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Innovations in the Global Process of Capital Reproduction

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***Abstract*—One of the main factors for globalization is innovation. The research of the globalization and innovation impact on the capital reproduction process is one of the most relevant. Each country tries to influence the global process through its domestic labor force, means of production, import-export tariffs and tax rates. The method of comparing capital reproduction approaches allowed to identify advantages and disadvantages for each other. Based on the analysis, it was found that the greatest threat to the economy is undoubtedly a sharp increase in technological unemployment. Any approach based on the principles of Keynesian Economics (through capital gains and job creation) should help to stimulate the national economy and consumer demand through the process of capital reproduction. This principle does not work well when manual labor is replaced by robotic technology and intellectual capital is replaced by artificial intelligence. It is concluded that it is necessary to stimulate retraining of unemployed citizens as a result of innovative activities. As a novelty, authors proposed to create a special Fund supported by taxes or compensation derived from the economic value added from innovation (EVAfI), which directly led to the reduction of jobs. This Fund can help retrain the unemployed to affordable jobs in the economy and support effective demand to continue capital reproduction process.**

Keywords: reproduction process, globalization, innovation, capital gain, taxes, jobs, demand

I. INTRODUCTION

The participation of national economies in the capital reproduction process of globalization has both positive and negative consequences.

- The positive implications include additional opportunities to accelerate economic growth.
- As a negative consequence, countries can have imbalanced economic development across the various sectors of their national economy and technological unemployment.

The idea that countries with an open economy benefit most from globalization does not justify itself at present. Countries which are active participants in the capital reproduction process of globalization do not show significant economic growth despite the full use of advantages in world trade relative to other national economies. One of the main reasons is unemployment due to constantly changing technology. At the same time national economies are becoming increasingly dependent on supranational institutions.

Global processes will tend to have a stronger effect on countries that are actively involved in the globalization process.

The impact of globalization on the capital reproduction process and national economies requires special attention.

II. RESEARCH METHODOLOGY (THE CAPITAL REPRODUCTION APPROACH COMPARING)

Capital investment plays a decisive role in widespread technologies, industrial re-equipment, and the formation of transnational manufacturing. This directly affects national economies. Branches of the national economy which have higher manufacturing costs in comparison with trans-national companies tend to close as they are not competitive.

One of the main factors that stimulate globalization is innovation. Technological innovation makes the process of capital reproduction cheaper and helps increase capital gains. This intellectual capital is one of the most important drivers for economic growth in the global marketplace.

At the same time, it can be noted that globalization and the involvement of national economies in this process became possible with a fundamental change in the reproduction model where participating economies utilized a capitalist approach. The fall of non-market socialist economies and the end of the socialist distribution system denoted the starting point for bringing economies to a uniform process of capital reproduction.

This uniform approach of capital gains led the world economy to globalization. The basis of a socialist economy was productive assets (through manpower and means of

production) rather than financial capital [1]. There was no accumulation of profit or capital gains. On the other hand a capitalist model features financial turnover and capital gains. With such fundamental differences globalization was previously impossible.

Political and social changes, the transition to a market based economy, a capitalist model of reproduction, and the global flow of capital into national economies have led us to a deeper economic connection through globalization production processes (such as Transnational Corporations) and the reproduction of financial capital. It accompanied by clear changes in global consumption.

Many national economies felt a shock during their transition from socialist to capitalist models. However, the shock from this transition was unavoidable as socialist economies lacked the financial capital (equity) to continue the capital reproduction process under the new model conditions.

Even despite sufficient natural resources, as well as available production assets and labor, sufficient financial capital was required to maintain the reproduction cycle in accordance with the conditions under the capitalist model.

As a result, financing, ownership, management, assets, and control of the capital reproduction process were transferred to the financial capital owner who provided the capital to support the production process through direct investment or loans.

Each country tries to influence global capital reproduction process through their intra-country labor force, means of production, import / export tariffs, and tax rates. The goal is to help support domestic businesses and increase available budgets within the government.

As previously mentioned one of the greatest dangers for capital reproduction globalization is undoubtedly a sharp increase in technological unemployment. This issue is not only discussed by scientists and negative forecasts regarding technological unemployment have been declared by business owners, politicians, and even students. One of the forecasts, and in general the reality, is undoubtedly an increase in social spending, not only for national economies, but also the world economy as a whole.

With the progress of technology, the need for a large labor force decreases. Globalization implies the introduction of innovations across various fields that provide a reproductive cycle with more progressive tech, reducing costs, and replacing unnecessary workers. In this aspect, we are no longer talking about national or sectoral affiliation, but instead the fundamental issue of technology and innovations replacing the global workforce along with natural resources, and thus causing major changes to the global process of production and consumption. As an example, an automated factory that produces electric cars can replace both the workforce and the need for oil or gas.

Social tension related to unemployment is giving rise to questions about redistribution of accumulated capital and supporting consumption.

It is worth noting that changing technologies have a huge impact on the global reproduction process as technological changes often have both positive and negative consequences. On the one hand new technologies can offer lower prices for goods. On the other hand higher unemployment means governments must increase social spending and retraining for unemployed workers.

Obviously, the process itself has consequences that must be taken into account. While the world economy is already tied to globalization, countries must understand the disruption that comes with it and be prepared to implement social and financial changes that protect their economies.

The globalization of capital reproduction is involving smaller participants in the process, forcing Transnational Corporations (TNC's) to cooperate with the micro-level of national economies. This process reflects the so-called "global paradox," according to John Naisbitt [2] — "the bigger the world economy, the more powerful its smallest players." This paradox demonstrates several aspects of globalization, namely the cooperation of TNCs with small local manufacturers, as well as the fact that telecommunications and the Internet creating a level playing field for small and medium business against large TNC's.

However, the essence of the global capital reproduction process does not change. The important question here is who owns the initial capital that starts and supports the reproduction process and who receives the capital gain.

Transnational corporations are constantly working to optimize their means of production and labor force, using innovations and the Process Approach, to achieve the highest gains in the capital reproduction process. With these complex processes underway they are the main drivers of globalization. Very often TNC's outsource business processes (for example logistics) to local small and medium business to maximize profits and decrease their tax liabilities.

Such outsourcing although, it creates jobs outside the framework of TNC's and within the national economy, is actually a way to maximize the financial results of the capital reproduction process for the TNC's. In other words, the global capital reproduction process as an existing model, regardless of whether a national economy is open or closed, ultimately benefits the TNC's and their beneficiaries the most. Local companies utilized by the TNC's often go bankrupt as they cannot maintain an effective balance between income, expenses, and taxes. Their role in the national economy is to provide wages for local employees before they are forced to close or change technologies and reeducate the workers.

III. Results (Impact of Innovation)

The current financial architecture of the world economy, which assumes the parallel existence of two capital reproduction models (simple and expanded method)[3,4], actually puts certain national economies, consumers and producers of financial capital in an unequal position. World financial centers and the banking system constantly accumulate and further reproduce capital gains, based on the ability of financial capital to self-reproduce. A simple example is interest accrued in a bank account.

Economies that include the Simple method of capital reproduction, such as the stock market, are able to accumulate financial gains faster than economies that are mostly based on the Expanded method of capital reproduction that includes manufacturing. Those economies that are dependent on the Expanded method of capital reproduction are at a disadvantage because their reproduction cycle includes production expenses, large initial capital outlays, depreciation of assets, social expenses, and longer return on investment for their production cycle compared the Simple method (investing in stocks for example). Theoretically, economies using the Simple method of capital reproduction have the ability to fill their budgets faster if needed.

The capital reproduction process has two main sides. Firstly, we mean the capital reproduction process by any method (simple or extended) including the associated risks. Secondly, the process of converting manufactured goods and services into financial capital, which is considered consumption, in accordance with the Extended method of capital reproduction. To ensure consumption, it is necessary to ensure effective payable demand which is supported by wages and distribution of capital gains. At the end of our capital reproduction process we separate capital gain between owners and the government with the owners receiving dividends and the government receiving taxes for their budgets. There are multiple theories regarding the "fair" or "unfair" distribution of capital in the global reproduction process.

Growing social inequality and the need to ensure demand for goods creates a need to review the existing capital reproduction model. These issues need to be addressed by not only scientists and economists, but politicians and business owners.

IV. DISCUSSION

Different approaches are being implemented to increase the variety of goods and services for consumers despite the wealth gap. One approach that is gaining traction is the "sharing economy." Electric Scooter Rental is a shining example of the sharing economy. The sharing economy approaches capital reproduction in the same basic way as before, production and consumption. However, the relation between production and consumption have changed with less consumption opportunities as consumers have less free money to purchase goods. This is where the sharing economy fills the gap to allow for continued consumption. This asserts the idea that it is more cost-effective to pay for temporary access to goods rather than owning them. The appearance is that "more convenient" is "less expensive." Everything else is just a substitution of concepts.

The sharing economy does not change the fundamental capital reproduction process and resulting distribution of goods and services. On the contrary, collective consumption provides the basis for reducing the cost of our reproduction cycle by lowering labor costs. Consumption becomes more diverse due to the collective use of more goods and services.

This approach creates a wider audience of customers for the business owners to transform their goods or services into financial capital.

Working with an effective payable client base historically happened in order to maintain the capital reproduction process, stimulate demand for reproduced goods, transform them into financial capital, and ultimately maximize capital gains.

The loss of the connection between production and consumer preferences in practice leads first to losses and finally to bankruptcy if consumers aren't satisfied. In this case the capital reproduction cycle is unprofitable and must be stopped in order to re-optimize your production to sync with consumer demand if possible.

The planned socialist economy theoretically strove for a fair distribution of wealth in society. This process was accompanied by guaranteed jobs and wages, as well as the lack of capital gains for distribution in society. Demand was stimulated by deficiency.

The capitalist economy is moving on the opposite principles. Maximizing capital gains by reducing costs (including wages), as well as satisfying customer preferences, is the main goal. Globalization and Innovation (process and product) is the main tool for achieving maximum results in the process of financial capital reproduction.

It is worth recalling that scientific and technological progress is an integral part of the globalization process and creates technological unemployment. Manual labor is being replaced by robotic technology, and intellectual capital is being replaced by artificial intelligence.

There are current attempts to combine capital reproduction with an equitable social distribution of capital gains.

An example of this is UBI, or Universal Basic Income [5]. This concept of guaranteed income arose as a utopian solution to social inequality and the wealth gap. In addition, UBI is being used to help ensure continued consumer demand for produced goods and create capital gains. The idea that each citizen owns a share of the national wealth has become widespread and transformed into a political trend. However, Keynesian economics model substantiated the State role in stimulating demand at the expense of state policy [6], and at the same time confrontation of socialism and capitalism did not allow for UBI to be implemented on a practical level.

Any approach based on the principles of Keynesian economics (through capital gains and creating jobs) should help stimulate the national economy and consumer demand through the process of capital reproduction.

This principal does not work well when manual labor is being replaced by robotic technology, and intellectual capital is being replaced by artificial intelligence.

When expenses for a labor force are partially or completely absent in the high-tech reproduction cycle, it seems the main purpose of maximizing capital gains is achieved as salaries are reduced.

But sales and, accordingly, consumption must be ensured.

Theoretically, to provide continued consumption may use several sources:

- Continue paying salaries to our labor force, which is an issue as technology continues to replace physical workers.
- Unemployment benefits paid from the federal budget.
- Charity directly from the profits of private and public companies.
- A special fund created and supported from taxes generated by Economic Value Added [7] from Innovation (*EVAfI*) that directly led to job reductions. This fund can help retrain unemployed workers for new available jobs in the economy.

Often *EVA* as an indicator is used by large companies to motivate top managers. If *EVA* is unattainable via innovation these managers can fire personnel and manipulate the underlying metrics to show positive results. While labor expenses are reduced the remaining employees have an increased workload and stress which can negatively impact the company. At the same time a reduced labor force reduces taxes paid into government budgets and requires more government spending on welfare and retraining of unemployed workers. A solution we propose is to create a fund from *EVAfI* can compensate for the loss of taxes from salaries, and help the government retrain unemployed workers for new emerging professions which ultimately helps support consumer demand in our capital reproduction process. This can also help reduce manipulation by corporate employees to show results at the expense of capital reproduction.

V. CONCLUSIONS

The authors proposal to use the *EVA* indicator as a basis for forming compensation Fund is a novelty. It is based on the approach of corporate financial analysis and the study of the fundamental theory of the capital reproduction process.

The main reason a fund from *EVAfI* is beneficial is because it helps support consumer demand, soothes social inequality, and overcomes the disruption from innovation.

The four main effects from innovation include:

1. The technical effect from innovation means that innovations drive increased use of technology in society, making us more dependent on that technology in our daily lives.

2. Innovations affect all industries and the labor resources in those industries. Social has led to the release of labor resources - technological unemployment, which requires adequate social security.

3. Innovations help drive additional capital gain and EVA for business owners.

4. Innovations affect technological unemployment, consumer demand, and the reproduction of intellectual capital. This can cause irreversible changes in society such as:

- Loss of older technology due to lack of specialists which direct knowledge of a particular technology.
- Accumulation of control over technologies and the reproduction process in the hands of even fewer people than before, which can lead to deeper economic and social inequalities.
- Providing social guarantees through the *EVAfI fund* for unemployed workers that retrain them for emerging job opportunities that ultimately support the capital reproduction process and consumer demand moving forward.

This article does not address global currencies and their associated exchange rates relative to the *EVAfI fund.*

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