the effects of each factor on retail stores' performance, and appropriate coefficient values point to their relative importance. Regression models provide a good evaluation of the potential turnover of a new retail store (Kraus et al. 2008). In this case the turnover of retail stores in the current retail network is taken as a dependent variable, and factors including data about the

store itself, the competition, and the characteristics of the local market are taken as explaining variables. Based on historical data the evaluated model is used for turnover prediction of the new retail store, bearing in mind factors characterizing the potential location.

The joint target for all models is the evaluation of demand and market participation in the new location. In the real business world there are situations where other criteria are more important for management than the location choice considered in the models, for instance, when the retail chain management wants to open a new retail store in a location just to be present in that market area or to prevent the access of competition. In that case results obtained by applying the method and model of choice would take second place.

The next phase in the process of choosing the location of the trade network is the optimization of the retail network. This is based on the overall analysis of the results obtained in the previous phases. Special attention is paid to the analysis of competition, and cannibalism between own retail stores. Finally, in the last phase of the process, the location that will realize the best business results is chosen, bearing in mind future market reactions. The chosen location should contribute to the optimization of the retail network of the trade enterprise and satisfy consumer needs in the best way. An analysis of the strategy of choosing the location of a trade enterprise shows that corporative policy tries to locate businesses in market areas characterized by as many consumers and as few competitors as possible.

In the process of choosing locations and trade network organization conflict situations can appear. Possible conflicts are classified into five categories (Lovreta, 2008):

- Conflicts between big commercial chains and small retail stores;
- Conflicts between current and new market participants;
- Conflicts between retailers and consumers;
- Conflicts between retailers and their suppliers, and
- Conflicts regarding environmental protection and local culture

Conflicts between big chains and small retail stores appear because of the unequal distribution of power between them and are the consequence of different efficiency levels. Big trade chains are able to offer consumers products at lower prices than those offered in independent retail stores. However, the problem appears when big traders use their shares to drive small competitors out of the

market by offering products to consumers at lower prices than cost. This is called predatory pricing (Lyons, 2009). When small retailers go out of business and the big merchant assumes a dominant position it is very possible that product prices will be higher than before the predatory behaviour. Consumer prosperity in the first phase will be better, but in the next phase the consumer will suffer double losses. The first loss will be in the form of a price raise, the second one in limited choice. Predatory behaviour is an important problem for the competition policy of governments and independent regulatory bodies. In Serbia the Law on Competition Policy constitutes the regulatory framework and the independent regulatory body is the Commission for Competition Policy.

The entry of new players to the market causes conflict and discontent of current participants because their share will be reduced if the market size remains the same. Even if the market and the natural population increase, and new residential districts are built, etc., the discontent will remain because of loss of possible profit increase. However the fundamental principles of competition policy as a desirable market state demand as many competitors as possible so that their mutual competition will result in price reduction. In this way consumers have better choice and lower prices.

Consumers want their trade services to be accessible, which means retail stores that are close and where they can find necessary products at accessible prices. This will happen if there are many competitors, as cited as the principle of competition policy. However, merchants try to position their retail stores in locations where the gravitation area will provide a large number of consumers.

To increase their competitiveness, retailers with a greater power of negotiation than their suppliers require terms of payment to be as long as possible, additional discounts and reductions if they realize the contracted planned volume of sale, a listing fee, a slotting fee, and participation in marketing costs and other benefits, giving them a favourable position in relation to other competitors. The question of retailers' justification depends on the location of their retail network. If their retail stores are located in attractive locations where there is high demand and where many consumers gravitate, they will have a high turnover coefficient and suppliers will place more goods through these stores than other stores located in less attractive places. Competition policy prescribes that suppliers must have the same sales conditions for all retailers. Contrary to this, mutual agreements in which some benefits are allowed to only one or a group of retailers are considered prohibited restrictive agreements, which significantly violate market competition (KZK, 2011).

Building a retail store at the location that retailers identify as attractive must satisfy environmental protection standards because it takes geographical space and directly influences the physical and cultural environment. This influence manifests itself in energy consumption, waste, transport generation, changing consumer habits, etc. Questions and standards associated with the living environment must be harmonized in accordance with competition policy regulation to prevent the dominant position of some participants because of uncoordinated activities and the impossibility of building new stores. In most cases it is possible to build retail stores with a minimum of harmful influence on the living environment.

From this analysis of possible conflict situations we can conclude that they are all connected with the choice of retail store location and competition policy. All the cited conflicts are based on mutual competition between different retail market participants and their efforts to reach higher efficiency levels in their retail store network. Each participant tries to take a bigger market share by positioning its retail stores in attractive locations. Therefore it is very important that there is a regulatory body to control competition in the retail market. Earlier we analysed in detail the goals of competition policy that demand many competitors in the relevant market. However, corporate policy and public policy have different interests in choosing the location of retail stores.

## **7. TESTING THE SET HYPOTHESIS ON THE IMPORTANCE OF AN ACTIVE ROLE FOR THE STATE IN RETAIL NETWORK DEVELOPMENT**

Having established that corporate policy and public policy have different interests in the choice of retail store location, the question is whether public sector involvement in retail network markets is justified. We will therefore test the hypothesis that the efficient application of competition policy positively influences retail development in transitional countries, and so an active role for the state is necessary in carrying out retail network development.

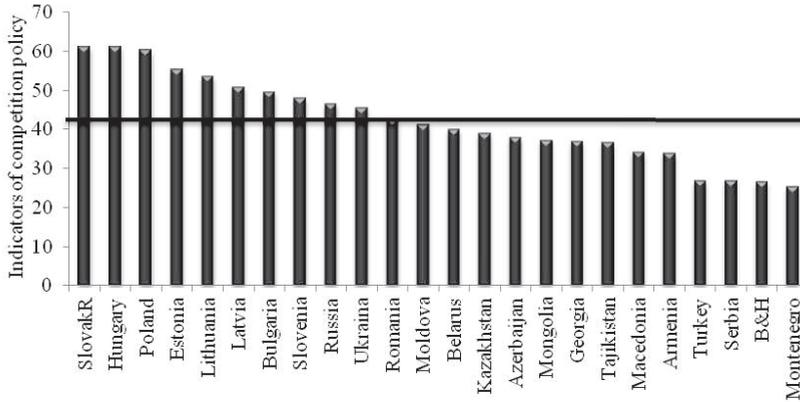
To test this hypothesis we first have to establish the determinants of the effective application of competition policy and retail development. The European Bank for Reconstruction and Development (EBRD) publishes its Transition Report every year, providing, among other things, data on the efficiency of competition policy for 29 countries which used to be or are still in the process of transition. We will use their indices for measuring the level of efficient application of competition policy.

Indicators of the level of retail development are retail turnover per capita, retail sale space per capita, number of employees in retail trade in the total number of employees, and the participation of retail trade in gross domestic product (GDP). By carefully analysing the most important conditions of retail development and individual retail chain distribution we can conclude that population, average salaries, and consumption at retail stores are the main factors in deciding the course of future retail development. Greater consumption per capita within a longer time frame will increase demand for new retail chains in a certain area. Therefore the number of market competitors will increase and competitive pressure will rise. Greater competitive pressure will increase the number of retail stores and introduce new and improved existing retail store formats, which together will increase the development level of the retail market. A more developed retail market with a greater number of retail stores and diverse retail formats will result in higher consumption in the local population's retail stores. All of these facts lead to the conclusion that retail store turnover per capita can be used to measure the level of retail trade development. Therefore, and because of data availability limitations, we take retail turnover per capita as the index of the level of development of retail trade. The analysis is of 24 countries still in the process of transition.

The indices level of applying competition policy moves in the interval from 1 to 4.33. The lowest value of indices 1 means that a country possesses neither regulatory framework nor regulatory body to carry out competition policy, while the highest value 4.33 is given to countries with the most efficient competition policy. These indices reflect the state in a country per year. However, as building an economy is a long process, the influence of the efficient application of competition policy must be considered over many years. The same state cannot be expected in countries where the index reached a fixed rate, for instance 3, only in the last observed year, and in those countries that have been evaluated by this index over the last five years. The influence of competition policy on market economy development will be higher in countries that have had a higher index for many years. Therefore it is necessary to consider the index cumulatively.

The next figure illustrates the cumulative indicators of the reached level of applying competition policy starting from 1989. In this graph we can see that 11 countries out of the 24 observed have a cumulative indicator above the average of all observed countries. The Slovak Republic and Hungary are the most efficient in applying competition policy, while Montenegro has the smallest value.

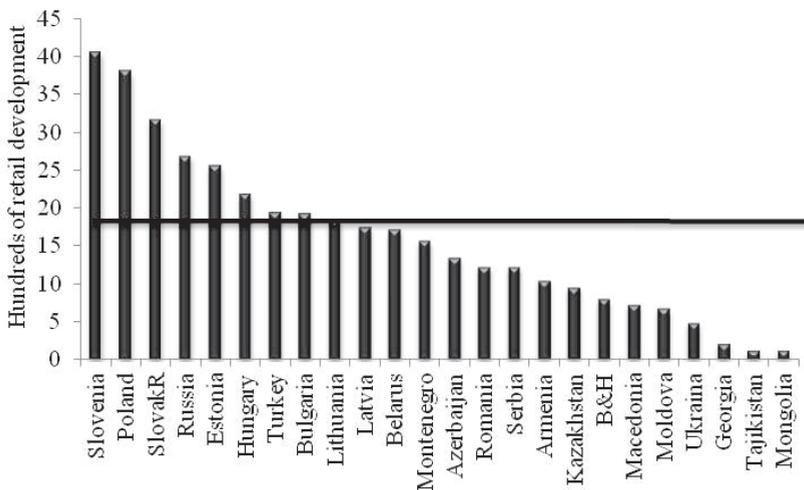
**Figure 6:** Indicators of the obtained level of applying competition policy in transitional countries in 2010



Source: EBRD 2012.

Although turnover in retail per capita in a country depends primarily on the level of GDP and the earnings and purchasing power of its inhabitants, it also reflects the level of retail development. In the next graph we will see that 11 countries have a retail turnover per capita above the average of all observed countries. The highest retail turnover in 2010 was recorded in Slovenia, while the smallest was in Mongolia.

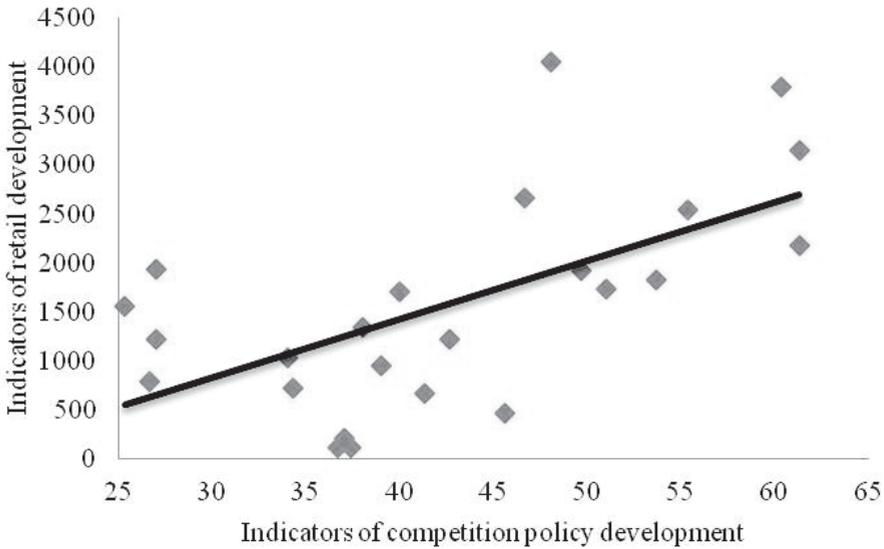
**Figure 7:** Turnover in retail per capita in transitional countries in 2010, in Euros



Source: The official statistical websites of the observed countries.

Based on the virtual analysis of the previous two figures, we can see that nine out of eleven countries that have an above-average level of applying competition policy also have an above-average turnover in retail per capita. This indicates a possible connection between the two phenomena. Therefore we will represent the first two series of observed indices in a scatter diagram, and then we will carry out quantitative testing by means of correlation and regression analyses.

**Figure 8:** Indicators of the efficient application of competition policy and retail development



**Source:** The authors' calculation.

In the scatter diagram we can see that there is a connection between observed indicators. It means that the countries with efficient competition policy have a more developed retail trade sector. The correlation coefficient is 0.61 and is acceptable at the statistical significance level of  $\alpha=0.01$  with  $t$  value of 3.57. This shows the strong connectivity between the two observed phenomena. We estimated the semi-log linear model and obtained the following grades of parameters.

**Table 1:** Estimated semi-log model of the simple linear regression

Dependent variable $\ln(RT)$	Coefficients	$t$ -value	$p$ -value
$\beta_0$	$\frac{107}{20}$	7.43	0.00
$\beta_1(CP)$	$\frac{1}{25}$	2.43	0.02
$R^2$	0.21	F=5.91	0.02
Number of observations	24		

**Source:** The authors' calculation.

Where:

RT - indicators of retail development, and

CP – indicators of efficient application of competition policy

The estimated equation can be transformed and we receive the exponential function:

$$RT = \left( e^{\frac{107}{20}} \right) \left( e^{\frac{1}{25}CP} \right) \tag{1}$$

Based on this regression analysis, at the level of significance of  $\alpha=0.05$  we can assert that competition policy has a positive influence on retail development. The whole regression is also statistically significant and can be accepted with the same level of significance. However, the estimated coefficient of determination does not have a very high value at 0.21; however this is quite acceptable regarding the nature of economic phenomena being researched. It means that the indicators of efficient application of competition policy explain 21% of variations of turnover in retail per capita in the observed countries.

To accept completely the results of this regression analysis it is necessary to carry out some additional econometric tests. We tested the existence of autocorrelation of residuals. The value of the Durbin-Watson statistics is 2.48 and based on this we cannot assert that there is first order autocorrelation. Therefore we carried out an alternative Breusch-Godfrey test to check for second order autocorrelation and obtained the value of F statistics 1.02 and the belonging p-value 0.38. Therefore we cannot assert that, at a level of statistic significance of  $\alpha=0.05$ , there is second order autocorrelation. The obtained value of the Jarque-Bera statistics amounts to 5.66 with the belonging value  $p=0.06$ ; therefore we cannot assert that, at the level of significance  $\alpha=0.05$ , residuals do not have the normal distribution.

The White test was used to test the heteroscedasticity of residuals. The obtained values were F and  $\chi^2$  of statistics 1.32 and 2.68 and the belonging p values 0.29 and 0.26, respectively, based on which, at a statistically significant level of  $\alpha=0.05$ , we cannot reject an assertion that supposes, at the same time, the absence of heteroscedasticity and the correctness of the linear model form.

Although these tests assert the stability of the evaluated model, it is necessary to be cautious when explaining the obtained results, bearing in mind that the analysed sample of 24 countries is relatively small, which is this model's biggest limitation when carrying out the test of residual normality. Further research should be directed toward the improvement of the set model so the time dimension as well as structural data is included in the analysis. This would create conditions for the application of econometric panel models and increase the number of observations. In addition it is important to include other independent variables that might influence retail turnover per capita.

However, based on the overall quantitative analysis carried out, we can conclude that competitive policy has a positive influence on retail trade development in transitional countries, so the set hypothesis is confirmed. An active role for the state is necessary, i.e., the efficient application of competition policy in the process of establishing and carrying out retail network development policy. Insufficient engagement of public policy in planning retail network development enables some retailers to become dominant in individual localities and so violate market competition and endanger the position of end users. Therefore the state should establish optimal distribution of trade networks in the whole territory and so enable the equal supply of necessary products to the population, disregarding place of residence.

## **8. CONCLUSION**

A dynamic environment and high level of competition are the basic features of the contemporary retail trade market. The number of companies in retail trade is falling as the total retail space increases. There is increasing participation of modern retail formats including large stores such as hypermarkets and supermarkets. All this is conditioned by the constant development pressure in retail trade, which has continued during the global economic crisis.

Development pressure forces retail companies to search constantly for new locations. The choice of retail store location is a very complex process that

includes many different stakeholders. The stakeholders can be classified into two groups. The first group consists of those with an interest in micro locations. They are consumers, retailers, landowners, suppliers, investors, construction companies, lawyers, consultants, and architects, who all in some way play a part in choosing retail store locations. The second group includes all those interested in macro locations; they are mostly the state, non-governmental organizations, commissions for competition policy, and different regulatory bodies at both local and national level.

The choice of retail network location depends on numerous factors. The most important is the size and characteristics of the local population. However, the availability of labour and proximity of supply sources are also very important in planning retail networks. Promotional capacities are important because the marketing depends on them. The existence of different economic activity in a determined market area provides stability in the retail trade sector, which does not then depend exclusively on the economic state of one economic branch. When choosing the exact fixed space for retail store location it is very important to consider the competition and current regulation, especially in the field of competition policy.

Location choice is the most important factor in the overall corporative strategy of commercial enterprises. Using different methods and models first the macro location is decided on and then the concrete micro location, The most important methods and models are the control list, the analogy model, and gravitation and regression models. These methods and models are used to evaluate precisely demand and potential market participation in the new location. Location choice strategy, which is the framework of commercial enterprises' corporative policy, tries to locate retail stores in trading areas with as many inhabitants and as little competition as possible. Therefore it is very important that the retail network's development plan is in accordance with the general planning policy.

Spatial development is a very important part of planning policy. In retail trade it should integrate special, individual, and general interests in order to provide an equal level of saturation and higher level of competition in the trading area. These two goals of spatial development planning are the focus of competition policy. Based on the above analysis of the different kinds of conflict situation which arise in the process of choosing a trade network location, it is established that corporate and public policy have different interests in the location of retail stores.

Based on the detailed quantitative analysis the set hypothesis that the efficient application of competition policy has a positive influence on retail development is confirmed. An active role for the government of applying the principles of competition policy is necessary in retail network development in order to provide an optimal distribution of retail network, enabling the equal supply of the population with necessary products disregarding their place of residence. Further research should be directed toward discovering a model to solve the conflicts between corporative and public policy when choosing retail store locations.

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