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## METHODOLOGICAL PRINCIPLES OF TYPOLOGY OF PASSENGER CARS REGIONAL MARKETS

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**Introduction:** The market of cars is an important indicator of the socio-economic well-being of the population, since the purchase of a car, as a rule, marks the achievement by individuals of full satisfaction of primary needs and stability in cash receipts. At the same time, conditions for the functioning of the passenger car market differ considerably in the regions, which complicates the effective management of the development of the passenger car market at the national level.

**Hypothesis of scientific research.** It is assumed that the functioning of regional markets for passenger cars is largely determined by the influence of certain indicators of socio-economic development of the regions. Identification of the availability, nature and strength of the impact of indicators of socio-economic development of regions on the functioning of regional markets of passenger cars will improve the efficiency of management of the development of the national market of passenger cars.

The purpose of the article is to develop the methodological principles of management of the national market of passenger cars through the development of methodical tools for the typology of regional markets of passenger cars.

**Methods of research:** method of expert poll – to determine the list of indicators of socio-

economic development of regions that influence the functioning of regional markets of passenger cars; the method of theoretical generalization – for the formation of the methodology of typology of regional markets of passenger cars on the most significant indicators of socio-economic development of regions.

**Results:** the methodology of typology of regional markets of passenger cars was developed, which provides clusterization of passenger car markets at the regional level by types: "production oriented market", "socially oriented market", "trade-oriented market", "financially investment-oriented market", "innovative oriented market", "mixed market".

**Conclusions:** the development of methodological tools for the typology of regional markets of passenger cars contributes to the further development of methodical principles of management of the national market of passenger cars in the direction of strengthening the target direction and, thus, increasing the effectiveness of managerial influence on the processes taking place in the market of passenger cars on the meso-, and at macro levels.

**Keywords:** regional market of passenger cars; socio-economic development of the region.

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## МЕТОДИЧНІ ЗАСАДИ ТИПОЛОГІЗАЦІЇ РЕГІОНАЛЬНИХ РИНКІВ ЛЕГКОВИХ АВТОМОБІЛІВ

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**Вступ:** Ринок легкових автомобілів є важливим індикатором соціально-економічного благополуччя населення, адже придбання легкового автомобілю, як правило, ознаменовує досягнення фізичними особами повного задоволення первинних потреб і стабільності в грошових надходженнях. Разом з тим, умови функціонування ринку легкових автомобілів значно різняться за регіонами, що утруднює ефективне управління розвитком ринку легкових автомобілів на національному рівні.

**Гіпотеза наукового дослідження.** Передбачається, що функціонування регіональних ринків легкових автомобілів значною мірою визначається впливом певних показників соціально-економічного розвитку регіонів. Ідентифікація наявності, характеру та сили впливу показників соціально-економічного розвитку регіонів на функціонування регіональних ринків легкових автомобілів дозволить підвищити ефективність управління розвитком національного ринку легкових автомобілів.

**Метою** статті є розвиток методичних засад управління національним ринком легкових автомобілів через розроблення методичного інструментарію з типологізації регіональних ринків легкових автомобілів.

**Методи дослідження:** метод експертного опитування – для визначення переліку

показників соціально-економічного розвитку регіонів, що здійснюють вплив на функціонування регіональних ринків легкових автомобілів; метод теоретичного узагальнення – для формування методики типологізації регіональних ринків легкових автомобілів за найбільш вагомими показниками соціально-економічного розвитку регіонів.

**Результати:** розроблено методичку типологізації регіональних ринків легкових автомобілів, якою передбачена кластеризація ринків легкових автомобілів на регіональному рівні за типами: «виробничо орієнтований ринок», «соціально орієнтований ринок», «торгівельно орієнтований ринок», «фінансово-інвестиційно орієнтований ринок», «інноваційно орієнтований ринок», «змішаний ринок».

**Висновки:** розроблення методичного інструментарію з типологізації регіональних ринків легкових автомобілів сприяє подальшому розвитку методичних засад управління національним ринком легкових автомобілів у напрямку посилення цільової спрямованості та, тим самим, підвищення ефективності управлінського впливу на процеси, що мають місце на ринку легкових автомобілів як на мезо-, так і на макро-рівнях.

**Ключові слова:** регіональний ринок легкових автомобілів; соціально-економічний розвиток регіону.

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**Formulation of the problem.** In today's turbulent conditions of transformation processes in the economy and social sphere of our state, the issue of ensuring sustainable socio-economic development is acute.

Socio-economic development of the state – is, first of all, material wealth of the population, which is largely characterized by the provision of durable goods.

Among durable goods, cars are particularly distinguished, the acquisition of which, as a rule, marks the achievement by individuals of full satisfaction of primary needs and stability in cash receipts.

Previous studies [1–2] have revealed a significant regional differentiation of motorization of the population of Ukraine and the development of the national market of passenger cars. So, today the markets of cars have reached the highest level in Dnipropetrovsk, Donetsk, Kharkiv, Kyiv, Odesa and Zaporizhzhya regions. The smallest volumes of sold cars take place in Volyn, Chernivtsi, Ternopil, Rivne and Ivano-Frankivsk regions.

Turning to the materials contained in the statistical collection "Regions of Ukraine" [3], we see that it is the region-leaders in terms of the development of the market of cars traditionally characterized by high levels of socio-economic development, and vice versa. At the same time, numerous indicators are involved in shaping the level of socio-economic development in the region, which logically can have a different influence and influence on processes taking place in the regional market of passenger cars.

**Analysis of recent research and unresolved part of the problem.** The problem of the development of the passenger car market, unfortunately, has practically not been reflected in the scientific works of domestic researchers. Only a few scientists included some aspects of the functioning of the car market in the range of their scientific interests.

However, most scientists mainly research marketing aspects of the functioning of the passenger car market both at the national and global levels, including issues of service policy (O. Dima [4]), branding (M. Chikusova [5]), Internet marketing (O. Savich [6]), as well as general questions of managing the needs of potential buyers of cars (O. Savich [7–8], E. Danilenko [9–11]).

There is still an almost unrealized approach to the study of the national car market in a regional context.

The purpose of the research is to develop the methodological principles of management of the national market of passenger cars through the development of methodical tools for the typology of regional markets of passenger cars.

**Research results.** Before moving on to achieving the main goal of the study, it should be clarified what exactly is meant by the economic category "regional market of cars".

The market as an economic category is understood as an open dynamic, coherent system of economic relations with regard to the sale and purchase of

goods and / or services, which is formed and operates as a result of interaction of participants under the influence of direct and indirect (indirect) factors of socio-economic development.

Accordingly, under the "regional market of passenger cars" we propose to understand the "open dynamic, integrated system of economic relations concerning the sale and purchase of cars, which is formed and operates in the territory of the administrative-territorial unit as a result of interaction of participants under the direct and indirect (indirect) influence of factors socially-economic development".

In this definition, in contrast to those already available in the scientific literature, simultaneously it is indicated: the openness and internal unity of the regional market of passenger cars as a system; the dynamic nature of market relations in the sphere of sale and purchase of cars; Variable number of participants in the regional market of cars; complexity, ambiguity and specificity of the influence of factors of socio-economic development on the formation and functioning of the passenger car market in the territory of the administrative-territorial unit.

Identification of the availability, nature and strength of the impact of individual indicators of socio-economic development of regions on the functioning of regional markets for passenger cars seems expedient to implement using multi-factor multivariate correlation-regression analysis tools. In this case, the resulting index (Y) is the number of cars sold in the region, factor indicators – indicators of socio-economic regional development.

The question naturally arises about the refinement of the list of indicators of socio-economic development of regions, which hypothetically may have an impact on the functioning of regional markets for passenger cars.

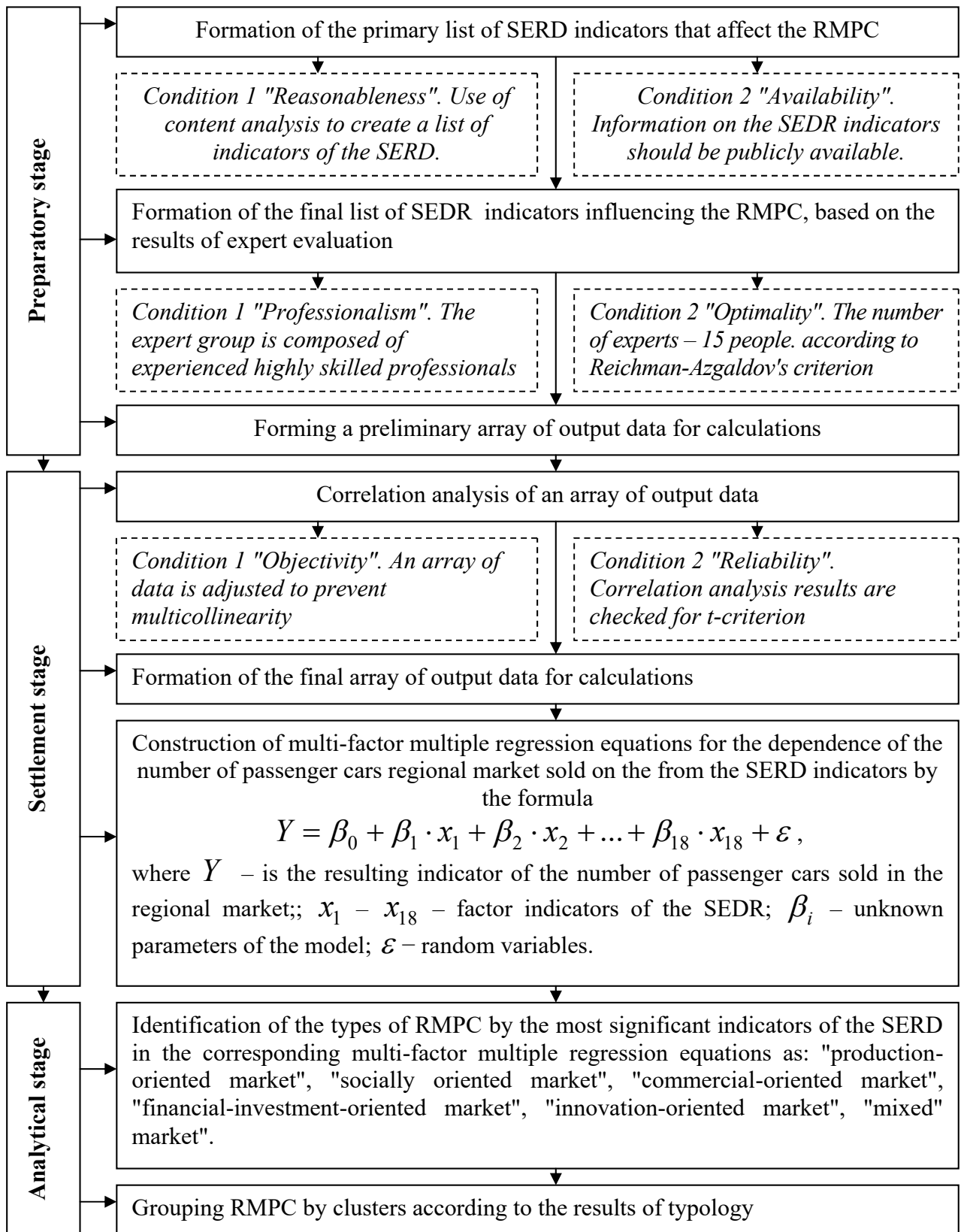
According to the Resolution of the Cabinet of Ministers of Ukraine "On introduction of assessment of interregional and intraregional differentiation of socio-economic development of regions" indicators of socio-economic development of the region are as follows: the volume of the gross regional product per person; the volume of industrial production sold per person; Gross agricultural output per person (in comparable prices); volume of fixed capital investments per person; the volume of executed construction works per person; the volume of direct foreign investments per person; the amount of taxes and duties (obligatory payments) to the budgets and state trust funds mobilized by the bodies of the State Tax Service (excluding the budget reimbursement of value added tax) per person; the volume of local budget revenues without transfers (general and special fund) per person; the volume of export of goods per person; the size of the average monthly salary of employees; the amount of wage arrears per worker; the unemployment rate of the population (according to the methodology of the International Labor Organization) at the age of 15–70;

level of provision of housing by the population (sq. meters of total area per person); the crime rate per 10 thousand population; average size of pensions; the ratio of the number of pensioners to the average number of employees [12].

Monthly, the State Statistics Service of Ukraine publishes a statistical bulletin "Socio-economic situation in the region" (for each region separately), the methodology (scheme) of which the formation involves the calculation of 147 indicators for the following groups: "population and migration" (includes 7 indicators), "employment and unemployment" (includes 15 indicators), "pay and social and labor relations" (includes 17 indicators), "education and culture" (includes 7 indicators), "social protection" (includes 3 indicators), "justice and crime" (includes 14 indicators), "enterprise activity" (includes 18 indicators), "services" (includes 2 indicators), "internal trade" (includes 3 indicators), "capital investment" (includes 5 indicators), "agriculture, forestry and fisheries" (includes 16 indicators), "energy" (includes 3 indicators), "industry" (includes 4 indicators), "construction" (includes 4 indicators), "transport and communication" (includes 6 indicators), "tourism" (includes 1 indicator), "United State Register of Enterprises and Organizations of Ukraine (EDRPOU)" (includes 2 indicators), "foreign economic activity" (includes 8 indicators), "consumer prices" (includes 1 indicator), "science, technology and innovation" (includes 4 indicators), "environment" (includes 7 indicators) [13].

In addition to the normative documents, approaches to the assessment of socio-economic development at the regional level contain numerous scientific works of domestic researchers, among them N. Balabanova, I. Bevz, V. Gorbatov, Y. Goryaschenko, M. Kizim, O. Kozyreva, R. Kulinich, M. Kupira, Y. Lukin, L. Matrosov, M. Mykolaychuk, O. Molina, T. Momot, I. Moroz, S. Noskov, V. Osipov, L. Prudnikova, A. Pursky, H. Revtyuk, N. Savchenko, I. Semigulina, N. Smentina, I. Storonyanska, O. Tyshchenko, A. Tofanyuk, N. Feday, O. Shramko, I. Yaroshenko and other scholars.

Given the considerable pluralism of opinions on indicators of socio-economic regional development of regions, we consider it appropriate to use expert methods to formulate a list of indicators that have an impact on the functioning of regional markets for passenger cars. To this end, an expert group of 15 respondents professionally engaged in the sale of passenger cars was formed, and it was proposed to carry out a simple assessment (in the "yes / no" variants) of the presence of indicators of socio-economic development of regions for the functioning of regional markets of passenger cars, which according to the results of content analysis are most often used by scientists in applied researches of socio-economic development at the regional level. To the final sample, the indicators of socio-economic development of regions were included in the recognition of their impact on the functioning of regional markets for passenger cars more than half of the experts.



Source: author's development.

on rice 1: SERD – socio-economic development of regions; RMPC – regional markets of passengers cars.

Figure 1. Method of typology of regional markets of cars cars

According to the results of expert evaluation, the following indicators of socio-economic development of regions that have an impact on the functioning of regional markets of passenger cars have been highlighted: gross regional product (x1); number of enterprises (x2); volume of industrial products (x3); volume of agricultural products (x4); volume of construction works (x5); Passenger traffic (x6); population (x7); migration movement of the population (x8); number of full-time employees (x9); Average monthly salary of full-time employees (x10); turnover of retail trade (x11); consumer price index (x12); export (x13); import (x14); financial results of enterprises before taxation (x15); volume of capital investments (x16); volume of direct investments (x17); costs for innovation activities (x18).

The indicated indicators can be divided into groups: the production sector (indicators x1 – x6), the social sector (indicators x7 – x10), the "trade sector" (indicators x11 – x14), "financial and investment sector" (indicators x15 – x17), "innovation sector" (indicator x18).

In Figure 1 is a visual representation of the methodology of typology of regional markets for passenger cars.

According to the results presented in Figure 1 methodology is the clusterization of regional markets for passenger cars.

According to the selected groups, indicators of socio-economic development of the regions are proposed, based on the results of multi-factor correlation-regression analysis, identification of such types of regional markets of passenger cars as "production-oriented market", "socially oriented market", "commercial-oriented market", "financially investment-oriented market", "innovative-oriented market". In the case where the multi-factor regression equation contains several weighty components that belong to different groups of indicators, such a regional market of cars is identified as a "mixed market".

**Conclusions and suggestions for further research.** The development of a methodological tool for the typology of regional markets for passenger cars contributes to the further development of methodological principles for managing the national market of passenger cars in the direction of strengthening the target direction and, thus, increasing the effectiveness of managerial influence on the processes taking place in the market of passenger cars on both the meso- and on macro levels.

Prospects for further researches is the practical testing of the developed methodology of typology of regional markets of passenger cars on the example of the national market of passenger cars in Ukraine.

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