

Aspects of the demand – offer report from the perspective of the food quality and security assurance

Danut Tiberius EPURE*, Anca Cristina STANCIU and Elena CONDREA

Faculty of Economics Sciences, "Ovidius" University of Constanta, 1 Aleea Universitatii St. 900055, Constanta, Romania

Abstract. Monitorization of the main aspects of the food and nutritional act from the perspective of food equilibrium and security represent the condition of the population health status and well fare.

The adequate structuration of the offer using agricultural-food policies together with the final consumer's information and education by nutritional policies remain the basing elements to create premises for a reconsideration of the balanced alimentation importance, both at the individual level and at the whole society level. The adjustment of the offer to the demand, bases in a great measure on the knowledge of suppliers concerning the population food-nutritional needs but also on the efficiency and competitiveness criteria. Theoretically, exists an equilibrium point between offer and demand, but practically it can't be touched. A food products free market means oscillation between penury and plenty.

The study aims to study the main aspects of the demand in relation with the offer on the food market from the food security point of view.

Keywords: demand, offer, quality, food, security.

1. Introduction

A particular feature of the food products is the concomitantly achievement on two markets: the economic and the metabolic ones. In this respect, a special attention must be given to the evolution of the demand-offer report and its optimization way, both from food necessary and from the real access to them point of view. From that perspective, the food products offer represents a fundamental dimension of the market which provide a various range of elements necessary to satisfy the demand; the final consumer have to select and structure the optimal effective food contribution. The main condition suppose that the complex nutritional value required by a consumer must be transposed correctly in purchasing programs, taking also into account economical criteria, like price and income.

In this respect, the pyramids and food recommendations allow the population to get the knowledge of the relative importance of the main food products in the population consumption. In the order that appears in the most of food pyramids, the main food products are the following [1]:

I. Cereal product and leguminous;

II. Vegetables, fruits and derivates;

III. Milk and milk products;

IV. Meat, fish and derivates

V. Eggs

In the daily nourishing structure, the participation in a certain measure of the food groups recommended by nutritionists and offered by producers depends on a variety of factors influencing the demand-offer report, both at the macro and the micro-economical level.

The adequate structuration of the offer using agricultural-food policies together with the final consumer's information and education by nutritional policies remain the basing elements to create premise for a reconsideration of the balanced alimentation importance, both at the individual level and at the whole society level [2].

2. The food product offer – material support for consumption

With the purpose to know and satisfy expressed or implicit requirements linked to the agricultural and food market, the food product offer aims permanently to be adapted to the demand and to

influence it in order to create new needs and to modify the existents ones, based on economic considerations.

Through both quantitative and qualitative dimensions, the food products offer is destined also to the metabolic market; from the quantitative point of view, merchandise must correspond like disponibility (logistic) and like accessibility (purchasing power) and from the qualitative one to assure the accomplishment of the consumer nutritional-metabolic requirements [3].

Consequently, the adjustment of the offer to the demand is founded in a great measure on the knowledge of suppliers concerning the population food-nutritional needs but also on the efficiency and competitiveness criteria.

The food products offer could be structured into groups constituted by nutritional necessary criteria. The knowledge of these a group is important in order to be well combined from the economic point of view, in conformity with nutritional and social-economic requirements [2].

3. Demand, food typologies and the purchase power

In quantitative expression, the demand of agricultural-food products, a complex economic category, similar with the demand of merchandise and services in general, could be presented like a function with multiple variables and various quantification and expression possibilities. The main influence factors could be considered: demographic factors, like number and structure of population (the potential request); real incomes of population (the solvent request); socio-professional factors (profession, social life environment); psychological factors (traditions, individual inclinations) seasonal factors (summer/winter periods); random factors [3].

Each of this factors acts with a certain intensity over the consumption behaviour at different categories of population, mainly depending on incomes. Thus, the population demand is structured in subsystems components, including: demographic factors (the potential demand of consumption); population incomes and expenditures; food consumption norms and the degree of their fulfilment.

The understanding and solving of the food security on global, and/or national level impose a net destruction between two basic notions: the normal demand (potential) of population, respectively the solvent demand that express the real possibilities of population to access the necessary food products.

Studies in the demo-food field are in general unilateral oriented, limited at the ratio population-food resources, without taking into account the population possibilities to purchase. Thus, in the developed countries there are important surpluses (ex: cereals) that couldn't be sold in less developed countries due to the insolvent demand. In addition, certain poor countries, like India, facing the starvation problem, make export of food products because of absence of solvation for the own population.

Concomitantly with the economic development and the human needs diversification, appears new satisfaction requirements of consumption, concretised in new consumption typologies.

Thus, consumptions could be classified as follows [4]:

- *Primary products* – agriculture food products with a consumption curve that exceeded all ready the maximum limit in the rich countries;
- *“secondary” products* – with a demand in development (the most part of industrial countries);
- *Services (tertiary products)*

This model depends on the availability of food resources, on the change of the traditional ways of nourishment in the direction of industrialized agriculture-food products but mainly on the population increase and the purchasing power.

The classical food models remain still predominant, influencing the consumption models intermediate by the following factors [5]:

- Modification of the report between physical and intellectual energy consumption;
- Extension of the urban type of consumption, based on industrialised products, adapted to the social environment;
- Modification of the biological structure of food consumption due to new reports between age groups (the ageing of population);
- Persistence of unemployment, extension of free time and of the entertainment mobility of population.

The macroeconomic policies determine in an indirectly manner the purchase capacity of individuals, through global policies like monetary, budget, protectionist or liberal ones, affecting the economical increase and the prices.

These food consumption typologies are orientative, for a suitable interpretation and in order to reflect the medium condition, it must be taken into account numerous collectivities and also to exist a certain stability of prices and market, with an offer sufficient to allow a free adjustment of the food products demand.

The trend of food consumption shows some features of the global food market [2, 4]:

- The underdeveloped countries (in the food insecure areas), characterized by an insufficient consumption and a lack in the food contribution of all the five main nutrients groups, facing the absolute or specific starvation.
- In the countries on the way of development, it can be observed a trend of increase of the consumption per capita (expressed in calories) and modification of the nutrients' structure in the direction of the diminution of those with low nutritive value.
- In the developed countries the trend is the light increase of the caloric consumption per capita and a continuous improvement of the structure in favour of high nutritive value's elements.

In the countries with a very high level of development is registered a trend of the stabilization of the caloric consumption, a limitation of the high nutritive value caloric consumption and the stabilization of the cereals' consumption.

The expenses occasioned by the food consumption include the energetically and nutritive cost until the final consumption stage. Even the agriculture is the branch with the most reduced artificial energy consumption, in the food chain (especially in the developed countries) the quantity of energy consumed to manufacture, prepare, pack, transport, distribution and stockage of food products is much more high than the agricultural product in fact [3].

Consequently, any major political decision must take into consideration the fact that the agriculture is an economical branch with specific particularities,

with a specific behaviour in the condition of the free market, as following [2]:

- An short term, demand is rigid, very few elastic reported to price; on long term, it become inelastic not even in report with price but also in report with income. The increase of incomes doesn't induce an increase of the agriculture products demand, due to the limit biological consumption potential of the population as biological entities and to the rigidity of changes in the consumption structure.
- Several researches estimated that for food products, the demand elasticity is und 0.5%, versus more that 1.5% for services. That means an increase of consumer incomes with 10% will induce about 5% for food products in spite of about 15% for services.
- The offer could oscillate in the direction of increase or reduction of natural factors, independent on men's willpower.
- The agriculture products offer follow the price oscillation, but offer a period up to one year, sometimes.
- Due to these objective characteristics of the food products market, the risk after a period of high and very high prices is that offer might register very high levels. Consequently, the result could be an additional oversupply, determining, in cascade, the price reduction and implicitly the producers incomes.
- Theoretically, exists a equilibrium point between offer and demand, but practically it can't be touched. A food products free market means oscillation between penury and plenty.
- The demand of food products is unstable, depending on the consumption structure. The instability of the demand could be determined both by subjective and objective reasons, could be registered for a product or for a group of products, could be temporary or permanent.
- The effects of the demand instability are to be found in structural changes, inducing very high fluctuations, both at the agriculture producers and at food industry level. Thus, the food products prices tend to be unstable and the offer fluctuations due to natural reasons face a demand relative inelastic in report with price.

The price on the competitive market of food product is the result of some laws specific for the economy of change, as follows:

- ★ The price on a competitive market of food products, in a certain moment, for same products, same quality, constitute the unique price (law of indifference);
- ★ The unique price is established spontaneous, without external interventions;
- ★ The market price is real and just, expressing the plenty or penury level and consequently regulating the production;
- ★ Price depends on the money value change;
- ★ The action of Veblen paradox (the Veblen effect) in conformity with whom the amount of purchase could increase in the condition of an important price growth not like expression of real needs but in order to demonstrate the welfare.

The nutritional norms for population are very important and are used to ground the nutritional and food policies in order to evaluate the volume and structure of the basic food necessary, respectively the agricultural and food resources necessary to be transformed into directly ingestible food.

It must be underlined that the offer of food doesn't depends only on reasons linked to agriculture and production, distribution, imports, economic requirements, fashion, tradition but it must be oriented very strongly depending on demand, population nutritional requirements, in order to assure the nutritional equilibrium.

The consumption norms are to be considered like orientative; it must not be ignored, but very carefully examined, depending on the real condition of the specific environment.

In conformity with the global experience, the optimization of the food contribution structure related to the physiological necessities of the mankind could not be achieved based only on a simply increasement of high nutritive value food products.

The frame-structure of the food security indicators upon the economic content and the relation between the causal and resultant factors, involve six groups [1, 2]:

- The population consumption demand indicators;
- The food and agriculture products offer (food disponibilities);

- The food consumption indicators;
- The food insecurity indicators;
- The adjustment of demo-food unbalanced indicators;
- The synthetic indicators of the food security.

In detail, the demand and offer indicators are as follows [2]:

Concerning the food consumption demand

- The potential demand indicators – expressed through the number of population on total, gender, age, habitat forms, socio-professional categories, etc.;
- The solvent demand indicators – expressed through net nominal incomes on family or individuals, on socio-demographic categories;
- The population final demand indicators – expressing the probable expenditure of population for agricultural and food products;
- The agricultural and food products price index;
- The food maintenance cost index – showing the medium modification of food products prices;
- The food products demand elasticity;
- The money purchase power index;
- The conventional food consumption norms indicators, expressed in calories necessary to maintain and assure the biological equilibrium of an individual per 24 h.

Concerning the food products offer

Note: *The potential food offer indicators could be expressed like arable field norm on person or like the number of persons on an arable field unit.*

Other food products measurements are:

- The animal and vegetal food production on habitant, expressed in physical, monetary or conventional (calories) units;
- The food industry production on habitant, in expressed in physical, monetary or conventional (calories) units;
- The agriculture and food production, expressed in physical, monetary or conventional (calories) units;
- The agriculture and food merchandise production, expressed in physical, monetary or conventional (calories) units;
- The agriculture and food merchandise volume, expressed in physical, monetary or conventional (calories) units;
- The agriculture and food products stocks indicators;

- The strategic reserves of agriculture and food production indicators;
- The export of “expressed in physical, monetary or conventional (calories) units” indicators;
- The food help indicators;
- The food security stock indicators;
- The alert stock indicators;
- The current stock indicators;
- The seasonal food products stock indicators;
- The food autonomy index-like ratio between internal resources and total consumption.

Thus, the food and nutritional policies are involved in the achievement of the food merchandise offer at micro and macro economical level, in the offer and demand correlation both in the economic and the metabolic area, having in view the technical progress impact and the consumer protection imperative.

Consequently, in order to ensure the food security, in the food economy a series of wide and comprehensive actions must be developed, as follows [5]:

- The food consumption evaluation research, related to the different stages of socio-economic development;
- The real food needs evaluation;
- The analysis of food demand reactions related to:
 - The population increasement;
 - The urbanization increasement;
 - The socio-professional changes;
 - The prices modifications etc..

The conclusions of this economical research, linked to nutritional studies, constitute the scientifically base necessary to formulate the food and nutritional policies objectives.

4. Conclusions

The food global issue is characterized by quantitative and qualitative noteworthy disparities, between countries and groups of countries, but even inside the same country; thus, the most developed states assure their food consumption and dispose also of excedents (own or earned) and the poor ones, are exposed to starvation, under the level of a normal food consumption.

Nowadays, the human necessities exceed the natural systems long life production. When the demand in increasement concerning a resource

exceeds the first time the long life production, the additional demand is satisfied by the resource base consumption, situation becoming more and more aggravating.

Similarly to the necessity of energy sources restructuration, it exists a strong necessity to restructure the global food economy, the population being in increasement.

The global equilibrium – the food one also-could become reality only if the less developed countries will substantial improve their production and consumption level, both in absolute and comparative terms face to the developed countries.

The human nourishing represents the area where the ratio economic development agricultural-food development is very evident. In this case, the economic development strategies are conditioned by the food and agricultural strategies.

Consequently, the main duty of the mankind consists in the very fast and radical improvement of the present status through an effort of the present status through an effort of the present generation and avoiding to be transferred to the next generations.

Monitorization of the main aspects of the food and nutritional act from the perspective of food equilibrium and security represent the condition of the population health status and welfare.

5. References

- * E-mail address: epure_dan@yahoo.com
- [1]. A. Burda, Mutations in the food products` quality in UE;optiond and perspectives for Romania (In Romanian), PhD Thesis, ASE București, (2007).
 - [2]. C. Ene The impact of the food security in the setting up of alimentary and nutritional policy (In Romanian), PhD Thesis, ASE București, (2005).
 - [3]. M. Diaconescu, Agricultural marketing (In Romanian), Editura Universitara, Bucuresti, (2005).
 - [4]. L’agriculture et la sécurité alimentaire (2009) <http://www.alimentationinfo.org/fra/ketenA3.htm>
 - [5]. Le rôle du consommateur dans la sécurité alimentaire (2008) <http://www.alimentationinfo.org/fra/veilighE.htm>