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## **FORMATION OF BABY ECONOMY IN UKRAINE AS A FACTOR OF NATIONAL ECONOMY ADAPTATION TO THE MODERN GLOBAL ENVIRONMENT**

## **ФОРМУВАННЯ БЕБІЕКОНОМІКИ В УКРАЇНІ ЯК ФАКТОР АДАПТАЦІЇ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ ДО СУЧАСНОГО ГЛОБАЛЬНОГО СЕРЕДОВИЩА**

## **ФОРМИРОВАНИЕ БЕБИЭКОНОМИКИ В УКРАИНЕ КАК ФАКТОР АДАПТАЦИИ НАЦИОНАЛЬНОЙ ЭКОНОМИКИ К СОВРЕМЕННОЙ ГЛОБАЛЬНОЙ СРЕДЕ**

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***Abstract.** The article substantiates the problem of forming baby economy as a factor of national economic development in the global environment. The main baby economy evolution directions as a component of the nanoeconomic system are formulated in the course of research. In addition, Ukraine's baby economy subsystem, particularly the practice of growing up, socialization and relationship process, is analysed. It has been revealed how little people in this country can influence the course of economic development. The factor analysis is conducted on baby economy factors' impact on GDP per capita which determines that our GDP manufacturing does not actively depend on the performance of baby economy. This dependence is 0.57. Therefore, it is necessary to introduce the levers of deploying baby economy processes in Ukraine's economic environment. Furthermore, it has been estimated that the number of people with higher education is gradually increasing as well as the number of foreign students that results in attractiveness of Ukraine's higher education. As a result of research, the conclusions are based on the necessity of updating baby economy and the beginning of the national economic system development, taking into account the formation of common approaches to education and upbringing. World experience shows that if the economic behaviour of a child is developed by the appropriate education, the level of national economy adaptation to the global environment becomes a decisive issue.*

***Keywords:** baby economy, nanoeconomics, human economy, nanotechnology economy, growing up, socialization, kinship, factor analysis.*

***Анотація.** У статті визначається обґрунтування проблеми формування бебіекономіки як фактору розвитку національної економіки в глобальному середовищі. В результаті дослідження були сформульовані напрями еволюції бебіекономіки як складової системи наноекономіки. Крім того, була оцінена підсистема бебіекономіки саме в Україні, зокрема практика дорослішання, соціалізації та процесу спорідненості. Визначено, яким*

чином маленька людина в нашій державі може вплинути на хід економічного поступу. Був проведений факторний аналіз впливу чинників бебіекономіки на ВВП на душу населення країни, який визначив, що наше виробництво валового продукту не досить активно залежить від показників розвитку бебіекономіки, така залежність становить 0,57. Тому в Україні необхідно вводити важелі розгортання процесів бебіекономіки в національному економічному середовищі. Також в статті було визначено, що кількість осіб, що мають вищу освіту поступово зростає, більш того, зростає кількість студентів-іноземців, та, відповідно, привабливість української вищої освіти. В результаті дослідження було зроблено висновки щодо необхідності актуалізації бебіекономіки та початку розвитку національної економічної системи від формування загальних підходів до виховання та навчання. Провідні країни світу засвідчують, що якщо розвивається економічна поведінка дитини та її відповідне виховання, то і рівень адаптації національної економіки до глобального середовища стає визначальним питанням.

**Ключові слова:** бебіекономіка, наноекономіка, економіка людини, економіка нанотехнологій, дорослішання, соціалізація, спорідненість, факторний аналіз.

**Аннотація.** В статтє определяется обоснование проблемы формирования бебиэкономики как фактора развития национальной экономики в глобальной среде. В результате исследования были сформулированы направления эволюции бебиэкономики как составляющей системы наноэкономики. Кроме того, была оценена подсистема бебиэкономики в Украине, а именно практика взросления, социализации и процесса родственности. Определено, каким образом маленький человек в нашей стране может повлиять на ход экономических событий. Был проведен факторный анализ влияния факторов бебиэкономики на ВВП на душу населения, который определил, что наше производство валового продукта не достаточно активно зависит от показателей развития бебиэкономики, такая зависимость составляет 0,57. Поэтому в Украине необходимо вводит рычаги разворачивания процессов бебиэкономики в современной экономической среде. Также в статтє было определено, что количество лиц, которые имеют высшее образование, постепенно увеличивается, кроме того растет число иностранных студентов и, соответственно, растет привлекательность украинской высшей школы. В результате исследования были сделаны выводы относительно актуализации бебиэкономики в начале развития национальной экономической системы от формирования общих подходов воспитания и обучения. Наиболее развитые страны мира акцентируют на том, что если развивается экономическое поведение ребёнка и его соответствующее воспитание, то уровень адаптации национальной экономики к глобальной среде увеличивается.

**Ключевые слова:** бебиэкономика, наноэкономика, экономика человека, экономика нанотехнологий, взросление, социализация, родственность, факторный анализ.

**Problem Statement.** It is important to use all the levers particularly nanoeconomic one's for the national economic development. According to scholar, K. Arrow [19] nanoeconomics is a human economy, which is at the lowest level in the structure of international economic relations (IER). Nanoeconomics consists of baby economy, human economy and nanotechnology economy [8,12]. This approach to the topicality of IER nanoscale development is used worldwide. The leading countries with the advanced level of economies have the nanosystem in the arsenal of their national economies. According to the system, a child from birth to a specialist's retirement becomes important for using a personal factor in economic relations development, particularly international ones. There is a topical issue for modern Ukraine to form a nanoeconomic system with baby economy, as one of its components. With the development of baby economy, the innovative system [18] in the country, a creative economy [Business Week, 2000; 16], human capital [6, 11], as well as the information economy [1] are being formed. Thus, the problem of forming baby economy is closely related to the problem of creating an effective and efficient national economic system in the conditions of global environment development.

**Purpose Statement.** The article is aimed at identifying the ways of forming baby economy within the national economic system in compliance with global development conditions.

**Analysis of recent research and publications.** Scientist V. Borysenko [15] investigates the possibilities of parents to give birth to a child and describes the rituals of the early years of life as well as singles out the conditions of adulthood and a transition period to a parental status. On the whole, a great number of contributions on baby economy issues are of culturological character. Thus, O. Telizhenko in the textbook "Fundamentals of National Culture" [14] shows that the peculiarity of forming nanoeconomics and baby economy lies in traditions, habits, folk arts in the society which are the basis for public relations development. G. Lozko, a known ethnologist, PhD, expounded cognitive information about the origin of the Ukrainians, their spiritual culture, economy, housekeeping and family in the textbook "Ukrainian Ethnology"[10]. Moreover, the author also emphasized the role of family relationships, family rituals, ethnic education and children's folk art in the formation of public relations and their impact on the economic development.

Russian scientist and economist G. Kleiner [9] determined that one of the approaches for understanding nanoeconomics is the interpretation of its componential features - baby economy. Researcher T. Hodovana [5] focuses on the formation of economic thinking of younger schoolchildren who are involved in the basics of economic literacy to form a new economic thinking. They learn about the life of people and animals, their needs and the ways to satisfy them, economic laws, thus creating a basis for further study of economic courses at secondary and high schools. In this case, baby economy is regarded as the economic behaviour of a child.

A. Chygyr [17] describes the interaction in the parental family as a factor of financial behaviour directionality. He identifies the following areas of family influence on the financial behaviour: focus on saving money (thrift); focus on unnecessary spending (wastefulness); moderation, the category of people who have no apparent orientation in any of the two directions mentioned above (this category of people accounts for the majority). It is to be noted that baby economy in the course of research should operate such categories as economic behaviour and financial behaviour in particular as the things going on in childhood form the basis of intelligence, fruitful creative life in the adult life.

I. Hubeladze [7] analyzes the process of forming a sense of ownership in preschool children in the process of economic socialization. It is emphasized that baby economy based on forming a sense of ownership in children will contribute to the positive development of economic, personal, business, governmental and international behaviour in the adult life. I. Hubeladze notes that one of the most important features characterizing economic socialization of a preschooler is a sense of ownership available before acquiring basic knowledge about money, valuables, economic phenomena and learning to perform basic operations and costs planning. There appears the main thing in the process of formation - a sense of ownership.

**Exposition of unsolved aspects of the general problem in the article.** The general problem of improving Ukraine's economy development can be resolved through economic revitalization and socialization of a child as well as the baby economy subsystem within the nanoeconomic system in the global development conditions.

**Presentation of main research findings.** Baby economy is responsible for the growing up process at the transition of a newborn baby to a preschooler, primary school, secondary and high school student and university student. The process involves the use of a certain baby economy resource as an input point and production of certain goods as an output point. The process of growing up is the gradual formation of economic behaviour of an adult, beginning with the use of certain resources – natural factors.

The internal factors include heredity, living conditions, a sense of security, the possibility of early learning, socialization, the opportunity to do creative work. There are also external factors: macroeconomic situation, political imperatives, legal conflicts. It is worth considering the impact of natural resources on the development and formation of baby economy in Ukraine.

The kinship system plays a decisive role in baby economy and social culture of a traditional society. The more archaic society is, the greater role family bonds play: they are based not only on personal relationships between people, but also on the economic system of society and self-government.

Kinship is not only the result of a child's birth, biological process but also implies certain rights and responsibilities, identifying it as a social phenomenon, that can be transformed to an economic phenomenon with the resources applied and goods produced. Thus, mother and father are related to the child not only by blood but also in a social way through the performance of certain social functions (care, education, upbringing).

Kinship is a type of social ties that unite people into a group of "relatives"[15]. The kinship system is a classification of relatives in a certain order by a well-established principle [3]. The kinship system reflects social and economic ties of one or another ethnic community according to the principle of grouping blood and non-blood relatives. Kinship implies the possibility of housekeeping for the benefit of all family members. The more members of a related society, the more opportunities arise for the development of the society in general and its individual members.

Every ethnic community has their specific approaches to identifying and grouping relatives that is why there are different ethnic systems of kinship. Human kinship systems paved a long way from classification (primary) characteristics of primitive societies to genealogical (secondary) characteristics of most nations. [15]

Since the Middle Ages, there has been a genealogical kinship system in Ukraine which is an extensive scheme of the family tree type, built by the family members of a person. Such types of kinship can be distinguished as: biological (blood, real), social (socio-family, fictitious) and economic (housekeeping), indicating that the hierarchy is arranged in the nuclear family, extended relatives and the head of family affairs [13].

Biological or blood relationship in the traditional society is referred to the concept "genus". Unlike modern societies (industrial, post-industrial, information), where the main value is an individual, traditional societies focus on the genus. Blood relationship was the foundation for the whole family superstructure.

Social relationship emerged within one family (between non-blood relatives) and outside it, through marriage (relatives-in-law), adoption, the sacrament of baptism.

Economic relationship generated fraternities or companies which formed a superstructure for the production of certain goods. The head of the subjects of economic relationship was the most effective host, with the other family members being dependent on him. A specific feature of Ukrainian traditional economic culture is the prevalence of a small family over the large patriarchal one.

Gender and age stratification like the kinship is a biological, social, and economic phenomenon. A person is born with gender and his age is related to his physical growth. Gender and age of people in different societies became the basis for traditional subcultures' formation – children, women, youth as well as a special hierarchical system of gender and age groups. From a social point of view, belonging to a particular age group plays an extremely important role in the life of any individual in the traditional society, since gender and age determine the behaviour of a person, his rights and obligations, etiquette rules for the appropriate treatment with the representatives of other gender and age groups.

There is a hierarchy of social and economic groups by gender and age. Thus, in all traditional societies, the male gender is ranked higher in the hierarchy than the female one respectively while the age group of children is at the lowest position. It is necessary to have preferences at a young age to become a leader of the group at an older age. This also applies to gender groups and their leadership. Gender approaches indicate that the group can be headed by a woman, and a man can serve as a guardian of the family hearth. If the family becomes a centre in the economic plane, the leader of family business can be a person of any gender and age, so the main skill is in managing an economic ship that produces benefits for all members of society.

It should be noted that such resource as heredity involves the use of kinship, gender and age stratification in shaping baby economy. Traditions within the genus and its hierarchical system allow to make an economic person [4]. These systems are interconnected in the international environment where the European system of values affects the systems that exist in different regions of the world. So, the Japanese often follow European traditions in the way they get dressed. Meanwhile, the Europeans show great respect to age and ability to use the experience of older people for identity formation among young people. It is common practice, that nations with the highest figures of national economic development have more grounds to compile social and economic behaviour. In Ukraine, there is a prevalent category of middle-aged people (man, woman).

It should be emphasized that transition from one age group (subgroup) to another is always accompanied by certain rituals in a traditional society – transition rituals forming a stage-by-stage socialization of man.

Socialization occurs within families. Family is the smallest social union, which is based on marriage, blood bonds. It exists in all human societies. It is believed that the only universal characteristic of different types of families, including modern unconventional or modern alternative ones is a mutual help which mainly provides social coexistence of people.

Mutual help has an economic background when one owning wealth shares with those being on a tight budget. At present, mutual help has an international aspect as the Ukrainians, who departed to work abroad, send some of the earnings to their relatives in Ukraine. This is a considerable part of income of modern Ukrainian families. Moreover, there are many examples of marriages of the Ukrainians and the representatives of other ethnic groups. When international families are made, there is a mix of family cultures, households and family relationships in general. The Ukrainians assimilate into the countries they leave for and Ukrainian traditions become the basis for improving the gene fund of other nations. The economic content of international marital relations and the Ukrainians involved is that newly created households produce benefits for the whole society and consume them by themselves as the subjects of globalization. If the unification occurs at the nanoscale, even a child depends on the ability to apply knowledge acquired at school and convert it to the background that will assist in the economic life of an adult. G. Kleiner claims that nanoeconomics is the skills in making optimal economic decisions for the development of individuals and their environment (family in particular).

Another resource for the baby economy process is early learning opportunities, which are advanced by the Conception of Preschool Education Development in Ukraine compiled in 2010-2016. The conception points out that the state recognizes the priority role of preschool education and creates the proper conditions for its acquisition. The changes in the world and in Ukraine today, related to the spiritual development of a human in the information period, are significant in their scope and social consequences. The current situation in the preschool education system of Ukraine can be defined as a stage between the old system of values, directives, habits and the new one, which is being formed, aiming at providing optimal conditions of education and upbringing for the personality development. The XXI century puts forward new requirements for the goals, objectives, structure and content of preschool education in Ukraine. This is explained by globalization processes, changing world positions and values, our country's aspirations to integrate into the European space. In these circumstances, preschools must acquire a new status, expand their functions and become compulsory institutions for attendance of children, especially older children.

The Conception of Preschool Education Development in Ukraine formulated the principles that are particularly important in developing nanoeconomic system and its component - baby economy. Therefore, these principles are as follows:

- science, providing support for classical and modern scientific achievements in the field of pedagogy and psychology of preschool education. It is to be admitted that preschool education should be developed within baby economy as a system of knowledge, skills and competencies to make better decisions about its own existence and its existence in the family and

household. In addition, the world and regional heritage to create preschool education institutions should be used in the global environment;

- humanization and democratization of education, concentrating on the personality of a child with the maximum disclosure of its inclinations, abilities and interests. A child must learn to use its potential including the economic one. A child has to answer the following questions: What are the opportunities in our family? Is it possible to have certain benefits without losses? How can the possibilities of our families and certain individuals be increased? Can the experience of families from other partner countries or joint business relationships be made use of?

- access to education. Access should not be synonymous with poor quality. Every kid under six (seven) should be able to join the world's leading technologies in preschool education. Baby economy requires a financial basis as a possibility for parents to pay for preschool education and as an investment in the future of their child;

- close contact with real life, its problems and contradictions, preschool living space expansion. There are global problems that must be solved by all members of international community. Their solution begins with the kindergarten, when a preschooler understands its problem situations and tries to solve them by making well-grounded decisions. In Ukraine, this practice is at the development stage. After all, what is taught must have a practical value and become the basis for future achievements;

- social cohesion, family education and upbringing. The directions of a preschooler's upbringing should be a continuation of the existing family values. There are such values in Ukraine as: respect for elders, respect for women, respect for learning and academic achievements, an individual approach to business and business practice in Ukraine. The ability to run business has to be explained in the kindergarten, when a child can do everything for itself or for its family. Society approves of this idea and welcomes new entrepreneurs and effective managers of the leading companies in the world.

Thus, the possibility of early learning in kindergartens becomes a resource that should be supported by the state, on the one hand, and private kindergartens with the right to exist, on the other hand. These institutions should be included in the system of baby economy and become a starting point for further achievements of preschoolers.

Another resource for baby economy process formation is socialization. Socialization is the process of acquiring a system of knowledge, learning norms and values that enable a child to function as a full-fledged member of society. The term "socialization" is correlated with another term "upbringing", since the concept of socialization involves a purposeful influence on the person in various ways. But it takes on a broader sense because it also covers chaotic, spontaneous processes regardless of the educators' will. In addition, the term "socialization" refers not only to children and young people who study but also to the representatives of all age groups and socio-cultural adaptation of one or another individual to changing social conditions: for example, the involvement of a woman into the group of married women that is also accompanied by the process of socialization .

The process of socialization in the economic environment provides entry to the group of economically active people who can provide themselves. So, students who work while studying are economically socialized as they have to make their own decisions about paying for tuition and living expenses without parental assistance. Economic socialization experience shows that adult children without parental care work to be able to pay for studying and provide financial support to their parents. This process is objective and covers most of the progressive countries in the world.

According to ethnographic sources socialization of a child in the Ukrainian society began even from the mother's womb. There was a popular belief that a child's future, including its social status, was stipulated by parents' behaviour during pregnancy. Parents had to follow a number of strict rules and prohibitions. The violation of a taboo had disastrous consequences: disabled children, illegitimate children, individuals with an irregular social status and minimum rights, being often despised and ignored by society.



Another resource is an opportunity to be engaged in creative work on one's own or in a group. Development of crafts is particularly important for baby economy and nanoeconomics. Thus, a child was taught such aspect of creativity that affected the ability to be a craftsman in the future. These young people had an opportunity to perfect the craft and implement new technologies to improve the production process of certain goods.

So, craft is a small production process based on the use of hand tools, personal skills and allows to make high-quality things, often top-class pieces of art [15]. Craft emerged at the start of a human production activity, getting through a long historical development, thus acquiring different forms – from domestic crafts on order and to the craft market. There was sprawl and development of cities as craft and shopping centres with the emergence of crafts on order, especially for the market. Home craft is often called home industry (production of non-agricultural products), crafts on order and for the market – handicraft industry.

Ukrainian lands have long been famous for a large number of artisans who ran their own farms and made products on order. Crafts connected with the processing of minerals, animal products have existed since the period of Tripoli culture. It is worth recalling the world-famous Trypillian ceramics. In Kievan Rus there were over 100 craft professions and more than 270 ones in the XV-XVII centuries. The first union of craftsmen was founded in workshops. Nearly every peasant family was engaged in spinning, weaving with the use of such tools as: scutchers, spinning wheels, self-spinning, Krosno weaving tools. There was a smithy in almost every village [15].

The emergence of professional crafts, especially in cities, led to the development of a new field of production and a new social layer - urban artisans. The emergence of developed forms of their organization - workshops that protected the interests of artisans, created special favourable conditions for the development of urban craft in the Middle Ages. Leading industries of urban craft were textile industry, production of metal products, glassware and others. In the process of industrial revolution (mid-XVIII - first half of the XIX century) the factory industry displaced the craft. Crafts (on order and for the market) were preserved in the industries related to serving the consumer's individual needs or the production of expensive pieces of art such as pottery, weaving, carving and others.

All countries in the world are divided into traditional and corporate. The former provide the production of craft (handicraft) products. These countries include Italy, Greece, Spain, etc. The latter are the countries having many corporate goals and producing standardized products that may be bought in different parts of the world. Ukraine lost its handicraft capabilities during the Soviet Union period. Nowadays these crafts are beginning to revive in the framework of small businesses with skills and traditions being acquired for further production of consumer goods, which are usually handicraft. Certainly, crafts have the characteristics of factory forms of production. However, small business is being increasingly focused on the technologies that are becoming unique.

Traditions are inherited from generation to generation, so training successors in a particular industry becomes a matter of survival and experience sharing for a long-term business existence (even a small one). Baby economy is a platform for creative pursuits of younger generation that will become the basis for the future development of business environment in their country and global environment as a whole.

The influence of external environmental factors on the economic situation, political imperatives and legal conflicts in particular becomes the basis for identifying these resources as the leading ones in the formation of baby economy and nanoeconomics in general. The multiple factor analysis reflects the impact of baby economy factors on GDP per capita in Ukraine.

### ***Construction of the linear regression model***

**Dependent variable** - GDP per capita (% previous year)

Y - GDP.

**The vector of independent variables** - (the number of persons in preschool education institutions, thousand; the number of students in secondary education institutions, thousand; the number of

people in higher education institutions, thousand; the number of postgraduates, persons; the number of doctorals, persons)

X - (dosh; ser; vysh; phd; doc)

The model of linear regression is:

$$GDP = a_0 + a_1 \cdot dosh + a_2 \cdot ser + a_3 \cdot vysh + a_4 \cdot phd + a_5 \cdot doc$$

The data studied from 1991 to 2017.

Research results:

Coefficients:

(Intercept) dosh ser vysh phd doc

1.520e + 02 -1.935e-02 -2.912e-03 1.635e-03 2.132e-04 -1.449e-02

$$GDP = 152 - 0.0194 \cdot dosh - 0.0029 \cdot ser + 0.0016 \cdot vysh + 0.0002 \cdot phd - 0.0145 \cdot doc$$

Call:

lm(formula = GDP ~ dosh + ser + vysh + phd + doc, data = REG)

residuals:

Min 1Q Median 3Q Max

-19,937 -2,529 1,429 4,211 6,645

Coefficients:

Estimate Std. Error t value Pr(> |t|)

(Intercept) 1.520e + 02 4.810e + 01 3.160 0.00473 \*\*

dosh -1.935e-02 7.802e-03 0.02170 -2.480 \*

ser -2.912e-03 3.396e-03 0.40098 -0.857

vysh 1.635e-03 1.336e-02 0.122 0.90374

phd 2.132e-04 1.273e-03 0.167 0.86861

doc -1.449e-02 1.726e-02 0.41050 -0.840

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 6.608 on 21 degrees of freedom

Multiple R-squared: 0.5749, Adjusted R-squared: 0.4737

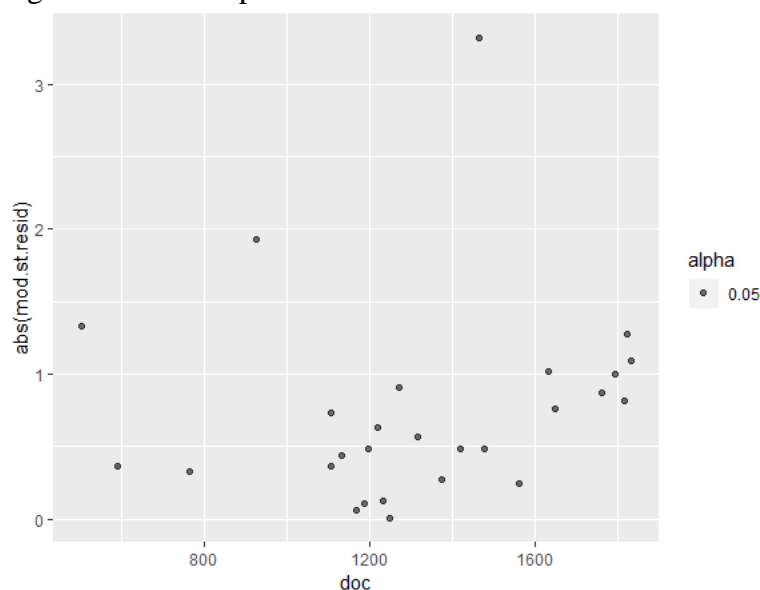
F-statistic: 5.681 on 5 and 21 DF, p-value: 0.001822

The results indicate a sufficiently low model quality, only the coefficient at the dosh variable is statistically significant, the coefficient of determination is 0.57.

The model check against heteroscedasticity, multicollinearity and autocorrelation.

**Check against heteroskedasticity using Breusch-Pagan test:**

Figure residual dispersion models:



Non-constant Variance Score Test



Variance formula: ~ fitted.values

Chi Square = 0.1366334, Df = 1, p = 0.71165

The test shows that residual dispersion is constant and there is no heteroskedasticity. p = 0.71165, which enables to accept the hypothesis of Homoscedasticity.

**Check against multicollinearity model according to Belsen method:**

The correlation matrix X is being considered

```
dosh ser vysh phd doc
dosh 1.0000000 0.2387704 -0.5975791 -0.5861140 -0.4834307
ser 0.2387704 1.0000000 -0.6051253 -0.8058572 -0.8805223
vysh -0.5975791 -0.6051253 1.0000000 0.9138170 0.5219850
phd -0.5861140 -0.8058572 0.9138170 1.0000000 0.7949878
doc -0.4834307 -0.8805223 0.5219850 0.7949878 1.0000000
```

Watching pair high correlation coefficient (> 0.6) between many pairs of variables, we can conclude that multicollinearity is present in the system.

Overall Multicollinearity Diagnostics

MC Results detection

Determinant | X'X |: 0.0009 1

Farrar Chi-Square: 161.8910 1

Red Indicator: 0.6724 1

Sum of Lambda Inverse: 110.6973 1

Theil's Method: 2.2753 1

Condition Number: 111.4098 1

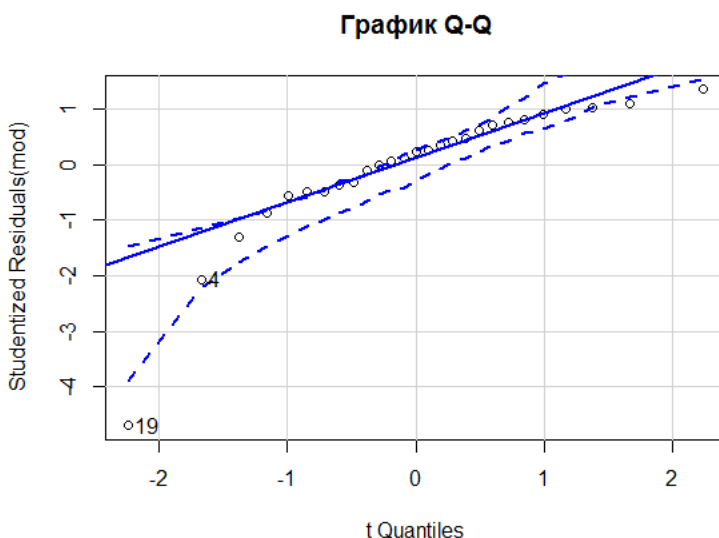
1 -> COLLINEARITY is detected by the test

0 -> COLLINEARITY is not detected by the test

Given all the indicators of Belsen test, the presence of multicollinearity is confirmed.

**Check against residual autocorrelation according to Durbin-Watson method:**

Let's construct a graph of standardized residual model:



lag Autocorrelation DW Statistic p-value

1 0.1597491 1.613839 0.028

Alternative hypothesis: rho! = 0

Durbin - Watson test results p-value = 0.028 confirm the presence of residual autocorrelation in the model.

The processes of transforming resources into active economic behaviour are the processes of education and upbringing. Education and upbringing form a coherent concept of education, which is an integral pedagogical mechanism of an individual's social development. It is through this mechanism that the society realizes the involvement of an individual to the achievements of his own production, science, culture with a view for their further reproduction and development.

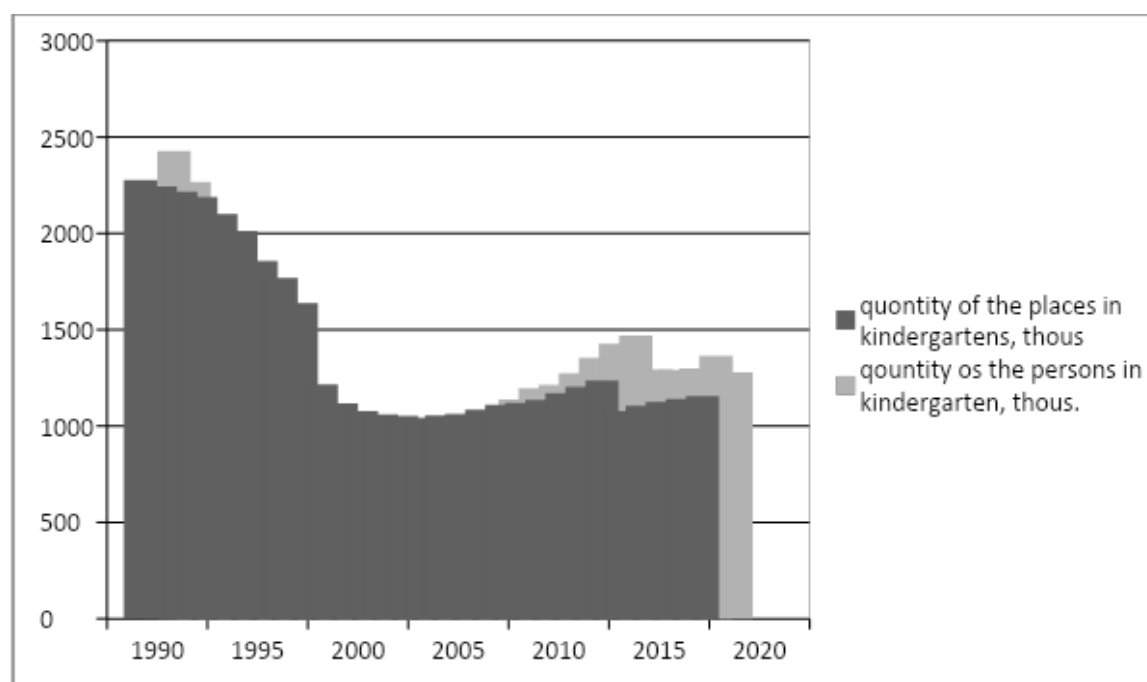


Fig. 1. Preschool education institutions in Ukraine, 1990-2018 [22]

Fig. 1 shows that the processes of education and upbringing start with pre-school education. So, there was an abundance of places in kindergartens of Ukraine by 2006, and since 2006 there has been a shortage of them, when there are more pre-schoolers than the preschool education system can provide. The positive tendency for the birth rate growth implies the need for places in preschool education institutions with more and more parents preferring kindergartens rather than family education. The system of decision-making regarding the future of a child aims to interest and encourage it to go to the kindergarten. Parents make such a nano-decision that influences the skills of a young person for his further development. Any child has to go to secondary school with a knowledge base similar to that of the kindergarten so that it could acquire skills and use them in high school. Being capable of learning is the task of a preschool education institution.

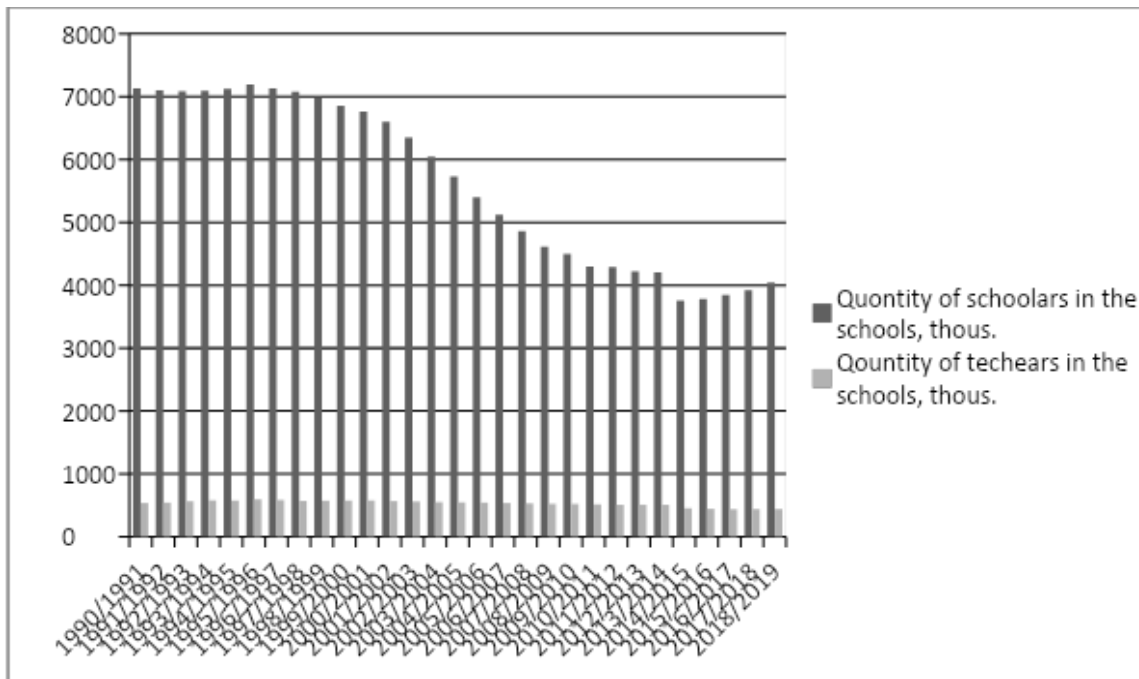


Fig. 2. The development of general secondary education in Ukraine (1990-2019 academic year) [22]

Studying in general secondary education institutions of Ukraine related to the demographic situation and the decrease in birth rate caused the reduction in the number of secondary school students. The number of teachers in our state schools is steady but has a sign of gradual decrease. For baby economy, reduction in the number of students at schools affects the number of students in classes. But it is evident that a teacher can work with each student more thoroughly and cause feedback from the student to activate learning. An individual approach to learning is the basis for developing children's skills in making optimal decisions in learning and in real life. Interactive learning in classes with fewer children influences the effectiveness of the learning process. It is well-known that the use of the world achievements in education will be the key to integrating education into the appropriate world space. On the other hand, advanced teaching methods in various fields of knowledge provide the opportunity to continue studying at leading universities in the developed countries of the world. In addition, schools focus on teaching worldview disciplines, knowledge of which will enable to become cosmopolitan students in the future. The latter has advantages over the narrow knowledge of students of closed systems within the national field of knowledge. It is well known that studying languages and world literature, mathematics and natural sciences means being a citizen of the world evolving in the context of globalization.

An individual has to acquire certain competencies (humanities, technical, natural, artistic, etc.) in secondary education. These competencies need to be defined in the seventh grade of middle school. A high school graduate has access to appropriate knowledge and may enter a particular higher education institution. If there are career offices at universities, there should be career counsellors at schools who can be useful for students to determine the profile of further education after the sixth year of schooling. The secondary school should provide worldview knowledge, competency profile and skills in the future profession. Future Nobel laureates start kindergartens and acquire specialized learning in general secondary education institutions. Schools teach a range of subjects that can be used by a person of the world.

A person of the world is completely formed at university. Ukraine is a member of the Bologna process and our higher education is developed on its basis. Being popular in 1990-2000, private (commercial) education gave way to state schools, most of which are currently presented by national universities. According to statistic data of 2019, between 15% and 25% of school graduates did not pass the External Independent Testing (EIT), while the rest of the school graduates became potential university students. There are statistic data on the number of Ukrainian higher education institutions from 1990/1991 academic year to 2018/2019, which are shown in Fig. 3.

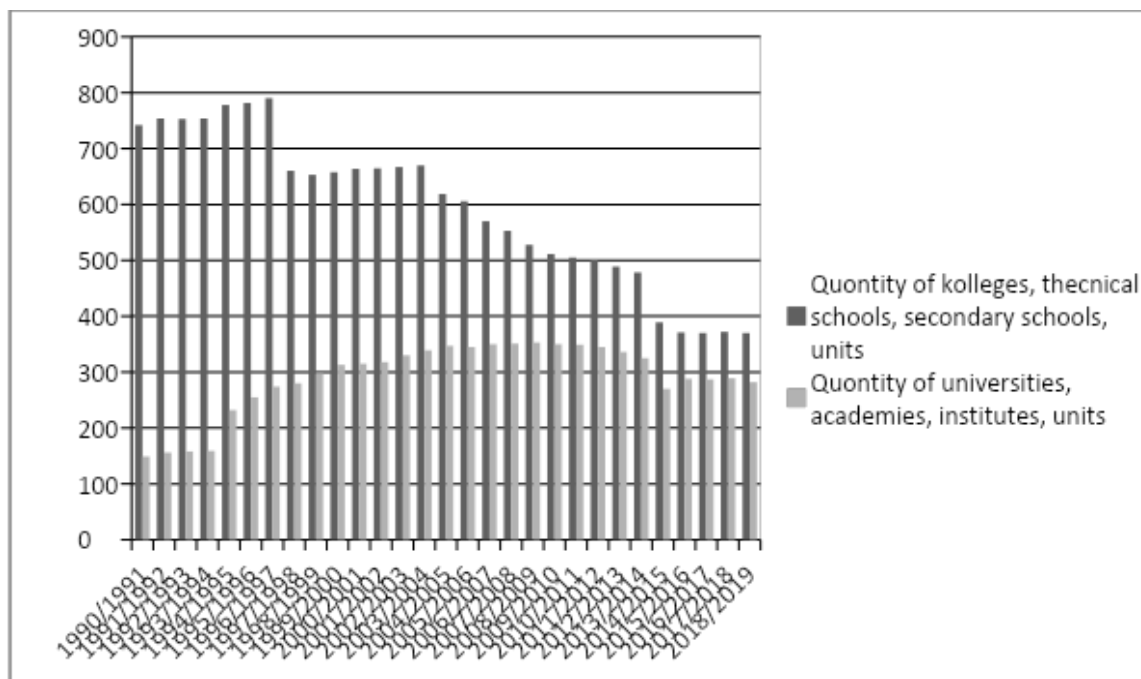


Fig. 3. Higher education institutions in Ukraine (1990-2019 academic year) [22]

As can be seen in Fig. 3, the number of colleges has almost halved since Ukraine gained its independence while the number of universities doubled but recently the number of universities have tended to decrease. The data presented testify the popularity of higher education in our country. An increasing number of school graduates are becoming students of higher education institutions (HEI). The main motto of an HEI graduate is "to make maximum use of theoretical knowledge in practice and to make optimal professional decisions." The theory must indicate various possibilities of its practical application. A famous thesis that science is separated from practice is a feature of the Soviet Union years. Nowadays knowledge should be used to the fullest. Thus, higher education is gradually changing as well as the manufacturing sector, in which changes must be made according to the requirements of modern times. Practical innovations all over the world are being implemented in the manufacturing sector of the economy in most cases. Basic technologies are the prerogative of higher education and academic institutions. Baby economy continues developing within human economy, when all the basics from preschool education to HEI must constitute an integrated system. In order to have an active baby economy, it is necessary to form an educational complex with the system of extensive baby specialization and appropriate requirements for the future specialist.

In addition, national baby economy must be implemented in global processes of nanoeconomic intensification. This is not only the exchange of students, it is the ability to meet new requirements of global innovation development, an opportunity to keep up with the world scientific and technological innovations.

The international aspect of baby economy is determined by the data on education of national youth abroad and foreigners in our country. According to the Ministry of Economic Development

and Trade of Ukraine, 70,000 Ukrainian students study abroad. From 2009 to 2016, the number of Ukrainian students abroad increased by 186%. According to the Institute of Public Relations (IPR), only 7% of Ukrainians studying outside Ukraine plan to come back. 30% of people plan to go to other European Union countries after graduation. According to the data of 2017, more than 35,500 Ukrainian students were enrolled to Polish institutions. The main reasons for choosing Polish education are: obtaining a European diploma (51%); poor living conditions in Ukraine (47%); gaining better knowledge (45%) [21].

It should be noted that Ukraine does not only send students, but accepts them as well. Thus, about 25,263 foreign students received invitation to study in Ukraine at the beginning of 2018. A list of countries that sent most of their students to study in Ukraine is as follows:

1. Morocco - 4254 students;
2. India - 3210;
3. Nigeria - 1987;
4. Turkmenistan - 1724;
5. Egypt - 1161;
6. Ghana - 1136;
7. Algeria - 1115;
8. Pakistan - 950;
9. China - 882;
10. Turkey - 634.

These data indicate that Ukrainian education is attractive to foreign students. Ukraine is actively involved in international educational processes. The balance in external educational processes is positive when we send more than we accept. The situation requires optimizing the educational process. It is important for baby economy and its system to make family-friendly decisions about studying abroad with the appropriate school training. Thus, a child of 14-15 years of age should decide on the choice of university, based on the training programme of career guidance that is the close link of school and university education and its development within baby economy. In addition, sending and accepting students envisages the membership of our country in the world educational projects. These projects are stipulated by the possibility of involving national universities in global educational programs and improving the quality of education. In the context of globalization, such projects are the basis for optimization of educational processes in higher education. This is an important issue for Ukraine. According to the world ranking of universities: 401 – V.N.Karazin Kharkiv National University, 411 - Taras Shevchenko National University of Kyiv, 501 - Igor Sikorsky National Technical University "Kyiv Polytechnic Institute", 701 - National Technical University "Kharkiv Polytechnic Institute", 801 - shared by Donetsk National University and Sumy State University [23].

Baby economy formation will enable to improve the quality of education and educational services in Ukraine and abroad. In addition to improving the quality of the educational process, it is necessary to optimize the following educational areas[23]:

- Academic reputation (40% importance);
- Employer reputation (10%);
- Student-teacher ratio (20%);
- Number of publications for one teacher (20%);
- Number of foreign teachers (5%);
- Number of foreign students (5%).

**Conclusions.** Baby economy involves teaching younger generation to make the best economic decisions and live a professional life with a set of knowledge, competencies and skills that will help them work for the benefit of the country and the world. The experience of leading universities shows that not only the educational process within the country needs to be improved, but the economic development in the country is worth enhancing as well. These processes are interrelated – where there is a high level of education, there is an opportunity to maintain high rates of development.

Baby economy ends at the first workplace after graduation from university or vocational education institution. A young professional pursues a career path with an ability to create and to be creative in different spheres. Baby economy is closely connected with creative economy where creative thinking must be instilled in preschool institutions and developed at schools and universities. Creativity is the ability to think unconventionally to combine unrelated ideas. These ideas should be extracted from world practice and should facilitate the discovery of innovations that would improve the world order in various fields of human activity. Such improvement must occur through active self-realization of an individual and influence the spread of knowledge all over the world.

The determinants of baby economy development are processes of kinship, gender-age stratification, early learning opportunities, socialization, an ability to engage in creativity and optimize craft. All these factors of the baby economy development should transform a young person into an economic personality with the ability to make effective decisions (managerial, technological and industrial) regarding their own development, the society and the economic component. It can be stated that the baby economy system in Ukraine is only at the stage of formation. At present, there are some separate components that can only be integrated by the will of the state policy. However, the private sector (enterprises and private research institutions) must be ready to cooperate with educational institutions regarding the practice and career guidance. In addition, baby economy needs to be implemented in global educational processes, especially at the university level. The inclusion of Ukraine in the world educational projects provides the possibility of optimizing secondary and higher education to the level of the best representatives of these institutions. Compliance with the models of the educational process should influence the development of the national economy of Ukraine and its relations with different countries of the world.

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