STATISTICAL ANALYSIS OF WINTER CLOTHES MARKET IN UKRAINE

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In conditions of market attitudes functioning of a commodity market and services influences all grow economy, all manufacturers and consumers. From a saturation of the market the goods and services, their realizations depend opportunities of development of manufacture. Through acceleration of process of the reference the market sphere influences duration of all cycle of reproduction of a product, growth of public labor productivity, and thus, on final economic results, on a level and quality of a life of all population. The market sphere brings the significant contribution to creation of a total internal product of the country. So, in 2000 relative density of the total added cost created in market sphere, made 10,6 % total internal products of Ukraine, in 2003 - 11,8 %, in 2006 - 12,6 %. Dynamics of relative density of the total added cost created at the enterprises of market sphere for the period since 2000 for 2006, is shown in a picture 1.
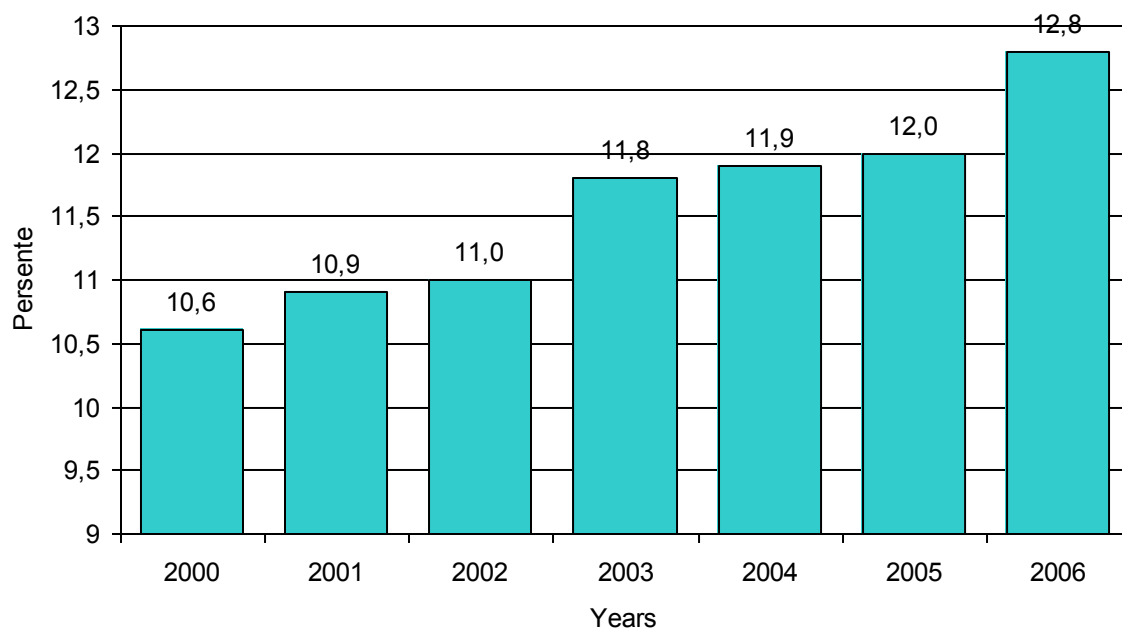
Pic.1. Contribution of market sphere to creation of gross internal product of Ukraine

A hard competition between manufacturers at the consumer market compelled the leaders of enterprises of productions and auctions to spare considerable attention conception of orientation on an user, search of the buyer which will be attracted by the commodities offered by them. In this connection marketing's researches of market segmentation, structures and conducts of consumers purchased certain actuality. Choice of criteria, signs and indexes of evaluation of action of consumers at the market of goods and services is the most debatable question of methodology which is related to the specific of activity of sphere of appeal.

The statistics plays the important role in maintenance of information-analytical needs of marketing. An overall aim of statistics in marketing research is:

1) the organization of statistical supervision;

2) a report and processing of the information;

3) development and modeling of parameters of dynamics of the market phenomena and processes;

4) revealing of numerous and complex market interrelations.

One of specific targets of statistics consists in studying structure and behavior of consumers, reaction of consumers to the new or modified goods.

In an initial stage of becoming of market attitudes strategy of mass marketing was applied. The seller could consider set of consumers as uniform homogeneous size where the general tendencies and laws of purchasing demand where all units of population equally react to conditions of the purchase operate and accept the goods given on the market.

However, the modern consumer market of the majority of the goods differs heterogeneity. Set of individual consumers is differentiated on a floor, age, consumer opinions, purchasing capacity. The majority of manufacturers and trading intermediaries are guided by the certain groups of consumers (segments of the market), that is adhere segmentation to strategy of marketing.

Segmentation of the market - represents distribution of set of consumers to a number of the groups formed to certain attributes which differ from each other the attitude to the offered goods.

From the methodological point of view, segmentation of the market represents process of a statistical grouping and should meet its all requirements. According to a method of statistical groupings it is necessary:

1) to be convinced of uniformity of set;

2) precisely to define attributes on which distribute set;

3) to define quantity and borders of groups.

If set non-uniform, it is necessary to arrange for allocation of more homogeneous parts, that is to use a method of a typological grouping. Groupings can be carried out both on attributive, and to quantitative attributes.

One of problems of segmentation is definition of a degree of appeal of a segment for the given manufacturer, that is prospect of a segment of the market for

selling the goods, availability to firm, its potential capacity, a substantiation of efficiency of a choice.

As information saturation of a segment understand a degree of completeness of a databank of a segment, that is presence in it of all necessary materials.

Thus, segmentation, on the one hand, is function of marketing - a choice of the certain part of the market and the organization of trade on it, on the other hand is a statistical process which represents a grouping of consumers to the certain attributes and should meet the requirements of a method of statistical groupings.

From the point of view of statistics the first stage of segmentation - allocation of groups (segments) on one or several attributes. The second stage - definition of the size of a segment and its capacities. The third stage - an estimation of efficiency of a segment.

The important characteristic of a segment is the parameter average intensity of consumption (demand), i.e. capacity of a segment, divided for its size.

First of all it is necessary to define the size of a segment, quantity of consumers and volume of the goods which can be absorbed by a segment. It is necessary to assess also to appeal of a segment from a position of the characteristic of a level of a competition and average rate of return.

It is necessary to distinguish attributes and criteria of segmentation of the market.

An attribute of segmentation - a parameter of a way of allocation of one segment in the market.

Segmentation of the consumer market is carried out to four attributes:

- geographical (regional): allocation of territorial units with optimum conditions for selling the goods;

- socially-demographic: distribution of set of the population on age, social and family attributes;

- psychographic: allocation of groups of the population incorporated by psychological properties (for example, perception of advertising, reaction to marketing actions, etc.);

- behavioral: search of groups of the population which make the general demands to the market (for example, orientation to the certain kind of the goods, etc.).

Criterion of segmentation - a parameter of, whether correctly the firm has chosen this or that market for activity.

Segmentation of the market is carried out by the certain criteria (table 1).

To choose a segment according to the certain criteria, it is necessary to analyze a situation and to give the characteristic of each segment, to reveal attributes which can be put in a basis of grouping.

Table 1

Criteria of market segmentation

Basic criteria of segmentation	Table of contents of questions on which it is necessary to answer
Quantitative limitation	What the capacity of a segment is, i.e. how many the goods and under what price it is possible to realize in this segment? How many real and potential consumers? It is necessary to involve what resources in this segment?
Availability	Whether probably to receive channels of distribution and selling of production? Are exist corresponding warehouses, bases there?
Informative saturation	Whether probably to receive the necessary market information for creation of a databank for a segment?
Importance	Whether is a constant the allocated group of consumers? What its needs for the certain goods?
Profitability, profitableness	What parameters need to be used for an estimation of profitableness? (usually profitableness is estimated by means of standard parameters: rates of return, the income on the invested capital, the size of dividends on the action).
Protected from a competition	Are there chances at an enterprise on successful activity? How many competitors?

To choose a segment according to the certain criteria, it is necessary to analyze a situation and to give the characteristic of each segment, to reveal attributes which can be put in a basis of grouping.

Segmentation of the market should consider some laws of distribution of the population on volume of demand. Already for a long time it is revealed, that rather small part of the population gets the most part of all goods of the given kind. Sometimes the parity between relative density of buyers and relative density of the goods got by them makes 20 and 80, that is the fifth part of buyers buys 4/5 goods. Such phenomenon name a rule "80-20", or law Pareto. But law Pareto should not be absolutes: disproportions between quantity of buyers and volume of their purchases different for the separate goods, the different countries and periods. However, basically, this rule entirely will be coordinated with the phenomenon of differentiation of the population under the income and price elasticity of demand.

For modeling reaction of consumers on color, the form, design, a set of useful qualities of the goods use statistical methods. More often models of motivation and behavior of consumers represent groupings of consumers which are carried out on the

basis of selective supervision - biographical or oral interrogation of the population. Many such models are developed to one attribute and look like of some distribution. Deeper analysis allows to construct groupings to several attributes. Thus the structural groupings have great value, allowing to define a place which is borrowed with this or that group of consumers in the general set. Besides analytical groupings which reveal influence of separate factors on behavior or opinion of consumers are used.

At statistical studying structure of consumers on a consumption level of the goods use such parameters: Average level of consumption on one person, a dispersion, an average quadratic deviation, factor of a variation.

For an estimation of intensity of structural distinctions at segmentation of consumers it is expedient to use parameters of a variation of a share: quadratic factor of absolute structural distinctions, quadratic factor of relative structural distinctions; factor of similarity of structures of two sets, integrated factor of structural distinctions of K.Gateva.

The factor gets value from 0 (at an invariance of compared structures) up to 1 (at full change of structures). For check of a hypothesis about importance or insignificance of distinctions between parameters of intensity of consumption in separate groups of consumers it can be used - criterion of Studenta.

In marketing researches probably use of many statistics for definition of average estimations, sizes of mistakes, a degree of a coordination of opinions of respondents, establishments of interrelations, etc.

For a substantiation of marketing decisions can be used multivariate methods, first of all factorial and cluster analyses in which basis the analysis of the numerous interconnected variables - for example lays, scoping of sales of a new product depending on its technological level, the price, competitiveness, publicity expenses, etc.

On the basis of the considered complex statistical approach to marketing researches has been carried out statistical research of segmentation of the consumer market of winter lady's wear southern region of Ukraine. The purpose of research was carrying out of segmentation of consumers, definition of types of buyers, studying of motivation of a choice and purchase of the certain kind of the goods. Research was spent by a selective method on the basis of questionnaire. Volume of a sample 250 respondents in the age of from 20 till 60 years.

As the basic attributes for definition of types of consumers of winter clothes in questionnaires at carrying out of research the following were used: - a preferred kind of winter clothes; - set of the factors influencing a choice of the consumer at purchase of products; - used sources of the information on clothes. The listed attributes - factors influence behavior of buyers which is expressed in chosen assortment of clothes, costs and conditions of purchases. The analysis of these attributes has allowed to allocate 4 types of consumers of winter clothes (pic.2)
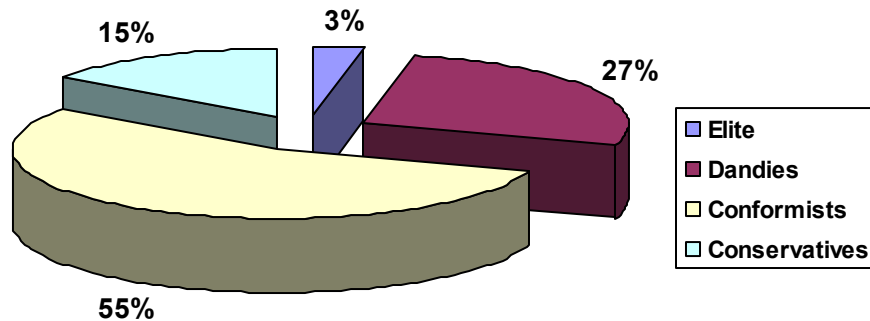
Pic. 2. Types of users of winter womanish clothes

1."Elite" - 3%. Prefers only vanguard models-novelties. Differs high insistence to got products, during a choice estimate popularity of the trade mark of the manufacturer, to a lesser degree decision-making on purchase depends on the price, the basic sources of the information - fashionable magazines, TV, exhibitions, fashion parades. Prefer import products. A principal cause of refusal of purchase - absence of the demanded size, a style.

2."Dandies" – 27%. They are involved with novelty of the goods, are not afraid to risk, getting the new goods. Actively watch fashion trends, the big attention at purchase give design of products, try to find an optimum parity between by and quality. Sources of the information: fashionable magazines, TV, recommendations of relatives and friends. An average level of their incomes approximately twice below, than at elite.

Consumers of first two groups for the further research we shall unite in one group - innovators.

3. "Conformists (usual buyers)" - 55%. The Primary factor is the authority of the manufacturer, at purchase are guided, first of all, by well-known trade marks. Prefer traditional models. Among other important factors allocate quality and the price of a product. Sources of the information - the same, as a "Dandies".

4. "Conservatives" - 15%. Prefer the models which have been checked up by time, not agree with novelty, technical complexity of the goods. In this group prevail respondents of an average and advanced age. The group is characterized by lower standard of living. The main criterion - quality of tailoring of a product at not so high price. Styles are not considered almost. A principal cause of purchases - replacement of the worn out clothes.

Consumer characteristics of products (the price, quality of tailoring, a style, wear ability, a practicality, a name of the manufacturer) were estimated by consumers on a degree of their importance on a scale from 1 (most important) up to 6 (does not

influence purchase). Results of an estimation of consumer characteristics of the goods are presented by various types of consumers in picture 3.
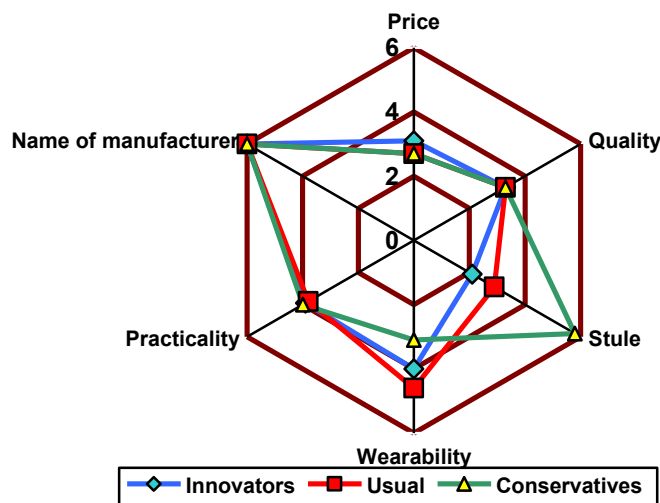
Pic.3. Descriptions of consumers of commodity during segmentation users

Apparently in a picture 3, the name of the manufacturer often has no value at purchase for all segments of the market. For all consumers the price, quality of tailoring and a practicality of a product has Great value. The style of a product is important first of all for innovators, then for usual buyers and to a lesser degree influences a choice of conservatives. Wear ability in a greater degree is important for conservatives. It is necessary to note, that innovators do purchases more often, than usual consumers and conservatives. The greatest relative density among innovators is made with the consumers doing purchases of time in 2-3 years. Among them there are also those who gets a new product each season. The preferable assortment of winter clothes of various types of consumers is presented in a picture 4.
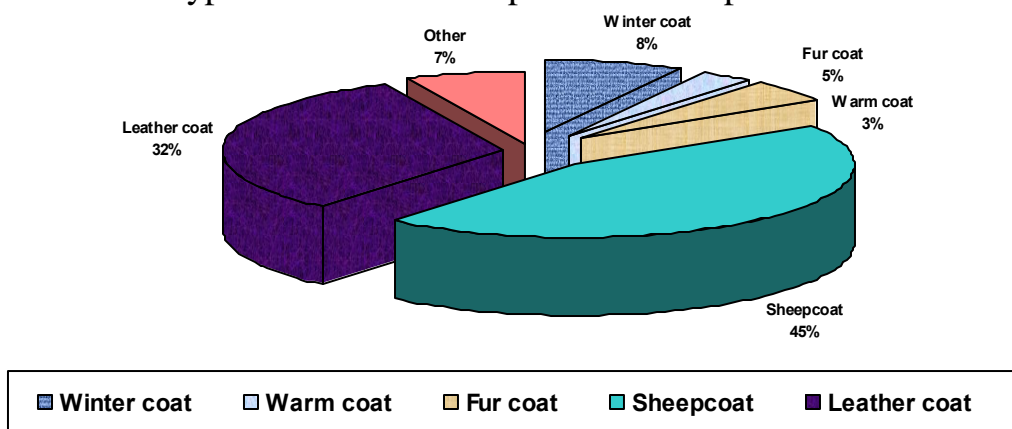
Pic. 4. Consumer demand on the types of winter clothes

We see, that demand on sheep coats prevails of other kinds of winter clothes. Also leather coats use a great demand. At segmentation of consumers on a level of the income on one person 3 groups of consumers have been allocated:

- With the income up to 500 UAH;
- With the income from 500 up to 1500 UAH;
- With the income from above 1500 UAH.

In a percentage parity segmentation looks as follows: in the first group with a level of the income up to 500 UAH. 23% of consumers enter; the second group with a level of the income from 500 up to 1500 UAH. The most numerous? 59% of consumers; with a high level of the income - from above 1500 UAH.-18 % of consumers. Hence, the majority of buyers is characterized by good solvency.

At the analysis of dependence of consumer characteristics of winter products from a level of the income it has been revealed, that the price of a product is especially important for first two groups of consumers. On a choice of consumers with the income more than 1500 UAH. The price of purchase does not render practically any influence, consumers of the given segment of the market pay the big attention to such consumer characteristics of the goods, as quality of tailoring and a style of a product that is caused by a high level of their income.

Analyzing the reasons of purchase, it is necessary to note, that a principal cause of purchase of a new product for all groups of consumers was deterioration of available clothes. Alongside with this essential factor for purchase among consumers of the first group the declared discounts that is the essential factor for the family budget of the given group are. It is necessary to tell also, that changes in a fashion considerably influence acceptance the decision on purchase for consumers with a level of the income from above 1500 UAH.

With increase in a level of the income the share of the consumers increases, preferring to make purchases in specialized shops and shopping centers of city. The share of buyers which get the goods in the market simultaneously decreases.

Thus, the average consumer of the market of winter clothes? He/she is the buyer, with a level of the income from 500 up to 1500 UAH. On the person, preferring traditional models. For such consumer the most significant consumer characteristics is the price, quality and a style. Great value they give practicalities of a product. This segment of the market does purchases of times in 4-5 years and less often, preferring to get a new product in shopping centers and shops. The reasons which have induced to purchase of a new product, for the given group is deterioration of available clothes or change in a fashion. Thus, it is necessary to emphasize importance of constant research and the account of the requirements shown by buyers.

The complex statistical approach to marketing researches of structure and behavior of consumers in the commodity market will allow to improve a technique of carrying out of such researches, to raise quality of processing of the information, to receive more authentic and proved results. It will allow to deepen the analysis of a

complex of the interconnected parameters and more grounded to define directions and reserves of increase of efficiency of functioning of market sphere.

LITERATURE

1. Самотоєнкова О. В. Особливості розвитку ринкової інфраструктури в Україні // Вісник соціально-економічних досліджень : зб. наукових праць / ред. М. І. Звєряков; Одеський держ. ек. ун-т. – Одеса : 2005. Вип. 19. С. 278-283.

2. Самотоєнкова О. В. Оцінка соціально-економічної ефективності ринкових процесів // Вісник соціально-економічних досліджень : зб. наукових праць / ред. М. І. Звєряков; Одеський держ. ек. ун-т. – Одеса : 2006. Вип. 23. С. 287-292.

3. Самотоєнкова О. В. Статистичне оцінювання структури і поведінки споживачів на ринку товарів і послуг // Вісник соціально-економічних досліджень : зб. наукових праць / ред. М. І. Звєряков; Одеський держ. ек. ун-т. – Одеса : 2007. Вип. 25. С. 306-311.

4. Підгорний А. З. Статистика ринку товарів і послуг : навчальний посібник / А. З. Підгорний, О. В. Самотоєнкова. – Одеса : ОДЕУ, 2008. – 238 с.