

Personal Consumption in the Conditions of Digitalization: An Intergenerational Aspect

Rakhmatullina D.K.*

Kazan (Volga region) Federal University, Kazan 420008, Russia

**Corresponding author. Email: na_nulya_@list.ru*

ABSTRACT

Industry 4.0 provides the economy with the production of goods in a wide range and high quantity, erasing the sense of rarity and the possibility of non-receipt of necessary goods and services for end users with appropriate financial opportunities. The analysis of the conditions for making the optimal consumer choice in the reality of the welfare economy in the period of digitalization is carried out. Significant influences of intergenerational interactions in the process of forming consumer demand and choice in the conditions of digitalization are revealed, associated with high-speed changes in production and consumption technologies and their special perception by people of different generations.

Keywords: *consumption, utility, digitalization, consumer choice, intergenerational aspect, life cycle*

1. INTRODUCTION

Consumer choice is one of the central processes of the economic system. The specifics of its optimization, implementation mechanisms, and their further development are determined by the system of economic relations, resources, environment, and infrastructure capabilities. Digitalization affects absolutely all aspects of social relations, from the way they are organized at different stages of the reproduction cycle, the nature of interactions between economic agents, to the results of their activities and the achievement of a certain level of the social welfare.

By the way to a welfare economy, there are significant changes in the system of needs, which focuses on the target to improve the quality of consumption, rather than the number of satisfied needs. The research work has shown that in the conditions of a welfare economy and digitalization, price is not the main factor determining the consumer's choice. First of all, the consumer correlates the characteristics and properties of goods with his ideal model (the system of consumer preferences), and if there would be overlap, proceeds to assess the possibility of purchasing it, taking into account the price and disposable income.[1] The welfare economy is abounded with a range of goods and services. This transforms the essential understanding of consumption, the main goal of which is now not over to get a rare good at a certain market price to satisfy the needs, but to choose the best alternative within the budget, which brings not only satisfaction, but also pleasure from the purchase process and the final extraction of useful properties of goods.

On the way to the digital economy, the terms of trading and information about the good or service are increasingly important for the consumer. Along with such terms of sale

as: assortment, convenience of goods placement and store layout, convenience of trade point location, convenience of work schedule, types of payment system, quality of service and speed, appearance and level of communication skills of sellers, design, corporate identity, window dressing, office, after-sales service, additional service, it is necessary to consider the possibility of virtual purchase on the Internet.

Digitalization is associated with the introduction of new technologies, including those used in the field of consumption, the success of which depends on the desire and abilities of people and is determined by their individual characteristics (internal and external factors). The characteristics of the consumer include:

- the level of income and the possibility of changing it (finance help from relatives, getting a loan, changing sources of stable income: wages, income from real estate, etc., the possibility of casual earnings);
- the standard of ideal consumption aimed for by the consumer – essentially similar to the system of needs and priorities expressed by the ideal representation of the expected useful properties of the good but in the era of digitalization requirements apply not only to the good, but also to possibilities of organization of the process of its purchase and, as a consequence, the speed of implementation of consumer demand and choice, taking into account energy and time.

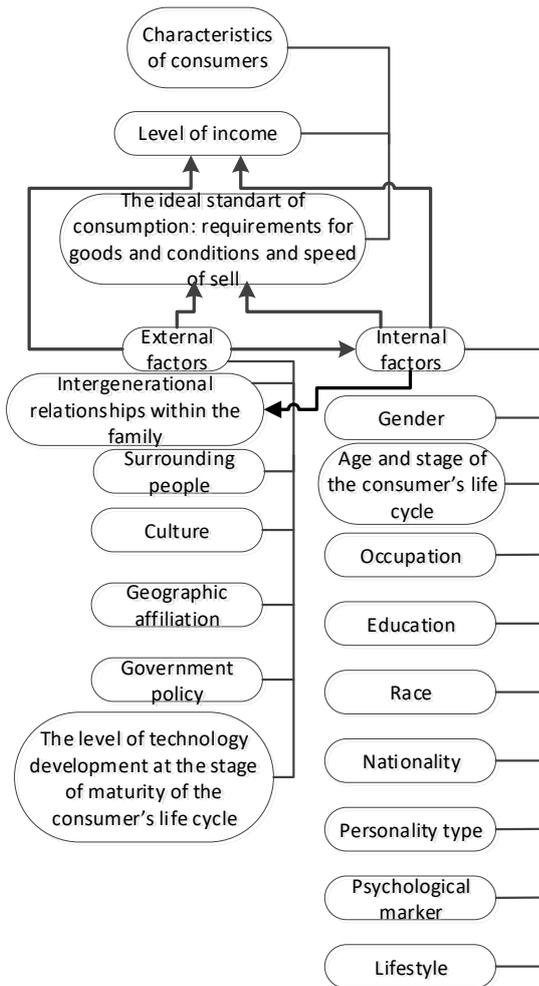


Figure 1 Factors affecting the characteristics of consumers

Figure 1 shows a diagram of the mutual influence of external and internal factors on the characteristics of the consumer. Macroeconomic indicators characterize household consumption, reflecting the specifics of state policy and the level of production development [2]. In addition, this scheme is indicative not only for analyzing the implementation of consumer spending, but for describing the features of the distribution of resources for consumption and savings. [3] But the main thing for that research is that the high-speed dynamics of progressive changes in the ways of organizing rational consumption determines the age of the individual and the intergenerational interactions within the family as key factors.

2. RESEARCH METHODS

Using the methods of analysis, scientific abstraction, induction and deduction, we consider the conditions for the formation of consumer demand and choice on the way

to the digital economy, and identify the main factors that determine them. Using the methods of sociological analysis, we study the features of relations between different generations within the same household, identify the directions of their impact on the formation of consumer behavior and optimization of final choice at different stages of the life cycle of consumption.

3. RESULTS

The latest high-speed technologies are increasingly used in product trading processes. First of all, this is manifested in the organization of online stores and other Internet platforms, the active use of social networks for marketing the products, when the user, without leaving home, can make a choice and purchase a good or service, receiving them after a certain period of time required for delivery. The delivery period does not allow the consumer to use the purchased products immediately, but this does not lead to a decrease in the overall level of satisfaction and utility.

The purchase process includes successive stages: awareness of the need, search for information, evaluation of options, purchase decision and reaction to the purchase [4, p. 75]. Online trading allows you to minimize the transaction costs of consumption of the implementation of the first four stages of the purchase process. Often pop-up Windows with the product offers even when the consumer is not interested in searching goods, but is working or resting, taking advantage of the opportunities of the Internet space, active advertising in social networks stimulate the desire to buy and possess goods. On the Internet, in a matter of seconds, you can find reviews of real customers for products you are interested in with a detailed description of the pros and cons, accompanied by real life photos and video reviews, and information on prices, and comparative characteristics of alternative products from different manufacturers, which reduces the likelihood of errors and losses. A special role in the search for information is played not only by the services of online shopping platforms and virtual stores themselves, but also by social networks. As Apatova N. V. notes: "Social networks are an essential element of virtual social capital, registration of Internet users in chats and forums, reading messages of other users, create a social system, all participants of which, both active and passive, create social capital by getting access to the necessary information, as well as studying the social norms adopted in a virtual partnership through acquaintance with active participants." [5, p.5].

The fifth stage of the purchase process-the reaction to the purchase-has its own characteristics when making online orders. There might be two possible options: expectations were met (which is more likely, since the information for online purchases is complete and reliable, verified and confirmed by all users of the network) or expectations were not met. If making a successful purchase on the Internet, the positive reaction to the purchase is doubled, since the moment of purchase does not coincide with the moments of possession and final use. Online shopping

brings satisfaction from the purchase itself in a virtual space (found what was looking for quickly and conveniently) and after a while from receiving the product in the material reality.

Compliance with the ideal imaginations of the good and the process and the speed of their purchase in terms of budget sufficiency at the appropriate prices of goods determines the choice of the individual and provides him with maximum satisfaction in the conditions of digitalization. The higher the consumer's involvement in digital relations, the shorter the time period they will take for consumption due to falling into the "funnel" of high-speed opportunities and processes. And its ultimate satisfaction will depend on the possible speed of the all stages of the purchase implementation and the final receipt of benefits. The more the consumer is involved in the digital world, the higher the value of time spent on consumption.

In the conditions of digitalization of the economy the process of purchase is transferred at the high-speed virtual space in which the representatives of generation Y are steadily guided (the children of generation X, today mature consumers) and the representatives of X are lost, the models of their consumption in details are described in the work of Shevchenko D. A. [6]. Altruistic attitudes of children to their parents in consumption in the conditions of the dynamically changing production and consumption technologies are manifested in assistance in the process of implementing consumption using innovative methods that give a higher level of marginal utility and overall final satisfaction.

4. DISCUSSION

Consumer choice is a complex multi-stage process of making a decision about the need and possibility of purchasing and using goods. According to Aflyatunov R. R. [7], all factors that determine a particular consumer choice are divided into two types: the characteristics of the product or service and the characteristics of the consumer.

The characteristics of a product or service in an innovative welfare economy include price, quality, prestige, terms of sale, availability and quality of information, innovation, availability of substitutes, and the need to purchase complementary goods.

Figure 2 shows a diagram of the relationship between product characteristics and consumer characteristics in the conditions of digitalization that arise in the process of the consumer choice forming and realization.

The consumer's propensity to use digital technologies depends on numerous factors that shape their personality and their external and internal capabilities. External factors include the following: availability or lack of access to the Internet, the availability of developed infrastructure, technical equipment necessary for digitalization of consumer choice, etc. Internal factors include those that directly characterize the consumer's personality: gender, age, nationality, personality type, psychological characteristics, occupation, education, and lifestyle, etc.

The research work of Sadykova Kh.N. showed "unanimity in opinions about mutual support of close relatives is recorded in all age groups in the range of 55.1–76.5 %. And if for young people this interaction is expressed as material (financial) assistance, then in older age groups-the need for moral and communicative influence" [8].

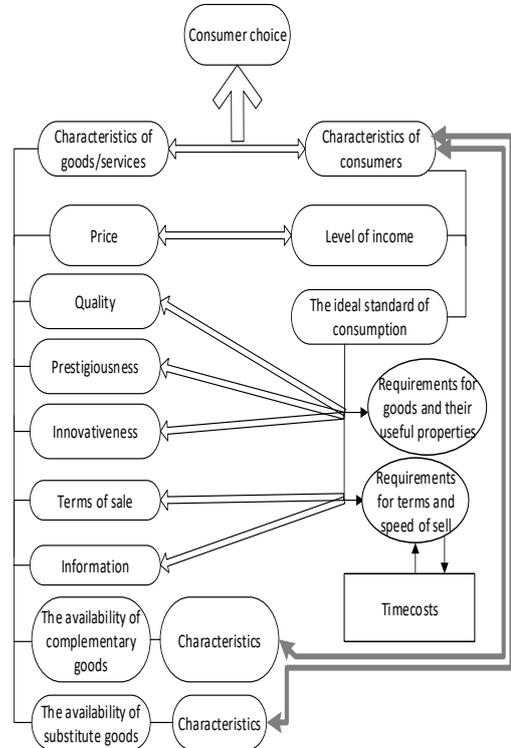


Figure 2 Consumer choice: comparison of consumer characteristics to product/service characteristics in the conditions of digitalization

The most analyzed manifestations of intergenerational relationships are altruistic interactions [9]: parents help children without demanding anything in return, grown-up children help their elderly parents. In consumption, it would seem, the only way this is manifested is the expansion of budget opportunities for consumers by the financial support. The target of this research is to identify other possible directions of intergenerational mutual influences on their style of consumption.

Figure 3 shows a diagram of the consumer's life cycle, taking into account possible interactions and relationships between generations within households.

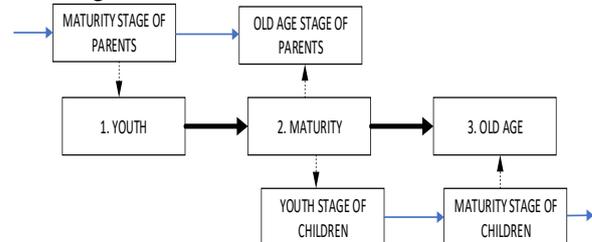


Figure 3 The stages of the consumer's life cycle and intergenerational relationships in households

The consumer's life can be divided into three stages according to the degree of their preferences formation regarding the ideal standard of consumption, income, and independence in making decisions about purchase and final consumption:

1) the youth -the consumer does not have a formed system of needs, a personal stable income of a sufficient level for full-fledged independent household production. It lasts from the moment of birth until entering an independent life and separation from parents. At this stage, the system of needs and their satisfaction depend on the decisions of Mature consumers (parents), who perceive the desires and needs of children as their own, and the well-being and the satisfaction of children as their own. Children receive the goods in the volume according to their parents' visions about their needs. The reasons for the dependence of children as consumers on their parents are the following features of this stage of the consumer's life:

- the consumer's income, as a rule, is absent or insufficient to support their life and meet their needs. Parents act as sponsors of children, distributing their income for the purchase of goods to satisfy their own needs and the needs of children. This shows an altruistic relationship;

- the preference system is not formed. In addition, understanding and ranking needs in their unlimited number requires the use of rational decision-making skills, experienced knowledge and knowledge of consumption technologies that are based on the corresponding level of the development of economic relations and production, that children and young people do not have. And in order to achieve the maximum level of utility from consumption, they transfer the right to solve the problem of their satisfaction of needs to Mature consumers - their parents.

If the child feels that the parents successfully cope with their responsibilities in the maintenance of his or her life and needs, the utility is going to the maximize value, typically by entering a phase of full maturity and independent consumption, the grown-up individual adopts the experience of the consumer behavior of the parents, the system of needs and preferences is built like the parents' one. If the child feels being unsatisfied in some needs, this reduces the level of the total utility that will force to reconsider the model of consumer behavior of the Mature mentors and on the way to a new stage of independent consumption, he will choose a radically different model, the system of needs will be formed in different way. However, in both cases, consumers will use technologies that differ from their parents' style on the new stage of full maturity of the consumer life.

At the time getting the stage of the separate independent consumption (20-25 years [10]), an individual enters the market with the appropriate infrastructure and capabilities, rules and technologies of consumer behavior, accepts them and optimizes the economic activities with their help.

2) maturity – the system of needs and preferences is finally formed, the consumer has learned all the tools and methods of the consumption style that exist according to the level of production development, and the ideal of standard of consumption has become completed.

3) old age is the third stage of the consumer's life. During this period, the consumer process is characterized by the formed system of preferences, he observes the certain model of consumer behavior, using technologies that are familiar to him but they are currently perceived by society as outdated and do not allow to realize the maximum possible potential level of overall satisfaction. But the consumer at this stage may not realize himself that he is not always using the most rational possible resource allocation option. For him, this solution is optimal, new features didn't fit into the used system. As a rule, his children who are at the stage of Mature consumption and are active users of qualitatively new consumption technologies realize the lost utility as a result of consumption.

5. CONCLUSION

In the conditions of digital transformation, improving the quality of consumption means satisfying needs with the help of goods, the choice of which will be error-free, accurate, fast and comfortable. The overflow of the product market in the welfare economy and a wide range of their related services has led to the fact that the consumer, making a choice, is not afraid of being left without the necessary kind of benefits in the needed quantity. At the same time, there are so many alternative options that it takes too much time to choose the ones that are truly necessary and meet the real needs of the consumer.

High rates of the reproduction cycle lead to the meaning of time as the main valuable resource. This is associated with an increase in the opportunity costs of the process of forming consumer demand and its implementation.

Over the past decades, we have been seeing the fast moving dynamic scientific and technological progress in industrial relations that used to lead to significant changes in the technologies every 20-25 years. This means that any person entering an independent stage of consumption is faced with ways of organizing it that are qualitatively different from those used by his parents and passively by himself in the previous stage of the consumer's life.

Consumer behavior technologies depend on the level of development of production technologies. They define the main characteristics of goods and services that consumers demand at every stage of their life. Studies have shown that the requirements for the characteristics of goods, the so-called standard of consumption, are formed by the consumer at the stage of maturity. Therefore, the level of development of industrial relations, corresponding to the time of entry into an individual's independent consumer life, determines his further model of the consumer behavior.

The modern process of consumption is not only the search for rational decisions about the distribution of available resources in order to obtain maximum satisfaction, but also the choice of the optimal way of its implementation, the most progressive of which today is characterized by high speed and, as a result, reduced opportunity costs.

Intergenerational relationships are significant in shaping the consumer behavior model and have an impact on all its components: from budget opportunities to the content of the system of needs and preferences and ways of their satisfaction.

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REFERENCES

- [1] D.K., Rakhmatullina, G.T., Guzelbaeva, D.S., Novikov. Household consumption process at the different stages of social development on the way to the digital economy, *Advances in Economics, Business and Management Research, Proceedings of the 2nd International Scientific and Practical Conference “Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth”*, 2020, Vol. 138, pp. 942-946. DOI: 10.2991/aebmr.k.200502.155
- [2] J. Varlamova; N. Larionova, *Macroeconomic and Demographic Determinants of Household Expenditures in OECD Countries*, *Procedia Economics and Finance*, 2015. DOI: 10.1016/S2212-5671(15)00686-3.
- [3] C.Carroll, J. Slacalek, K. Tokuoka, M. White, *The distribution of wealth and the marginal propensity to consume*, *Quantitative Economics*, 2017. DOI: 8.977-1020.10.3982/QE694.
- [4] F., Kotler. *Basics of marketing*. - M.: Williams, 2007, 656 p.
- [5] N. V., Apatova, *Social networks in the digital economy*, *Scientific notes of the Crimean Federal University named after V. I. Vernadsky, Economics and management*, 4 (70-4) (2018) 3-9.
- [6] D. A., Shevchenko. *Research of consumer behavior of large market segments in Russia: generational approach*, *Practical marketing*, 4 (194) (2013) 4-13.
- [7] R. R., Aflyatunov *Factor analysis of consumer behavior in an innovative economy*, 4 (2012) 11-13.
- [8] H. N. Sadykova, *Specifics of intergenerational interaction in modern Russia (regional aspect)*, *Modern problems of science and education: electron. scientific. Journal*, 1 (2015). <https://science-education.ru/ru/article/view?id=17927>
- [9] A.V. Zagrebina, A.V. Surkov. *Sociological aspects of altruism in intergenerational relations*, *Sociological research*, 11 (2020) 105-109.
- [10] A. A., Dolgova, E. S., Mitrofanova. *The Beginning of independent life by Russians: an inter-generational aspect*, *Demoscope Weekly: electron. scientific. journal*. 2015. no. 625-626. URL: <http://www.demoscope.ru/weekly/2015/0625/analit02.php>