# Intellectual Products, Result of Economic Development

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# INTELLECTUAL PRODUCTS, RESULT OF ECONOMIC DEVELOPMENT

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**Abstract:** Intellectual products, having the most diverse destinations in different time periods have some premises that have contributed to the intellectual product of necessity, need, application of ideas, level of socio-economic development, levels of exposure and transmission of information time and space

*Keywords:*  *product intellectual, man hypothetical, information, exposure, human society, the application of the idea, the idea generator, generators trade ideas.*

### INTRODUCTION
Agriculture products are known as agricultural products, the industry - industrial products. Products intellect called them the intellectual products unlike some publications where they are called smart products.

On the basis of all success, throughout the life of mankind, have intellectual products. They contribute to solving problems facing humanity. To produce intellectual products each country bears enormous costs. Preparation generators of ideas (intellectual products manufacturers) and involves spending time and resources. Unlike other kinds of production superspecialist future has come a lag, which can not be compressed. This time of maturation of the brain is composed of four ranges: the initiation of knowledge, accumulation of knowledge, knowledge referral, knowledge generation. Large volume of information to be notified, the necessary steps to be taken to become generator of ideas, we shall be pessimistic that ostensibly scientific research achievements in the youth. There have been times when only a Blez Pascal at the age of 18 years has managed to invent the computer. Today Pascal future he needs a certain lag, a team of researchers courtesy, an adequate infrastructure and a request from the company's intellectual product. But they involve huge costs. If the country is lack of such costs, then the problems that can arise in society, lack of ideas, could cause even greater expense. So, it is a maximum: intellectual products cost more, their lack much more.

### STRUCTURE RESEARCH
Products human brain (intellectual products) in relation to the age of humanity 2 million years [1] occurred "recently". Very hard man out of the cave dwelling in the open. This idea emerged only 100.000 years ago. If we imagine a man "who lived hypothetical 2 million years then he has lived" humane "only 5% of his life.

Since our world was 2-3 generate many ideas in a century. The evolution of success was maintained until the XVth century in "Man" hypothetical and used intellect in solving problems only in 0,075% of his life.

According [2] the intellectual achievements of Man, we could include: "The medical field", a Greek doctor Pedanios Dioscordie of Anazarbus, which treats about medicinal properties. 600 plants and 1,000 drugs a.a. 40-49 en "Naturalis historia by Pliny the Elder, the work of 37 volumes, which amount to time in the knowledge of astronomy, geography and zoologiei, uh 50-59 en "Treaty of 70 books of Dioscuride comprising pharmacology, medicinal plants, such En 70; Trigonometric and spherical geometry of Menelaos in Alexandria, uh 100 en "Introductio arihmetica of Nicholomachus of Gerasa, which contains knowledge of the theory of numbers, uh En 68, a number of his works Diofantos, Azybhata, Plato, Euclid, etc.. During 1500 years e.n. mankind can "bounce" with approx. 30 scientific discoveries. In the XVI century intellect "explode" and humanity in the hundred years between XV and XVI make scientific discoveries so far had been to her when mankind. The emergence of intellectual us remember a "chain reaction", the innovation increases exponentially.

If note XV, XVI, ..., XXI by 1, 2, ..., 6, when the number of innovations can be calculated by:

$$N_t = 2{,}2^{t+3}, \qquad t = 1, 2, ..., 6$$

Result

$$N_1 = 2{,}2^4 = 23{,}4; \quad N_2 = 2{,}2^5 = 51{,}5; \quad N_3 = 113; \quad N_4 = 250; \quad N_5 = 549; \quad N_6 = 1.207$$

Century, encumber many problems, mainly with the previous, will be accompanied by a number of discoveries that will exceed the number of scientific discoveries during its existence including through the twentieth century.

Intellectual products, having the most diverse destinations (household, social, ecological, military, space, etc. imaginary.) In different time periods were certain premises. Among the factors that contributed to the intellectual products include: need, need, demand for ideas, the activity of the generators of ideas, level of socio-economic development of human society, the level of exposure and transmission of information over time, in space; concourse level of the human population, technology growth generators ideas; transformation process to generate ideas in a specialized field of activity conditions and adequate remuneration of labor, trade generators of ideas; superspecialiştilor concentration.

Among the factors contributing to the innovation, intellectual products, a particular role it plays need to resolve some issues (the request). A retro scientific discoveries in history allows us to determine the main impetus in the emergence of intellectual property.

Human population reached 1, 2, ..., 6 billion people in the years 1803, 1926, 1959, 1973, 1986, 1998.

Table 1

**Innovations of mankind to a year-man**

| | **1803-1926** | **1926-1959** | **1959-1973** | **1973-1986** | **1986-1998** |
|---|---|---|---|---|---|
| The average number of population (billion instead.) | 1,5 | 2,5 | 3,5 | 4,5 | 5,5 |
| The number of innovations | 368 | 215 | 75 | 71 | 46 |
| The number of innovations to a year-man | $\dfrac{368}{1{,}5 \cdot 123} = 2 \cdot 10^{-9}$ | $\dfrac{215}{2{,}5 \cdot 33} = 2{,}6 \cdot 10^{-9}$ | $\dfrac{75}{3{,}5 \cdot 14} = 1{,}5 \cdot 10^{-9}$ | $\dfrac{71}{4{,}5 \cdot 13} = 1{,}2 \cdot 10^{-9}$ | $\dfrac{46}{5{,}5 \cdot 12} = 0{,}7 \cdot 10^{-9}$ |

According to Table 1 in a year-man most of humanity has made innovations in the years 1926-1959, namely the range within which held the Second World War. According to data from the table "The average" intellect of mankind is decreasing. By 2050 the world will take approx. 604 main innovations in November, the average number of population - 10.1 million inhabitants. So the quality of intellect of mankind will be $\dfrac{604}{0,5(6,2+10,1)\cdot 50}=1,48$, ie an insignificant increase compared to previous years, but lower compared to the years of heavy war in the twentieth century. So, intellectual products emerging from an evolutionary process, endogenous, accompanied by "explosions" in extreme situations. The successes are not distributed evenly in space in time between the branches are concentrated in highly developed industrial countries. This case needs to argue, needs, demand for products in the intellectual 2050. Population is calculated as follows:

$$\frac{dN}{dt}=mN \qquad\qquad \frac{dN}{N}=mdt \qquad\qquad l_n N = mt + c \qquad\qquad N = l^{mt}\cdot l^{c}\,.$$

Since the initial conditions:

1) for $t=0$ $\qquad\qquad N = 6,2\cdot 10^{9}$ (inhabitants)

2) for $t=1$ $\qquad\qquad N = 6,275\cdot 10^{9}$ (inhabitants)

determine the $N = 6,2\cdot 1,01^{t}\cdot 10^{9}$ (inhabitants).

For $t=50$ $\qquad N_{2050}=10,1\cdot 10^{9}$ (inhabitants).

The average number of inhabitants in the 2000-2050 range $\dfrac{6,2+10,1}{2}\cdot 10^{9}=8,15\cdot 10^{9}$.

In the century the number of scientific discoveries will be $2,2^{t+3}=2,2^{9}=1.207$, in the first 50 years 604.

The quality of the average intellect of mankind in the first 50 years of the century XXI will be $604:(8,15\cdot 10^{9})=1,48\cdot 10^{9}$.

Problems of the XXI century may be determined based on data retro. The amount of gross domestic product of all countries, called PIBT (T - total) in the twentieth century was more than PIBT throughout the existence of mankind; PIBT of the twentieth century was 38 times higher than PIBT of the nineteenth century. The number of human population was 1900 $1,6\cdot 10^{9}$ inhabitants, in 2000 $6,2\cdot 10^{9}$, the average number of the $\dfrac{1,6+6,2}{2}\cdot 10^{9}=3,9\cdot 10^{9}$ inhabitants. The number of human population in 1800 was $1\cdot 10^{9}$ the people, the average number of inhabitants in the nineteenth century XXI was $\dfrac{1+1,6}{2}\cdot 10^{9}=1,3\cdot 10^{9}$ inhabitants. PIBT of the nineteenth century is noted by A, then in the twentieth century PIBT will 38A.

PIBT per capita in the twentieth century - $\dfrac{38A}{3,9\cdot 10^{9}}$ ;

PIBT per capita in the nineteenth century - $\dfrac{A}{1,3\cdot 10^{9}}$ .

A "man" in the twentieth century virtual lies PIBT more than a "man" in the nineteenth century virtual, 12.5 times, namely:

$$\frac{38A}{3,9\cdot 10^{9}}:\frac{A}{1,3\cdot 10^{9}}=12,5 \text{ (times)}$$

The average number of human population by 2050 will be approx. 8.4 billion people, that will increase by approx. 35% /Table 2/.

Table 2

**Analysis of GDP in most developed areas and countries of the world**

| State | SUA | UE | Japonia | Europa, Central Asia | Total |
|---|---|---|---|---|---|
| a. 2004<br><br>GDP ($10^{12}$ \$) | 10,4<br><br>100% | 6,6<br><br>63,4% | 4<br><br>38,5% | 1,1<br><br>1,05% | 32,3<br>3 or SUA<br>produces $\frac{1}{3}$ in<br>world GDP |
| GDP per capita year $10^3$ \$ | 36,1 | 21,6 | 31,5 | 2,3 | 5,3 |
| 1 month $10^3$ \$ | 3 | 1,8 | 2,6 | 0,19 | 0,44 |
| Salary instead. 0,2-0,8 GDP of \$ 1 employee: \$ 7000 / 2 years | 600-2.400<br>8.400 | 360-1.440 | 520-2.080 | 38-152 | 88-352 |
| Population place $10^4$ | 288 | 306 | 127 | 476 | 6.100 |
| Increased min. pop. % | 0,9 | 0,2 | 0,0 | 0,1 | 1,3 |
| Longevity of life | 78,0 | 78,2 | 81,1 | 68,6 | 66,7 |
| Area $10^6$ , km$^2$ | 9,6 | 2,5 | 0,38 | 24,2 | 133,9 |

*Source:      author      calculations      based      on      statistical      data*

## CONCLUSIONS

But starting from the assumption that the per capita amount of PIBT will remain at the level of 2000, environmental pollution will increase at least 30%, but if PIBT growth rate per capita will be maintained at the twentieth century, when a "Jack" century of virtual will return PIBT more than a "man" in the twentieth century virtually by 17.64 times, namely:

$$\frac{38 \cdot 38A}{8,4 \cdot 10^9} : \frac{38A}{3,9 \cdot 10^9} = 17,64 \text{ fold in 50 years about. 9 times.}$$

Compared to the nineteenth century PIBT per capita in the century will increase 223 times. This economic success will have serious consequences for the ecological problems and will appear in the depletion of natural resources ireproductibile will appear incurable diseases, etc..

In these circumstances the demand for intellectual products will increase.

**Finally, as a general conclusion**, intellectual products in the XXI century will be to solve environmental problems, the creation of telecommunications technology, the informatization, training of medical treatment.

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