

The Factors Influencing Fruit Consumption in Romania

Subjects: Agricultural Economics & Policy

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Sustainable development, including the consumption of sustainable food, is an issue that is receiving increasing attention in research and policy construction. Thus, complex policies are being created to address these issues, targeting economic, social, and environmental factors.

Keywords: fruit consumption ; healthy eating ; sustainable consumption ; sustainable development

1. Sustainable Development and The Agricultural Sector

Increasing social needs determined by population growth and intensive economic activities have led to the need to achieve a better balance in terms of natural resource use and environmental protection, thus aiming for a long-term vision of sustainable development, considering three important pillars (economic, social, and environmental) ^[1].

The International Institute for Sustainable Development (IISD) presents the chronology of sustainable development ^[2]. In 1972, the United Nations (UN) emphasized the relationship between the environment and human development needs, and in 1980 an international strategy (World Conservation Strategy) mentioned the concept of sustainable development from an ecological point of view, which in 1987 was defined in the Brundtland Report as a type of development that responds to current needs without endangering the possibility of the next generations to respond to theirs. In 1992, the UN through the Earth Summit adopted Agenda 21, which aimed to create the UN Commission on Sustainable Development (UNCSD). In 2002, the concept of sustainable development benefited from its own World Summit, where improving the well-being of people's lives along with the conservation of the natural environment dominated. In 2012, the Rio+ 20 Summit mentioned the need to approach a green economy, so to ensure a sustainable development ^[2], and in 2015 ^[3] the 2030 Agenda was created, which presented 17 sustainable development goals (SDGs) that should be met by 2030 in order to achieve sustainability.

The 2030 Agenda ^[3] has an objective specifically linked to the agri-food sector, SDG 2. It focuses on "ending hunger, achieving food security and improving nutrition and promoting sustainable agriculture" by ensuring access to healthy food for the entire population and increasing the yields, while ensuring sustainable food production systems ^[4]. Agriculture is one of the strategic economic sectors considered in the achievement of the SDGs, and effective actions for enabling the sustainable development of the agricultural sector must be designed and followed in all three pillars (economic, social, and environmental) ^[5].

Because SDG 2 emphasizes the sustainable development of the agricultural system as a whole, the Food and Agriculture Organization (FAO) defines sustainable food systems (SFS) as those systems able to provide food security and nutritious food for the entire population, while not hindering the possibility of the future generations of doing the same ^[6].

The sustainable development of the agricultural sector has been defined by the FAO ^[7] as being "environmentally non-degrading by conserving the natural resources, economically viable and socially acceptable". The agricultural sector has always had the capacity to unite economic, social, and environmental aspects through specific actions, which aim at ensuring sufficient and nutritious food. Therefore, the sustainability of the agricultural system is necessary for its development in the current context ^[8] and the progress towards sustainability may start at the local level, leading to a global integration of the agricultural sector development ^[9].

2. Food Consumption and Sustainable Development

Food consumption is a natural process for every human being; without food people will not be able to survive ^[10]. The natural resources available at regional levels, the cultural background of each country along with the level of income determine a specific food pattern for each country ^[11]. The economic progress of the low-income countries generates profound changes in those patterns, as people tend to eat more meat and forget about the traditional food they ate, aiming towards a developed lifestyle, including a new food consumption pattern ^{[12][13][14]}. The new food patterns place more pressure on the use of natural resources and significantly contribute to climate change ^{[12][13][14]}.

Some authors ^{[15][16]} point out that a growing category of people have started taking into consideration their individual contribution to diminishing climate change and to sustainable development and adapting their lifestyles so as to diminish

their negative impact. Some examples of the individual contribution are, among others, the choice of sustainable fashion ^[17], the choice of less pollutant transportation methods ^[18], and even the choice of food ^{[19][20]}.

The FAO ^[21] describes sustainable diets as those which are targeting the long-term development of individuals, through:

- Low environmental impacts to protect the natural resources;
- Accessible and affordable food, which is safe and healthy for human consumption;
- Fair trade for ensuring adequate incomes for farmers and the right price for the final consumers.

Some authors ^{[22][23]} claim that the main factor in the choice and consumption of sustainable food products is the certification, especially organic farming, or fair trade. Others consider that the choice of a locally produced food product or traditional food ^{[24][25]}, or a seasonal product ^{[24][26]}, are characteristics of a sustainable choice, while others emphasize the perceived health considered when choosing a sustainable food product ^[27]. Therefore, while a commonly accepted definition of sustainable food is still missing ^[28], there are some common aspects for being sustainable.

In this scenario, increasing fruit consumption responds to multiple sustainability characteristics, for example a part of the research focuses on the health benefits of fruit micronutrients, their high content of water ^[29] and the important role of the antioxidants found in fruits ^[30], opposed to observations on the low intake of those micronutrients caused by the low consumption of fresh fruits, leading to weakened immune systems ^[31].

There are some regional and country variations regarding fruit and vegetable consumption based upon determinant factors, such as economic level differences and socio-cultural influences of the consumers ^[32]. Furthermore, the socioeconomic status of the consumer is seen as an influencing factor for fruit consumption ^[33].

Some studies ^{[34][35]} point out the importance of diversifying the range of fruits and vegetables in diets, especially in young people, but also the need for boosting the consumption through more attractive and easier to consume products that have developed in the recent years ^[36], such as:

- Fresh, ready to eat products that consist of different combinations of fruits and vegetables (premade salads), which are cut, washed and ready to be eaten immediately and anywhere.
- Freshly cut products that are represented as a healthy snack, such as cut fruits, or various fruits and vegetables cleaned and vacuum-packed that can be prepared faster.
- Fresh or pasteurized fruit and vegetable juices.
- Frozen fruits in exact proportions to be turned into milkshakes, ice creams or others.

Some authors ^[22] indicate that another factor that consumers consider when choosing fruits and vegetables is the quality certification that the products have. Food quality certifications being promoted in accordance with the sustainable goals, help to build consumer confidence in the fruits and vegetables that hold these certifications ^[37], for example, local, seasonal, and organic certified products ^[27]. Other authors ^[24] show that the main five characteristics of fruits and vegetables considered by consumers are origin, seasonality, freshness, local origin, and price.

3. Macroeconomic Factors Influencing Food Choice

As several studies show ^{[38][39][40][41]}, the possibility of changing the dietary pattern does not depend solely on the individual's will, but on the real options of them doing so. The higher income countries can afford to consider the sustainability-related criteria in choosing food products, unlike countries with lower incomes, where most of the income is spent on food ^[40]. The economic condition and food prices are important influencing factors in food choice ^[41]; therefore, changes in the inflation rate are expected to influence fruit consumption ^[42]. Furthermore, the habituality of eating certain foods, such as fruit, may be obtained through early education, therefore the educational policies should be adapted to include nutritional knowledge, as some authors point out ^[43]. Other authors ^[44] demonstrate that factors such as the price of a particular fruit compared to the price of substitute fruits, the consumption per capita of food, the real income of consumers, the general price index of the goods, the technology, and the USD real exchange rate against the currencies of each of the countries considered have significant influences on consumer choice. The general indicator for the level of income, considered in studies on influencing factors of food consumption is the GDP, the results pointing out again that countries with higher GDP have more meat-based diets ^[12], while the rapid change in dietary patterns puts increased pressure on agricultural supply, as well as on imports and exports of food products ^[12]. The correlation between GDP level, food supply and food exports is also studied and confirmed by other scholars ^[45]. Furthermore, the policies intended at reducing the greenhouse gas emissions from agriculture also have an influence on the supply of food, including fruit supply ^[46].

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