

# Digital Technologies as a Factor for Growth of Continuous Well-Being of Sovereign Consumers in the Modern Society

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**Abstract.** In the article, the authors analyze the impact of digital technologies on the reaction of sovereign customers to the goods and services offered at the market. The economy digitalization enables to take into account as much as possible all factors that allow the consumer to make effective decisions aimed at full meeting individuals' needs. The formation of the production pattern to a great extent depends on what needs are, and what level of their meeting is. Consuming some of the benefits and refusing to consume the others the consumer actively influences the production activities of economic agents in the economy. The sovereign consumers' needs, accounted and unaccounted, are the guideline for the development of the production activities of economic agents, structure and quantity of output of necessary goods and services. The sovereign consumers capable of making effective consumer decisions create a new need and an internal encouraging incentive in the economy. The modern economy is fundamentally oriented to the ultimate taking into account the social, cognitive and emotional factors and their influence on making effective consumer decisions by individuals. This influence affects the activities of the economic agents, production of goods and services, the market variables (prices, benefit, and allocation of resources). The sovereign consumers basing on digital technologies strongly influence the manufacturers' choice. In terms of digital transformation, the process of meeting the increasing needs becomes more dynamic and is reflected in the quality of continuous well-being of the society.

## 1. Introduction

Digital technologies strengthen the interaction of real economic agents: sovereign consumers and sovereign manufacturers. Modern digitalized market is an area where actual demand is manifested, and the quantity and pattern of this actual demand are more or less predetermined. Under the influence of digital technologies, the sovereign consumers' behavior becomes rational, controlled and purposeful. They acquire a new technological basis for rapid making effective consumer decisions. The influence of these decisions on continuous well-being can be goal-oriented and effective. Linking the decisions of sovereign consumers and sovereign manufacturers is an important aspect of the problem, revealing the relationship between production and consumption. The correlation is imposed by the logic of the digital revolution. At the same time, the leadership is transferred from traditional

business to innovative, research structures and sovereign consumers. The principles of rationalism are introduced at the market basing on digital technologies. In the new situation, the consumption pattern mainly determines the production pattern. The sovereign consumers, dominating at the market, take into account the situations at the market and predetermine them affecting the prices, demand pattern and size.

## **2. Review of literature**

The digital revolution and digital technologies have a direct impact on the sovereign consumers and continuous well-being of all segments of the population [1, 2]. Nowadays the continuous well-being is a tendency of innovative development of the economy [3]. We consider the continuous well-being as complete meeting of needs and a set of features, contiguity of the latest techniques, methods, instruments that determine the unity of social and innovative trends in the economy. The new structures and relationships are formed within this development:

- 1) growth of innovations and technologies of social well-being;
- 2) growth of humanitarian services sector;
- 3) introduction of flexible forms of work organization in high-tech areas of production;
- 4) formation of new social movements;
- 5) increasing cultural fragmentation, pluralism, including political one;
- 6) formation of global identities, cultural values, etc.;
- 7) a tendency to continuous transformation, so that the ideas, culture and all industries are in the state of permanent convergence.

The term "continuous well-being" in a broad sense includes the doctrines of stability and assistance. It reflects continuous adjustment of well-being in the economy and society. The intensive growth of continuous well-being multiplies the emotional, moral, cultural and social processes in the society. They are associated with the assimilation of innovations, exclusive fashion, forms of communication, education, creativity and aesthetics. Diffusion of continuous well-being occurs as a result of active susceptibility of the sovereign consumers. As a rule, continuous well-being implies a social order. This is a product of the multilateral negotiation processes (discussion, bargaining, agreements, compromising and reaching a deal) between individuals and groups. The social order is a complex of fundamental communication. The changes are observed in the social structure of the society, in professional and general educational levels, in minds of individuals. Under the influence of the digital revolution, the social processes are improved in terms of quality. This occurs in several key dominant and main areas:

- 1) increasing quality of health, education, income, leisure, free time;
- 2) improvement of psychological, emotional, moral, ethical characteristics of the sovereign consumers (lifestyle, forms of activity, opinions, interests, values, behavior, etc.);
- 3) growth of positive medical characteristics in compliance with the geographical features of regions and territories.

Social achievements are a factor of continuous well-being and in the broadest sense can be considered as a specific feature of the modern behavioral economics. Here the culture of continuous well-being of the society is formed, which is the situation when individual tastes reflect social characteristics (age, gender, employment, education, etc.) and social values, lifestyles, etc. In the modern behavioral economics qualitative consumption:

- 1) is continuously encouraged to support innovative production and provide incentives to creative work;
- 2) has become an important feature of the status differentiation of all social groups;
- 3) is a main source of pleasure and satisfaction.

In this context, the role of science in the social life of consumers significantly increases. The forms and methods by which it interprets nature, human being and society are updated. The relationship of science with various forms of social life is changing dramatically. The sovereign consumers have

faced a number of new problems due to these changes in social life. They have required reinterpretation of the traditional problems about:

- 1) the meaning of life of consumers;
- 2) the connection of the individual fate of consumers with social history;
- 3) the role and place of consumers in the society;
- 4) the possibility itself, the scope and criteria of well-being.

Sovereign consumers are the most socially active group of population of the modern society. They are mainly interested in the realization of high quality of life and good health.

The continuous well-being of the society became a subject of scientific research not so long ago. The global best practice shows that even if there are differences in initial state of health, the higher level of social interaction and activity is associated with lower mortality rate. At the beginning of the 21st century, the demographic changes can be observed. They are related to the increased lifespan all over the world. Under these conditions, the problems of continuous well-being become the most important. The process of consumers' continuous well-being depends on the development of technological determinants in general [4]. In Russia, there is the same trend that has emerged in the developed countries of the world in recent decades. The manifestation of this trend in Russia is associated with a special intensity of the process of digitalization of the economy and the society. The result of which is the spending spree on digital goods and services. I.A. Strelets notes that "during consumption the consumer is no longer focused on individual benefits, but on the groups of benefits that have certain common properties and characteristics (computer models, coffee varieties, etc.), in order to simplify the selection process in terms of increasing diversity of opportunities" [5, p. 67].

The diffusion of digital technologies causes the increase in search and acquisition of information. The introduction of digital technologies in all spheres of the economy and the society is accelerated. Sovereign consumers are involved into the Internet sphere. There is a large proportion of consumers in Russia, who are involved in the Internet economy. The continuous well-being and high intellectual activity of consumers lead to more intensive exploration of the Internet in Russia. At present, there is a clear predominance of young and middle-aged consumers in the Internet sphere. The employment of human resources is constantly increasing in this area. However, if we increase the level of information literacy and working capacity, the Internet sphere will expand as well. At the same time, it is necessary to create conditions for sovereign consumers to work, relax and develop dynamically in the Internet.

A new structure of needs is being formed in current situation. The significant increase in the proportion of the consumers that use digital technologies results in the change in the system of values and preferences in the society. Digital technologies have led to certain improvements in the consumers' living conditions. These improvements relate mainly to the most necessary aspects of the consumers' life (food, clothes, durable goods, services, healthcare, etc.). At the same time, they affect many other very important elements that have a direct impact on the population's standard of living (housing, transport service, social insurance and medical care, environment, etc.). Digital technologies contribute to the development of new business models by returning assets to the market that are out of circulation to earn the second, third and even fourth income [6]. The transformation of the retail trade takes place with noticeable technological changes. Digital transformation in trade is called "Trade 4.0" in a similar way with "Industry 4.0" where cybernetic systems are the determining feature [7]. These systems help collect and analyze data, optimize the existing processes and create offers with greater added value for consumers. As a result, there occurs the balance between the met and historically necessary needs of the society. Continuous well-being of the society is an integral assessment of all aspects of the consumer's activity, which shows how comfortable the consumer's certain period of life has been.

The market economic system concentrates the best digital technologies of mobile platforms, which allow improving the business efficiency due to consumers' loyalty. To attract pilot projects and effectively manage the flows of knowledge, ideas and innovative decisions between local participants, the global innovative network has been created, which includes the partners in local markets. At the same time, the new digital technologies are focused on ensuring the well-being and the greatest

meeting of the needs of the society [8]. Digital transformation and associated improvement in life have contributed to a significant increase in the consumer sentiment, gradual refusal of traditional value orientations to saving and asceticism, as well as vivid disruption of value orientations to a group, team, to the development of individualization and personal fulfillment of consumers.

The ambition of individualization causes the consumers' greater attention to private life in all its manifestations. In recent decades, the priority of private life over the social life is one of the main trends of transformation of consciousness of all consumers.

The most essential aspect of the problem of consumer sovereignty is the objective conditions that determine the general limits of freedom of an individual choice and affect the nature of the choice itself.

The development of the system of social services, such as education, healthcare, vocational training and retraining of people, becomes dominant. At the same time, the annual expenditure of the state for social programs is not enough not only to provide the system of social services that meets the needs of the era of information and technological revolution, but also to solve such urgent problems as the problem of poverty in the society.

In the economic theory, the ideas of state social control and regulated development are closely connected with the names of the scientists in economics of reformist institutional and sociological approach, such as J. Hobson, T. Veblen, J. Commons, W. Mitchell, J. M. Clark and others. They have made a significant contribution to the analysis of such problems as:

- 1) social inefficiency and social costs of the economic growth in market conditions;
- 2) contradictions of private and public criteria of economic efficiency;
- 3) the problem of social services and social insurance;
- 4) the problem of social and material inequality.

The fundamental ideas of these brilliant economists have influenced political decisions concerning practical problems, making modern economic policy, development of social legislation (social insurance, laws on minimum wages, etc.), as well as contributed to the formation of the theoretical concept of the "welfare state".

The economic crises accompanied by social negative effects have pushed the development of social legislation, and made the governments of the developed countries realize that social insurance cannot be effective if it is only a separate sphere of the social policy that is not related to the economic policy as a whole, maintaining the economic resilience as a global tendency [9]. The idea of the state responsibility to maintain the social sustainability in the society was recognized in the second half of the 20th century.

The accelerated actualization of social and economic problems in connection with the launching digital revolution has resulted in a new approach to the problems of social and economic policy of the state. In modern conditions, it has the following main aspects related to the social welfare:

- 1) "welfare programs", in the narrow sense, are a system of social security and insurance;
- 2) a system of social services and public housing;
- 3) measures of countercyclical policy and state regulation of economic growth;
- 4) environmental protection measures.

Public provision of benefits and social security is greatly important for maintaining continuous well-being of the society. This implies the improvement of social legislation, especially in the sphere of healthcare, education, income support, housing and personal social security. The quality of life is also influenced by the state obligation to ensure continuous well-being. At the same time, the state should provide minimum support for well-being to guarantee everyone the opportunity to participate properly in all spheres of social life.

The social security system includes five main types of programs in accordance with which the cash payments and medical services are provided:

- 1) old-age pensions, incapacity pensions and survivor's pensions;
- 2) sickness and maternity payments;
- 3) payments related to the damages due to workplace injuries;

- 4) job seeking allowance;
- 5) family allowance.

Digital development and widespread public pressure in favor of social legislation and reforms at the state level have the following consequences: the “welfare programs” are developed within large firms and companies. For large firms it is a means of social protection and an attempt to support the further development of social legislation. The corporate welfare programs (pension funds, group insurance, etc.) play a significant role as:

- 1) an additional means of attracting skilled personnel;
- 2) a means to bind them to the firm: a method to set up “human relations” and atmosphere of partnership;
- 3) a means of social propaganda and advertising the “social face” of the company.

### **3. Materials and methods**

The works of Russian and foreign scientists on the theory of consumer behavior have been the theoretical basis of the research. The study of economic literature shows that the democratization of the economic system, the nomination of a developed person as its goal, the freedom of consumers' choice and a greater respect to human rights are a global trend. At the same time, it is one of the qualitative principles of manifestation of the behavioral economics. The development of emancipated sovereign consumers' competence is one of the accelerators for conversion of the traditional economics into behavioral one, whereas all the factors that influence the rational consumer decision making are fully taken into account.

R. Thaler's works devoted to the study of needs and consumer behavior in terms of development of the behavioral economics have great importance for further scientific research [10]. He has created the methodological instruments that will significantly help in the development of coordinated and comprehensive recommendations on the targeted formation of the sovereign consumers' competence and strengthening their active and rational position in the market of goods and services.

A set of methods to study the phenomena and processes of consumer behavior is applied in the article.

### **4. Research results**

In modern conditions, it is necessary to develop and expand the competence of sovereign consumers in order to realize the hidden due to lack of training and incompetence (ignorance) but inherent utility of a certain product (or service) by systematic improvement of the sovereign consumers' skills for effective use of the purchased product for complete assimilation of its utility. This process, which extends the competence of sovereign consumers, should develop and increase their satisfaction from the purchased goods and services; and at the same time, it should have a positive impact on all relationships between sovereign consumers and sovereign manufacturers. The purpose of this activity is quite clear: to get additional advantages over the manufacturers by using new information. They can result in decrease in expenses of households and individuals, assimilation of new goods and the effective use of already assimilated goods, etc. To assess the degree of novelty and the level of utility of new goods is possible only in the process of their use.

An important aspect of this process is the analysis of information from all sources. However, since information has special nature (it has its peculiarities: multidimensionality, complexity, scientific and technical novelty), therefore the special information technologies are required to understand it and provide analytical data to people.

The competence of the sovereign consumer is considered as an amount of knowledge, as well as his personal and social readiness, related to the use of the product during the lifetime of the product, to maximize its utility. In this case, it is possible to distinguish two major levels of sovereign consumers' competence. Special and social competences of the sovereign consumer are distinguished within the first level. The special competence covers the cognitive ability and readiness of the sovereign

consumer to get maximum benefit from the use of a product. Several areas of the sovereign consumer's competence are subject to differentiation at the second level. They are as follows:

- 1) competence that the sovereign consumer needs after purchase of a product, but before its use, for example, when installing and assembling the equipment (preoperational competence);
- 2) competence related to the actual use of the equipment (operational competence);
- 3) competences required when the product is temporarily not used, for instance, during its storage, maintenance, cleaning, etc. (related competences);
- 4) finally, after operation the sovereign consumer should also have very specific competences related to returning the used product or its disposal as waste in compliance with environmental requirements (post-operational competences).

It means that increasing saturation of existing needs and accelerated emergence of new ones have expectedly resulted in the expansion of the emancipated sovereign consumers' competences. The whole system of social needs is transformed under the influence of digital development. In this case, the elevation of needs of the society becomes apparent. The strategic parameters of the social consumption system are substantially changed. However, continuous well-being of population may not occur if the opinion about the invariance of principles of consumption and consumers continues to dominate. The key strategic issues of consumption are realized by teaching sovereign consumers to behave effectively to ensure user's leadership. These issues relate to the best meeting of the long-term needs of sovereign consumers. The increased competences of sovereign consumers can significantly improve quality of their life. Such approach is rather useful in relation to each consumer and other groups of consumers. Transformation of the social needs system is an accelerator of innovative development of production. The use of digital technologies in production is aimed at improving the efficiency and quality of social processes and meeting the needs of the society. Social sphere requires continuous introduction of digital technologies that improve the organization of household, free time and leisure. This process is also very important in conversing social needs and transforming personal consumption. The model range of goods and services is expanded and deepened under the influence of digital transformation. The market becomes consumer-oriented and consumer's sovereignty is significantly strengthened. Optimization of consumers' interaction with manufacturers affected by digital technologies creates the conditions for shifting the consumer's interests from long-term period to short-term. Wide access to new goods and services expands the sovereign consumers' opportunities. At the same time, utility maximization is realized through high level of meeting needs and the continuous well-being is provided.

Global information infrastructure allows sovereign consumers to have access to necessary information. Complete information helps the consumers specify a set of purchased benefits. In modern conditions, consumers focus on general properties and characteristics of goods and services (models of computers, mobile phones, tablets, etc.). There is a growth of consumption of both items that are physically necessary for consumers' existence and the items that are more "informational". At the same time, the rate of change in basic economic benefits is much lower than the rate of change in "informational" ones. It is well-known that many foods may not change for centuries, but the latest information goods are constantly being modified. These modifications become less distinguishable from the consumer's point of view.

Digital transformation of production has resulted in recognition of the need for priority of quality to quantity of goods and services. The researchers emphasize the necessity of their individualization and updating due to modification of characteristics and original combination and simplification of use. In this case, either the technology and the basic model remain unchanged, or there is a convergence of consumer functions previously performed by several products in one product. Here is the predominance of already existing variations over the creation of completely new ones. Due to digital transformation of production, the number of classes of produced goods, as well as models and modifications in each class, increases significantly. At present, digital technologies contribute to individualization of demand. They allow to personalize goods and services, as well as offer consumers to participate in production and sale of necessary goods and services. The manufacturer always tries to

take into account the tastes and preferences of sovereign consumers in a more developed behavioral economy.

The above-mentioned processes of elevating needs of the society optimally comply with modern economic concepts. In fact, it can be considered as the law of elevation of marginal utility, generalized in case there are many different goods and their qualitative improvement. Namely, the utility of goods meeting various needs increases during the transition from early benefit to a new one. As production increases, these benefits will comply more and more with the laws of consumption of traditional commodities.

Taking into account the fact that manufacturers use parameter values in certain intervals (i.e. "from" and "to"), the real choice is much wider. This testifies that due to various technical and design solutions, the manufacturer offers a much more structured model range that allows choosing a product meeting personalized consumer preferences. It is possible to expand consumer practices due to digital technologies. Sovereign consumers having full information about the market and conditions tend to choose famous brands that have knowledge, associations and positive ideas about goods and services.

Indeed, the elevation of needs is constantly observed. This serves as a stimulus, an impulse for range expansion, quality improvement and increase in quantity of produced economic benefits and services. First of all, there is a process that can be called as rationalization of consumer behavior. The consumer choice theory assumes that consumers tend to maximize the utility while the balance of consumers is achieved. Nevertheless, wide access to information today gives the consumers more opportunities in this regard, and utility maximization occurs at a higher level of its satisfaction. Today's market takes into account new trends and becomes more focused on sovereign consumers.

Intensively filling free time of sovereign consumers, the Internet also attracts those sectors of the economy that had almost no areas of common interests before, including:

- 1) sport – a new form of mass entertainment;
- 2) industry of appliance electronics;
- 3) software industry similar to cultural industries;
- 4) fashion – a peculiar hybrid of different industries: information, culture and consumer.

The formation and development of emancipated sovereign consumers capable of emergent making of the most complicated decisions is a condition for innovative economic development. Comprehensive modernization assumes active search for ways and forms of innovative development of production. The final goal is meeting needs of the society. In this regard, the role and importance of sovereign consumers that form the demand for new goods and services are increasing. Namely elevated needs determine the quantitative and qualitative parameters of the innovative production development. The quality of goods and services is a result of high requirements of sovereign consumers. At the same time, consumer exactingness does not stop here. He vigilantly monitors the performance characteristics and design of goods. The manufacturers' efforts to meet these requests as much as possible serve as a powerful stimulus for innovative economic development. There are three types of modern sovereign consumers:

1) a mass trained sovereign consumer (qualified to know high quality goods and services he needs and differentiating from cheap ones). Minimizing consumer infantilism requires a well-functioning system of training and development of sovereign consumers;

2) a mass cultural sovereign consumer capable of choosing the necessary goods and services from a bulk of various standard goods and services. If a consumer differentiates new goods and services in this bulk, distinguishes really necessary and of high quality, then the dynamic domestic market is formed with the demand within behavioral economics. This influences the business results and all sectors of national economy, highlights consumer interests, their rational behavior. The main characteristics of economic relations within digital society are the growing role of sovereign consumers;

3) finally, universal sovereign consumers are formed, who understand the great value of unique goods and services. The materials of art and culture become goods filling the leisure time of consumers. Awakening of sovereign consumers' interest to art, cultural values, ideas, brands,

trademarks is a part of the process of information society formation. The works of art in their new marketable style become a part of everyday life. High interest is already a professional attitude of the consumer capable of choosing and making an effective consumer decision.

The innovative economic development requires socially developed sovereign consumers. This is a process of vigorous activity of socially developed consumers, who have huge amount of needs. The combination of intellectually aestheticized and high preferences characterizes the creatively developed sovereign consumers. They can emergently make the most complicated consumer decisions (consumer innovations). In new conditions, the formation of ideas about innovations is associated with the concept of consumer innovation; understanding of it changes the idea of innovation organization and novelty, which is a key concept of the society. According to the concept of consumer innovation, the novelty is a set of properties that characterize the radical changes of an object based on the consumer's perception of these changes, giving him the right to consider them exclusive.

Consumer innovations are the result of sovereign consumers' creativity materialized into new or upgraded products and services that are demanded by the market and directly meet a particular need. Consumer innovations are most likely to be in demand in the market and will be more effective since the consumers themselves have raised this idea basing on their own needs and preferences. Since new products and services are developed for consumers and evaluated by consumers, the innovations created basing on consumer suggestions are more viable and cost-effective. Moreover, the positive effect from its implementation is brighter if consumers are more involved in the innovation formation. Consumer preferences can be fully revealed and used if consumers are involved in the formation of consumer innovation. When forming consumer innovations, sovereign consumers raise the necessary intellectual ideas, i.e. use intellectual resources, knowledge and experience of consumers. The sphere of creative activity expands in innovation-oriented behavioral economy. At the same time, it is important to involve consumers in innovations development with the following processing of consumer proposals and selection of the most cost-effective ones. The advanced companies using new methods more often gather and collect the ideas of their own consumers, choose the best innovative solutions and materialize them in real products and services.

Thus, creativity becomes the main feature of both manufacturers and consumers, based on which innovations emerge. The company employees and the consumers themselves can be the idea providers. Under new conditions, manufacturers adapt the production to consumers' requirements; this process is called "mass customization". Sovereign consumers prefer unique goods and services. This is a distinctive trait of character, a manifestation of creativity of a universal consumer. Creativity is a source of enormous energy for the development of innovative technologies. Sovereign consumers always tend to be the first buyers of unique goods and services. They create demand for innovations. The formation of sovereign consumers is important both in macroeconomic and microeconomic aspects.

The macroeconomic aspect is connected with the objective course of the processes of social orientation of market relations, strengthening of sovereign consumers' positions, and progress of behavioral economy towards innovative development. The microeconomic aspect is interesting from a business point of view, since it is connected with possession of competitive advantages in the market of innovative goods and services.

Within the development of behavioral economics, the exchange of tangible and intangible benefits between individuals is actually the introduction of these individuals to knowledge and skills that are materialized and objectified in these benefits, and which each of them has had so far alone. Because of ideal character, knowledge and skills do not disappear during consuming benefits; they are transferred to consumers and are copied into new benefits created by these consumers. The circle of people, to whom more and more new knowledge and skills are available, is expanding during exchange.

Macro- and microeconomic importance of innovative demand is great. Demand, as it is known, is the initial and final point of consumer behavior. The supply and demand ratio is the basis of all mechanisms of market economy self-regulation, the level of innovative processes and its potential depend on it. Effective demand for innovative goods and services is the indicator of social well-being

in the society. Effective demand for innovative goods and services causes entrepreneurs' winning in their competition and is closely connected with decrease in entrepreneurial risk and uncertainty.

It should be noted that all consumers' attempts to look into the future and tomorrow can be successful only if we know how the consumers' desires and tastes change, and what patterns these changes follow, in other words, if we know the process of forming consumer behavior.

Innovative development changes the principles of sovereign consumers' behavior. At the same time, new requirements to consumer demand mechanisms are formed. Traditional economic questions "What", "How", and "Whom for" to produce become the questions of "What do consumers use?", "How and what for are goods and services consumed?". The fundamentals of consumer behavior change in new conditions.

The development of most firms is largely determined by how effectively they organize the informational support for the sold goods and services. The competitiveness of certain firms largely depends on the level of development of national information infrastructure. The system of informational support is necessary when forming consumer innovations. The use of the system of consumer innovations implies the creation of an integrated informational support system, which will allow to provide consumers with information about goods and services, and, what is more important, to receive continuous feedback from consumers about various improvements.

In general, the development of consumers and needs is determined by the processes within digital development of the economy and society. Here the economic situation is manifested as follows:

1) in significant increase in people's demand for high quality, eco-friendly and vitamin-rich foods. At the same time, high availability of food becomes a positive parameter for assessing its quality. Production is more oriented to consumers' needs, expanding cultural diversity, individual choice and self-expression;

2) among non-food goods the priority is given to a wide range of products, household digital technologies, clothes made from natural fabrics. Digital technologies widely enter the sphere of personal consumption. They make a genuine technological revolution in this area;

3) significantly increases the demand for housing quality, which is digitalized and becomes a priority benefit;

4) the role of various services (informational, touristic, etc.), which meet the people's needs, is dramatically increased in the pattern of personal consumption;

5) requirements to people's living quality and conditions are raised;

6) the reaction to the environment and the need for safe and clean environment are increased.

These features as a whole form a new model, a modified pattern of personal consumption. It causes the need for additional expenses on purchasing high quality goods and services. The priority is to improve living conditions, household and environmental comfort. The technological structure of consumers' personal property radically changes with the electronization of everyday life. Elevation of needs of the society is constantly observed. It serves as an incentive and impetus for expanding the range and improving the quality of produced economic benefits. Sovereign consumers join the fashion where the key feature is fast and continuous change of styles. Fashion reflects two aspects of innovative economy:

1) permanent change of goods and services supported by digital technologies;

2) style and choice of clothes, furniture and other items enabling consumers to influence their surrounding social environment and express their own self and social identity. Different groups of people create their own style via creative comparison. Consumers express their creativity and tolerance through fashion. They tend to maximize utilities, at the same time, the consumer balance is achieved for them.

The research works of D. McFadden, A. Sen and J. Heckman have fundamental significance in analysis of sovereign consumer's behavior and individual choice and welfare. Their works reflect a new concept of consumer behavior and welfare of the society. D. McFadden has created the fundamentals of the theory of choice of the place of activity and residence by individuals. Consumers are heterogeneous in their "unobservable characteristics" (in "standard set of tastes", in individual

mechanisms of perception formation, etc.). A. Sen believes that individual well-being should be characterized basing mainly on universal ethical principles and “rational public judgments”. In this case, value judgments should be used as additional information. J. Heckman has developed the methodology for assessing the buyer's free individual choice of the purchased benefit [11, p. 401-417, 270-271, 326 - 377]. He has been proving that diversity and heterogeneity significantly affect consumers' actions and their complex alternative choice. A multi-dimensional system of preferences and choice of individuals and the society is formed during the development of socially-oriented economy.

K. Lancaster is the author of a new method of analysis of consumer behavior and consumer demand formation. This method is based on division of goods into homogeneous groups. He calls it analysis of characteristics. K. Lancaster's indifference curves represent sets of characteristics of goods. The main idea of K. Lancaster's conclusion is that there is a maximum price for a particular consumer in the current system of preferences. He is ready to pay this price for a particular product. In case of rising prices, the consumer starts to prefer a combination of other products that have the same characteristics as this product [12]. Those consumers that can buy the product will surely increase their welfare since they will pay less. However, is continuous well-being of the population provided? According to R.S. Pindyck and D.L. Rubinfeld, the method of counting changes in consumers' surpluses allows measuring and assessing the benefit and losses from changes in market price and sales volume [13]. Consumer surplus is a total benefit of sovereign consumers. It is equal to the difference between the price they are ready to pay and the price they pay.

Digital technologies cause more and more informational needs in society in current conditions. They are connected with consumers' new multi-alternative opportunities. This causes the formation of a unique consumer model, more inherent to digital society. These processes are reflected in the concepts of socioeconomics – the study of human reproduction processes as the main resource of the socio-economic system [14].

Wide access to information using digital technologies gives people more opportunities. Utility maximization occurs at a higher level of meeting needs. The market organized and operating on the basis of digital platforms shows that the economic system responds with immediate increase in production of the relevant product to any demand both spontaneous and stimulated. In general, the market of digital goods and services is subject to this law [15]. The demand for digital goods and services begins to dominate in the economy. To meet this demand is possible as a result of effective activity and the development of new areas of digital economy. Hence, digital development is a need of the current market, a condition for growth and rational functioning of all its elements and segments. The development of “smart” homes, production of new digital goods and services make consumers' lives much easier. For example, high-tech wallpaper will turn the walls of the house into a digital device. A new type of printed electronics allows turning the walls of the house into digital technologies (tiny speakers, microphones, switches and sensors). Home digital technologies will be able to interact with a computer only with the help of voice commands. Such innovations are especially useful for all consumers. A person is talking to a wall that responds to him through speakers. A person does not need to take a phone to make a call. He can address the “smart” wall. Such technologies can provide information that contributes to the knowledge expansion. At the same time, a person increases his creativity and continuously enriches his inner culture. 3D printed food will become an important element of household. The so-called “smoothfood” will be oriented to all people. The latest 3D-technology supposes cutting, mixing and grating to puree state of fresh, frozen, raw food, and its subsequent formation into food products. Printer settings allow creating dishes according to individual needs. Electronic underwear and toilets will transmit health state data to a doctor via the home computer. The technological base for household digitalization is formed in new conditions. People can already pay for utility facilities and other types of services via TV in many countries. This has become available through receivers (supporting HTTP Live Streaming – HLS protocol), which have the “personal account” option. Intellectualization of household technologies minimizes consumers' costs. For instance, the smart laundry system automatically determines the optimal water

level and laundry time depending on the amount of clothes and temperature of the incoming water to minimize the consumption of water and electricity in household.

The flow of diverse information has become an indispensable element of consumers' everyday life due to digital technologies. The practice of introducing digital technologies, the Internet (infrastructure for transmitting information over global distances) testifies to the digitalization of the society. National, regional and sectoral digital systems are integrated with the Internet. The idea of transmitting and accessing information on the Internet is based on local decisions. They accept self-regulated decentralized subsystems capable of serving the widest range of needs in a dialogue mode. The Internet is a pervasive, universal and dynamic system. First, the information on it is universal. Second, users are families, individuals and the elderly people rather than focused specialists or organizations. Synthesis of cybernetics and telecommunication (via phone, TV, satellite) predetermines conditions for fundamental enrichment of team, group and individual digital activity. It expands the sphere of social communication. There is formed a system that will be widely used by all social groups. It is hard to imagine people without the Internet tomorrow. Digital technologies determine the prospects for the development of network social life and the parameters of continuous well-being in Russia [16]. Socio-economic transformations in Russia have caused the openness, information abundance and sustainable development of the society [17]. Digital era is characterized by rapid development of information infrastructure for technological, economic and social processes in the society. Russian society has got an opportunity to choose information. Nowadays, over half of Russian population has access to the Internet [18]. More comfortable digital conditions have been created for individuals. Mobile phones are an indispensable attribute of individuals. Digital TV programs have provided them with a variety of digital services (news and announcements, a schedule of all types of transport, medical consultations, commercial advertising and other pragmatic information). Information integration into a single digital directory will provide quick and easy access to information about goods and services. The Internet not only has many market functions, but also integrates these functions with others:

- 1) identifying, ordering and purchasing goods and services;
- 2) conducting all financial calculations and payments;
- 3) support of business and personal contacts;
- 4) work and study with the implementation of the idea of continuous learning;
- 5) art and hobby;
- 6) virtual traveling in cyberspace;
- 7) entertainment.

Only few consumers, who use mobile phones with the Internet access at least for a week, later return to regular phones – only for phone calls and SMS. People change the consumption pattern for communication services and create a new comfort zone. It is not easy for them to leave it. It is rather difficult to imagine that a mobile user will give up such important opportunities as keeping handy almost all knowledge available to humanity – from the Internet encyclopedia to art collections of the best museums in the world, as well as give up other facilities, such as a quick way to map the route from point "A" to point "B" in an unfamiliar area, pay for utility services without leaving home, watch a match of a favorite team or a popular TV series if he is not at home. It is only a small part of how the Internet can make life of any person brighter, more exciting and comfortable.

The qualitative changes are more tangible due to the fact that the Internet, mobile phones and digital technologies give individuals new opportunities. We can equally speak of fundamental changes in the algorithms for using various sources of new information and of noticeable increase in the time spent on mass communication. The expenses partially include the fixed costs (expenses to buy a computer and software, training, etc.) and variable costs (the Internet connection, payment for telephone services, etc.). It is possible to single out positive external effects that are expressed in providing equal access to information, acquiring the necessary skills of using digital technologies. This effect has been significant in another respect. The Internet has made the consumers' orientation in various situations of social life easier. Currently, the consumers live in difficult conditions. Every day

they have to make more decisions over the time. This “necessity” has a compulsory nature (under the influence of rhythmicization of work and other spheres of life). This makes it impossible to reschedule making a decision to another time (or postpone it altogether). This fact emphasizes the “necessity” of free access to information that can help to make the decision. The Internet, TV, mobile phones, tablets and other digital technologies regulate consumers’ life. Today these technologies have such profound content that they dominantly influence the consumers’ decisions. At the same time, they can change traits of character, since the ability to adapt to something new quickly and without any moral damage becomes an essential factor of network well-being in terms of rapidly changing reality. Theoretically, all consumers should possess physical and intellectual abilities, independence and devotion to their ideas. However, it is obvious that such consumers are quite difficult to manage. Modern information technologies create common technological and economic space. The current changes are based on the process of digitalization – transfer of all forms of information into digital format. Common digital space stimulates the convergence of technologies and economic sectors. Digital revolution causes increase in innovations. The time between the discovery and its diffusion is significantly reduced. At the same time, many economic sectors are in the process of continuous metamorphoses. As a result, a stable and expansive integrated market is created where all sectors of the economy and all consumer groups are indispensably connected. Accelerated diffusion of innovations activates the intellectualization of the economy and updates the technological basis of the continuous well-being of population. Unique competences of consumers and manufacturers are formed in this new situation.

Currently, those features of consumers, continuity, worldview and age culture are important that are compatible with new digital technologies and in some cases promoting them.

Implementing the principles of universal digital service is based on national information infrastructure. A whole range of digital services is provided with the help of modern digital technologies, the Internet, satellite communication, mobile phones and other technologies for creating, storing, transmitting and receiving various complete information. Another important advantage of the Internet is two-way sound and image communication between houses. The Internet to a great extent enriches the informational basis for many daily routines in various spheres of everyday life and recreation, as well as enriches family and interpersonal relations, typical of modern consumers.

Speaking about consumers’ rational expectations related to the Internet, one can emphasize their wide scope. They have reflected desires to:

- 1) learn the history of the area, region, country, world, etc.;
- 2) exchange opinions about the read books;
- 3) get advice from more experienced people;
- 4) learn housekeeping, gardening and useful crafts, art, and flower care;
- 5) see on the screen the meetings of the municipality and local parliament;
- 6) learn foreign languages;
- 7) get professional medical consultations from doctors and advice on treating patients and preventing diseases;
- 8) acquire skills to use personal computers, mobile phones and tablets;
- 9) participate in tournaments and competitions (for example, play various games) using the Internet;
- 10) watch TV programs to overcome the generation gap and facilitate mutual understanding between generations;
- 11) watch documentaries about history, traditional and modern art and culture of Russia and other countries, etc.

The major part of consumers’ requests can be met. Global best practice shows that consumers consistently consider the Internet as a means of dialogue and two-way communication. At the same time, the Internet plays an independent role and a role of an intermediary between consumers and local authorities. Consumers believe that the Internet is an important source of local information, regional historical information, medical knowledge and practical information on health issues. The share of consumers that use the Internet is very significant. In a new situation the Internet:

- 1) promotes dissemination of cultural information and the improvement of cultural and educational background and outlook;
- 2) is a means of development of interests (hobbies) and getting practical skills;
- 3) activates participation in the activities of municipality;
- 4) is doubtless helpful for teaching and educating children.

Finally, the Internet develops contacts between people, especially in close neighboring environment (meeting new people, the emergence of topics and subjects for conversations, improving mutual care, exchanging greetings when meeting outside, etc.).

The functions of the Internet are rather wide:

- 1) upon requests of individual and group users it can give news from various areas of social and economic life (global problems, domestic policy, business, education, healthcare, ecology, etc.);
- 2) reference and encyclopedic data; governmental and parliamentary information;
- 3) legal information;
- 4) social and economic statistics;
- 5) bibliographic, historical and archival information, environmental data, weather forecasts and reports;
- 6) tourist information, etc.

Easy access to information makes the Internet a very effective and progressive system of mass public service.

Digital technologies introduced in consumers' life from the very beginning are fully supported by the government, companies, public organizations and institutions. The search for effective social and technological solutions has an economic basis. Increased competition, the need to stimulate individual and cumulative demand for digital technologies force all entrepreneurs to act efficiently. Their strategies are based on the attempts to remove the digital processes from subordination of the main imperatives of social and economic development. However, it cannot be noted, that digital technologies can radically change consumers' basic social and cultural attitudes, but still positive improvements are evident.

Sovereign consumers representing wealthy social groups are more educated and rich. Consumers have become choosing, rational, self-determining actors capable of realizing goals and expressing their own economic interests. This is a policy caused by permanent characteristic of consumers. Their social and cultural privileges directly influence the content and structure of information needs, motivation to use new technologies. Consumers are more democratic in their composition and even more meet the purposes of information development of the society. The diffusion of cultural patterns is globally accelerated under the influence of digital technologies. They multiply the cultural capital and have a positive impact on consumers in general. The consumers' cultural capital is wealth in the form of considerable experience, knowledge, ideas and broad mind. The degree of acculturation, socialization and cognitive development among sovereign consumers is higher than that of traditional consumer groups. In addition, they tend to rational behavior. Culture of people is subcultural features surrounding sovereign consumers as a social category. It includes:

- 1) peculiar fashion and preferences, especially in music and clothes;
- 2) relationships focused on friendship, peer groups and family;
- 3) relative priority of work rather than leisure;
- 4) tolerance to the values of the young and regularity of lifestyle;
- 5) quality of choice in the style of leisure and behavior.

Discrepancies between traditional and sovereign consumers are significant in current conditions. However, the culture of sovereign consumers is far from being homogeneous. There are many competitive cultural styles among consumers. In modern society, the formation of special cultures among sovereign consumers is associated with the dominant role of digital technologies and continuous well-being of the society. Accordingly, unique markets, mainly focused on sovereign consumers, are created due to them. Unless wages are a means of simple manpower replacement, there will be restrictions related to slow growth of material and information needs. Meeting them is a

necessary precondition for consumers' full participation in social life. Here, an important factor is the increase in output of goods and services based on digital revolution, application of innovative technologies and effective use of rare social resources.

## 5. Consideration and conclusion

Consumers more and more need information about current processes in the economy under the influence of continuous dynamic changes caused by modern digital revolution. The mechanism for making effective decisions by sovereign consumers is completely modified in terms of continuous changes. At the same time, the consumers' influence on current changes in the economy is increased. The elements of market organization (conscious behavior, social, emotional, cognitive factors, informal rules, etc.) are greatly important, as well as elements of structure. The objectives of consumers may not comply with the objectives of manufacturers. However, they exist and influence the actions of economic agents when making effective business decisions. There has always been a certain mutual understanding, interaction and interdependence between sovereign consumers and sovereign manufacturers. They are increased under influence of new conditions and factors. Commitment to joint activity in the market is based on the purposes of meeting needs. The decisions made by consumers and manufacturers are implemented through a system of markets. The system of market relations is a complicated system of relations whereby variety of the selected decisions are taken into account, summarized and mutually balanced. Namely these systems assist the society to make decision on what to produce, how to organize efficient production, and for whom to produce. These decisions are implemented with the system of market relations.

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