CONSUMPTION MODELS AND PURCHASING POWER

MARIANA STANCIU
ADINA MIHĂILESCU

Starting from some theoretical aspects regarding history of consumption economy, this article shows their evolution until the present theory of the normative consumption models and presents some consumption models (elaborated after 1990, for several different types of households, by the Institute for Quality of Life Research, Bucharest), and some international models, too. A complex view on the dynamics of the consumption models can be acquired only by constructing the modular trends given by the evolution in time of the main synthetic indicators for each representative module integrated in a particular consumption model. The paper reveals the importance of studying the consumption models for economic forecasting and for the formulation of socioeconomic policies.

Keywords: consumption basket, GDP per capita/food expenditure, forecasting, economic behaviour.

KEY-FACTORS INFLUENCING THE DEMAND FOR GOODS

The theoretical bases of the economy of consumption, set by Ernest Engel (1821–1896) in his *theory of demand*, have been substantially enriched in time by the contribution of several economists. However, the concepts introduced by Engel are still quite used to study and describe the *consumption models* of the population. Engel described the key-factors which influence the demand for consumption – *price level* and *income level*, and two of the fundamental laws of the demand, defined for "normal" goods: *demand drops with the increase of the price for goods* and *demand increases with the income increase*.

In order to evaluate the *intensity of the relation between demand and the prices/incomes,* Engel introduced the concept of *elasticity of demand* (how much is the demand sensitive to the variation of factors). There are three categories of elasticity of the demand for goods: elasticity function of own price, also called *price–elasticity*; elasticity function of the price of another good, also called *crossed price–elasticity*; and elasticity function of consumer income, also called *income–*

Adresa de contact a autorilor: **Mariana Stanciu**, **Adina Mihăilescu**, Institute for Quality of Life Research, Calea 13 Septembrie, nr. 13, sector 5, 050711, Bucharest, Romania, e-mail: mariana1stanciu@yahoo.com; adina.mihailescu@yahoo.com.

elasticity. When other conditions remain unchanged (caeteris paribus clause), the demand for a good is decreasing with the price (P_x).

The *variation of* P_x produces two categories of effects:

– the *effect of substitution,* also termed the *price effect*, which measures the variation of the demand for a specific good due to the change in its relative price, when the real income remains constant, maintaining its level of utility resulting from the combination of goods. This effect will always be negative, because the variation of the relative price of a good, in comparison with other replaceable goods, will always elicit a variation in the opposite direction of its consumption;

– the *effect of income*, measuring the variation of demand for a specific good elicited by the change of the real income or of the utility, which may be due to the variation in the price of a good, while the price of the other goods and the nominal income remain unchanged (when the nominal income remains unchanged, that particular good gets cheaper – P_x decreases – because the purchasing power, or the "real income" of the buyer increases).

Price–elasticity of the demand for a good expresses the sensitiveness of the demand or its reaction to the variations of the price of that particular good, and it is determined as ratio of the percent of variation of the demanded amount to the percent of variation of the price, otherwise said, the ratio between the relative variation of the required amount and the relative variation of the price.

Crossed price–elasticity expresses the sensitiveness of the consumption or demand for good, *x*, function of the price variation of another good, *y*, being calculated as ratio of the relative change in the demanded amount for the first good, *Dx/x,* and the relative change in the demanded amount for the other good, DP_y/P_y. Studying the *crossed price–elasticity* is of practical interest for the identification of the *market monopolies*, against which limiting measures have to be taken via the *policy of competition*. If, for instance, a company has control over the production of a good with a high coefficient of elasticity, it means that the specific good has a replace, a substitute on the market, which doesn't allow a real monopoly. If, however, the crossed elasticity is low, under unit value tending towards zero, in relation with the price of any other good, this shows that the company supplying the specific good holds a monopoly.

Demand versus income. The second law of the demand or consumption of a good shows its behaviour function of the dynamics of the incomes. *Income elasticity* expresses the sensitiveness of the demand for a good in relation with the dynamics of the incomes and the direct correlation between the demanded amount of a "normal" good and the variation of consumer's income. Income elasticity is determined as ratio of the relative variation of the demanded amount and the relative variation of the income. The studies of demand elasticity for various categories of goods allowed the accumulation of a large volume of information, which may be used to by the economic agents to develop scientific strategies and other macroeconomic policies.

The demand of goods on the market is also influenced by other social-economic factors, such as family size, area of residence, local traditions, religion, type of employment, health status, forecasted income or forecasted inflation, etc. Such influences are not usually approached via the classical theory of the demand, because of their low weight (30%), in comparison with the other influences due to the prices and incomes.

EQUILIBRIUM BETWEEN DEMAND AND SUPPLY

Other two fundamental concepts used by the economic analysis of the consumption behaviour are the concepts of *equilibrium* and *economic optimum*.

The *economic equilibrium* between the demand and offer of goods and services was a concern for the political economy as early as in the dawn of capitalism, when the market conditions were strikingly different from the current ones. The classical vision belongs to reputed authors such as Smith, Ricardo and Mill. They have approached the concept of *economic equilibrium* in the hypotheses of the economic agents' independency and of conceiving the economic system as simple sum of the composing subsystems. According to this view, the balance between demand and offer may be ensured by finding a *balanced price* derived by maximizing the advantages of every category of economic agents.

The neoclassical economists, such as Keynes, or modern, such as Debreu, Arow or Hahn, have been more interested in the macro level of the economy of consumption and have consequently developed the *theory of the macroeconomic balance*. Keynes (1936) introduced the concept of *propensity of consumption*, defined as the ratio of the *total value of consumption* to the *value of population income*. The *marginal propensity to consume* is calculated by relating the *variation of consumption value* to the *variation of the incomes* in a given time frame. The *function of consumption* expressed as relation between the variation of the consumption and the variation of the global incomes, as well as the *stability of the collective consumption behaviour* are analysed by the *theory of the permanent income* and by the *theory of the constant consumption (*or *of the dynamics of consumption) throughout the lifetime*.

In the modern world, the *consumption behaviour* designates those human actions, which show that the consumers are aware of the existence of specific *needs* and of *consumption opportunities*. The modern consumption behaviours are in balance when the tensions produced by the awareness of needs are dissolved within the *field of consumption opportunities and restrictions*, within which each consumer acts (within the limits of the offer available in acceptable terms, within the limits of own incomes, function of own preferences, function of the objective to subjective ratio which form when the needs arise). According to the *theory of the economic optimum*, the size of population's expenditure depends at least on two important factors:

– *size of the income available to the consumers*. This dependency can be measured by the *marginal bias towards consumption*, which shows what part from each monetary unit gained supplementary by the consumer will be spent for consumption;

– *interest rate* or the compensation offered by the banks in exchange of giving up consumption in favour of saving. Theoretically, this dependency is negative, which means that the higher interest rates will not suppress consumption.

The economic practice, however, proves that the social environments widely affected by poverty have a very low sensitivity of the consumption, in relation to the changing interest rates. This relation is rather ignored by the consumers due to reasons pertaining to the stringency of the needs for consumption, poor information on interest rates, etc.

The neoclassic (Walras, Jevons, Menger), and also Pareto or Wieser, introduced through the *theory of marginal utility* the *postulate of consumer rationality*. According to it, by the act of consumption, the individual actually solves two problems – one of *decision* or choice between several variants of consumption according to his/her needs, and one of *utility maximization* (Tache, 2004). Pareto promoted the introduction of the mathematical and sociologic models in the economic research, contributing, thus, to the mathematical formalization of the theory of the rational consumer. Pareto saw in the consumer an autonomous economic agent in the utilization of its available income, a rational person which evaluates quantitatively and qualitatively the goods and services for own necessities, according to certain priorities and to the size of its income. The concept of *Pareto efficiency* or *Pareto optimum* has multiple applications in the analysis of the possible variants of resource distribution within specific consumption models. Given a set of alternative distributions of goods or incomes for a set of consumers, the transfer from a distribution to another that may be advantageous for a consumer without disadvantaging others is called *Pareto efficiency*. A distribution is *Pareto optimum* when no further Pareto improvement can be made. This is also called *strong Pareto optimisation*. A *poor Pareto optimisation* satisfies a less stringent need, such a distribution being considered *Pareto efficient* only if it is preferred by all the involved consumers. Pareto discovered that the *population income follows a probabilistic-type distribution, which actually expresses the relations at the level of the social power,* when they achieve a *Pareto-type distribution*. The assertion of *Pareto's optimum* presumes the existence of at least a *minimum of reason* on the side of the consumers. Pareto was interested by the study of the *general equilibrium of consumption* in relation to *consumer preferences* and *economic restrictions*. He showed that if the study of preferences puts the analyst in the field of the consumer, and the study of the economic restrictions puts it in the field of the producer, only the knowledge of both terms makes it possible to maintain an economic balance. Pareto notices that, in order to accomplish its purpose, the

consumer doesn't need a rigorous measurement of the utilities, just a clear image on the hierarchy of its preferences, which allows it to purchase the goods and services in the preferred order and within the limits of its incomes. Leaving from such reasoning, Pareto proposed to replace the *theory of cardinal utility* with that of the *ordinal utility*. The basic concept with which the theory of ordinal utility functions is the *utility function*, which reveals consumer's intuitive priority level of the requirements when it has to purchase goods. Thus:

$$U = f(x_1, x_2, \ldots x_n),$$

where U – is the ordinal utility, $x_1, x_2, \ldots x_n$ – are different amounts of goods Q_1, $Q_2, \ldots Q_n$, and the indices – are the order of preference set by the buyer.

The interval on which this function is defined is not single. It may have a minimal limit imposed by the minimal possible variation of the consumable goods and a maximal limit determined by the necessity of the constant affirmation of consumer preferences.

Other economists, such as Morgestern, von Neumann, von Hayek, Friedman, Samuelson, Hicks introduced in their scientific approaches some instruments belonging to disciplines other than economy (such as sociology, psychology etc.), in order to explain some phenomena that belong to the dynamics of the incomes and prices, time influence on the demand, state intervention in regulation and production, market dynamics (labour, goods and services, monetary, stock exchange) and to identify and describe the great trends of the consumption behaviour.

CATEGORIES OF CONSUMPTION MODELS

The objective premises of structuring any *consumption model* derive from the *material-economic liberties/restrictions* prefigured through the *production model* practiced in a specific space/temporal area and valued concretely by the consumers through the *sociocultural and personal filter of needs* (bio-psychic parameters, habits, customs, traditions, norms, values, fashion etc.).

The *consumption model specific to a space/temporal area may include several consumption models,* which derive from the coexistence of two or more *cultures* within the same area. Some consumption requirements may generate specific cultural orientations displayed on narrower social areas than those of the consumption models, under the expression of *consumption styles*. Between two or more consumption styles there may also be *common specific elements*, which originate in the infrastructure of the consumption model which includes them.

The cultural characteristics of a consumption model are learnt by socialization and are transmitted between generations. Despite the increased social dynamics

worldwide, some dimensions of the consumption behaviour are hardly changing when traditional goods or services are involved. By value sharing, communication within a population becomes more facile and the predictability of the consumption model is higher. Advertising, for instance, has different effects on populations with distinct cultures. The structuring of the consumption models within very old cultures requires some tens, hundreds or even thousands of gathering experiences, circumstances or validation of life solutions. Function of different factors, the new generations change more or less the inherited models, new life ideas and solutions being incorporated continuously within consumption models to be forwarded to the future generations. Most consumption models remain active as long as their major underlying premises persist (availability of economic resources, environment characteristics, etc.).

Various categories of models can be used to study population's consumption:

– *abstract or symbolic models* – whose variables describe the behaviour of the consuming entities through functions – for instance, the curves of demand variation for various categories of goods, developed by Ernest Engel;

– *sociologic models* – in which the characteristics of some segments of consumers are described, in terms of statistic frequencies of their consumption behaviour (for instance, the average model of the consumption of goods and services in Romania);

– *hybrid models* – which use both descriptions of abstract variables and sociologic descriptions (for instance, the consumption of goods and services of the poor population in Romania, CASPIS, 2002).

Any approach to studying the consumption models relies on an effort of understanding the necessities, actual behaviour, values and aspirations of the consumers. Until now, no sufficient investigations were done on *consumer's reasoning* and much less on the *unconscious impulses* that form the consumption behaviour. *Hence, there still lacks a comprehensive understanding of why a specific consumption practice is adopted*, although studies have accumulated in this field.

The consumption models can be analysed by criteria, from perspectives, or using various methods, each consumption model being supported by integrated utility and stylistic behaviours. The more criteria are used to define a model, the better shaped will that model be.

The methods used to study the consumption models are selected according to the nature and extent of the investigators' interests of knowledge. A consumption model can be studied:

– *in its full expression*, case in which we need to know the basic indicators of population's consumption, which will be determined by the use of techniques of social investigation, or will be calculated according to certain formulas;

– *partially, on certain areas and dimensions*, particularly in the situation of in-depth studies;

– on the areas of detachment in relation to the *dominant consumption model* (such analyses may contribute to outlining consumption styles).

Most studies rely on partial studies of some consumption models.

Usually, the income allocated to consumption is just part of the *total household incomes* – the other being used for bills and compulsory payments (taxes, dues etc.)*,* for *saving* or to make *investments on the capital markets*. The distribution of household's income usually uses a *self-regulation mechanism*, which aims to *achieve maximal utility in consumption* and to *make savings/ investments* that will maximize the future incomes. Such reasoning forms produce ultimately the decision concerning the *frequency of consumption,* the choice to *consume or to invest*, the choice to *consume now or in the future*.

The households may have higher or lower *consumption autonomy*, in relation to the general economic context, which may stimulate or inhibit the *self-regulation of inputs and outputs* of goods and services into/from households. In the modern era, there is a *trend to decrease the economic and functional autonomy of the households* by centralizing the distribution of specific goods and services.

The definition of the purposes of a consumer system raises numerous problems, which derive from the *diffuse character of the inner system states*, because of previous inputs. Therefore, the marketing specialists are concerned to study the satisfaction towards specific consumption acts and their implication on other processes within the life cycle.

The social capital, the level of education, the stage of life or *the age* of the person/ family*, the psychosocial traits, the economic capital*, are *independent variables* which influence in a decisive manner the structure and level of the consumption expenditure through the filter of consumption model choice by the consumer. With the purpose to increase the operative character and the precision of analysis, the *consumer* (one or several persons, families, households, production units etc.) *may be assimilated to a cybernetic system* which uses its incomes, properties and capacities to maintain/ develop its structure, by meeting its needs by making use of the relevant markets of the national economy.

PURCHASING POWER, IN TERMS OF MINIMAL MODELS

Analytically, any consumption model may contain several *modules* or *chapters of consumption* – each module corresponding to an *essential need of consumption* (Stanciu, 2002). The main *modules of the modern consumption models* are feeding and physical development; dwelling/ protection from the environmental factors; maintenance, rehabilitation and modernization of the dwelling; endowment of the dwelling with goods; clothing for the family members; education, knowledge, personal development; health care and promotion; transportation, communications and other public utilities; social and cultural integration.

Each *module* may include several *groups of products*. Some modules, such as those concerning feeding or dwelling requirements, are *vital* or *crucial*, being a top priority. The economic restrictions to these *capital modules* produce *tensions* or even *decreased manifestation of other modules*. Such a phenomenon was produced, for instance, within the *average consumption model in Romania* in the '90s, when the food expenditure of the population (deficient in some items) decreased not just in terms of real value, but also as proportion within the overall consumption expenditure because of the excessive increase on the costs with dwelling utilities.

The explosion of poverty occurred in Romania during the early '90s and it persisted throughout the transition period, bringing forefront the problem of developing the concepts of *minimal consumption baskets*, adapted as well as possible to the actual conditions of the Romanian economy at that period, with the purpose to substantiate scientifically the social policies.

At international level are used various methods to evaluate the minimum standard of living, based either on *consumption norms* for *the basic modules,* or starting from the *proportion of groups of expenditure*, *food mainly,* within the overall consumption expenditure of the family budget. *Comparative method* relates *the individual or family incomes* to the *average cross-country income.* The *objective methods*, such as those mentioned above, are usually complemented by *subjective methods*, which aim to know the opinion of the people on their conditions of living.

Among the initiators of economic models to calculate the minimum requirement for living was Rowntree (1901), who mentioned two levels of the minimal standard of living. The first one concerned the *physical subsistence*, focusing on the food consumption determined by the nutrition specialists, while the second one, including *several modules,* concerned a larger budget of expenditure. Starting from Rowntree's conception, other researchers, such as Allen & Bowley (1935) have developed the concept of *minimum standard of living*, starting from the evaluation of the *income required by a household* to reach a *minimal standard of health and dignity*. Thus, the concept has been enlarged with expenditures for social participation. However, Rowntree or Allen & Bowley focused on the *basic consumption* and didn't take into calculation cultural, educational and spiritual aspects, which yield major, needs of the human existence.

Any option for a specific level of the poverty doesn't meet the unanimous consensus of all categories of specialists. However, the *minimal consumption*, under one expression or another, needs to be determined, because any society which has clearly stated objectives of social development needs an instrument to analyse the situation of the population, during various stages of development. Such an instrument allows knowledge on the dimensions of poverty, allows the enforcement of measures to control this phenomenon, identifies the most affected groups of population and allows estimates of the costs required to meet these

stringent needs. The concept of *minimum standard of living* is defined in the sociologic literature as needs-obligations (de Lauwe, 1972, CASPIS, 2002).

In Romania, several institutions have been concerned, in the early '90s, with the minimal consumption. Among them, the National Institute of Statistics, the Ministry of Labour and Social Protection and the Research Institute for Quality of Life (RIQL) within National Institute for Economical Research (NIER), Romanian Academy (Barbu, 1992).

We present a model developed in RIQL in this direction:

Table no. 1

Expenditure for the minimum standard of living, for the family of employed people and for the pensioner family, urban area

– % –

Items	Decent minimum consumption		Subsistence consumption	
	Family of two employees with two children	Family of two pensioners	Family of two employees with two children	Family of two pensioners
Food.	54.2	55.8	63.4	68.0
Clothing.	7.4	5.9	2.6	3.4
Furniture	1.2	0.5	0	0
Household appliances.	1.0	2.0	0	0
Household electric items.	0.2	0.1	0.1	0.1
Sanitary and hygiene articles.	0.9	1.2	0	0
Textiles.	0.6	0.5	0.1	0.1
Cutlery, dishes, related articles.	0.3	0.5	0	0
Household utility products.	0.8	0.6	0.9	0.7
Transportation.	5.4	0.4	5.4	0
Cultural services.	2.9	2.8	0.7	1.6
Annual minimum of stationery items.	1.1	0.4	0.8	0.2
Annual minimum of post office, telecommunications.	3.5	8.0	2.6	1.6
Personal hygiene.	0.8	0.4	0.9	0.3
Reconditioning and maintenance services for clothing and footwear.	0.8	0.8	0.4	0.2
Expenditure with dwelling.	12.7	16.9	14.9	19.9
Expenditure with medicines.	6.2	3.2	7.2	3.9
Total	100.0	100.0	100.0	100.0

Source: Minimum decent consumption and subsistence consumption calculated with the normative method within RIQL, Bucharest (Mihăilescu, 2001).

Note: In December 2009, the value in lei of these indicators was the following: Decent minimum – family of two employees plus two children = 1,900 lei; Minimum of subsistence – family of two employees plus two children = 1,475 lei; Decent minimum – family of two pensioners = 911 lei; Minimum of subsistence – family of two pensioners = 677 lei.

Table no. 2

**Expenditure for the minimum standard of living for the family of agricultural workers
and family of old people, rural area**

– % –

Items	Decent minimum consumption		Subsistence consumption	
	Family of two agricultural workers with two children	Family of two old people, over 65 years	Family of two agricultural workers with two children	Family of two old people, over 65 years
Food.	16.6[1]	35.8[2]	19.1[3]	57.6[4]
Clothing.	7.2	12.6	2.1	10.2
Furniture (house on the ground with 3 rooms).	1.3	1.1	0	0
Household appliances.	1.1	4.7	0	0
Household electric durables.	0.2	0.3	0.1	0.3
Sanitary and hygiene items.	0.9	2.3	1.0	0
Textiles.	0.7	1.1	0.1	0.4
Cutlery, dishes, related items.	0.3	1.1	0	0
Household utility products.	0.8	1.4	1.0	2.1
Transportation.	0.9	0.9	0	0
Cultural services.	2.0	0.3	0.8	0.4
School stationery and general stationery.	1.3	1.0	0.9	0.7
Post office, telecommunications.	3.9	18.6	2.9	4.8
Personal hygiene.	0.9	0.9	1.0	0.8
Maintenance services for clothing and footwear.	0.4	1.0	0.4	1.5
Expenditure with dwelling.	3.8	9.4	4.4	9.1
Expenditure with medicines.	3.4	7.5	3.9	12.1
Expenditure with agricultural works.	10.7	–	12.3	–
Total lei	100.0	100.0	100.0	100.0

Source: Decent minimum and subsistence standard of living, calculated with the normative method within RIQL, Bucharest (Mihăilescu, 2002).

Note: In December 2009, the value in lei of these indicators was the following: Decent minimum – family of two agricultural workers plus two children = 1,639 lei; Minimum of subsistence – family of two agricultural workers plus two children = 1,354 lei; Decent minimum Minim decent – family of two old people = 723 lei; Minimum of subsistence– family of two old people = 550 lei.

[1] Household production in total food for family of two agricultural workers with two children for decent minimum consumption was 43.6%.

[2] Household production in total food for family of two old people, over 65 years for decent minimum consumption was 46.2%.

[3] Household production in total food for family of two agricultural workers with two children for subsistence consumption was 50.0%.

[4] Household production in total food for family of two old people, over 65 years for subsistence consumption was 60.3%.

Such consumption models are extremely useful when a society undertakes to monitor the social situation of the families disadvantaged on the labour market, in order to support them and to prevent an extreme polarization of the socioeconomic situation of the population.

Table no. 3

**Coverage of the decent minimum consumption and subsistence consumption
by the earned income, between 2000–2009 (%)**

Synthetic indicators	2000	2003	2006	2007	2008	2009
1 average net wage + 2 children allowances / decent minimum (%)	37.1	47.6	57.8	67.5	72.7	77.8
1 average net wage + 2 children allowances/ subsistence minimum (%)	61.2	67.3	66.8	78.0	93.7	100.1
2 average net wages + 2 children allowances / decent minimum (%)	71.4	90.8	112.4	132.0	142.6	153.0
2 average net wages + 2 children allowances / subsistence minimum (%)	117.8	128.4	130.0	152.4	183.7	196.9
1 minimum wage + 2 children allowances / decent minimum (%)	11.6	24.2	20.4	21.8	22.5	25.1
1 minimum wage + 2 children allowances / subsistence minimum (%)	19.2	34.3	23.6	25.2	28.9	32.3
2 minimum wages + 2 children allowances / decent minimum (%)	20.5	44.1	37.6	40.6	42.1	47.6
2 minimum wages + 2 children allowances / subsistence minimum (%)	33.8	62.4	43.5	46.8	54.2	61.2

Note: Decent minimum consumption and subsistence consumption are calculated with the normative method within RIQL, Bucharest (Mihăilescu, 2002).
Source of auxiliary data: Statistical quarterly bulletin of incomes and expenditure 2000–2009, NIS.

The graphic representation of the purchasing power evolution for the different categories of population incomes, in relation to the *decent minimum consumption* and to the *subsistence consumption* shows the degree of adequacy of the different income policies.

We can notice that in 2008, an average net wage plus the state allowance for two children could not cover in Romania the minimal requirement for decent consumption for a family with two children.

Chart 2 shows the dramatic situation of the families in Romania, which after the year 2000 only had a minimal wage and the state allowances for two children (in the '90s, the similar situation was even worse than after the year 2000).

Chart 1

Evolution of the purchasing power of an average net wage plus the allowances of two children in Romania, function of the minimum for decent consumption (%), between 2000–2009
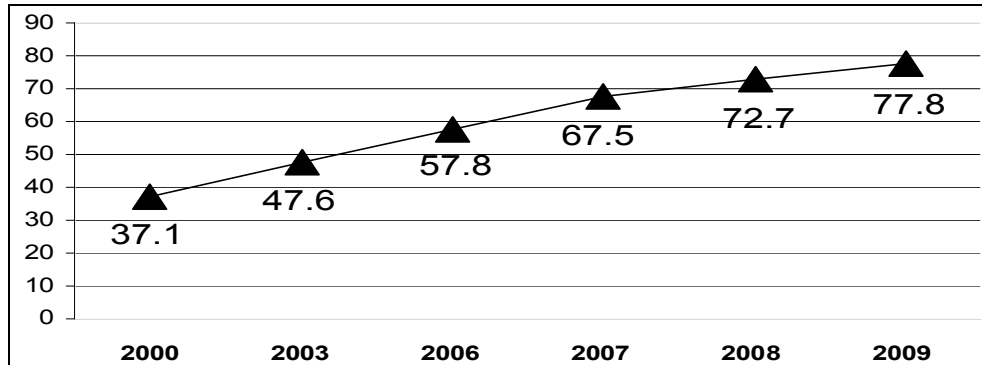
Source: RIQL for the decent minimum consumption, Statistical quarterly bulletin of incomes and expenditure 2000–2009, NIS.

Chart 2

Evolution of the purchasing power of the minimal wage plus the allowances of two children in Romania, related to the decent minimum consumption (%), between 2000–2009
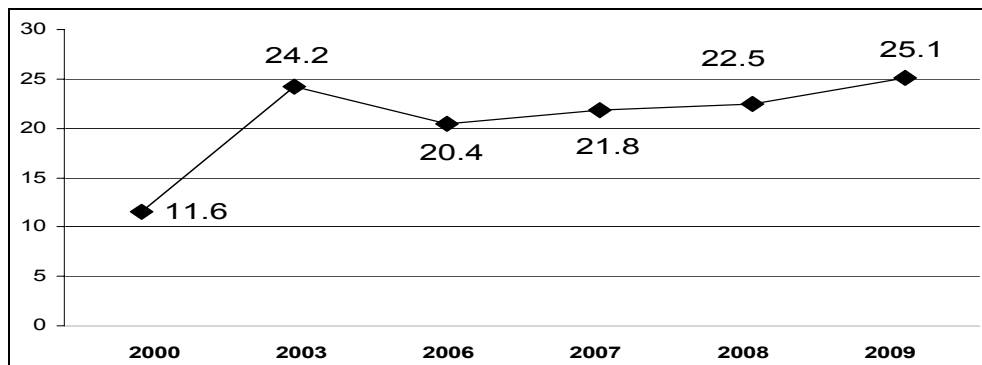
Source: RIQL for the decent minimum consumption, Statistical quarterly bulletin of incomes and expenditure 2000–2009, NIS.

MODULAR TRENDS

The preponderance (as proportion) within the model of the biologic modules doesn't exclude the fact that, under different circumstances, other modules can become capital.

The consumption models can be investigated by various *modules* or *chapters of consumption* and *within a module, by stages*.

A complex image of the dynamics of a consumption model can be acquired only by constructing the *modular trends* given by the time evolution of the main

synthetic indicators for each module. For instance, the food module of the statistic model of the population in Romania during 2000–2007, has the following dynamics (Table no. 4):

Table no. 4

Food consumption/person/day of the Romanian population, expressed in nutrients

	UM	2000	2001	2002	2003	2004	2005	2006	2007
Proteins	g	94.7	97.6	103.3	106.8	112.3	112.2	114.3	111.2
Lipids	g	85.1	87.0	91.0	94.7	96.3	101.7	107.5	101.3
Sugars	g	449.7	459.8	466.4	467.7	487.2	483.9	485.4	462.4

Source: Statistical Yearbook of Romania 2001–2008, NIS.

The *objective synthetic indicators* are obtained by adding the analytical consumptions for all groups of products/services from the module, corresponding to each moment of reference within the monitored trend

The *studies of modular trend* are frequently used for economic forecasts because, as the consumers acquired specific consumption models, the future can only incidentally record dramatic discontinuities from the past and from the present. The trend investigations accomplished with objective indicators can acquire a higher relevance if completed by information on the *expectations, aspirations* and *perceptions of the consumers* on specific issues, misbalances or difficulties in using the consumer prerogatives.

The *graphical representation of the modular trends* usually is very suggestive, allowing comparing similar trends from different periods of time or of equivalent modules belonging to equivalent models (Chart 3).

A wider research on the consumption of the populations from 114 countries worldwide was done between 1996 and 2000, the study being published in 2003 by the USDA Service of Economic Research *(ERS USDA DATA, 2003)*. This survey allowed international comparisons on the influences on the food consumption in various parts of the globe *(Seale jr., Regmi, Bernstein, 2003) (see the Annex)*. Having available data series of a great volume, one can make relevant studies on the influence of some economic parameters on the consumption models, in relation to the different stages of national development worldwide. The latent trends of the statistic behaviour in purchasing some categories of goods and services can also be identified for groups of countries, selected according to various criteria.

The Annex shows a selection of countries with very far apart GDP per capita. By calculating simple regressions with the *GDP per capita* as independent variable for the different items included in the food expenditure, we may identify for the selected countries to what extent the *size of the GDP per capita correlates with the presence and weight of certain food expenditures within the overall household expenditure for consumption.* The value of the calculated correlations shows the average increase or decrease of the dependent variable for the one unit change of the independent variable.

Chart 3

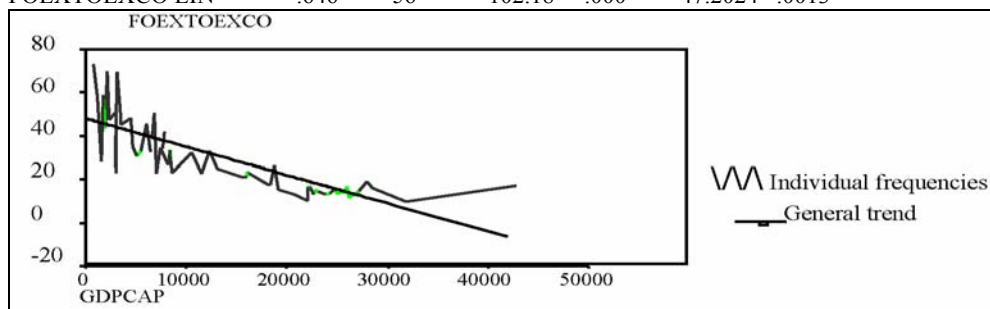**Average intake of calories of the Romanian population, between 1980 and 2007**
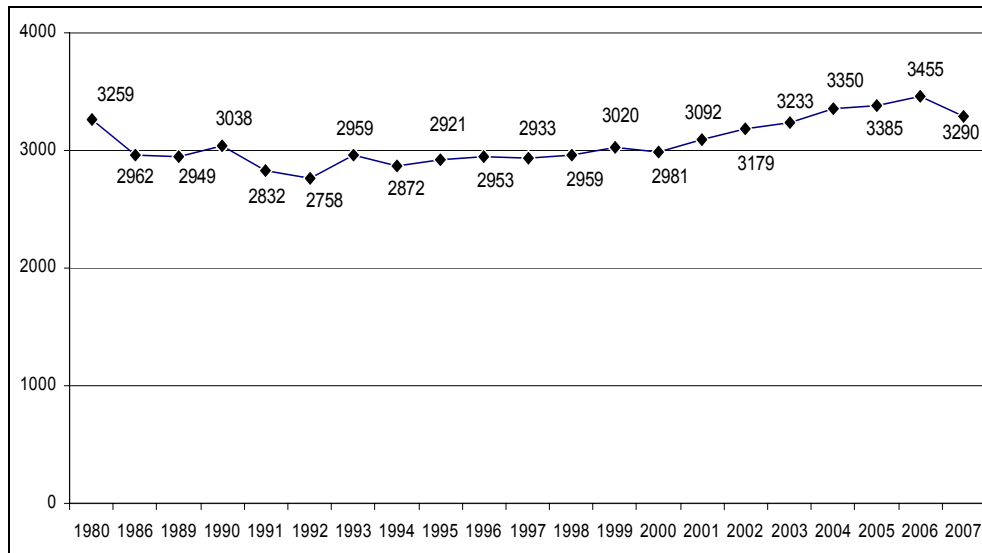
Source: Statistical Yearbook of Romania 2001–2008, NIS.

Chart 4

**Trend of food expenditure weight within the total expenditure for consumption,
related to GDP per capita increase**

Independent: GDPCAP

Dependent	Mth	Rsq	d.f.	F	Sigf	b0	b1
FOEXTOEXCO	LIN	.646	56	102.18	.000	47.2024	−.0013

Function of the correlation sign, there is a *direct correlation* – when the regression coefficient has a positive value, and a *negative correlation* – when the regression coefficient has a negative value. When there is no correlation between the considered variables, the regression coefficient takes the zero value.

The chart of the correlation between the size of the GDP per capita and the size of the weight of the food expenditure within the total expenditure for

consumption shows clearly a reversed correlation between the two variables. The higher is the GDP per capita, the lower is the weight of the food expenditure within the overall expenditure for consumption.

Chart 5

**Trend of the expenditure for fruits and vegetables, when the proportion
of the food expenditure within the total expenditure for consumption increases**

Independent: FOEXTOEXCO

Dependent	Mth	Rsq	d.f.	F	Sigf	b0	b1
FRUVEG	LIN	.157	56	10.41	.002	12.5974	.1230
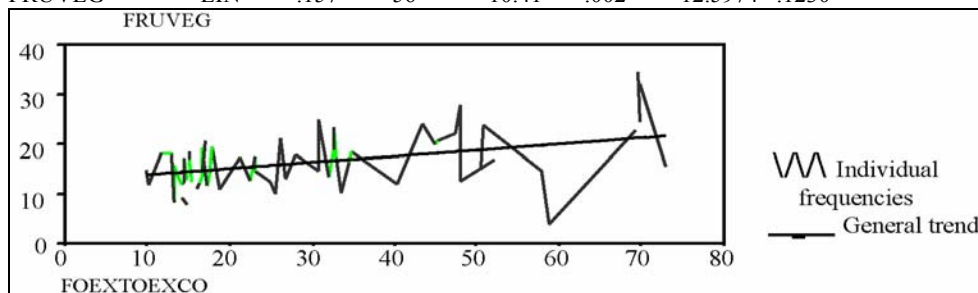
A direct correlation can be noticed for that group of countries between the proportion of the food expenditure within the total consumption expenditure and the expenditure for fruits and vegetables. The larger is the proportion of food expenditure within the overall expenditure for consumption, the higher is the expenditure for fruits and vegetables.

There is no significant correlation between the proportion of food expenditure within the overall expenditure for consumption and the expenditure for meat.

Chart 6

**Trend of the expenditure for meat, when the proportion of the food expenditure
within the total expenditure for consumption increases**

Independent: FOEXTOEXCO

Dependent	Mth	Rsq	d.f.	F	Sigf	b0	b1
MEAT	LIN	.022	56	1.24	.271	19.9611	−.0470
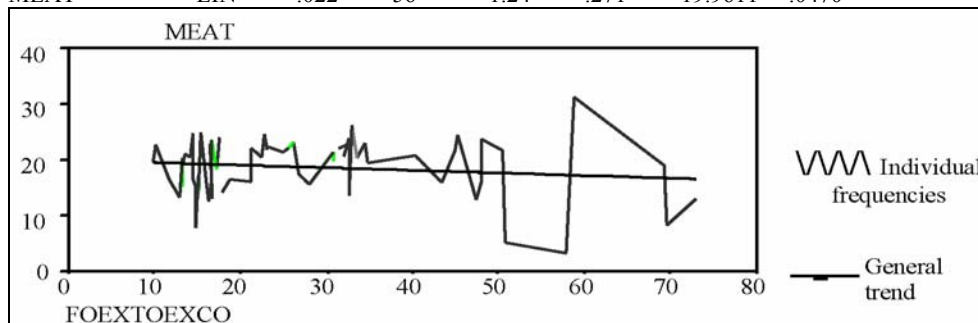
CONCLUSIONS

The investigation of specific consumption preferences by rather narrow segments of population makes it possible to describe in detail some consumption models, however, usually on relevant segments for various economic agents interested in the sales of goods and services.

However, comprehensive surveys focusing on the identification of consumption models are rather few. Several multi-thematic surveys on large number of subjects, such as the *public opinion barometers* and some *international surveys of the standard of living* or of *poverty* – usually financed by CEE, EU, WB, and UN – also include analyses of consumption structures, although they don't always meet the criteria of consumption models analysis.

The consumption models of the groups on low incomes are studied more frequently than those related to the elites, because of the attempts for scientific substantiation of the social policies. Among the studies of this type, most approach the income level making comparisons between the living conditions of the social groups living in *relative poverty* and those of the groups on median or high incomes. The purpose of such surveys usually is to identify possibilities to disrupt the major gaps existing between the *consumption models pertaining to the relative poverty* and those pertaining to other social categories. These attempts aim to describe the actual context of the relative poverty, of the attitudes, values and life micro-strategies adopted by the people living in relative poverty. Of a wider interest, however, is the presentation of *success stories* by which some people exceeded their condition of deprivation and integrated within a flow of events, which took them out of poverty.

The *study of consumption models* mobilised during the past two centuries very consistent economic resources both monetary and as human capital. This speaks for itself of the economic and social importance of the knowledge on the consumption models. The study of consumption models usually generates *laborious and theoretically-methodologically complex processes*, but in the present such investments become not just legitimate, but also necessary for any society that aspires to knowledge-based development.

The mathematical formalisation and the *modelling of population's consumption* it is possible to achieve an *optimal distribution of the economic resources* at the macro, mezzo or microeconomic level, with the purpose to accomplish community, national or international goals.

Knowledge of the *dominant consumption models* provides a *clear direction of development*, while stimulating the adaptation of the production structures to the *requirements of the environmental conditions* and to the *peculiarities of the social demand* for goods and services, avoiding the waste of economic resources.

The investigation of the economic relations between specific *parameters of the consumption models* and the *key indicators of development* (such as the GDP per capita) allows making realistic *economic and social forecasts*. This makes it possible to formulate *properly targeted socioeconomic policies* for the social environment and the adoption of *highly desirable socioeconomic goals* under conditions of *rather low incertitude.*

Annex

Excerpt from the worldwide dominant food module, 114 countries, between 1996 and 2000 (%)

Country	GDP per capita (1999) (PPP US $)*	Drinks and cigarettes	Bread and cereals	Dairy products	Fats and oils	Fish	Fruits and vegetables	Meat	Other foods	Food expenditure within total expenditure
1	2	3	4	5	6	7	8	9	10	11
Albania	3.198	5.125	20.635	17.365	9.544	0.307	22.637	18.994	5.392	69.264
Argentina	12.277	15.016	14.593	12.672	3.461	1.390	17.224	26.134	9.510	32.794
Armenia	2.215	5.204	18.856	6.229	9.580	1.570	34.360	8.179	16.022	69.657
Australia	24.574	25.244	13.499	9.672	1.655	3.110	18.343	16.913	11.564	15.071
Austria	25.089	23.724	13.449	11.290	3.799	1.642	14.105	20.980	11.012	13.534
Belarus	6.876	12.999	14.981	18.055	6.307	4.091	14.788	21.673	7.105	50.454
Belgium	25.443	21.059	10.783	10.959	3.867	6.063	12.382	24.723	10.165	14.357
Brasilia	7.037	12.315	16.798	14.036	3.622	2.309	14.833	24.540	11.546	22.715
Bulgaria	5.071	12.346	17.074	13.936	3.486	0.813	24.777	19.683	7.886	30.699
Canada	26.251	29.481	11.429	11.185	2.108	2.651	18.119	16.456	8.570	11.680
Chile	8.652	13.414	21.483	11.193	4.595	2.063	17.334	21.791	8.127	22.961
Czech Republic	13.018	28.092	10.250	11.628	4.034	1.755	12.377	21.272	10.592	24.996
Denmark	25.869	28.806	8.929	11.115	2.157	2.040	11.925	20.377	14.650	14.021
Egypt	3.420	9.249	24.649	10.104	8.361	4.558	12.529	23.625	6.925	48.078
Estonia	8.355	21.391	16.081	13.172	4.732	2.966	10.185	20.264	11.210	33.452
Finland	23.096	31.447	11.444	12.569	1.963	2.845	13.451	15.161	11.120	14.672
France	22.897	21.358	10.887	11.799	2.851	4.750	12.389	24.921	11.045	15.345
Georgia	2.431	4.391	27.098	14.451	6.991	1.521	21.991	12.860	10.698	47.385
Germany	23.742	28.246	14.872	7.109	2.272	1.871	8.279	20.299	17.052	13.093
Greece	15.414	24.556	7.252	13.577	5.375	4.534	17.269	16.033	11.405	21.168
Hong Kong	22.090	17.865	9.044	3.439	3.325	19.656	11.807	22.674	12.189	10.284
Hungary	11.430	23.581	10.907	12.759	4.735	0.771	12.674	20.482	14.091	22.545
Island	27.835	27.406	11.866	11.558	1.616	5.045	10.827	16.450	15.232	18.900
Indonesia	2.857	11.324	33.472	5.704	4.736	8.703	23.726	5.135	7.200	50.620
Iran	5.531	4.794	24.799	11.167	6.963	1.657	18.619	23.879	8.122	32.546
Ireland	25.918	37.26	9.511	10.093	2.739	1.972	13.423	16.377	8.558	16.586
Israel	18.440	18.589	14.446	12.972	1.862	2.511	19.366	14.106	16.147	17.697
Italy	22.172	16.184	11.317	13.901	3.856	5.401	19.142	23.584	6.614	16.593

Country										
Japan	24.898	23.148	22.279	4.793	0.661	17.024	12.787	7.818	11.490	14.878
Lithuania	6.656	19.879	12.918	14.103	4.829	3.468	11.982	20.671	12.151	40.416
Luxemburg	42.769	43.119	8.879	7.828	1.879	2.264	11.643	18.302	6.087	17.084
Macedonia	4.651	15.608	18.103	12.363	5.313	2.111	18.451	19.350	8.700	34.725
Mauritania	1.609	24.690	10.056	10.472	5.222	8.357	17.857	15.551	7.795	28.123
Mexico	8.297	18.880	21.669	10.878	2.304	3.121	13.004	17.328	12.816	26.627
R. of Moldavia	2.037	7.058	19.778	16.957	6.050	1.689	24.043	15.857	8.568	43.445
Mongolia	1.711	6.126	30.378	18.107	3.462	0.032	3.780	31.207	6.909	58.737
Nepal	1.237	9.790	57.613	5.359	4.330	0.628	14.575	3.293	4.412	57.884
The Netherlands	24.215	24.000	12.357	12.610	2.213	2.162	15.719	18.672	12.266	13.289
N. Zealand	19.104	32.928	12.616	9.195	2.284	1.740	16.851	13.873	10.513	15.187
Nigeria	853	2.731	34.080	5.613	5.146	15.222	15.437	12.883	8.888	72.974
Norway	28.433	29.994	7.700	12.789	1.525	4.851	11.065	16.345	15.732	15.983
Poland	8.450	26.530	10.328	8.352	3.443	1.546	14.491	21.245	14.065	30.650
Portugal	16.064	21.488	13.061	8.535	3.653	12.179	14.501	22.399	4.185	23.227
Qatar	18.789	7.319	10.635	10.356	2.721	5.613	20.991	23.154	19.211	26.217
Romania	6.041	13.471	14.624	12.817	5.713	0.795	20.606	24.344	7.630	45.264
Russia	7.473	15.459	14.260	13.265	4.262	4.130	16.237	22.921	9.465	34.346
Singapore	20.767	25.213	10.294	4.970	1.821	14.989	18.143	13.286	11.284	13.041
Slovakia	10.591	25.444	10.039	13.864	4.570	1.683	13.435	20.562	10.404	32.059
Slovenia	15.977	24.129	10.078	11.413	2.979	1.905	17.207	22.131	10.159	21.342
Spain	18.080	17.701	12.465	11.600	4.769	10.322	13.818	23.975	5.349	17.525
Sweden	22.636	27.468	11.424	11.711	2.288	4.368	14.445	15.179	13.118	13.255
Switzerland	27.171	26.183	10.734	15.157	1.970	1.813	17.019	16.522	10.602	14.572
Syria	4.454	10.319	8.499	12.253	13.020	0.988	27.845	16.008	11.068	47.924
Turkey	6.380	9.470	20.340	12.840	8.420	1.010	23.230	13.550	11.140	32.605
Ukraine	3.458	9.382	17.816	13.994	4.211	2.503	19.872	21.626	10.597	45.034
G. Britain	22.093	47.530	8.306	6.884	1.271	2.254	12.018	12.573	9.164	16.374
USA	31.872	28.710	11.387	8.587	1.771	1.194	14.662	19.583	14.106	9.726
Zimbabwe	2.876	13.908	23.704	8.988	6.682	2.614	10.016	22.044	12.043	25.575

REFERENCES

1. Allen R. G. D., Bowley A. L., *Family Expenditure: A Study of Its Variation*, London, King, 1935.

2. Barbu Gh., *Nivelul minim de trai – concept şi instrument operaţional în realitatea românească*, in "Revista Calitatea Vieţii", nr. 3–4, 1992.

3. Chombart de Lauwe, P. H., *Pentru o societate a aspiraţiilor*, Cluj, Editura Dacia, 1972.

4. Engel, E., *Price elasticity of demand*, http://www.answers.com/topic/engel-s-law, 2009.

5. Keynes, J. M., *The General Theory of Employment, Interest and Money*, London, Mcmillan, 1936, (reprinted 2007).

6. Lury, C., *Consumer Culture*, Cambridge, Polity, 1996.

7. Menger, C., *Principles of Economics*, 1871, http://cepa.newschool.edu/~het/profiles/ menger.htm, 2009.

8. Mihăilescu A., *Nivelurile minime de trai în condiţiile actuale în mediul urban*, in "Revista Calitatea Vieţii", nr. 1–2, 2001.

9. Mihăilescu, A., *Nivelurile minime de trai decent şi de subzistenţă în România în mediul rural*, in "Revista Calitatea Vieţii", nr. 1–4, 2002.

10. Mihăilescu A., *Minimul de trai şi costurile sociale: concepte operaţionale în analiza calităţii vieţii*, Iaşi, Editura A' 92, 2004.

11. Mincu, I., *Alimentaţia raţională a omului sănătos*, Bucureşti, Editura Medicală, 1975.

12. Puwak, H. (coord.), Stanciu, M., Popescu, E., Ghindă, I., Teodorescu, M., *Costul vieţii. Probleme teoretico-metodologice ale măsurării acestuia*, Bucureşti, Editura Centrul de Informare şi Documentare Economică, 1992.

13. Rowntree, S., *Poverty: A study of Town Life*, London, Macmillan, 1901.

14. Seale, J. jr., Regmi, A., Bernstein, J. A., *International Evidence on Food. Consumption Models*, in "USDA Technical Bulletin", 2003.

15. Stanciu, M., Modele de consum ale populaţiei României, în Mărginean, I., Bălaşa, A. (coord.), *Calitatea vieţii în România*, Bucureşti, Editura Expert, 2002.

16. Tache, I., *Economişti celebri*, Braşov, Editura Infomarket, 2004.

17. Voineagu, V. (coord.), *Starea socială şi economică a României, 2005–2006*, Bucureşti, INS, 2008.

18. *** *Anuarul Statistic al României* 2001…2008, Bucureşti, INS.

19. *** *Buletinul Statistic trimestrial de venituri şi cheltuieli* 2000–2009, Bucureşti, INS.

20. *** *International Food Consumption Models Query Results*, ERS UDSA DATA, 2003, http://www.ers.usda.gov/Data/InternationalFoodDemand/RERUN.ASP?RUNID=291670595&RSTYLE= 1&VIEW=FBS&FILETYPE=None&Country=All%20countries&Commodity=All%20commodities.

21. *** *Making New Technologies Work for Human Development*, Human Development Report, UNDP, 2001.

22. *** *Planul Naţional Anti-Sărăcie şi Promovare a Incluziunii Sociale*, Guvernul României, CASPIS, 2002

23. *** *Teoria cererii*, 2009, http://209.85.129.132/search?q=cache:5uCEC2gSZYsJ:portal. feaa.uaic.ro/undergraduate/an1/stec/microec/Documente/007_Capitolele4_5.doc+Ernest+Engel+teori a+cererii&cd=3&hl=ro&ct=clnk&gl=ro

*P*ornind de la câteva elemente de istorie a economiei consumului, articolul urmăreşte evoluţia acestora până la teoria modelelor de consum normative, prezentând mai detaliat câteva modele actuale de interes naţional (coşul minim de consum, elaborat după anul 1990, în mai multe variante, de Institutul de Cercetare a Calităţii Vieţii, Bucureşti), dar şi unele modele internaţionale. O viziune de ansamblu asupra dinamicii modelelor de consum poate fi obţinută numai prin construirea trendurilor modulare date de evoluţia în timp a principalilor indicatori sintetici aferenţi fiecărui modul integrat într-un anumit model de consum. Lucrarea relevă importanţa cunoaşterii modelelor de consum pentru prognoza economică şi pentru formularea politicilor socioeconomice.

Cuvinte-cheie: coş de consum, PIB pe cap de locuitor/cheltuieli pentru hrană, previziune, comportament economic.