The Impact of Transformation Processes on the Formation and Determination of the Capacity of the Consumer Market

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Keywords: consumer market capacity, transformation processes, transformation, methods for determining market capacity.

Abstract: Effective modeling of the procedure for assessing the capacity of the modern consumer market involves identifying current and relevant trends in the development and boundaries of the transformation of the market itself, as well as possible modification of the methodology, methods, and key indicators characterizing its state and development. In the course of the study, the authors identified the main mainstreams of the modern consumer market, which served as factors influencing the possibility of adapting the methods for calculating and assessing market indicators. By grouping existing methods of finding market capacity, a system of unified (for a group) indicators for assessing transformation processes of market capacity was proposed depending on the nature of the grouped features and the scope of application of the methods. The conducted analysis of the "deformation" of the selected indicators included in the system allowed us to form an understanding of the "applicability" of currently existing methods for assessing the capacity of the modern consumer market.

1 INTRODUCTION

Currently, the deepening and expansion of the processes of digitalization and informatization of business observed in the modern economy is becoming a key factor in the emergence of transformational "currents" in the consumer market.
The consequence of the manifestation of transformation is the modification or degradation of the stable order of interaction and communications of market participants, the transformation of the structure and infrastructure of the market itself. The change in "filling", the content of the main categories and indicators of the market, the methods of their assessment occurs under the influence of digitalization, digital technologies, the emergence and development of new forms, methods of trade, value chains, the composition and content of the roles of market participants (Budrina, 2019; Kapkaev, 2023; Domingos, 2022). In this situation, the adoption of competent coordination and management decisions in the field of assessing the capacity of the consumer market, determining the feasibility and effectiveness of these decisions depends on the applied methods and methods for determining both the real and potential capacity of the market.
The purpose of this study was to substantiate the applicability of existing methods for assessing the capacity of the consumer market with a focus on current development trends.

2 RESEARCH METHODOLOGY

In the process of substantiating the influence of transformation processes occurring in the consumer market on the formation and determination of its capacity, both theoretical methods of scientific knowledge - methods of systematization and structuring of information, formal-logical analysis of theoretical sources, and empirical methods - methods of description, comparison were reflected.

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3 RESEARCH RESULTS

The transformation of market capacity both as an economic category and as an indicator in modern conditions is due to the following directions, which are quite clearly expressed in the consumer market (Table 1) (World Digital Competitiveness Ranking, 2024):

Table 1: Directions of transformation processes manifested in the consumer market in modern conditions.

Direction	Type of direction	Characteristic
Transformational processes of consumption	Adaptation, transformation of procedures and algorithms of commodity exchange operations	Transformation of the market situation (change in the number of consumers and producers, assortment of goods), reorganization of intermediary links between the producer and the consumer
	Changing the mechanism of making purchasing decisions	Intensification of the influence of subjective factors and information flows on consumer behavior, adjustment of the criteria for the rationality of consumer choice, activation of the role of consumers, changes in their educational competencies
	Reorganization of consumer behavior models	"Modern business models are focused on creating an omnichannel space, synchronizing data and information in all information and physical channels of interaction in order to meet customer demand for any product, at any time and place" (Petruchenya I.V., 2019, Petruchenya I.V. 2021)
Transformational processes of the conceptual apparatus	Modification of the "filling" of the market capacity	"Evolution" of information support, development of the composition and transformation of elements involved in determining capacity, transformation of the content of the "price" component of market capacity
Transformation of consumer market development trends	"Cloud Expansion"	Use of technologies that provide access to computing resources, data storage and applications via the Internet
	Platformization of the consumer market	Platform solutions, consolidating the market to achieve the set goal, unite all market players in a single information space: from the customer of the service to the contractor,
	Transition from digitalization to digital transformation	Digital transformation involves changes at all stages of the formation and functioning of business models, in the process of communication with employees, clients and other participants
	The Emergence of a Cross-Industry Trend	Transformation of the methodology for determining market capacity due to the interaction of various sectors of the economy and the emergence of new business models and end-to-end digital processes at the intersection of industries

Transformation processes (from the Latin "transformatio" - to transform, change, convert), in general, imply, first of all, the transformation of forms, functions, market infrastructure (ensuring its operation), market structure (constituent elements of the market and their interrelations), which together ultimately leads to a modification of the goals, communications of market participants. Regarding the "capacity" of the consumer market, the identified transformation processes (Table 1) primarily imply the adjustment of the methods for determining it. Within the framework of this study, the grouping of methods for determining market capacity was carried out depending on the nature of the features grouped by the authors and the scope of application of the methods (demand zone, supply, comparison, etc.) (Table 2).

Table 2: Grouping of methods for determining the capacity of the consumer market depending on the scope of application (Budrina, 2019; Egorov, 2018).

Method groups	Methods for calculating market capacity
Calculation methods with a focus on the "demand" zone	A statistical method with a focus on the accumulation of primary, repeat and additional sales
	Normative method (focus on product consumption rates)
	Normative method (focus on norms and standards of consumption of goods)
	Method based on the intensity of consumption of goods
Calculation methods with focus on the "supply" zone (trade)	Calculation of market capacity using the "Nielsen panel method" (multifactor method (based on the research panel index)
	Method for calculating the market capacity of a trading enterprise's activity area
	Method for calculating the market capacity of a trading enterprise's activity area
	Calculation of capacity based on the summation of primary, repeat and additional sales
	A method with a focus on sales penetration
	The "test" market method
	Real Sales Method (based on determining consumer costs)
Combined (complex) methods	The "mediation" method of complex assessment
	The "road map" method (based on data on the movement of goods in the region)
	Statistical methods
	Normative method (based on consumer spending standards)
	Estimation of market capacity as a percentage of GDP
	Methods of expert assessments
	The method based on "industry growth"
Methods based on comparison with another market	Sales Volume Reduction Ratio Method
	Method of imputed coefficients (calculation of reduction of sales volumes for different regions)
	Method of proportions
	Method based on the regional purchasing power index
Methods for assessing market capacity with a focus on retrospective	Plot: adjustment taking into account changes in the share of imports (KI), exports (KE) and other retrospective indicators
	Plot: recognition of indicators of the previous period with adjustment for significant economic changes in the ruble exchange rate, solvency, oil prices and other indicators

To identify the significance of the impact of transformation processes occurring in the consumer market on its capacity and assess the applicability of grouped methods for calculating capacity, the authors proposed a system of indicators for assessing the transformation processes of the consumer market capacity in accordance with the proposed criteria and parameters (Table 3).

Table 3: System of indicators for assessing the transformation processes of the consumer market capacity in accordance with the selected criteria and parameters of the study (Petruchenya, 2021; World Digital Competitiveness Ranking).

Market capacity assessment	Criteria	Parameters	Indicators used in determining market capacity
	Type of market capacity real (RMC), potential (PMC)	Offer	The amount of inventory on the date, the number of trading enterprises, the share and volume of traditional and electronic trade, the volume of import and export of goods, the volume of

			import (export) of goods outside the market, the volume of supplies of goods to the market by local producers, the volume of production of goods by a separate type of product or product group, etc.
		Demand	The number of actual and potential buyers, the average quantity and cost of goods purchased by one buyer, the frequency of purchase of goods. Sales volumes of all enterprises in the industry for one product or one product group, the consumption rate (standard) per capita, income per capita, the quality and volume of consumption per consumer, the elasticity coefficient of demand, the solvency of consumers, etc.
		Price	Unit price of goods, price growth index, moral depreciation of goods
	Evaluation methods used in the study	Valuation methods used in the "demand" zone	The calculations are based on the product of per capita consumption volumes by the number of consumers, taking into account time and temporal characteristics, the calculation of potential demand based on recommended rational, physiological consumption standards, etc.
		Methods used in the "product supply" zone	The indicators used characterize the scale of sales of goods and products, the volume and structure of exports and imports of goods, average stock sizes, price growth indices, tariffs, coefficients of frequency of replacement of goods, etc.
	Information support for the evaluation process	Information sources	Search systems, Internet resources, internal reporting of consumer market entities, external information, etc.
		Time limits	Year, half-year, quarter, month, decade
		Target audience	Number of consumers, interested external and internal subjects of the consumer market
	Customer Service Channels	Digital platforms (multi-channel)	Share of sales through Internet resources or search systems
		Multichannel	Level of competition in the market
		Crosschannel	E-Commerce Readiness Index
		Monochannel	Volume of production, price of goods

The constructed system of indicators for assessing the impact of transformation processes allowed us to

form an understanding of the applicability of existing methods for assessing the capacity of the consumer market (Table 4).

Table 4: Assessment of the degree of "applicability" of existing methods for assessing the capacity of the consumer market.

Groups of methods	Market MC	Unified indicators for a group of methods	"Applicable" to the assessment	Need adjustments		Need replacement
				Minor (subject adjustment	Significant adjustment needed	
Calculation methods with focus on the "supply" zone (trade)	PMC	number of potential buyers	-	-	+	+
		the amount of goods purchased by one buyer	-	-	+	+
		unit price of goods	-	-	+	+
		number of enterprises, stocks of goods on date	+	+	-	-
		sales volumes	+	+	+	-
		share and volume of traditional and electronic trade	+	+	-	-
		number of real buyers	+	+	-	-+
	RMC	the amount of goods purchased by one buyer	+	+	-	-
		unit price of goods	+	+	-	-
		number of enterprises, stocks of goods on date	+	+	-	-
		sales volumes	+	+	-	-
	RMC	share and volume of traditional and electronic trade				
Methods with a focus on the "supply" zone (production)	PMC	production volume	+	+	+	-
	RMC	volume of import and export of goods	+	+	+	-
		stocks at the beginning and end	+	+	-	-

		of the analyzed period, prices				
		sales volume of goods	+	+	+	+
	RMC	production volume	+	+	+	+
		volume of import and export of goods	+	+	-	-
		stocks at the beginning and end of the analyzed period, prices	+	+	-	-
		sales volume of goods	+	+	-	-
Calculation methods with a focus on the "demand" zone	PMC	consumption rate (standard) per capita	-	-	+	+
		average consumption/sales per consumer				
		income per capita	-	-	+	+
		Towards elasticity of demand	-	-	+	+
		unit price of goods	+	+	+	+
		consumption volume per capita	+	+	+	+
		consumption rate (standard) per capita				
	RMC	average consumption/sales per consumer	-	+	+	-
		income per capita	-	+	+	-
		Towards elasticity of demand	-	+	+	-
		unit price of goods	+	+	+	+
		consumption volume per capita	+	+	+	+
Methods based on comparison with another market	PMC	capacity of the basic regional market	+	+	+	+
		To adaptation (adduction)	-	+	+	+
		decreasing or increasing K	-	+	+	+
		base market capacity	+	-	-	-
	RMC	To adaptation (adduction)	-	+	+	-
		decreasing or increasing K	-	+	+	-
Combined (complex) methods	PMC	volume of goods supplied to the market by local producers	-	+	-	-
		volume of imported goods	-	+	+	+

		volumes of exported goods	-	+	+	+
		substitutes (replacements)	-	+	+	+
		moral depreciation of goods	-	+	+	+
		market saturation	-	+	+	+
		consumer solvency	-	+	+	+
	RMC	volume of goods supplied	-	+	+	+
		to the market by local producers	-	+	+	+
		volume of imported goods	-	+	+	+
		volumes of exported goods	-	+	+	+
		substitutes (replacements)	-	+	+	+
		moral depreciation of goods	-	+	+	+
		market saturation	-	+	+	+
		consumer solvency	-	+	+	+

4 DISCUSSION OF RESULTS

During the study of transformation processes occurring in the modern consumer market, as well as critical analysis of existing approaches and methods for determining the main market indicators (with a focus on "market capacity"), the authors noted that there are practically no studies confirming the mutual influence and interaction of market transformation factors with the main indicators characterizing the processes or situation in the market, there are no clear criteria for assessing the impact of transformation (Garcia-Ortega, 2023; Ghaffar, 2023). The range of criteria and features used is quite limited, and the algorithms for selecting criteria in the context of the development of the digital economy require rethinking.

5 CONCLUSIONS

The studies of theoretical sources conducted by the authors confirm the existence of many methods and techniques for determining the capacity of the consumer market. Most often, they are combined into groups "depending on the "classical" information used (to calculate market capacity) - methods based on data on sales volumes, consumption rates and volumes, production volumes, structural characteristics of the market, expert opinions", without linking them to the transformations taking place in the modern economy. As a result of identifying the current mainstreams of consumer market transformation, it can be assumed that when determining market capacity, most of the methods used, although to varying degrees, are subject to varying degrees of adjustment, or require replacement due to the emergence of new directions and forms of trade, new digital technologies, changes in consumer behavior models, etc. .. Clarification and "regulation" of the selected methods for determining various types of market capacity will allow taking into account the main changes occurring as a result of transformations and modifications of the consumer market, and thereby improve the quality of analysis, the accuracy of current calculations and calculations of market capacity for the future, and make sound management decisions.

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