

HOUSEHOLD MANAGEMENT AS MAIN LINK OF NANO-TECHNOLOGIES GLOBAL MARKETS FORMING

Household Management is a special form of management that has always existed, but scientific approaches to the interpretation emerging only now. Management involves household formation system of family centers, when positive-minded system of family relationships formed personality, able to create new knowledge especially in nano-industries. Research on household tasks and management are such solution, which will lead to the definition of household participation in the system of economic relations, nano, micro, meso and macro levels. What is needed, in turn, to understand the nature of the economic system as a whole multidimensional phenomenon of networking in the internal and external environment.

Practical tasks relating to the interpretation of the essence of management of households arise when using process-management techniques and functional approaches inherent in modern methods of management at the enterprise level. Methods inherent in the management of households were used in the management of various enterprises. This interplay is relevant for all circumstances of national, sectoral economics and business economics.

Ukrainian and foreign authors devoted his labor savings and safety issues households. Thus, L.M. Twardowski, U.V. Pivnyak, M.W. Chabanenko [145]. Recognize that economic and financial security of the state is inextricably linked to financial relations that occur between all spheres and levels of the financial system and economic relations cycle begins with households in the management interact with the environment, namely the state and various economic organizations, thus creating specific channels through which financial resources are moving.

G.M. Makedony [149] shows that the household is the primary link in the financial system. It is the ultimate consumer of goods and services of social production, supplier of various types of capital. In his opinion, market reforms dictated the need for a separate household sector, recognition of their status as full subjects of economic ties and independent research facilities.

L.V. Klyuchnik [147] shows that the growth of living standards, depending on the effectiveness of social and economic policy in general and each region in particular, will lead to further growth in household savings.

J.J. Stankiewicz [154] notes that today the members of the household are active in various spheres of the country and perform a variety of functions, among which occupies a special place of consumption of tangible and intangible benefits. The author notes that household consumption is spending the proceeds of its members to purchase necessary goods and services. In addition, the article specifies that at the microeconomic level process provides for final consumption by households and at the macro level – the formation of aggregate demand.

V. Kovch [148] specifies that the finance owned business entities involved in creating a profitable part of household budgets, manifested in the form of wages (including real wages), various social benefits, and income from securities and so on. The author notes that the state also contributes its share to the formation of household budgets. Often this is due to tax policy and transfer payments.

E.V. Bolotina [145] revealed features of the institutional environment of households in market infrastructure and change their functions in the transitional economy of Ukraine. Characterized are the conditions of use of the institutional approach focuses primarily on the availability of demand for institutional changes in the economy caused by insufficient effective use of resources.

G.M. Klimko & V.P. Nesterenko [150] show that household as one of the subjects of microeconomics play a crucial role in economic relations. In Ukraine the development of market relations the household was in the new conditions of operation. Economic Issues households dedicated research leading Ukrainian and foreign scientists, but the question of management of households and their influence on the formation of global markets nano-technology alone are not considered.

The purpose of this study is to determine the conditions of household management to create an efficient economy of households as management systems are able to increase the effectiveness of the control system. However, it should be understood that households actively managed system should influence the creation of an effective innovation system and the creation of high and nano-technology.

Economies of households are household economies of individual families. The family is the focus of public relations and relations between individuals. Nano-economics as economics Rights provides that the family consists of persons who are individuals and each one contributes to the development of family relations.

Note that the household economy presupposes the productive forces and production relations specific mechanism of regulation and control. The productive forces are separate individuals – family members that include a sale of its efforts in manufacturing, while older family members sell their work to obtain compensation in the form of wages. The productive forces to create income households and the possibility of savings that can be used to produce material goods to meet the needs of individual family members. Total needs of families create and form the aggregate demand in the national economy.

The function of the formation of aggregate demand and provide family members determined to accumulation of free funds (household income) is investing in the national economy. Available funds of households under favorable conditions can be reserve investments in the national economy. So, to make money work they need to invest, and invest perhaps directly into buying shares in companies and corporations, or the formation of deposits in banks (exactly when banks decide how to dispose of the funds – or invest in securities or invest in real estate or provide of these funds in loans to the business sector), or create your own business with an initial capital formed their own means. Stimulating investment of households is one of the most important tasks of the government of any country. The case described by M. Porter as Japanese residents purchased bonds of internal loans in the postwar period through the establishment of mail and thus invested in rebuilding the Japanese economy [152]. This must be the conscience caused great confidence in public institutions and confidence about the direction of investment in those areas most in need of investment. Industrial relations within households are the enforcement of economic reproduction process. When there are scientific and technical relations,

industrial and institutional and socioeconomic they play it within the household. There are two segments relations: first, the relationship aimed at reproduction households when to use the principles and methods of scientific system to form a functioning housekeeping methods and features of productive economic processes for arranging housing, savings wealth and effective spending of households and methods of social adaptation of the household in changing environments. And secondly relationships affecting national economic system and its relationship: for example, a scientist who lives in the family affects the creation of fundamental and applied knowledge in a particular industry and households must create the conditions so that a positive working scientist the benefit national innovation system. Also talking about engineers and technicians within households should restore power and get motivated to create products innovation and innovation processes and manufacturing high-quality end products for consumption within households. And the rest, socio-economic relations are relations that are formed within households and create the aggregate demand for products and services sold within the national economic system.

In addition to the productive forces and relations of production economic system is governed by a specific mechanism of control. Thus, management of the household provides functional and process approach, because the quality necessary to plan, organize, motivate, supervise and coordinate the lives of all household members and create separate processes of learning, life, work and leisure.

Management of households based on a functional approach involves the allocation of management functions. The primary function is the planning function when family members are planning a budget, expenses and its development. Of course, you need to plan a budget that consists of two parts: income and expenditure. Paying formed part of income, wages, social benefits and payments on securities. Man starts and counts on some income if the employer produced work effectively, members of the family can afford to live without the involvement of borrowed funds. If the wages are low, the family and the household are living in debt. The expenditure of the foundation is also budgeting when you need to pay utility bills, spend money on the household physiological needs food, hygiene products, clothing, shoes and more. And preferably profitable part of the household budget must be greater than the expenditure.

Note that affects planning and self-household members when money is spent, and human resources for internal training, education, obtain practical skills and competencies. Especially if a family has children, these costs are not major. For the formation of identity and socialization of adult household, members must carefully plan all expenditures that are related. Yes, you must select a pre-school for the active development of the child, and then choose a school that would meet the needs of the child in the next period to choose the direction of the acquisition of competencies, which would generate skills in a particular area of knowledge (technical, medical, humanitarian, artistic, etc.). In this aspect corresponds baby's economy, to be integrated into the management of the economy and households.

Note that planning within the household can be strategic and operational. And

long-term (strategic) planning implies two directions: material and immaterial. When it comes to financial strategic planning, it is, above all, the quality of life: planning a change of residence, home improvement necessary gadgets, spending on organic food and environmental clothing and shoes. Intangible provides strategic planning, such planning education of children in kindergartens, in schools, in higher education and graduate and doctoral studies. Operational planning exercise hostess households when planning costs for a day or a week is what to buy for nutrition and possibly treatment as well as access to cultural institutions (theaters, cinemas, museums and exhibitions).

The function of the organization is also leading households, because the organization provides living space and affects communication between members. Living space is subordinate to the home if the family and its organization depend on the apartment in which he lives. If the family is cramped in the old housing is necessary to change and expand, organizing space so that was convenient to all members of the household, must live with older adults; less generation of smaller generations and have separate areas for joint activities, interests and enforcement of foreign missions. In addition, the function of the organization involves a subordination of households among its members. In any case, is the head of the household or their community (father and mother) are the people who depend on them (children, nephews, grandchildren) can be persons living with this family as needed (aunt and uncle, grandparents). In such families established a whole system of relations and communications, which affects the formation of individuals within that particular household.

The motivation function within the household provides motivation to perform their functions or their family head counselor, the child function that depends on the actions and thoughts of adults and older family members that also depend on the daughters and sons in his life. Head of the family is motivated by the fact that it depends on the life and existence of other members of the Household staff. According pyramid Maslow head of the family has a higher level of motivation associated with lower levels. Yes, he must ensure the livelihoods of families, providing funds for food, clothing and footwear (but as display lower binding motivational principles). Besides, it should encourage other members of the household to the development, education and self. Other members of the household have their own incentives for spending on physiological needs and the self. It should be noted that the participants in smaller households formed motivation skills in adult life. Baby's economy is the basis for the creation of complex approaches to adult life, when all the motifs of life then created when theirsocialization life and economic skills growing person.

The function of coordination implies that all members of your home community agree on joint actions of all households. There is (or should be) a synergistic effect of such coordination when all household members with reinforcing of each other. Coordinating function is performed household head. It monitors and directs all of the individual members to optimize the economics and management of the household as a whole. Positive coordination and synergistic effect of it creates a positive climate in the community and create a springboard for future development.

As you know, the ultimate function of management is to control. Everyone should monitor their actions to monitor the results of planned events in the life of the household. Note that the management control is the process of supervision and regulation of the various activities of the organization to ensure compliance with organizational objectives. Effective control is created based on its association with the strategic planning process. Today psychologists and coaches offer plans to form families and their individual members, plans of person visualizes them closing to real events in the life of the family as a whole and its individual members. And effective control provides the basis for monitoring the implementation of strategic plans for the family so that the individual members of your home community could determine how well the plan is executed and where necessary amend or apply regulatory measures [153, p.48].

Ukrainian scientists [153] indicate that the control is aimed at managing natural resources, human, financial and information. Natural resources provide the household availability of life-supporting conditions of existence households. When optimally should be comfortable accommodation, to be healthy and quality food supply of clothing and footwear you. All household members should monitor the existence of these natural resources and influence their increment. Human resources should also be controlled so as to be family planning and the number of its members. Planning birth of children and the possibility of living together with older family members is such reverse side is to monitor the implementation of the plan.

Human resource has properties such as the development of creative potential for parenthood opportunity to nurture other smaller household members, senior and subordinated opportunity to learn from their family and economic experience, developing skills in school and university, etc. All these resources should be controlled by the chairman and other members of the household and children are attached to the skills of control actions. The child also has monitors and particularly for creative activities and homework. Senior members of the family when the monitor attached to the family tradition and form them feel involved in family life in general. Attraction and allocation of financial resources is also the task of the control functions in the household. This feature is best described and elaborated in the modern scientific literature. And within the family is the distribution of funds received and controlled flow in the form of wages or other income of individual household members. Realistic control over revenues and expenditures is the main function of management of the household.

Information resources should also be directed within the household, so obtaining information about all aspects of the necessary resources to support the terms and content of life of individuals and families in general. Today, in times of internet and virtual reality it is more than ever necessary to control the flow of information especially on his admission to the younger generation. Along with the functional approach to the management of the household, there is a process approach when all of the family team focused on execution of certain processes.

The process approach to managing household involves adjusting some vital processes as a set of sequential actions performed for individual family members.

Thus, a process viability of the whole family and its individual members, the process of education, learning and cultural transmission process of family traditions, process invention of new knowledge for the development of the whole family and its individual members and more. To be responsible in the household if all the actions of these processes, as head of the family is not able to do everything alone and he has delegated these functions control process for family members of other households.

Home improvement is a center of knowledge that can be used in practice, is from a family of scientists growing that are designed to create nano-technology. Support research skills to the younger generation older members of the household can lead to the formation of new Nobel laureates in various fields of life and economy. The quality management of household or dependent family member becomes youngest conductor of new technologies.

Consider the characteristics of households in the surveyed countries such as Singapore, Finland and the United States. We have chosen these countries, because these countries are the most competitive for a long time. So, in Singapore [156] in 2015 there were 1,225,300 households, 3.39 average size people. 90.8% of all households have property. Thus, the distribution of residential property is as follows: 1-2 room flats 5.6%; 3-bedroom apartments 18.2%; 4-room apartments 32.0%; 5-room apartments and more than 13.9% of all flats in Singapore. Land ownership in the country is 5.6% of households. If we look at the size of the household in 2010, they had the following characteristics: All households – 100%, i.e.:

- 1 person - 12.2%;
- 2 people - 18.8%;
- 3 people - 20.2%;
- 4 people - 23.0%;
- 5 people - 14.7%;
- 6 or more people - 11.1%.

As you can see, most of Singapore households are made up of four people. Alone families and families with many households is approximately 10%. The same figures correspond to the distribution of families and households by ethnicity.

Husband and wife is the basis for the formation of households in Singapore as couples who are at least 35 years is 7.2%. Setting-cell households are ranging from 35 to 49 years, given to 28.8% of all households. 50-64 years' pair is the basis of 25.7% of households in the country. And couple that survived the Golden Jubilee Wedding was up to 7.9%. Thus, we note that the majority of households and Singapore are the basis of family pairs, yaks are 35 to 49 years. This is the average age of those born in the seventies – early eighties of the twentieth century. Singapore statistics shows that most of these couples are head of the family or professional higher education, and therefore have every reason to raise a bona fide scientists and citizens own society. Statistics on education and training of the head of household is presented in Table 16, which shows that the head of family aged 35 to 60 have a university education. Older people generally have lower levels of education (primary secondary and secondary). Thus, middle-aged people have the ability to manage their household using scientific background.

Table 16**Overview of Singapore households by age and qualification basis***

	Total	Without education	Elementary education	Secondary education	Polytech education	Specialized education	University
Total	1225,3	143,4	92,2	233,6	85,6	86,5	345,4
<30	23,0	0,2	0,3	2,0	3,3	2,1	10,5
30-34	74,4	0,4	0,7	5,6	9,6	6,5	43,3
35-39	118,2	1,2	1,7	12,3	13,3	11,9	4,5
40-44	150,0	2,7	3,8	21,5	14,2	15,4	70,7
45-49	156,5	7,4	8,2	29,5	14,0	3,3	55,2
50-54	175,0	4,6	16,1	42,5	11,4	12,5	41,4
55-59	166,5	19,5	19,2	43,3	9,7	9,0	25,8
60-64	138,6	18,5	16,4	37,2	5,2	7,0	16,5
65-69	94,0	21,3	11,6	21,9	2,8	5,0	9,2
70-74	52,2	20,0	7,0	7,9	1,4	1,9	3,9
> 75	75,0	40,5	7,3	9,9	0,6	1,9	4,4

Source: www.singstat.gov.sg

Note that education is gaining popularity, people with higher university education and is the basis of household and evolution of the national economy. Personalities who have completed university are building family relations on the basis of self-realization and higher approaches to development. These approaches work harmoniously carried on when new knowledge can create high technology and provide innovative development business economics and economics of the whole country. It should be stressed that Singapore's economically active population as a whole in 2015 amounted to 990.6 thousand. People are actively working with them 963.6 thousand and 27 thousand are temporarily unemployed. Inactive population in the same year amounted to 234.7 thousand. Among the active population in the country are 761.5 thousand men and 202.1 thousand women. Thus, the head of the households are men who are actively dealing with career, family and household. Women, despite the prestige and create a career for women to stay at home raising children and keeping the whole household. Marital status of certain households is also great because of households 1,225.3 – 155.4 thousand created by one person; 882.8 thousand households where the base is a married couple; widowers – 91.6 thousand; and divorced couples as the basis of households – 85.5 thousand. As you can see, most households are based on the age-old tradition of marriage. Where is marriage, there is stronger household.

In Singapore, the household is really the core of development, and this core is highly educated. It is the basis for enterprise development and integration into global markets higher and nano-technologies.

Finland, unlike Asian countries, is a tradition of reducing the number of full families, and therefore lower households. Total households in this country in 2012 numbered 2,594,999. Statistics confirms this country [158] that 1-person households make up the majority – 37.7% in 2001; 40.1% – in 2006 and 40.3% – in 2012. Absolute numbers are 2012, involving 1,044,957 households consisting of one person. In 2012, households ratios were as follows: a household with 2 persons – 35.0%; 3 persons – 10.5%; 4 persons – 9.4%; 5 or more people – 4.8%.

Finland is a country that has over the population and does not try to restore certifying sole most households. A member of the farm lives for themselves and builds relationships to a greater extent with society than with his family household. Lack of implementation of parental and privacy features leads to a more active social life and find application of their parental capacity to persons outside the household. Nano-economy is outward signs when an individual creates a family center and educates itself, provides self-management of their own households.

Among other things, management of households are characterized by quality and quantity of consumer spending. Thus, the household spends in 2012, 24,046 euros for different needs. Food and beverages per household spends 3014 Euros; on alcoholic beverages and tobacco – 564 euros; for clothing and footwear – 737; housing – 7038; health – 808; transport – 3950 euros. The above-mentioned Engel's Law implemented in Finland since the average Finnish household spends more on luxuries than necessities. The average size of Finnish households – 2.05 persons. Its monthly income is about 10,000 euros. Information on household assets in Finland presented in Table 17. As seen from the Table 17, most proprietary software are households with two parents and children and couples without children. The first grants have on the growth and education of children, and the second most spend money on themselves and their fortunes. Households with one parent and the child are those with the least wealth and property is small family of the elderly. Overall management of households in Finland mainly involves the invention of funds for the precious property: apartment, car or cottage. Most Finns have salaries over 2,000 euros per month and the money to spend for the welfare of their households.

Statistics confirms US [157] that the number of households in the country is gradually increased from 52.8 mln. in 1960 up to 124,590,000 in 2015. But the average size of households decreased during this period – from 3.33 people to 2.54 people. This means that the U.S. lives by the rules of the Western world, where the number of household members and their families forming reduced.

Table 17

Property of households in Finland in 2006 and 2012*

Types of households	Accommodation (number of rooms)		1 car		2 cars		Rural residence	
	2006	2012	2006	2012	2006	2012	2006	2012
All households	1,7	1,7	75	75	23	25	22	26
One person households up to 65	1,9	1,9	54	56	4	4	10	14
Couples without children up to 65	1,6	1,5	89	87	32	36	27	28
One parent with children	1,3	1,3	60	71	5	10	14	11
Two parents with children	1,1	1,1	97	97	52	57	27	27
Households of older people	2,1	2,1	46	60	3	7	24	35
Other households	1,5	1,6	89	93	42	44	37	39

Source: www.tilastokeskus.fi

Statistics 2015 emphasizes that family households were 81,760,000. And non-family – 41,880,000. To the family households include:

- Households with husband and wife 60,010,000;
- Households with husband, wife and children 31,710,000;
- Households with husband and wife without children 23,810,000;
- Women households out of wedlock 15,440,000;
- Women households with children 13,000,000;
- Women without children households 2,550,000;
- Men's households out of wedlock 6,160,000;
- Men's households with children 3,660,000;
- Men without children households 2,500,000.

Apparently, households are based on marriage, are in the majority, but 1-person households with children and without them represent a small fraction of the total. Speaking of single people and their households, the ethnic composition of a household as follows: single white – 98,680,000, single black – 16440000, single mongoloid – 6,040,000, spaniards (any race) – 16240000. Please, note that Asian ethnicity is most favorable to the formation of families and of households, and the white race is the one that is subject to a greater extent to the lonely existence. When we compare the situation in Singapore and the US, in this small Asian country, the situation is more positive on the creation of households and families that form them. America is a country of mixed type and households increasing by no whites.

We should emphasize that household income in the United States are the largest in the world. Thus, the annual income of 15,000 US dollars' households has 11.6%; 15000-24999 – 10.5%; 25000-34999 – 10%; 35000-49999 – 12.7%; 50000-74999 – 16.7%; 75000-99999 – 12.1%; 100000-149999 – 14.1%; 150000-199999 – 6.2%; over 200,000 US dollars – 6.1% of households.

As you can see, the most popular US household income range is from 50,000 to 74,999 dollars, having 16.7% of households. Fortune show that they can spend on luxury items, so the greatest cost American households are spending on housing costs of \$ 2602443 from 11255773 US dollars' households' total expenditures in 2015. Overall, household spending increased from 9731501 US dollars in 2008 to US \$ 11,255,773 in 2015. These expenses increased as a result of growth in household incomes and note that the money is spent mainly on expensive goods and services. Yes, the food in 2015 spent 650,695 dollars from 11,255,773 dollars signification of total costs. Thus, the characteristic features of US households predict that they are controlled mainly by two parents, but there is a large proportion of single households are, in turn, the white population of the country. Management of households is positive because the funds are income households are those, for which you can get valuable products and services such expensive housing. But most families spend money Asian US population, which is increasing to the greatest extent.

CONCLUSIONS

Three countries Singapore, Finland and the United States is the developed countries that their traditions forming households, but in common – increasing their

number and reduce their stock. Households are the foundation of education in Asia and its reception in Europe and America. Households remain the focus of which is governed by two parents and grows more than one child in Asia and is guided more by a parent and raising at least one child (in general). Yet it can be noted that the household is the basis for the formation of nano-economy for all countries surveyed and the basis for the development and implementation of high and nano-technology.

REFERENCES

145. Bolotina Ye.V. (2014), *Domohospodarstvo v systemi instytutiv rynkovoyi infrastruktury Ukrayiny*, Available at: http://www.nbu.gov.ua/old_jrn/Soc_Gum/Vdnuet.
146. Kyreev, A.P. (2001). *Mezhdunarodnaya ékonomyka*: In 2 books, Part 1: *Mezhdunarodnaya mykroékonomyka: dvyzhenye tovarov y faktorov proyzvodstva*, Mezhdunarodnye otnosheniya, Moscow, 416 p.
147. Klyuchnyk, L.V. (2013). *Zaoshchadzhennya domohospodarstv u formuvanni investytsiynoho resursu natsional'noyi ekonomiky*, Available at: [http://www.ecnof_2013_10\(5\)_12.pdf](http://www.ecnof_2013_10(5)_12.pdf).
148. Kovch, V.V. (2014). *Problemy zadovolennya potreb domohospodarstv pry formuvanni innovatsiynoyi ekonomiky*, Available at: [http://www.ecan_2014_16\(1\)_9.pdf](http://www.ecan_2014_16(1)_9.pdf).
149. Makedon, H.M. (2015). *Zaoshchadzhennya domohospodarstv: ekonomichna sutnist' ta faktory vplyvu*, Available at: http://www.sre_2015_2_23.pdf.
150. *Osnovy ekonomichnoyi teorii: politekonomichnyy aspekt, manual* (1997). [H.N. Klymko, V.P. Nesterenko, L.O. Kanishchenko et al]; Edited by H.N. Klymko, V.P. Nesterenko, Vyshcha shkola, Kyiv, 743 p.
151. Ostapenko, T.H. (2012). *Mizhnarodnyy obmin tekhnolohiyamy u formuvanni konkurentnykh perevah natsional'noyi ekonomiky* (na prykladi Italiyi): monograph, Zovnishnya torhivlya, Kyiv, 188 p.
152. Porter, M. (1993). *Mezhdunarodnaya konkurentsyya*: Translated from English by V.D. Shchetynyna, Al'pyna Pablysher, Moscow, 947 p.
153. Rodchenko, V.V. & Novak, V.O. (2001). *Menedzhment: manual*, NAU, Kyiv, 400 p.
154. Stankevych, Yu.Yu. (2014). *Kharakterystyka spozhyvchoyi povedinky vitchyznyanykh domohospodarstv*, Scientific Bulletin of the Kherson State University: Economic Sciences, Vol. 7, Part 1, Available at: http://www.ej.kherson.ua/journal/economic_07/12.pdf.
155. Tvardovs'ka L.M., Pivnyak Yu.V. & Chabanenko M.V. (2012). *Problema vyznachennya ekonomichnoyi bezpeky domashnikh hospodarstv v umovakh rynkovoyi ekonomiky*, Naukovi Zapysky, Economy, Vol. 19, Available at: http://nbuv.gov.ua/UJRN/Nznuoa_2012_19_56.
156. Department of Statistics Singapore, Available at: www.singstat.gov.sg.
157. Statista, Web-portal for statistics, Available at: www.statista.com.
158. Statistics Finland, Available at: www.tilastokeskus.fi.