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A POST-COVID-19 ECONOMIC RECOVERY PROPOSAL: THE NATIONAL DOMESTIC ECONOMIC AUTO-SUSTAINABILITY MODEL (NDEAS-MODEL)

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Abstract

The significant damage of COVID-19 on the world economy forces us to reconsider a deep restructuration domestically and internationally in the next few years. This paper suggests a Post-COVID-19 reconstruction model is called "The National Domestic Economic Auto-Sustainability Model (NDEAS-Model)." The NDEAS-Model proposes four economic platforms: (i) the domestic education and technical training standardization platform (P1); (ii) the domestic productive infrastructure and transportation platform (P2); (iii) the selective strategic trade, investment, and tourism protection platform (P3); (iv) the environmental and natural resources management platform (P4). The main objective of NDEAS-Model is to avoid imported massive pandemic diseases, non-sustainable and weak food security platforms, and job diversion, respectively.

Keywords: Economic Simulation, Massive Pandemics, COVID-19, Policy Modelling, Food Security

Introduction

The national domestic economic auto-sustainability model (NDEAS-Model) applies to any country worldwide. In proposing the application of the NDEAS-Model, this study presents a three-part analysis: (i) an introduction to the NDEAS-Model; (ii) the NDEAS-Model Platform; (iii) how the NDEAS-Model works?; (iv) the last part of the analysis aims to demonstrate the post-effects of NDEAS-Model implementation to generate strong economies after a massive pandemic contagious diseases, and thus, to integrate any country domestically and regionally more than globally. The NDEAS-Model is intended to be a proposal to offer a new economic model to avoid massive pandemic damage. The NDEAS-Model demonstrates the necessary conditions to succeed in any country in the case of worldwide pandemic diseases is essential to implement new economic platforms offered by NDEAS-Model. This research paper proposes the implementation of the NDEAS-Model to help any country reduce its vulnerability in the case of worldwide pandemic diseases anytime and anywhere. The NDEAS-Model will generate sustainable food security in any country. In turn, the job creation (less unemployment) effect will create a spillover effect in any economy in the short run. In the long term, this helps reduce import dependency and imported inflation, respectively.

An Introduction to the national domestic economic auto-sustainability model (NDEAS-Model)

The NDEAS-Model is an equitable and harmonious domestic and neighbor's economic scheme. It is based on the interaction between a series of economic platforms. More precisely, the implementation of the national internal economic auto-sustainability model (NDEAS-Model) involves the application and coordination of a series of economic platforms with social and economic implications at different priorities respectively as well as the use of a new socio-economic development model to replace the global economies integration through the globalization framework by a more robust domestic economies development under the Deglobalization framework. This said interaction is based on four economic platforms: (i) the domestic education and technical training standardization platform (P1); (ii) the domestic productive infrastructure and transportation platform (P2); (iii) the selective strategic trade, investment, and tourism protection platform (P3); (iv) the environmental and natural resources management platform (P4). The coordination and systematic control of these platforms can create favorable conditions to avoid pandemics (imported diseases) and thereby enables counties in any pandemic crisis to protect all nationals from import scarcity, price speculation, imported inflation, and jobs diversion.

As indicated above, the NDEAS-Model adapts its platforms to the requirements and characteristics of any country. The general objective of the NDEAS-Model is to increase the national and neighbors' trade through the increment of national productivity, efficiency, and competitiveness. The principles behind NDEAS-Model are nationalism, cooperation, tolerance, and respect. There are seven specific objectives of the NDEAS-Model theoretical framework:

(i) Through the combination of its four platforms and the new focus on the support of domestic and neighbors' economies, the NDEAS-Model seeks to serve as a new approach suitable for integrating national economies in massive pandemics, prices speculation, imported inflation, and jobs diversion.

(ii) The NDEAS-Model seeks to offer a primary mechanism to strengthen the weak areas of any country according to the social, economic, technological, and political situations in any country (Ruiz Estrada 2011) and (Ruiz Estrada and Park, 2018). It also takes into account the internal and external conditions of each country.

(iii) With its emphasis on the new world order resurgence of Deglobalization, as well as its adoption of a new-functional and flexible structure, the NDEAS-Model presents a new focus for integrating any domestic economy with its neighbors' economies easily.

(iv) Taking domestic education and training as the pillar of local human capital formation, the NDEAS-Model seeks to create a new type of economic system through the diversification of academic programs at elementary, high school, technical/vocational training, universities and research levels.

(v) The NDEAS-Model seeks to generate equal benefits to any country. This is done by attaching much attention to firstly, the building of a more robust domestic physical infrastructure to help in the mobility of local goods and the local labor factor; secondly.

(vi) The NDEAS-Model places much emphasis on the strategic national and neighbored trade, investment, and tourism protection issues.

(vii) Through the control of natural resources management and pollution by different public institutions and NGO's on the national level.

The National Domestic Economic Auto-Sustainability Model (NDEAS-Model) Platforms

The Domestic Education and Technical Training Standardization Platform (P_1)

The first platform in the NDEAS-Model is the domestic education and technical training standardization platform (P1). This program uses an action framework to create domestic high qualified human capital based on the standardization of education and training at the national level. In this platform, an action framework is used to standardize private education in the country and to concurrently create the conditions to produce highly qualified domestic labor with high productivity and competitiveness. This pool of capable human capital, in turn, provides goods and services with high added value that competes well in the domestic and international market, as well as serving as a primary tool to reduce unemployment and job creation.

There are four principal domestic activities in this program, namely:

1. Free education to raise their basic education level
2. National coordination and standardization of elementary and high school programs
3. Local development of technical training programs
4. Setting up any national university information network based on joint research and development projects capitalizes on these four activities (Ruiz Estrada, 2005)

This program's general objective is to lay a solid national education foundation for the younger generation in the country so that they can compete domestically and internationally.

At the tertiary level, the development of a domestic technical training program tries to join different academic programs in various scientific fields by exchanging educational programs at the national level**,** including the transfer of professors and experts and joint research and development (R) in different scientific areas. An exchange of regional professors (and experts) in various fields (for short courses and seminars) should be implemented.

This approach, accompanied by national scholarships at the Master's and Doctoral programs around the world**,** together with joint research and development (R&D) among universities in the same country, is more likely to meet with success. This approach should be complemented with the offer of national post-graduate scholarships among universities in the same region.

About national technical training, this program proposes a common strategy for the coordination and standardization of national training in different sectors such as agriculture, industry, and services to be put under the purview of national technical institutes and engineering faculties of the universities in the country.

Meanwhile, the national information technology platform should be considered the basis of national education development. It is instrumental in information exchange in the coordination and standardization effort of this education and technical training program. It is responsible for coordinating all programs using information exchange at different levels based on the knowledge and professional training standardization programs.

The Domestic Productive Infrastructure and Transportation Platform (P_2)

This section considers two types of infrastructure and transportation systems in the domestic public infrastructure: transportation and domestic private infrastructure and transportation. It is especially pertinent to pay attention to these two types of infrastructure and transportation

systems in countries with a limited infrastructure budget. This is because the inadequacy of infrastructures and transportation systems creates a constant poverty cycle according to this research and thereby inhibits the national production growth and domestic human development within the country concerned.

The general objective of this joint domestic infrastructure and transportation programs between public and private is to solicit financial support from regional technical and business organizations. These organizations may help to develop better local infrastructure in bilateral or regional negotiations. In this regard, this platform serves as a guide for developing domestic infrastructure and transportation mega-projects proposals to obtain credit from different local financial organizations.

The domestic social infrastructure and transportation systems aim to promote efforts relating to social well-being such as supplies of hospitals assistance in times of natural disasters, epidemics, public transportation systems, provision of schools and universities, as well as installation of national security infrastructures such as police stations, military quarters, and fire stations. All these efforts can significantly serve as a base for economic development in any country concerned: the favourable domestic socio-economic conditions resulting from the improvement of the internal social infrastructures and transportations systems in any country respectively, to reduce its vulnerability.

The other aspect of the platform of the productive infrastructures and transportations systems refers to communication services, public transportation, physical infrastructure cooperation (bridges, highways, railways, airports, and ports).

The Strategic Selective Trade, Investment, and Tourism Protection Platform (P_3)

The third program of the NDEAS-Model is the selective strategic trade, investment, and tourism protection platform (P3). This platform's general objective is to concentrate efforts within any country and neighbors' countries to create a more reliable platform to promote trade, investment, and tourism at an intra-neighbor level.

More specifically, this module of the NDEAS-Model seeks to expand the national production and exports of any country in different neighbors' markets based on the increment of domestic productivity and competitiveness, as well as to attract into the region direct investment (RDI) and tourists from different neighbors' countries. This platform can also have interested to protect particular strategic food security and manufacturing sectors in case of war, pandemics, and national emergencies.

The efforts adopted for the above objectives include the classification of all essential food items and manufacturing sectors to build a stable food security platform. By participating and support a large number of small and medium producers technically and financially, all essential food items will be easily identified and organized according to a list of national food priorities. In turn, this enables them to produce enough in any national emergency, such as the case of a massive pandemic. It also becomes more comfortable for people to find stocks of food anytime and anywhere. As a result of the above, all small and medium producers who participate in this platform has the same opportunity to compete.

The Environmental and Natural Resources Management Platform (P_4)

The environmental and natural resources management platform (P4) is the fourth platform in the NDEAS-Model. This module's central idea is to look for a solution to different problems in the environmental and natural resources management and planning of any country. This

module focuses on administrative procedures, legal framework, and institutional organizations to help improve the environment and uses of natural disasters, respectively.

Additionally, it is proposed here that specialized R & D centres be set up to provide consultation and advice to solve environmental and natural disaster management issues. At least three categories of R&D with their respective centres should be put in place:

1. Information and education about the environment
2. The creation of public, legal and institutional platform pro-environment and natural resources management
3. New technologies to benefit the environment and natural resources management

How the NDEAS-Model Works?

For demonstration, this study presents two countries, Country-A and Country-B and two scenarios (S), S1 (without pandemics), and S2 (with pandemics) in the application of the NDEAS-Model.

The Country-A with a secure link with globalization (attached firmly to free trade). The Country-B is also connected to globalization with a higher dependency on the free trade than Country-A ruling under the application of the GATT-international legal framework and the World Trade Organization (WTO) institutionally**.**

Country-A

It is postulated that the higher free trade. In the case presented here, however, Country-A is trying to attempt to attach more to the dynamic worldwide trade process under the framework of Globalization. The Country-A produces raw materials and some manufacturing products, that is, agricultural products in raw forms. As raw materials, Country-A has low added value and thus commands low prices in the international market. Similarly, the industrial structure of Country-A is minimal and limited in number. Although country-A exists relatively less environmental and pollution problems than Country-B in the short run, it lacks continuous massive exploitation of its natural resources exist a high probability of getting high levels of pollution in Country-A. The deficit in the balance of trade shows the trade dependency level of capital goods and intermediate goods imported from Country-B. In this case, we don't have any massive pandemic. Therefore, Country-A would have to depend on the Country-B for capital goods and intermediate goods. As a result, Country-A always has a higher deficit in its balance of trade about Country-B. Thus, Country-A still has a high debt in its balance of business, respectively.

Besides a high deficit in its balance of trade, Country-A also has a low income with low national productivity. Consequently, both the national saving level (saving = investment) and the domestic investment are low. In the case of investment is expensive and difficult to obtain by the private sector at the national and regional levels, because the interest rate is higher for the limited nationwide savings in Country-A. The limited savings face a series of obstacles in its attempt to increase investment for domestic production. Therefore, the export supply is smaller.

Additionally, the small export supply is also affected by poor add value and diversity of products and services. The high cost of production stems from the higher production cost. The

high cost of production affects the domestic and regional market prices directly. As a result, the local high qualified workers is lower; consequently, unemployment is higher.

Also, the infrastructure and transportation systems in Country-A is smaller. In this case, Country-A consumption is higher under free trade with Country-B in the form of trade liberalization under the assumption of non-exist imported inflation. Our assumption as to why the use in Country-A is higher is based on the import dependency and fragile national food security. Another issue affecting Country-A is the weak legal framework and justice, high financial speculation, income inequality, political instability, high corruption, high bureaucracy, and scarcity of information About the country, small amounts of qualified labor supply, limited physical infrastructure. However, the cost of production in Country-A is higher from its significant dependency on imports from Country-B always. Country-A is faced with a high rate of unemployment. This constitutes a substantial obstacle to uplifting the standard of education in these countries and the reason behind the low labor productivity at the regional level. The smaller human capital high qualified supply also creates a significant obstacle to transforming the production sector of any country and hence, the quest to produce new goods and services with more high add value. In addition to the above shortcomings, Country-A has scarce physical infrastructure and transportation systems, a high gross population rate, a high level of poverty, and imbalance wealth distribution. As regard politics, Country-A experiences an unstable political instability. This is due to fragile democracies with a flexible legal framework and a lack of government institutions in Country-A. The economic elites also have a minimal interest to integrate within a single and sustainable national economic development model (see Figure 1).

Country-B

Country-B has a better scenario compared to Country-A. At the same time, Country-A has less advantage than Country-B. Country-A has a position with more natural resources and less pollution compared to Country-B with high pollution and vulnerable to get any time a massive epidemic. The Country-B economy is based on the high technology industries and services. In this case the production of Country-B shows high value-added, or in other words, the creation of industrial goods. Country-B has a comparative advantage based on the low production cost in terms of high productivity and a high number of qualified workers in the labor market. Therefore, Country-B employment is higher because the Country-B offers products with top value-added products to Country-A. However, the impact of a massive epidemic on Country-B can automatically stop to trade with Country-A (exports and imports) and starts to affect directly on the consumption of Country-A. If both countries stop to purchase, then Country-A can experience imported inflation effectively, and at the same time, jobs diversion from Country-A and Country-B. The crux of the problem comes about when, due to the comparatively higher cost of producing a commodity in Country- B due to higher labor cost (quarantine effect), Country-B experiences higher domestic inflation, at the same time higher unemployment simultaneously. Nevertheless, in the case of Country-A, the opposite situation is right to exist the possibility of closed trade with Country-B originated by a massive epidemic and open potential to job creation in Country-A (reduction of its unemployment) in the short-run (see Figure 2). This is, in effect, the situation before the implementation of the NDEAS-Model.

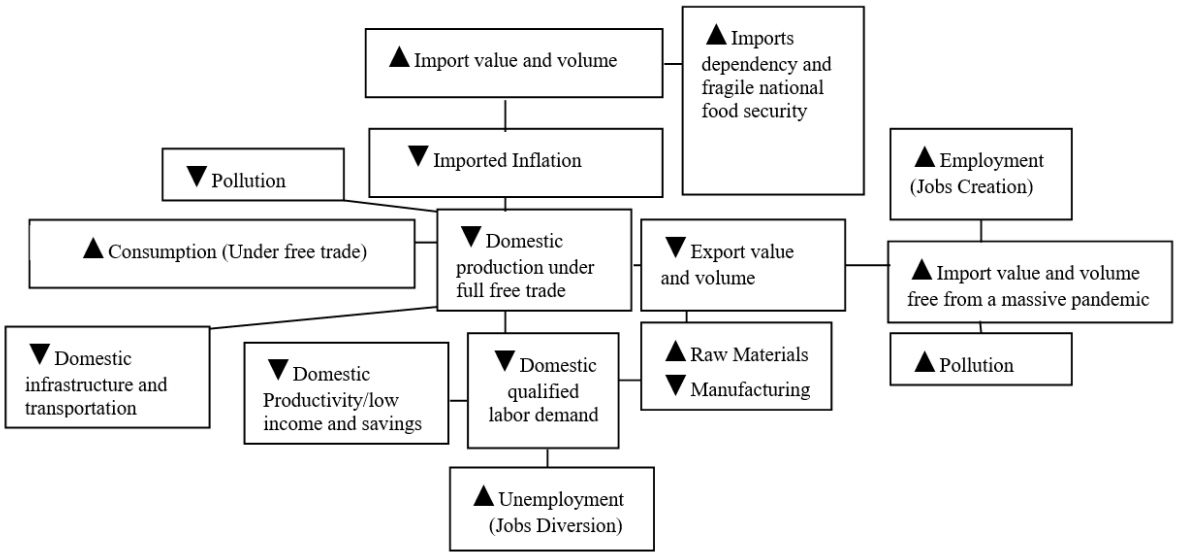

Figure 1: The Country-A Situation Without Any Massive Pandemic Diseases from Country-B

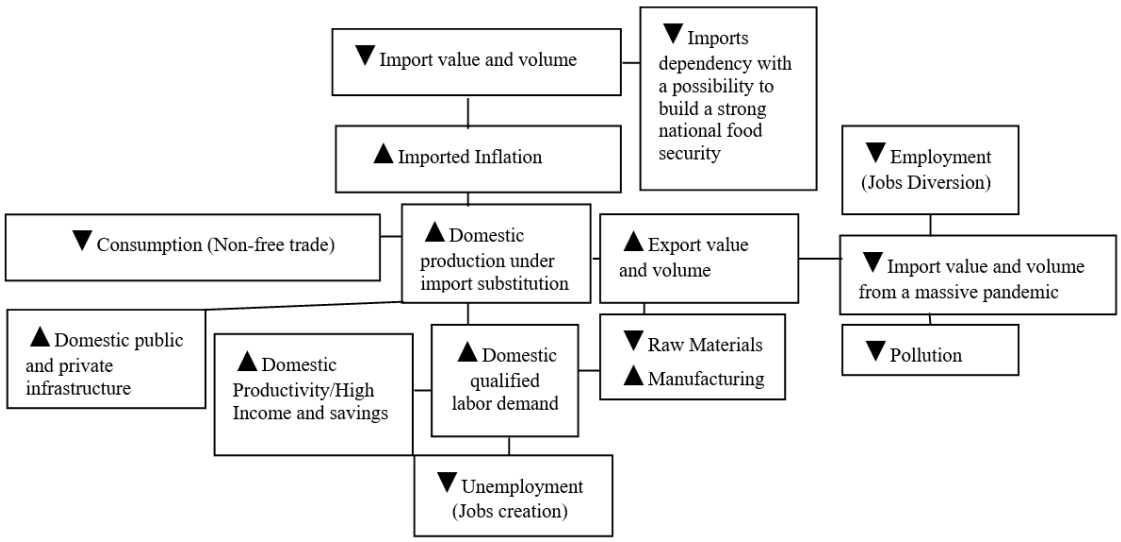

Figure 2: The Country-A situation With a Massive Pandemic Diseases from Country-B

▲ = Increase

▼ = Decrease

Source: The author

Post-Effects of the NDEAS-Model

Before the NDEAS-Model is applied in any country initiative around the world, it is recommended that an analysis of the following aspects as a whole be carried out: culture, history, stage of economic and social development, stage of the regional integration process, political situation, legal framework, local institutions available and the needs of each country. This research paper proposes the application of the four platforms to the analysis. These four platforms are used as a list of necessities and priorities that each country presents.

The four platforms of the NDEAS-Model, as explained in the earlier part of this paper are:

- The domestic education and technical training standardization platform (P1)
- The internal productive infrastructure and transportation platform (P2)
- The selective strategic trade, investment, and tourism protection platform (P3)
- The environmental and natural resources management platform (P4)

The NDEAS-Model Platforms Objectives

The Domestic Education and Technical Training Standardization Platform (P_1)

In this research paper, the general objective of the domestic education and technical training standardization platform (P1) is to increase the qualified local labor (soft technology) to enhance productivity and create new goods and services with high added-value for new market niches. It is based on innovation, strategies, and plans to develop new products and services for the local market. P1 can generate more jobs (jobs creation) with high productivity.

The above development, in turn, brings about a rise in the income and hence the savings among people in the country. The next positive result will then be an increase in the productivity derived from the P1 implementation. If productivity is higher, then the income and savings also can increase simultaneously. It pushes down the cost of production because the investment is equal to savings.

The Domestic Productive Infrastructure and Transport Platform (P_2)

This module is meant to create the conditions for the formation of domestic public and private infrastructure and transportation systems for the mobility of goods and labor domestically and internationally (import & export) of any country. The local public and private infrastructure and transportation systems can help increase domestic production and international trade of any country based on the implementation of better ports, airports, highways, railways, tunnels, and bridges. The (P2) can help considerably to generate jobs and attract investors domestically and internationally.

The Strategic Selective Trade, Investment, and Tourism Protection Platform (P_3)

In the light of the new international image of Country-A following the developments achieved through P1 and P2, the promotional programs in P3 further strengthen these developments by generating from the domestic market and thereby creates more business opportunities at the local and neighbor's level.

The P3 is based on work together in both the private and public sectors in the same country. Such an open atmosphere created in Country-A provides equal opportunity and equal conditions to all its local small and medium producers and neighbors producers in all aspects of the trade, investment, and tourism. This is manifested in the design of universal and equitable strategies for all local small, and medium producers are done efficiently.

In short, through P3, Country-A as a whole will have an improved food security program, but a shared identity as a capable country to survive in case of a massive pandemic. This platform demands the collaboration and coordination of industry and trade, exporters union (traditional and non-traditional products), chambers of commerce, tourism promotion agencies, ministry of agriculture, and ministry of foreign affairs in the same country.

The Environmental and Natural Resources Management Platform (P_4)

The last platform, the environmental and natural resources management platform (P4), aims to look for a solution to different problems that any country faces while trying to decrease pollution and better manage natural resources through intensive controls institutionally and legally. This module will improve the administrative procedures, legal framework, and institutional organizations related to better management of pollution controls and pro-environmental policies.

Considerations in the Application of NDEAS-Model

The application of NDEAS-Model is slightly varied by country. It is important to note that the necessary step to take in the NDEAS-Model for integrating any domestic economy is to foster local production reorganization to solve the structural differences of any country. In the case of Country-A, it depends on the application of the NDEAS-Model four platforms geared towards robust partial import substitution in strategic food security items and manufacturing sectors in case of a massive pandemic. This is the first step towards helping local small and large producers that do not have sufficient credit and training to compete in the domestic market.

The reduction of import dependency is part of the strategic food security, and manufacturing sector reorganization is the deciding factor for the priority step to take in the NDEAS-Model. Any country with an excellent strategic sustainable food security plan with less import dependency generates less national crisis consumption and more job creation under the domestic level. In the case of a common massive pandemic disease, the success of any country needs to seek a new flexible and sustainable production model, respectively. The NDEAS-Model offers the implementation of its four platforms. On the other hand, for any country whose imports are higher and exports are small, due to their little diversity of products and services with low added value. Their priority should be to implement the partial import substitution model than open trade. This is the step to be taken in any country to reduce risk in case of massive pandemic diseases like COVID-19.

Conclusion

Through the NDEAS-Model, this research paper recognizes the importance of less dependency on imports and national food security in the case of worldwide pandemics. The NDEAS-Model is a showcase of how the negative impact of trade liberalization could be analyzed using the

concepts of jobs-creating effect and jobs-diverting effect. It is concluded here that for the NDEAS-Model, the job-creating effects at the semi-import substitution model could be causal by a deep restructuration in the actual trade liberalization under globalization the implementation of the NDEAS-Model. Specifically, a sustainable food security model is achievable through the full support of a semi-open economy more than an open economy.

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