

On the Natural Economic Integral Indicator of Labor Productivity

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ABSTRACT

The article presents the idea of a natural economic integral indicator of labor productivity in countries where a bioenergy measure of the cost of goods and services will be introduced. The essence of this indicator is that each year the cost of 1 kg of gross harvest of biological energy (food) is determined, represented in the calorie content of the national grain crop of a particular country. This annual indicator illustrates the growth or decline in the “displacement” of edible energy by “inedible” energy from the production of goods and services. In other words, it becomes obvious to all its citizens that the cost is decreasing or vice versa.

Therefore, the prices of goods should also change accordingly. It is clear that the cost of goods can decrease to certain asymptotic conditions.

Keywords: Integral Indicator, Cost of Goods, Bioenergy Measure of Value, National Grain Crop, Bioenergy Equivalent of the National Monetary Unit

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Introduction

In my opinion, economic science has now reached a dead end due to the nefarious corporate activities of the so-called economists. In economic periodicals, I have not come across even one of them raising the question of any measure of value. These people have transformed the truly natural economic science into a pseudo-science that “scientifically” serves economic fraud. I will not analyze the “exaggerations” that have been taking place in this science over the past 2 centuries. All of them were and are either provocative or subversive. Money still remained arbitrary quantities, and therefore, means of economic fraud. So, as a result, a non-labor material stratification of the population arose, which leads to all sorts of rebellions, uprisings, wars, etc. And modern wars, in particular the Russian-Ukrainian one, are confirmation of this.

So, the purpose of the article is to describe the algorithm for calculating this integral indicator. In I substantiated how to introduce planetary money [1]. It is clear who wants to understand

that this is the only way to preserve our earthly civilization to live in peace and tranquility. Of course, imperialists of all stripes will offer fierce resistance, **but it is impossible to deceive life.**

Let's assume that in every country there is seasonal food production, perhaps except for tropical countries. The agro-industrial complex (AIC) produces a certain amount of bioenergy (food) during the season together with nature. In economic science, this is called gross domestic product (GDP). Unfortunately, to this day it is determined in money, which over time creates a distorted idea of GDP in kind. The number of agricultural workers in each country can be calculated according to the data of national Statistical Yearbooks.

Those citizens who are supported by taxes on agricultural workers, that is, from the budget, participate in production indirectly. This includes the state apparatus, police, judiciary, army, education, medicine, various social benefits, etc. In other words, the whole society directly or indirectly works in the “field”.

Now we can calculate the amount of food consumed by agricultural workers per year. There is a rule: if a country produces one ton of grains and legumes per capita, then the country is considered self-sufficient.

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Next. We divide the amount of food consumed in kcal by the number of kg of food collected and get the cost price of 1 kg of total food, that is, produced per season. In mathematical form, this looks like this: $K = N \cdot E_d / M$, where K is an integral indicator of labor productivity (in kCal), N is the number of agricultural workers, E_d is the energy of the daily life cycle of an average agricultural worker, M is the gross seasonal food harvest, presented in kg according to the calorie content of the national grain crop. Moreover, $E_d = 3E_k$, where E_k is the daily physiological energy requirement of an average agricultural worker. Why another $2E_k$? We assume that two more units of E_k are needed for infrastructure. Information appears on the Internet that approximately a third of the salary is spent on food.

Everything stated above applies to countries that are self-sufficient, that is, they provide their population with their own food. **But what about countries where this is not the case?**

Preliminary remark. In each country, the age composition of the population is as follows: a third is children under 18 years of age, a third is able-bodied adults, and a third is pensioners aged 60 and over.

In this case, the following option is proposed. For example, consider the calculation of K for China. The national grain crop in China is rice. One kg of rice contains 3030 kCalories. The population of China in 2024 was 1408 million people (Internet). Let's assume that the working age population in China will be somewhere around $100\% - 33\% - 33\% = 34\%$, or it will be $1408 \cdot 0.34 = 478.7$ million.

In 2024, China produced 706.5 million tons of grain, and for a normal life, 1408 million tons are needed, that is, one ton per capita. Where can we realistically get more food to cover this shortage? I assume that we can add another 30% from milk, vegetables, fruits, seafood, etc. So our own annual food supply will be $706.5 \cdot 1.3 = 918.5$ million tons. Now per capita there will be $918.5 \cdot 10^6 / 1408 \cdot 10^6 = 0.65$ t/capita.

About 0.35 t is missing from 1 t. This shortage of food forces the Chinese to exchange "inedible" goods for edible ones in other countries, that is, to trade intensively. And this means that the number of workers in the agro-industrial complex (AIC) of China must be reduced by about 30%, since they are forced to produce "inedible" goods for export. Another 25% of the working population is withheld from the budget (I am guided by my calculations for Ukraine).

Thus, about $100\% - 30\% - 25\% = 45\%$ of workers remain in the AIC, or it will be $478.7 \cdot 0.45 = 215.415$ million. In a year, these agricultural workers will consume $215.415 \cdot 10^6 \cdot 10^3 \cdot 3000 = 646.24 \cdot 10^{12}$ (kCalories). So, $K = 646.24 \cdot 10^{12} / 918.5 \cdot 10^9 = 704$ kCal/kg.

These calculations completely coincide with my calculations for Ukraine in 2017 [2]. I would like to draw your attention to the fact that in China in 2017 almost 500 million tons of grain were produced, and in 2024 already 706.5 million tons. So, labor productivity in 7 years has grown almost 1.4 times or 40%. This was due to various factors (I will not recalculate).

I calculated K under the hypothetical condition that China has already introduced the bioenergy equivalent of the yuan (maybe rice or wheat). If this were to happen in reality, a real economic revolution would take place in the planetary economy. This would be an example of how to put an end to virtual economic science and practice, and the beginning of a new economic science of physical sense. Obviously, the dollar would stop "walking" around the planet.

Now let's imagine that this indicator K is calculated in each country. **What valuable information appears in the hands of economic analysts!** Now it is done somehow - "by eye". For national governments, there is also something to think about how to improve this indicator.

It is obvious that the integral indicator of labor productivity depends on the process of "displacing" edible energy by "inedible" energy from the production of goods and services. As K decreases annually, prices for goods will also decrease with stable salaries, which are determined by the physiological and household needs of a person. This will also mean that the improvement of society will grow in proportion to the decrease in K .

My calculations according to the Statistical Yearbook of Ukraine for 2013 amounted to 700 kcal/kg (for a round number). I remind you that 1 kg of "calculated" wheat contains 3000 kCal. Therefore, when exchanging an "inedible" product for an edible one, the owner receives 3 - 4 times more biological energy than he consumed in the manufacture of a unit of goods, provided that the law of equality of values of exchanged goods is fulfilled. And the whole process takes place without any fraud (almost).

The annual calculation of K will show the dynamics of the development of the national economy of each country depending on the effective activities of the national government, interstate relations, weather conditions, etc.

Naturally, the decrease in K will be to a certain asymptotic limit, where it is no longer possible to release workers from production, that is, the mechanization and automation of production also has its limits.

It is logical to think that with such an economic system, inflation and deflation of national monetary units will be self-liquidating, since the amount of money determines the country's GDP. But there is a question: the idea is wonderful, but who will implement it? We can hope for the national elites of countries, if they somehow realize that only in this way can life in their countries be normalized.

Since the entire planetary economy "revolves" around bioenergy (food) and money, it would be appropriate to mention something about the history of money. "Mountains" of literature have been written on this topic. Personally, I have read, leafed through maybe a dozen books by different authors, and in none of them have I encountered a normal interpretation of money as representatives of something concrete material. So, here are collected various "gossip" about money that once existed and exist now. There is no objection to the fact that money is an intermediary in the exchange of goods. But at the same time, a monetary unit must represent a certain value.

The natural daily physiological energy requirement of an average adult person is 3000 k Cal and will be the universal integral measure of the cost of goods and services, also presented in kCalories. Let me remind you of the basic principle of metrology: like is measured by like. The entire International System of Weights and Measures (SI) is organized on this principle. Popular wisdom says: no measure, no trust.

For example, consider the monograph by Harris L. (1932 - 2015) "Money Theory", 1981, 750 p. [3]. Judging by the biography, he was our contemporary and should know what energy in general and biological energy in particular is. But no, he collected scholasticism and "gossip" about money from perhaps a dozen of the same "scientists" as himself. Then the question is: why did they promote such scholasticism about money? I have only one answer: some underground organization forbade writing the truth about money. In the press I came across the name - Financial International. If this is so, and according to the second it cannot be, then it becomes clear why in our time there is no material measure of the value of goods and services and, accordingly, a material equivalent of national monetary units.

Conclusions

The proposed integral method of assessing labor productivity would make it possible to organize this existing chaos in the planetary economy. Each country in its development would move towards autarky. Critical imports would be compensated by trade. The main problem of the planetary economy is the significant difficulties in introducing a material bioenergy equivalent of monetary units in each country of planet Earth.

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