

SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS
MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

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MANAGEMENT OF CONSUMER BEHAVIOR
IN TRADING ENTERPRISE

Specialty: 073 Management

Submitted to PhD degree in economics

Applied for the degree of Doctor of Philosophy

Kharkiv – 2021

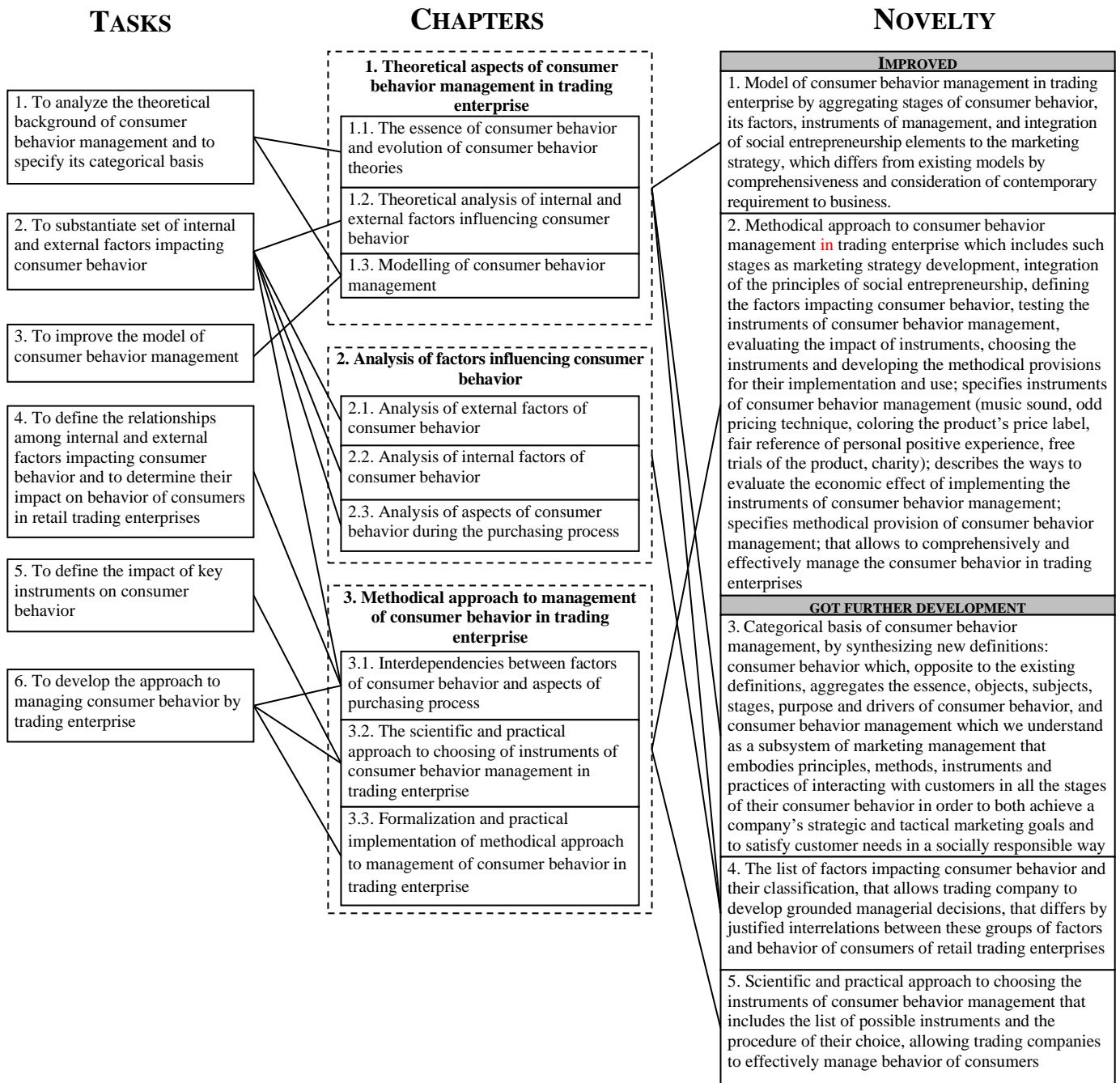


Fig. 1. Logics of the dissertation research

Table 1

Morphological analysis of the term “Consumer behavior” (fragment)

Definition	Author(s)	Genus	Subject	Actions	Object
The decisions that people make to buy or not to buy a product, and the things that influence their decisions	Cambridge dictionary [86]	decisions	people	To buy or not; influence	a product
the process whereby individuals decide whether, what, when, where, how, and from whom to purchase goods and services.	Walters and Paul [173, p. 7]	process	individuals	Decide; to purchase	goods and services; decisions on whether, what, when, where, how, and from whom
The study of the buying units and the exchange processes involved in acquiring, consuming, and disposing of goods, services, experiences, and ideas	Mowen [135, p. 6]	study	buying units	acquiring, consuming, and disposing	goods, services, experiences, and ideas
Behavior consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs	Schiffman and Kanuk [156, p. 5]	behavior	consumers	searching for, purchasing, using, evaluating, and disposing	products and services
				satisfy	needs
Those acts of individuals directly involved in obtaining and using economic goods and services, including the decision processes that precede and determine these acts	Engel, Blackwell, and Kollat [98, p. 3]	Acts, decision processes	individuals	obtaining and using	goods and services
The acquisition, consumption, and disposition of goods, services, time, and ideas by decision making units	Jacoby [111, p. 332]	acquisition, consumption, and disposition	decision making units	acquisition, consumption, and disposition	goods, services, time, and ideas
The processes involved when select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs or desires	Solomon et al. [164, p. 5]	processes	individuals or groups	select, purchase, use or dispose	products, services, ideas or experiences
				satisfy	needs or desires
Field of consumer behaviour is the study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society	Hawkins and Mothersbaugh [104, p. 6]	study	individuals, groups, or organizations	select, secure, use, and dispose	products, services, experiences, or ideas
		processes; impacts		satisfy needs	
A set of physical, psychological, cognitive and social processes a person participates in to meet one’s own needs, which include the following basic stages: need recognition, information search, analysis of alternatives, purchase, use, service, disposal of goods or services	Abramovich K. [2, p. 5]	Set of processes	person	participates in to meet one’s own needs; need recognition, information search, analysis of alternatives, purchase, use, service, disposal	goods or services
An activity aimed at obtaining, consuming and disposing of products and services, including decision-making processes before and after the purchase	Dorokhov A. et al. [176, p. 63]	activity, decision-making processes		obtaining, consuming and disposing	products and services

Own definition: consumer behavior is a set of physical, psychological, emotional, cognitive and social processes including need recognition, information search, selection, purchase, use, service, evaluation, disposal of goods, services, ideas, time, events, experiences, or any other entities, and further information sharing, performed by individuals, groups, or organizations in order to meet their needs and wants in context of internal and external factors driving such processes and their impacts on consumer and environment.

Table 2

Factors impacting consumer behavior (fragment)

Factor	Blackwell R., Miniard P., Engel J. [16]	Loudon D. et al. [227, p. 50]	Kapinus L. [60, p. 8]	Kotler Ph. [65, p. 155 – 166]	Lepeyko T., Sanddal J.-U., Omberson E. [224]	Popadynets N. et al. [248]	Howard J., Sheth J. [198]	Hawkins D., Mothersbaugh D. [193]	Ilyin V. [52]	Pestun I. [87, p. 77]	Shumilo Ya. [146, p. 90]	Hosaini A., Rojhe K. [197, p. 7062 – 7064]	Aliyeva Z. [6]	Neizvestna O., Skrynko N. [145]	Shtefanych D. et al. [145]	University of Minnesota [249]	Total number of mentions
<i>Internal (Endogenous)</i>					+		+	+			+			+	+		6
<i>Personal (Individual)</i>	+	+	+		+		+			+		+			+	+	9
Age	+	+		+	+			+				+		+		+	8
Generation	+				+												3
Sex (Gender)		+			+			+	+				+			+	6
Occupation				+				+				+	+	+	+		6
Income (financial status)	+	+		+			+	+		+	+		+	+	+		10
Personal characteristics					+		+			+							3
Lifestyle	+			+		+		+	+	+		+		+	+		9
Personality (Personality type)	+		+	+			+	+		+		+	+	+	+		10
<i>Psychological factors</i>		+	+		+							+			+		5
Motivation	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Opinions		+															1
Awareness	+	+								+							3
Emotions	+					+		+	+	+	+		+				7
Perception (Conception)			+	+	+	+	+	+			+	+	+	+	+	+	12
<i>External (Exogenous)</i>	+				+		+	+			+			+	+		7
<i>Cultural</i>			+	+	+		+				+	+		+	+		8
Culture	+		+	+	+	+	+	+	+			+		+	+	+	12
Subculture			+	+	+			+	+			+		+	+	+	9
Values	+							+	+				+				4
Social class	+		+	+	+		+	+				+	+	+	+	+	11
<i>Social (civil)</i>				+	+							+					3
Reference groups	+			+	+		+	+	+		+	+	+	+	+	+	12
Family	+			+	+		+	+			+	+	+	+	+	+	11
People of direct communication (Friends)					+		+				+			+			4
Roles and status	+		+	+	+		+	+	+			+	+		+		10
<i>Marketing mix impact</i>			+	±	±	±	±	±	±		±		±	+	+	±	12
Product	+		+	±		+	+	+			+		+	+	+		10
Price	+		+	±	+	+	+	+	+		+		+	+	+		12
Promotion (marketing communications)	+		+	±		+	+	+			+		+	+	+		10
Distribution (place)	+		+	±			+	+			+		+	+	+		9

Morphological analysis of the term “Consumer behavior management” (fragment)

Definition	Author(s)	Genus	Subject	Actions	Object
The process of forming consumer decisions under the influence of the use of marketing tools and psychological approaches to achieve the goals of the enterprise	Капинус Л. [Ошибка! Источник ссылки не найдён., p. 14]	Process	-	Forming	Consuming decisions
				Use	Marketing tools and psychological approaches
				Achieving	Enterprise goals
The company's marketing activities aimed at maximizing consumer satisfaction with the company's products, on the one hand, and optimizing sales of the company's products – on the other	Shumilo Ya. [146, p. 45]	Marketing activity	Company	Maximizing	Customer satisfaction
				Optimizing	Company's sales
Communication process, the purpose of which is to provide businesses with information about consumer demand and opportunities to meet it	Krakhmaleva A. [146, p. 54]	Communication process	[Company]	Provide with information	Businesses
The set of actions that result in such changes in consumer behavior that lead to the desired purchase of a product (service)	Traino V. [139, p. 271]	Set of actions	[Company]	Changes	Consumer behavior
				Purchase	Product (service)
Formation of such a structure of consumer awareness, which causes a change in their perceptions of market demand and leads to achieving the goal of management, which is to increase the consumption of goods or services of the enterprise to obtain additional profit	Shumilo Ya. [146, p. 64]	Formation	[Company]	Formation	Consumer awareness
				Change	Consumer perceptions
				Achieving	Goal of management
				Increase	Consumption of goods or services
The process of purposeful impact on the subjects and objects of marketing activities that participate in the process of forming new needs and values of goods, services, creating new models and patterns of consumer behavior	Danylenko Ye. [33, p. 2.4]	Process	[Company]	Impact	Subjects and objects of marketing activities
				Forming	New needs and values
				Creating	Models and patterns of consumer behavior
The influence of the enterprise by certain means, methods on the consumer, on his preferences, on the formation of needs, motives, of a certain emotional state in accordance with the strategic, tactical goals and objectives	Senenko I. [130]	Influence	Enterprise	Influence	Consumer, consumer preferences
				Formation	Needs, motives, of a certain emotional state

Own definition: consumer behavior management is a subsystem of marketing management that embodies principles, methods, instruments and practices of interacting with customers in all the stages of their consumer behavior in order to both achieve a company's strategic and tactical marketing goals and satisfy customer needs in a socially responsible way.

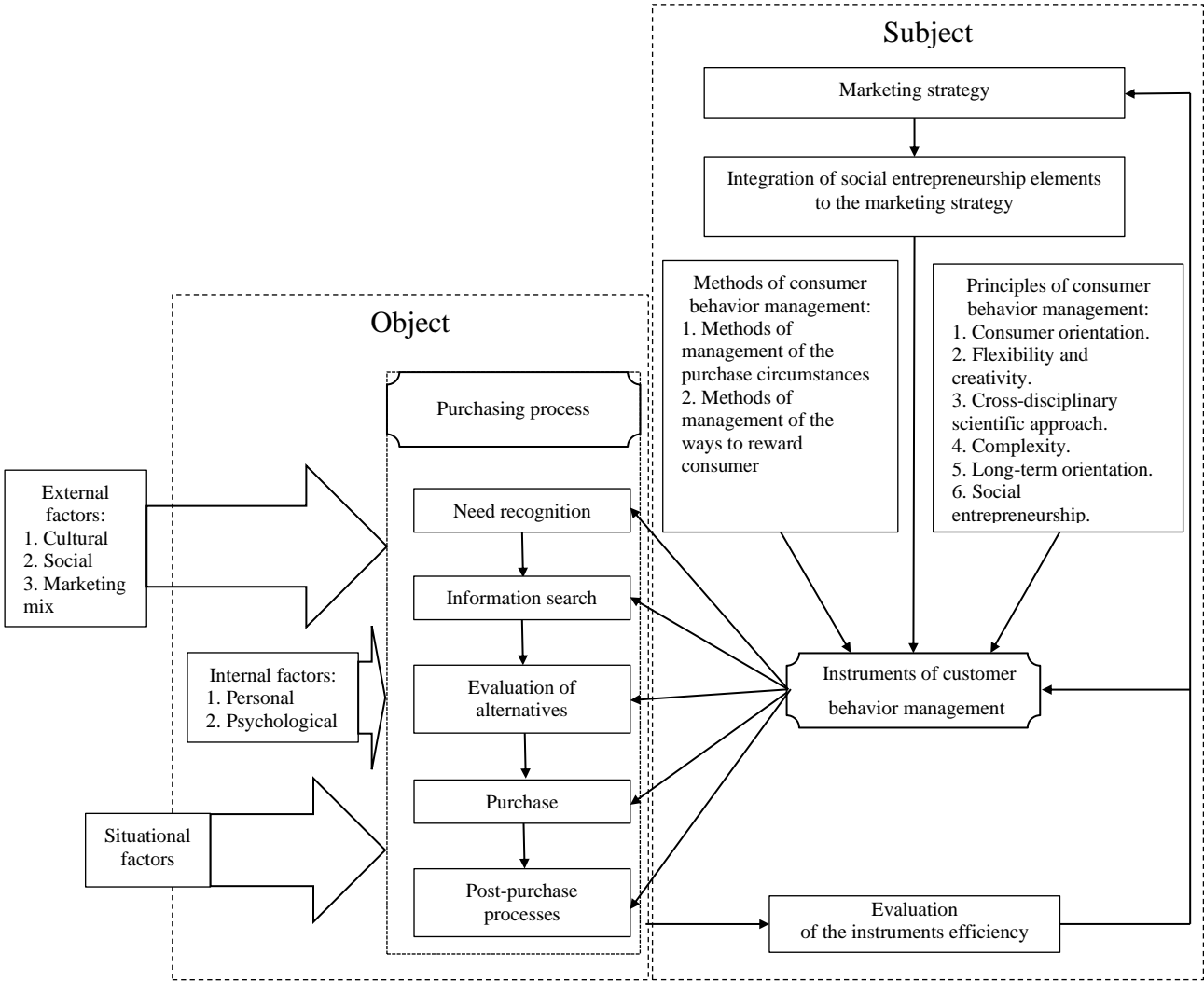


Fig. 2. Model of consumer behavior management for trade enterprises developed by the author

Table 4

Structure of total expenditure in Ukraine and its dynamics, % (calculated basing on data of State statistical service of Ukraine)

Expenditure items	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average	Standard deviation	Change in 2020 comparing to 2019, pp.	Variation coefficient, %	Change in 2020 comparing to 2019, %
Average monthly total expenditure per one household, UAH	3073	3458	3592	3820	4049	4952	5720	7139	8309	9670	9524	5755.1	2498.4	-146	43.4	-1.5
Structure of household total expenditure	percent															
Total consumption expenditure	89.9	90.1	90.8	90.2	91.6	92.9	93.2	92.9	92.0	91.3	91.4	91.5	1.2	0.1	1.3	0.1
food and non-alcoholic beverages	51.6	51.3	50.1	50.1	51.9	53.1	49.8	47.9	47.7	46.6	48.1	49.8	2.1	1.5	4.1	3.2
alcoholic beverages and tobacco	3.4	3.4	3.5	3.5	3.4	3.3	2.9	3.1	3.4	3.2	3.5	3.3	0.2	0.3	5.7	9.4
manufactured goods and services	34.9	35.4	37.2	36.6	36.3	36.5	40.5	41.9	40.9	41.5	39.8	38.3	2.6	-1.7	6.8	-4.1
including																
clothing and footwear	6.0	5.7	6.1	5.9	6.0	5.7	5.6	5.5	5.4	5.5	4.8	5.7	0.4	-0.7	6.5	-12.7
housing, water, electricity, gas and other fuels	9.2	9.6	9.9	9.5	9.4	11.7	16.0	17.0	15.2	14.6	14.4	12.4	3.1	-0.2	24.6	-1.4
furnishing, household equipment and routine maintenance of the house	2.3	2.2	2.3	2.3	2.3	2.0	1.7	2.0	2.1	1.8	2.2	2.1	0.2	0.4	10.0	22.2
health	3.2	3.2	3.4	3.4	3.6	3.7	4.2	3.8	4.0	4.1	4.3	3.7	0.4	0.2	10.6	4.9
transport	3.7	4.0	4.3	4.3	4.3	3.7	3.6	3.7	3.7	4.8	4.0	4.0	0.4	-0.8	9.4	-16.7
communication	2.7	2.6	2.8	2.8	2.8	2.4	2.3	2.4	2.6	2.8	3.4	2.7	0.3	0.6	11.1	21.4
recreation and culture	1.8	1.9	2.0	2.1	1.8	1.5	1.4	1.6	1.8	1.6	1.5	1.7	0.2	-0.1	13.0	-6.3
education	1.3	1.3	1.3	1.2	1.1	1.1	1.0	1.1	1.0	1.1	0.9	1.1	0.1	-0.2	12.0	-18.2
restaurants and hotels	2.4	2.5	2.5	2.5	2.3	2.0	2.2	2.3	2.4	2.6	1.6	2.3	0.3	-1.0	12.5	-38.5
miscellaneous goods and services	2.3	2.4	2.6	2.6	2.7	2.7	2.5	2.5	2.7	2.6	2.7	2.6	0.1	0.1	5.2	3.8
Non-consumption total expenditure	10.1	9.9	9.2	9.8	8.4	7.1	6.8	7.1	8.0	8.7	8.6	8.5	1.2	-0.1	13.8	-1.1
For information: payment for housing, communal products and services	7.6	8.0	8.3	8.0	8.1	10.2	14.7	15.4	13.9	13.0	12.9	10.9	3.1	-0.1	28.2	-0.8

Table 5

Volumes and structure of the retail trade turnover of enterprises by types of economic activity in 2020 (source: State statistical service of Ukraine)

Types of economic activity and type of points of sales	Volume of the retail trade turnover, thsd. UAH	Percentage to the total	Percentage to the total by the type of economic activities
Total	868283314.6	100.0	100.0
Wholesale and retail trade and repair of motor vehicles and motorcycles	64002626.9	7.4	100.0
Sale of cars and light motor vehicles	60538150.2	7.0	94.6
Sale of other motor vehicles	381378.2	0.1	0.6
retail trade of motor vehicle parts and accessories	2739270.2	0.3	4.3
trade in motorcycles, parts and accessories, maintenance and repair of motorcycles	343828.3	0.0	0.5
Retail trade, except of motor vehicles and motorcycles	804280687.7	92.6	100.0
food, beverages and tobacco predominating			
at specialised stores	11586971.4	1.3	1.4
at non-specialised stores	405688814.7	46.7	50.4
non-foods			
at specialised stores	336654725.4	38.8	41.9
at non-specialiced stores	44001752.4	5.1	5.5
outside of stores, from stalls and in markets	6348423.8	0.7	0.8

Table 6

Characteristics of a settings for the questionnaire

Parameter	Description
Target audience	Individual consumers buying consumer goods
Place of interview	Chain of retail shops
Range of goods in the assortment	Food, beverages – mandatory, other consumer goods – optionally; the wider – the better
Method of respondents selection	Randomly

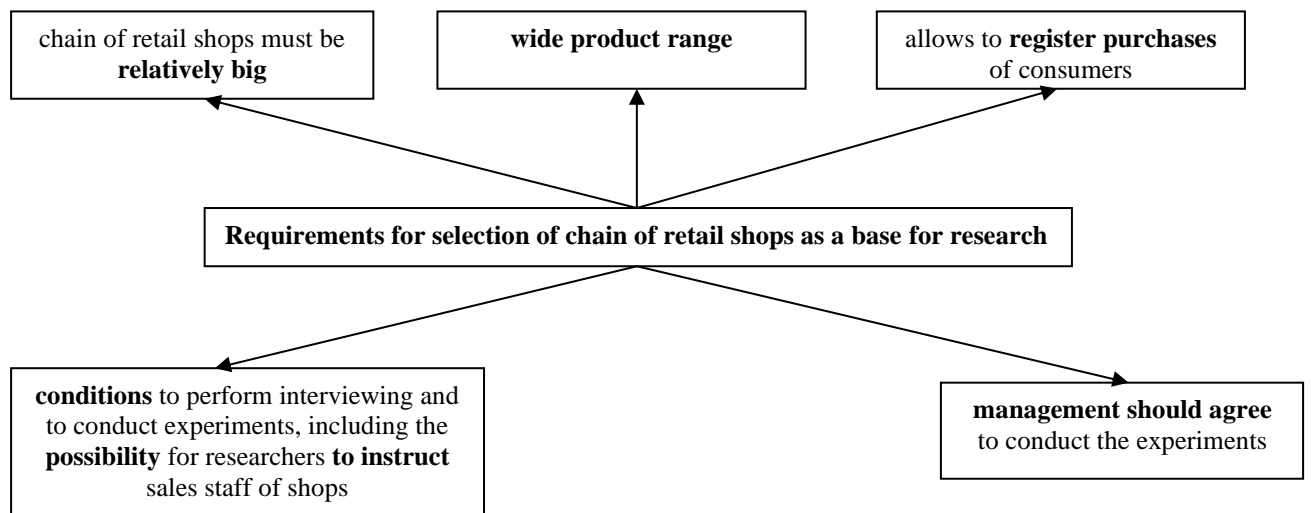


Fig. 3. Requirements for selection of chain of retail shops as a base for research

Table 7

Shops characteristics

Shop	Location	Average sales per month, UAH	Average paycheck, UAH	Average amount of customers per day
A1	Kharkiv, Proskura str., 4	2 550 982,00	203,4	418
A2	Kharkiv, Kurchatova av., 9	2 563 613,50	171,3	499
A3	Kharkiv, Chkalova str., 29	2 425 762,50	237,6	340
B1	Kharkiv, Starova str., 73	1 733 791,50	230,4	251
B2	Kharkiv, Alchevska str., 25	2 352 763,00	174,6	449
B3	Kharkiv, Nauki av., 77	2 615 035,50	153,9	566
Average		2 373 658,00	195	421

Table 8

Results of expert assessment for the external factors of consumer behavior

External factors of consumer behavior	Average scores assigned by experts
Culture	17
Subculture	2.4
Ethnicity	1.3
Values	12.8
Social class	16.3
Fashion	2.7
Political and legal base	2.6
Reference groups	19.4
Family	17
People of direct communication (friends)	2.6
Roles and status	2.2
Natural and geographical environment	1.1
Innovations, scientific and technical progress	2.6

Table 9

Results of expert assessment for the internal factors of consumer behavior

Internal factors of consumer behavior	Average scores assigned by experts
Age	7.4
Generation	0.6
Life cycle stage	1.8
Sex (Gender)	8.2
Physical characteristics	0.7
Occupation	1.9
Education	0.7
Income (financial status)	10.3
Personal characteristics	0.8
Lifestyle	8.6
Self-concept (oneself-concept)	1
Location	2
Personal values	5.9
Personality (Personality type)	7.7
Culture	0.4
Motivation	11.1
Opinions	1.8
Awareness	1.7
Emotions	1.5
Perception (Conception)	10.7
Preferences	1.1
Learning (assimilation)	7.5
Memory	1.9
Beliefs	0.8
Judgements	0.3
Attitude	1.6
Intention	2

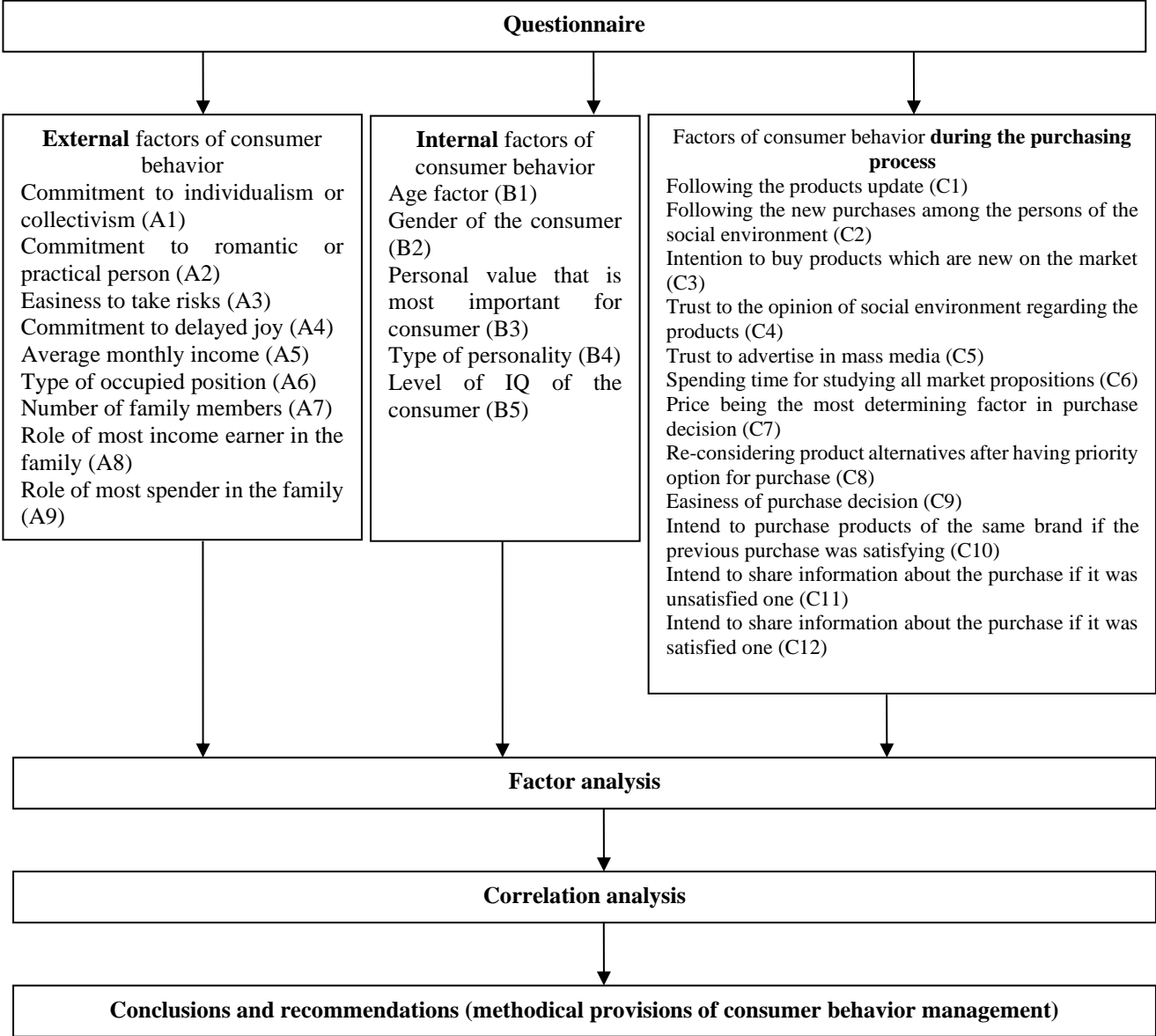


Fig. 4. The logics of the research on impact of factors on consumer behavior

Table 10

Questions on external factors influencing consumer behavior

External factor	Specification of the factor	Question for the consumer
Culture	individualism or collectivism	Would you refer yourself to more individualistic person or to more collectivistic person?
	romantic or practical orientation	Would you refer yourself to more romantic person or to more practical person?
	risk acceptance or safety	How easily you take risks?
	delayed or immediate satisfaction	What would you prefer, to eat one candy right now, or eat 2 candy's in two hours?
Social class	Income	What is your average monthly income?
	Occupation	Which kind of position do you occupy?
Family	Amount of family members	How much family members are living with you?
	Responsibility for the family well-being	Are you bringing the biggest income to your family?
	Responsibility for the family consumption	Are you responsible for most spending in your family?

Table 11

Responses to questions on external factors influencing consumer behavior

Question	Variants of answer	Amount of answers	Persantages of the answer
Would you refer yourself to more individualistic person or to more collectivistic person?	More individualistic person;	35	17,50%
	More collectivistic person;	20	10,00%
	Somewhere in between.	145	72,50%
Would you refer yourself to more romantic person or to more practical person?	More romantic person;	43	21,50%
	More practical person;	92	46,00%
	Somewhere in between.	65	32,50%
How easily you take risks?	I take risk if I see the higher benefits;	67	33,50%
	In most cases I chose safe side.	133	66,50%
What would you prefer, to eat one candy right now, or eat 2 candy's in two hours?	One candy right now;	41	20,50%
	2 candy's in two hours.	159	79,50%
What is your average monthly income?	Less than 10 000 UAH;	98	49,00%
	In the range of 10 0000 – 50 000 UAH;	83	41,50%
	In the range of 50 0000 – 150 000 UAH;	14	7,00%
	Higher than 150 000 UAH.	5	2,50%
Which kind of position do you occupy?	Working in the governmental sector;	25	12,50%
	Working in the office in private sector;	36	18,00%
	Working in educational/social sector	18	9,00%
	Working with your "own hands";	34	17,00%
	Self-employed;	10	5,00%
	Non-working student;	32	16,00%
	Non-working pensioner.	45	22,50%
How many family members do you have?	Living alone;	84	42,00%
	2-3 family members;	91	45,50%
	4-5 family members;	23	11,50%
	6 or more family members.	2	1,00%
Are you bringing the biggest income to your family?	Yes;	73	36,50%
	No.	127	63,50%
Are you responsible for most spending in your family?	Yes;	115	57,50%
	No.	85	42,50%

Table 12

Questions on internal factors influencing consumer behavior

Internal factor	Direction of internal factor	Question to the responders
Physical factors	Age	What is your age?
	Gender	What is your gender?
Lifestyle	Belongings to values	What is the personal value that is most important for you?
Personality	Type of temperament	Responders were given with 57 questions answer on each of them could be yes or no (appendix J)
Cognitive resources	IQ level	Responders were given with 40 questions. Some of the answers should be chosen among the given options, some answers should be given by the responder [3].

Table 13

Responses to questions on internal factors influencing consumer behavior

Question	Variants of answer	Amount of answers	Percentages of the answer
What is your age?	18-21	31	16,00%
	22-35	34	17,50%
	36-60	57	29,00%
	61-75	68	34,50%
	76 and more	10	3,00%
What is your gender?	Male	89	44,50%
	Female	111	55,50%
What is the personal value that is most important for you?	search for truth	46	23,00%
	economic benefits	51	25,50%
	style and harmony	31	15,50%
	love for others	17	8,50%
	power and influence	25	12,50%
	spirituality and the search for the meaning of life	30	15,00%
Type of temperament	Sanguine;	46	23,00%
	Choleric;	76	38,00%
	Phlegmatic;	22	11,00%
	Melancholic	56	28,00%
Level of IQ	0 – 80 points	24	12,00%
	81 – 100 points	96	48,00%
	101 – 120 points	67	33,50%
	120 – and more points	13	6,50%

Questions on consumer behavior aspects among the stages of purchasing process

Stage of purchasing process	Question for the consumer
Need recognition	Do you follow the new product updates?
	Do you follow the new purchases among the persons of your social environment?
	Do you like to buy products which are new on the market?
Information search and evaluation of alternatives	Do you trust the opinion of your social environment regarding the products?
	Do you trust to advertisement in mass media?
	Do you prefer to spend much time for studying all market propositions?
Purchase	Is the price being the most determining factor in your purchase decision?
	How often do you tend to re-consider product alternatives after you have priority option?
	Do you make purchase decision easily?
Post purchase evaluation	Do you intend to purchase products of the same brand if the previous purchase was satisfying?
	Do you intend to share information about the purchase if it made you dissatisfied?
	Do you intend to share information about the purchase if it made you satisfied?

**Responses on questions on consumer behavior aspects among the stages
of purchasing process**

Question	Variants of answer	Amount of answers	Percentages of the answer
Do you follow the new product updates?	I prefer to be aware about most of the products that could be interesting for me;	31	15,50%
	I prefer to be aware about the product updates only in few special markets;	68	34,00%
	I consider the information about new products as unnecessary in my everyday life.	101	50,50%
Do you follow the new purchases among the persons of your social environment?	I prefer to follow what my family/friends/colleagues buy;	153	76,50%
	I don't prefer to follow what my family/friends/colleagues buy.	47	23,50%
Do you like to buy products which are new on the market?	I prefer to try new products;	57	28,50%
	I prefer to buy old models of the products.	143	71,50%
Do you trust the opinion of your social environment regarding the products?	I trust to the opinion of my family/friends/colleagues regarding the products;	126	63,00%
	I prefer to trust my own perception regarding the products;	74	37,00%
Do you trust to advertise in mass media?	The advertising is quite valuable to understand the advantages of certain products;	29	14,50%
	Advertising could be useful under very specific conditions;	43	21,50%
	I don't trust advertising at all.	128	64,00%
Do you prefer to spend much time for studying all market propositions?	In most cases I know in advance exactly which product I want to buy;	62	31,00%
	I prefer to study main alternatives of the product;	85	42,50%
	I prefer to get maximum information about all product alternatives.	53	26,50%
Is the price being the most determining factor in your purchase decision?	Rather yes;	149	74,50%
	Rather no.	51	25,50%
How often you tend to re-consider product alternatives after you have priority option?	I tend to make purchase as soon as I find proper for me option;	86	43,00%
	I take some time before making purchase in order to re-consider all advantages/disadvantages and other alternatives.	114	57,00%
Does purchase decision made easily by you?	Rather yes;	75	37,50%
	Rather no.	125	62,50%
Do you intend to purchase products of the same brand if the previous purchase was satisfying?	Rather yes;	133	66,50%
	Rather no.	67	33,50%
Do you intend to share information about the purchase if it was unsatisfied one?	Rather yes;	124	62,00%
	Rather no.	76	38,00%
Do you intend to share information about the purchase if it was satisfied one?	Rather yes;	98	49,00%
	Rather no.	102	51,00%

Factor loadings for external factors influencing consumer behavior after rotation

Variable	Factor A1	Factor A2	Factor A3
Y	0,7110	0,1738	0,1790
A1	0,1432	-0,6461	0,9695
A2	-0,6154	-0,5858	-0,1738
A3	-0,0445	-0,8633	-0,8704
A4	0,3187	0,6461	0,9079
A5	-0,6461	0,4789	0,0922
A6	0,8073	0,8678	0,4807
A7	0,4512	-0,8201	0,0582
A8	-0,4807	0,9663	0,3123
A9	-0,0582	-0,0205	-0,4512
Expl. Var	4,6625	2,8876	1,6164
Prp. Totl	0,3318	0,2061	0,1158

Factor loadings for internal factors influencing consumer behavior after rotation

Variable	Factor B1	Factor B2	Factor B3
Y	0,6604	0,1614	0,1663
B1	0,1330	-0,6001	0,9005
B2	-0,5716	-0,5441	-0,1614
B3	-0,0413	-0,8018	-0,8084
B4	0,2960	0,6001	0,8433
B5	-0,6001	0,4448	0,0856
Expl. Var	5,5206	3,1349	1,6251
Prp. Totl	0,3863	0,2585	0,1756

Table 18

**Factor matrix after rotation for the internal factors influencing consumer
behavior during purchasing stage**

Variable	Factor C1	Factor C2	Factor C3	Factor C4
Y	0,7327	0,1790	0,1845	0,4295
C1	0,1475	-0,6658	0,9990	-0,4014
C2	-0,6341	-0,6037	-0,1790	0,8283
C3	-0,0459	-0,8895	-0,8969	0,3589
C4	0,3284	0,6658	0,9356	-0,7742
C5	-0,6658	0,4935	0,0950	-0,3354
C6	0,8319	0,8942	0,4953	0,3475
C7	0,4650	-0,8451	0,0600	0,9061
C8	-0,4953	0,9957	0,3218	-0,9015
C9	-0,0600	-0,0211	-0,4650	0,9645
C10	0,1588	0,1884	0,4809	0,3275
C11	-0,2967	-0,8604	0,0646	-0,4392
C12	0,0764	-0,0590	0,4708	0,2420
Expl. Var	4,1676	2,4448	1,8779	1,7423
Prp. Totl	0,3338	0,1897	0,1290	0,1258

Table 19

Correlation matrix of main groups of factors of consumer behavior

Factor	Y	F A1	F A2	F A3	F B1	F B2	F B3	F C1	F C2	F C3	F C4
Y	1										
Factor A1	0,217	1									
Factor A2	-0,91	0,205	1								
Factor A3	0,948	0,943	0,148	1							
Factor B1	-0,83	0,06	0,894	-0,51	1						
Factor B2	0,75	-0,08	0,255	0,229	0,673	1					
Factor B3	0,473	0,98	0,813	0,761	0,861	0,287	1				
Factor C1	-0,21	0,137	-0,25	-0,82	0,314	-0,97	0,268	1			
Factor C2	-0,72	-0,5	-0,35	0,51	-0,74	0,864	-0,35	-0,82	1		
Factor C3	0,921	0,879	0,412	0,394	-0,17	-0,61	0,8706	0,364	0,356	1	
Factor C4	-0,85	0,72	0,175	0,743	0,795	0,524	0,13	0,029	0,347	-0,34	1

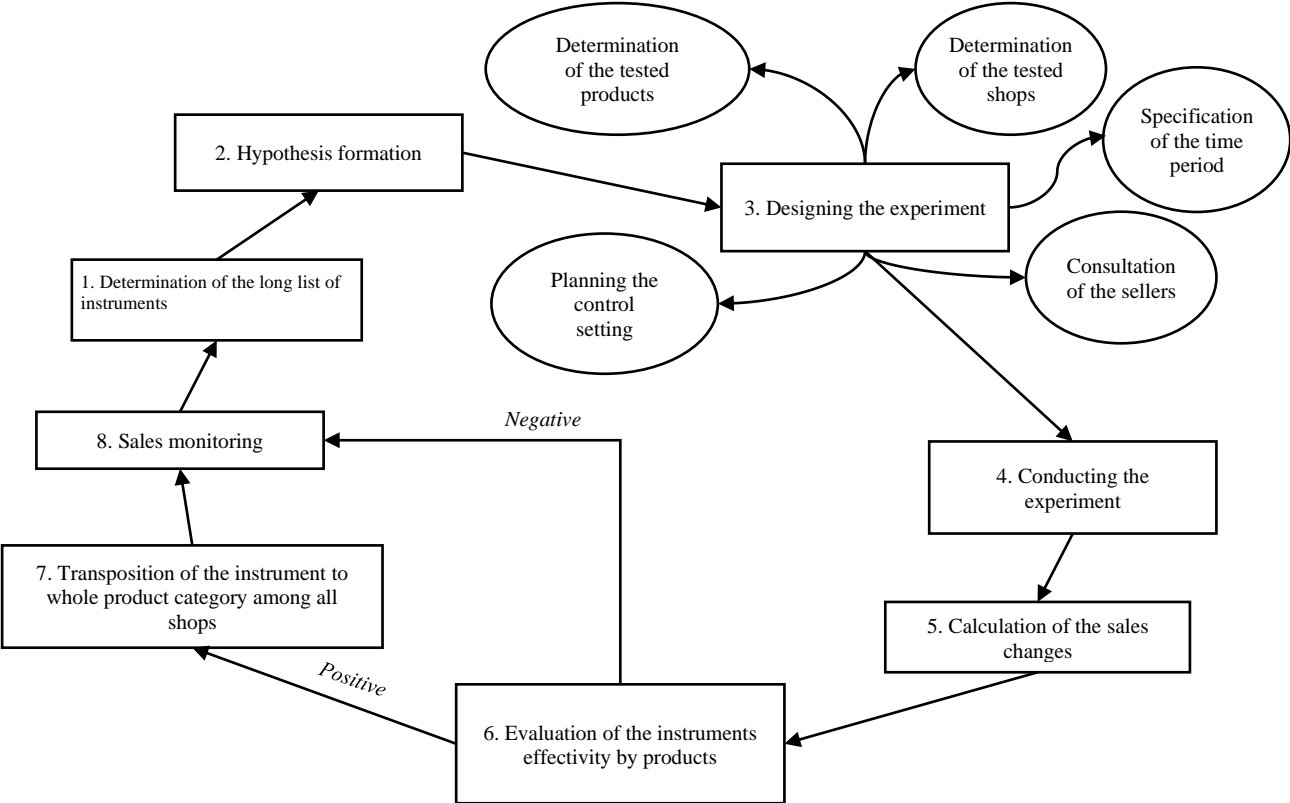


Fig. 5. The scientific and practical approach to choosing of instruments of consumer behavior management in trading enterprise

**Results of expert assessment of the importance of instruments of consumer
behavior management**

Instruments of consumer behavior management	Average scores assigned by experts
Assortment, its updating	9.5
Quality	2.1
Packaging	0.6
Services	6.4
Point-of-sales materials	1.3
Price (Price decisions)	11.4
Promotion	9.7
Promotional Deals	11.8
Product sampling	8.3
Physical conditions	1.4
Layout	1.4
Crowding	0.7
Music	6.1
Odors	1.2
Colors	5.2
Merchandising	5.9
Parking	0.9
Stockouts, availability	3.7
Sales personnel knowledge, skills	1.4
The customer–salesperson relationship	8.7
Location	0.8
Working hours	1.5

Table 21

Research hypotheses

Hypotheses index	Hypotheses
H1	The music sound is positively influencing the sales level of the point of sales
H2	Preliminary advertise of the known product is positively influencing the sales of this product
H3	Odd pricing technique positively influence the amount of sales of priced product
H4	Coloring the product's price label positively influence the amount of sales of this product
H5	Reference of personal positive experience regarding the product positively influence sales of this product
H6	Personal experience of using the product positively influences the sales of this product
H7	Charity the shop performs by donating a part of revenues to charity organizations positively influences the sales of this product

Table 22

Results of the experiment on testing the hypothesis H5

Setting	Product	Avg sales per week in 2020	Avg sales per tested week	Changes in amount of customer
A shops	Rogan MPP	145	211	45,52%
	Three Cheeses	136	197	44,85%
	Flagman	96	143	48,96%
B shops	Rogan MPP	128	131	2,34%
	Three Cheeses	124	120	-3,23%
	Flagman	103	106	2,91%
Avarage A		126	184	46,15%
Avarage B		118	119	0,56%
Tested influence				45,59%

Table 23

Results of the experiment on testing the hypothesis H7

Setting	Product	Avg sales per week in2020	Avg sales per tested week	Changes in sales, units	Changes in sales, %
Products participating the charity experiment					
A shops	Fruit juice Sandora, 1 l	448	507	59	13.2
	Bubble gum Orbit	377	518	141	37.4
	Chocolate bar Corona, 100 g	411	498	87	21.2
B shops	Fruit juice Sandora, 1 l	461	449	-12	-2.6
	Bubble gum Orbit	369	361	-8	-2.2
	Chocolate bar Corona, 100 g	434	429	-5	-1.2
Avarage A					23.9
Avarage B					-2.0
Tested influence					25.9
Alternative products					
A shops	Fruit juice Jaffa, 1 l	363	318	-45	-12.4
	Bubble gum Dirol	462	403	-59	-12.8
	Chocolate bar Millenium 100 g	538	471	-67	-12.5
B shops	Fruit juice Jaffa, 1 l	348	343	-5	-1.4
	Bubble gum Dirol	508	522	14	2.8
	Chocolate bar Millenium 100 g	542	528	-14	-2.6
Avarage A					-12.5
Avarage B					-0.4
Tested influence					-12.1

Recommendations to manage customer behavior based on series of experiments

Hypothesis index	Hypothesis	Hypothesis status	p-value	Recommendations
H1	The music sound is positively influencing the sales level of the trading point	proved	0,000354	To use the calm music on in the shop
H2	Preliminary advertise of the known product is positively influencing the sales of this product	rejected	0,34576	Advertising strategy must be differentiated for different product groups and due to specific marketing goals
H3	Odd pricing technique positively influence the amount of sales of priced product	proved	0,000045312	Odd pricing technique must be used
H4	Colouring the product's price label positively influence the amount of sales of this product	proved	0,0002134	It is better to accompany the coloring of price tags with special offers and alternate goods with painted price tags, because coloring of absolutely all price tags will cease to attract attention and give a positive effect
H5	Reference of personal positive experience regarding the product positively influence sales of this product	proved	0,0000621	Sincerely share both positive and negative information to customers
H6	Personal experience of using the product positively influences the sales of this product	proved	0,005321	Practice food degustation
H7	Charity the shop performs by donating a part of revenues to charity organizations positively influences the sales of this product	proved	0,0150863	Donate some part of revenue and inform consumers about it

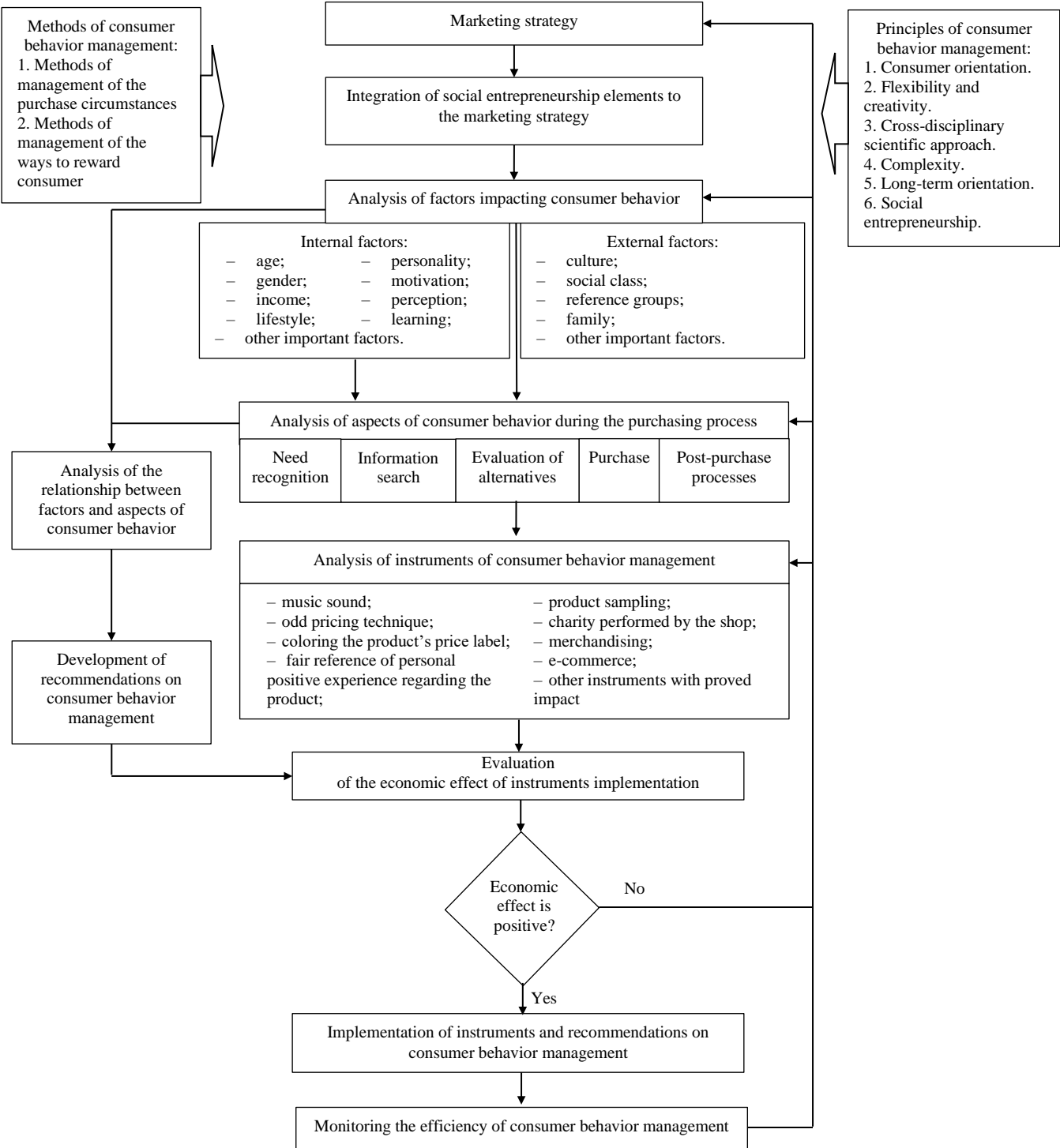


Fig. 6. Methodical approach to consumer behavior management in trading enterprise

Recommendations to manage customer behavior based on analysis interrelation between behavior demonstrated on the need recognition stage and other factors

Statements with high level of reliability	Recommendations to manage customer behavior
The more individualistic persons do not prefer to follow product purchases among their social environment	Products for families with children need to be more actively advertised in social media
The higher the monthly income of the consumer, the less often he/she is following the product updates on the market	For expensive products, it is necessary to update / expand the product range more often
Higher the monthly income of the consumer, with higher probability such consumer will consider to buy newly entered on the market product	
The consumers of higher ages scored lower results of IQ test	The format of providing information related to products intended for aged people must be simple
People who are more responsible for main spending of the family budget prefer to be aware about most of the products that could be interesting for them	It's necessary to encourage people to share positive shopping experiences. This can be implemented by the means of likes program and competitions in Instagram
People who are more responsible for main spending of the family budget prefer to follow what their family/friends/colleagues purchase	
The younger generations more often than other age groups prefer to follow the new product updates	For youth-oriented products it is necessary to conduct more intensive information campaign
The younger generations more often than other age groups prefer to consider to buy products which are new on the market	For youth-oriented products, it is necessary to update / expand the range more often
The people with the higher IQ level less often follow the new purchases among the persons of their social environment	Social media communication style should be simple and straightforward

Economic effect of using the music in the shop:

$$E_{H1} = (\Delta SR_{H1} - \Delta VC - C_M - \Delta WS_{H1} \times (1 + SCR)) \times (1 - ITR) \quad (1)$$

where ΔSR_{H1} – increase in sales revenue as a result of implementation of the recommendation to use the active music on in the shop, UAH;

ΔVC – changes in variable costs caused by implementation of the recommendation, UAH;

C_M – costs related to purchasing the music compositions per year according to the Ukrainian property rights legislation, UAH;

ΔWS_{H1} – increase in wages and salaries of employees whose duties include performing the implemented recommendation to use the active music on in the shop, UAH;

SCR – rate of social charges according to the Ukrainian legislation [**Ошибка!** **Источник ссылки не найден.**];

ITR – rate of income tax according to the Ukrainian legislation [**Ошибка!** **Источник ссылки не найден.**].

$$\Delta SR_H = Q_0 \times P_1 \times \frac{Q_{A1}/Q_{A0}}{Q_{B1}/Q_{B0}} - Q_0 \times P_0 \quad (2)$$

where Q_0 – quantity of tested product being sold chain of shops during the basic year;

P_0, P_1 – price of tested product before and after the experiment, respectively ($P_0 = P_1$ for all the recommendations except the odd pricing);

Q_{A0}, Q_{A1} – quantity of tested product being sold in shops of group A during the experiment, in average week of year 2020 and in the tested week, respectively, units;

Q_{B0} , Q_{B1} – quantity of tested product being sold in shops of group B (control settings) during the experiment, in average week of year 2020 and in the tested week, respectively, units.

BROADSHEET 21 (continuation)

$$\Delta VC = Q_0 \times \left(\frac{Q_{A1}/Q_{A0}}{Q_{B1}/Q_{B0}} - 1 \right) \times P_0 \times \frac{VC}{SR} \quad (3)$$

where VC – total variable costs in shops during the basic year, UAH;

SR – total sales revenue in shops during the basic year, UAH.

$$\Delta WS_H = \Delta WS \times \frac{T_H}{\sum T_H} \quad (4)$$

where ΔWS – total increase in wages and salaries of employees whose duties include performing all the implemented recommendations, UAH;

T_H – time spent during the year by the employees whose duties include performing the implemented recommendations, related to exact recommendation, man-hours;

$\sum T_H$ – total time spent during the year by the employees whose duties include performing the implemented recommendations, related to all the recommendations, man-hours.

List of publications of the applicant on the topic of the dissertation
Articles in periodicals of other states that are members of the Organization for Economic Cooperation and Development and the European Union, which are members of international scientometric databases:

1. Lepeyko T., Kotlyk A., Omarov E. Gender Differences in Customer Behaviour in the Aspect of Odd-Even Pricing. *International Journal of Supply Chain Management*. 2019. Vol. 8, No. 4, August. P. 970–979. URL: <https://ojs.excelingtech.co.uk/index.php/IJSCM/article/view/3332/pdf>. (*Scopus*).

Особистий внесок здобувача: обґрунтовано вплив окремих факторів на поведінку споживача.

2. Omarov E. Social entrepreneurship and what does it mean for management of consumer behavior. Access to *Science, Business, Innovation in Digital Economy*. 2020. Vol. 1(2). P. 86–102. [http://doi.org/10/46656/access.2020.1.2\(1\)](http://doi.org/10/46656/access.2020.1.2(1)) (*Index Copernicus*).

Articles in professional scientific publications of Ukraine, included in international scientometric databases:

3. Omarov E. Evolution of scientific approaches to management of consumer behavior. *Науковий вісник Чернівецького університету: збірник наук. праць. Економіка*. Чернівці: Чернівецький національний університет, 2018. Вип. 804. С. 37–44. (*Index Copernicus*).

Articles in scientific periodicals of Ukraine:

4. Omarov E. Literature review on the effect of odd pricing technique on the demand. *Молодіжний економічний вісник ХНЕУ ім. С. Кузнеця*. 2017. № 8-9. P. 274–277. URL: https://www.hneu.edu.ua/wp-content/uploads/2018/11/MV_8-9_2017.pdf

Proceedings of scientific conferences:

5. Omarov E. Aspects of managing consumer behaviour of organisational buyers. *Сучасні проблеми управління підприємствами: теорія та практика* : Матеріали міжнар. наук.-практ. конф., 3-4 бер. 2020 р., м. Харків – м. Торунь. Харків : ФОП Панов А. М., 2020. С. 22–24.

6. Omarov E., Sandal Jan-U. Management of consumer behaviour based on the effect of odd pricing technique. *Сучасні проблеми управління підприємствами: теорія та практика* : Матеріали міжнар. наук.-практ. конф., 18-19 бер. 2019 р., м. Харків – м. Торунь. Х.: ФОП Панов А.М., 2019. С. 37–39. *Особистий внесок здобувача: обґрунтовано підхід до управління поведінкою споживача на основі стратегії неокруглених цін.*

7. Omarov E. Factors influencing consumer behaviour in retail. *Сучасні проблеми управління підприємствами: теорія та практика* : Матеріали міжнар. наук.-практ. конф., м. Харків, 29-30 березня 2018 р. Х.: Вид-во «НТМТ», 2018. С. 32–34.

8. Omarov E. S. Evolution of social entrepreneurship development in Europe. *Дискусії з актуальних питань соціального підприємництва* : Матеріали 64-го Саміту Соціального підприємництва, м. Житомир, 24 травня 2019 року. Житомир: Житомирський національний агроєкологічний університет, 2019. С. 76–81.

9. Lepeyko T., Sandal J.-U., Omarov E. Factors influencing consumer behaviour management. *Proceedings of the International Congress on Business and Marketing*, Istanbul, 29.11.2018-01.12.2018. Istanbul: Maltepe University, 2018. P. 195–211. *Особистий внесок здобувача: обґрунтовано підхід до виділення факторів управління поведінкою споживача.*

10. Omarov E. Governance of the price perception as an instrument managing consumer behaviour. *Мале та середнє підприємництво: проблеми і перспективи розвитку в Україні* : зб. матер. наук.-практ. конференції, 15-16 листопада 2018 р. Київський національний університет імені Тараса Шевченка. Київ, 2018. С. 147–151.

11. Omarov E. Sh. Trade marketing as an element of managing consumer behaviour during crisis. *Економічний розвиток і спадщина Семена Кузнеця* : Матеріали Міжнародної науково-практичної конференції : тези доповідей, Харків, 31 травня – 1 червня 2018 р. Х.: ХНЕУ імені Семена Кузнеця, 2018. С. 117–118.

12. Omarov E. Sh. Influence of reference group on consumer behaviour management. *Економічний розвиток і спадщина Семена Кузнеця* : Матеріали Міжнародної науково-практичної конференції : тези доповідей, Харків, 30–31 травня 2019 р. Х.: ХНЕУ імені Семена Кузнеця, 2019. С. 49–50.