Food Crisis, Energy Crisis and Recession: A Global Opportunity and Challenge towards Endemic

Geraldine Grandea
De La Salle University Manila, Philippines
Email: grandeageral@gmail.com

Abstract

The purpose of this study is to analyze the energy crisis, food and recession as a challenge and opportunity in the global world towards endemic. This research uses qualitative research with descriptive analysis approach. The types of data used in this study are primary data and secondary data. Presentation of data using qualitative methods. This study shows that the disappearance of a system based on the free play of market players supported by weak regulatory management has been marked by the massive paralysis of private investment in the energy and food sectors on a global scale, particularly gas and electricity. The effect is yet to be seen due to a significant economic recession, but it is unknown to experts that in 2023 there will be a recession. The recent economic recovery has led to an increase in energy demand and the first effects of the crisis are imminent, this of course due to the protracted war between Russia and Ukraine. The current government is late in reacting to problems that have structural characteristics that are impossible to solve in the short term.

Keywords: *Crisis*, *Food*, *Energy*, *Recession*, *Economy.*

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A. INTRODUCTION

There are a variety of types of economic crises, but they all share the characteristic of being periods of severe imbalance. Some of the most general definitions (Marazziti et al., 2021) propose that an economic crisis is "a situation of large-scale public dissatisfaction or even fear that emanates from a range of economic problems" (p. 440). According to Gourinchas (2020), a crisis is defined by the existence of poor annual economic performance. The different types of economic crisis can be independent of each other.

Carletto et al. (2021) identify five types of economic crisis. Crises can provoke each other and trigger cycles with political correlates, also endogenously. For example, according to Alexopoulus et al. (2019), Philippines's political instability in the period 1956-1976 was due to the type of incentives for political-economic actors that emerged from business cycles—balance of payments crises, devaluation, stabilization programs, etc. recession-. These incentives generated changing and short-term alliances between the big urban bourgeoisie, the Pampas bourgeoisie and the local urban bourgeoisie, the unions and the urban sector.

On the other hand, financial crises are disturbances associated with falls in asset prices and non-payment of acquired debt, which can spread within the financial market, altering its ability to allocate capital (Sanches et al., 2021). The severity of financial crises has been related to the strongest economic contractions. The

monetarists, for example Lacerda (2019) argue that State intervention should be almost null in the presence of exogenous structures related to the money supply. Other authors point to a greater need for intervention in the face of the existence of endogenous or crisis-prone financial structures and foreign currency speculation in international currency markets (Kriesi et al., 2020). Matsubayashi et al. (2020) indicates that both the monetarists and the Keynesians ignore the instability of credit and the fragility of the banking system; in addition, he argues that the negative impact on production and prices of the paralysis of the credit system must be observed.

Some studies use the principal-agent theory with the information asymmetry framework to understand the nature of financial crises, analyzing how financial markets worsen by not channeling funds efficiently, slowing down economic activity (Urso et al., 2019). According to Villani & Fana (2021), five factors cause financial crises, including interest rates and falls in the price level. From another perspective, the effects of financial crises on the international environment have been investigated. In general, the assumption that the financial crisis is directly related to the financial market suggests that it can spread throughout the economy, taking the notion of the generalization and propagation of financial crises (Fourstreis et al., 2018). Also, financial crises can be transmitted through trade links.

Recent studies consider that the efficient use of energy is the most effective measure, in the short and medium term, to achieve a significant reduction in CO_2 emissions and other greenhouse gases. Furthermore, it is not only the environment that benefits from greater efficiency, but also the user and, by accumulating benefits, society as a whole. Also for the companies that participate in the chain of production, transmission and distribution of electrical energy, it is considered as a way of postponing investments (Bhandari, 2020).

Industrialized countries have developed energy efficiency policies strongly influenced by the notions of external energy dependence and global environmental problems. In contrast, in Philippines, most of the countries are characterized by the high availability of energy resources and a reduced contribution to global greenhouse gas emissions. This is one of the reasons for the reduced interest in promoting energy efficiency. Other reasons, particularly in Philippines, have been the liberalization and privatization processes of the energy sectors in the 1990s, which gave rise to competitive markets, without any centralized planning, with a continuous decrease in electricity rates and natural gas. These conditions, generally not very encouraging, are aggravated by the neglect of the concept of productivity and the absence of environmental awareness, both factors have turned out to be decisive in the successful performance of energy efficiency improvement programs in industrialized countries.

It happens, first of all, that our system, in addition to having produced incredible levels of wealth, has also, since the industrial revolution began, multiplied almost fifty-fold the differences between human beings, and at a time when all this is easily perceptible by globalization, it cannot help but generate reactions that can be violent (a magazine recently spoke of the horror of an Ecuadorian emigrant when she

sees the incredible amount of food that is thrown away in restaurants, catering companies and others) (Kassie & Bang, 2022).

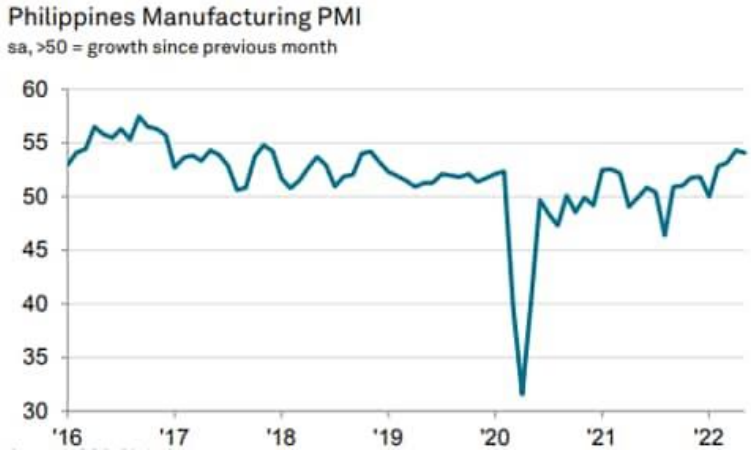

Figure 1. Philippines Manufacturing PMI

Source: S&P Global

I assume we don't have that new system. The great mistake of Marx and the countries that invoked him was to believe that there was a ready-made solution of total replacement, and that, just by making a revolution, solution was as easy to apply as changing tires in a race. As in technical progress, where solutions were never perfect the first time: let's remember the first cars that we can still see in a movie of the time: the decisive thing was that they were already moving; but let's compare them with one of our current cars and we will see how much we have improved this new transport system: rear-view mirrors, more comfortable seats, faster speed to that of thirty years ago, at least in many cases). It is not about having a replacement to apply, but about taking steps in the direction of health (Li et al., 2022).

With all of the above, I intend to show that the first condition to change our system is that we know how successful it will be: but we do know that all historical solutions have been achieved not at the first attempt but after several tests. Another example, perhaps better grounded and developed, is in the conviction of its necessity because "our life depends on it", as the life of a drug addict depends on getting detoxified. And because, without recognition of the disease, there will be no search for treatment. The second will be to go looking for steps and learn about all the experiments that point in the new direction.

Although it is a small example, but given that it is very little known, I want to allude to the so-called «economy of communion», born around 1991 in São Paulo and among the group of the so-called "foccolari". It currently has about 800 companies. And it is making its way in adverse conditions: because they have proposed to enter the world of the market, as it is, accepting the game. But once there: they limit the benefits in the following way: only a third is reserved for the consumption of the owners and for investment in the companies. Another third goes directly to campaigns against poverty and today at least— the other is destined to train people in their economic line.

B. METHOD

This research uses qualitative research with descriptive analysis approach. The types of data used in this study are primary data and secondary data. Presentation of data using qualitative methods. The research begins by analyzing The Energy Crisis, Background and Current Situation, Government Measures and Their Effects, Economic Crisis and their Political Correlates, then analyzes the Great Depression of 1930 and 2008 and the possibility of it happening again.

C. RESULT AND DISCUSSION

1. The Energy Crisis, Background and Current Situation

A journey through the history of electricity in the Philippines shows us that the phenomenon of supply crises is recurrent. The first major crisis takes us back to 1960, which, ironically, was solved by nationalizing the services (mostly in private hands), creating in 1961 the Electrical Services Company of Greater Buenos Aires (SEGBA). In reality, the state had previously begun to play a preponderant role in the development of the electricity sector with the creation, first of all, of the company Agua y Energía Eléctrica (AYEE) in 1947 and later with the creation of HIDRONOR, the Salto Grande Mixed Technical Commission, the National Atomic Energy Commission, the Yaciretá Binational Entity and the Provincial Energy Companies. With the nationalization of the Italo Philippines Electricity Company (CIAE) in 1978, the generation, transportation and distribution of electricity remained entirely in the hands of the state, except for small businesses in the cooperative sector.

The abrupt political changes that subsequently took place in our country were reflected in the operation of companies and state agencies, giving rise to discontinuities in investment planning. This and other well-known causes that would take a long time to analyze led to the second major crisis in the electricity sector. Thus, there was a shortage of demand despite the over-equipment of the thermal generation park. The crisis deepened with the entry into a dry year. The solution, now, was tried by seeking the opposite path to that undertaken in the 1960s, that is, by privatizing services. At the beginning of 1992, the process of deregulation of the electricity market began in the Philippines with the granting to private activity of the concession of the facilities previously served by Agua. The transformation led to the vertical division of these companies, giving rise to independent areas of distribution, transmission and generation. In addition, the horizontal division gave rise to the creation of numerous companies that took charge of each business unit.

After 12 years, the Philippines is once again facing a crisis in the sector. Thus, at the beginning of this year, a situation that had been long predicted by technicians and experts in the sector erupted. Figure 1 shows a projection of the cold reserve in the Steam Turbine and Combined Cycle for the next few years based on the real daily value of the year 2003, for two scenarios of availability of the thermal park. The origins of the problem are multiple, but the most important and the most costly solution must be classified as structural.

The Argentine energy system is highly dependent on natural gas, this fuel, as shown in fig. 2 represents almost 50% of its energy matrix. This is observed both in industrial activities, almost entirely supplied with natural gas, as well as in the Residential sector and in a very important number of vehicles that run on Compressed Natural Gas (CNG) 50% (approximately) of electricity generation is based on equipment that runs on natural gas, part of which can operate alternatively with other fuels at a much higher cost.

It is understood then that the first alarm signal came from the gas sector where its producers limited the delivery of said fluid, which produced a significant shortage of said product. Although, in principle, the measure was due to speculative factors, it revealed the absence of investments that had been necessary and were not made at the right time (exploration and drilling of wells to maintain or increase production levels). In other words, the energy crisis, whose manifestation in the present has been the supply cuts to customers with interruptible contracts from industries and electricity generators, is due to a decrease in the supply of natural gas. These could grow as the temperature drops and residential consumption increases together with the maintenance of the consumption of the automotive fleet (Olafsson et al., 2019).

If you want to delve a little deeper into the origins of the crisis, there are some antecedents that are important to detail: a) the attitude of private actors, in the face of an inadequate regulatory and control framework, was to maximize short-term benefits term. This was evident in the maximization of production based on the deposits discovered prior to the privatization process and the minimization of investments in exploration and development (since 1996 investments have been paralyzed) with which the capacity was substantially reduced of extraction and the horizon of reserves. With the same reasoning, the transportation capacity of the existing trunk gas pipelines was maximized (by means of loops and compression plants) without investing in a single additional trunk gas pipeline; and b) The reduction in the price of gas at the wellhead, as a consequence of the 2022 devaluation, has placed the companies in a strong position of negotiating pressure in order to recover the price in dollars. Said pressure erupted in February of this year, when the producing companies practically reduced gas injections at the head of the gas pipeline or maintained them in the face of growing demand.

2. Government Measures and Their Effects

The government's belated response to the crisis was delayed until May with the development of a set of measures presented as the 2018-2022 National Energy Plan. These include: a) Repair of the second power transformer of the Río Grande hydroelectric plant; b) Compensation of the third and fourth Comahue-Buenos Aires high voltage line; c) Works in Yacyretá aimed at reaching a height of 78 meters above sea level; d) Completion of works in the concession areas of the transportation companies Transener, Distrocuyo, Transba, Transnoa, Transcomahue and Transpa, from the signing of trust contracts; e) 500 kV high voltage line from Choele Choel to a new transformer station in Puerto Madryn; f) Production of natural gas based on the

agreement reached with producers to guarantee supply to distributors until 2018; and g) Normalization of natural gas prices at wellhead.

Meanwhile, the measures that would be applied in the short and medium term total investments of 10,725 million pesos and consist of: a) Increase in the transportation capacity of the Santa María-Salto Grande electricity corridor; b) National electric power transportation plan, which includes high-voltage works in different parts of the country; c) Electricity agreement for the readjustment of the wholesale electricity market until December 2019; d) Resumption of the execution of the Atucha II Nuclear Power Plant; e) Works in Yacyretá aimed at reaching a height of 83 meters above sea level; and f) Natural gas transportation expansions planned for 2005.

The measures include the creation of a national energy company ENARSA and an energy saving program whose regulation was already established by Resolution ENRE No. 389/04 and consists of a system of incentives to reduce consumption through a bonus mechanism and additional charges for excess demand. The Program is intended to help residential and general users save energy. It is consigned that this saving will allow allocating a greater amount of energy to commercial and industrial economic activities. It will be applied in the concession areas of the electricity distribution companies EDENOR S.A., EDESUR S.A. and EDELAP S.A. However, the provinces have been invited to participate in it. This program has some points of contact and is less rigorous than the one applied by Brazil to get out of the supply crisis it suffered in 2001. That year, the neighboring country had droughts that reduced the water levels of the reservoirs of its hydroelectric plants contribute 90% of the generation. The expectation, very optimistic on the part of the national government, considers that savings of 15 to 20% of the current level of consumption could be achieved.

In the Senate of the Nation is the bill 34/04 presented by Senator Guinle. It has the support of the Ministry of Energy and refers to a set of mechanisms to promote the Rational Use of Energy. In its first article it states: “The Efficient Use of Energy is declared of general interest, understood as the adequacy of energy production, transport, storage and consumption systems aimed at achieving the greatest sustainable development with the technological means available, minimizing the impact on the environment, avoiding losses and reducing energy costs”. Chapter 5 provides for the application of incentives.

It is understood that the approval of this law, which among other considerations provides for the development of education, dissemination and research programs, can be an important contribution in the application of the URE beyond temporary situations. In the Senate of the Nation, with the approval of the Chamber of Deputies, a bill for the promotion of Renewable Energies (Senator Salvatori). There are obstacles to define the application authority, which keeps its definition delayed. This situation is unfortunate compared to the current scenario, where the contribution of these alternative sources must be taken into account in order to achieve a cleaner generation and a necessary energy diversification.

3. Economic Crisis and their Political Correlates

There are differences between crises and cyclical economic trends. A serious economic crisis has repercussions on the expectations of the actors and, therefore, on production and capital. But what implications does it have for political systems? Despite the problems that stem from the economy, within the political sphere, this type of event can allow room for maneuver for the rulers. If the economic problem is attributed to international shocks, the leaders can avoid the political price and have more room to manage decision-making. Crises cause changes that, for political scientists, are related to a profound institutional outcome (Royulea et al., 2019; Erokhim et al., 2019).

Financial crises and political crises have effects in a circular way. In the presence of political distortions or events outside the political system, large amounts of debt remain unpaid, which in turn leads to a costly political crisis. Conversely, under the assumption that financial markets are prospective, the cost and size of debt depend on expectations of political stability. In this way, the expectations of the lenders can lead not only to a financial crisis but also to a collapse of the government (Lobo & Pannico, 2020). If lenders believe that the stability of the incumbent government is in doubt and operate under uncertainty, they set high interest rates, thus increasing political distortions and leading to default on debt payments. If lenders are bullish, the opposite is more likely.

In this way, the term "political instability" raises great debate within the economic environment. The study of political instability is related to the emergence of modernization theory, starting in the 1950s and 1960s. The concept of instability applies to a relationship where there is the possibility of change within the political system, where if there are exchanges within the limits of role expectations, the systems are stable; otherwise, they are unstable.

The vision of the Marxist crisis theories gained strength during the first half of the 20th century, being increased by the experience of the Great Depression (Clarke 1994). In this tradition, the term crisis alludes to a set of failures in the economic and political relations of capitalist reproduction (Shaikh 1978). From this perspective, the crises that regularly disturb the accumulation of capital are the superficial manifestations of the fundamental contradiction that the capitalist mode of production supposes and constitute a traumatic mechanism for regulating competition in light of the size of the market. The proposed inevitable connection between political and economic outcomes around crises is relevant to the question at hand.

Sarmento's study in (2019) concluded that the relationship between the economic crisis of 1930 and its repercussions, creating a model that explains the Great Depression in six European countries, connecting with the collapse of the government. Through electoral volatility, electoral and elite polarization—in addition to the lack of a national democratic consensus—indicate that the crisis affected the fall of governments. In this line, the studies of Erokhim et al. (2019) for Latin America arise. The first analyzes the effect of the economic crisis on the electoral results between 1982

and 1990, indicating that the literature that explains the results of the elections has not taken into account the economic crises that, when seeing the causes of the effect, these are not usually considered take as an explanation. The second explores how crises facilitate economic reforms with two case studies: The Philippines, from 1989 to 1994. Crises often play a role within politics in general, and within economic reforms in particular.

4. The Great Depression of 1930 and 2008 and the Possibility of It Happening Again

Having established that economic crises respond to different logics and that they can affect each other, we proceed to recount the processes involved in the Great Depression of 1930.3 According to Samuelson (2012), depression is an economic collapse that produces high unemployment where there is no clear solution. , while recession is a shorter process where the economy recovers faster with market corrections and government policies. For this discussion, we will start from the 1920s. According to Tzaremes (2020), this period accounts for three factors that increased the propensity of the international financial system to destabilizing shocks: foreign exchange market, international loans, and structure and regulation.

Despite the fact that attempts were made to maintain gold reserves, the problems increased and the costs of the war were paid for with the issuance of money and bonds, which put pressure on the foreign exchange market. The resulting increase in inflation rates made it difficult to peg currencies relative to gold. For Latin America —after the First World War— there was a growth led by exports that caused a boom. The region was incorporated into the world through trade in primary goods and capital inflows, and became attractive to foreign investors and lenders.

Beginning in the 1930s, the United States was the dominant economy. However, the Smoot-Hawley tariff on imports generated the paralysis of global trade and amplified the economic crisis that had begun a year ago due to the financial crisis; and already for the years 1931 to 1933, the banks also failed. The Great Depression caused an explosion of the global economy, an implosion in international relations, and a nationalist withdrawal from each country. Finally, the gold standard was abandoned in September 1931 throughout the world. The fact that the engine of growth was damaged did nothing to change the social and political structures. The elites maintained their power, the new institutions did little to change the status quo, and it was the exports prior to this event that perpetuated inequality.

The Great Depression harmed governments because it did not allow them to generate tax revenues to pay the debt. The debt default in America in 1931 had similar characteristics for all countries: The debt crisis and political instability interacted in a vicious circle in which political instability hampered attempts to achieve fiscal reforms while the crisis environment and the 'draconian' policies adopted to curb the problem threatened to undermine the most stable governments. Given the situation, there are two important issues to highlight: first, the link from debt default, foreign exchange market disturbances to instability in banking systems, and second, the role of politics

in breaking these links by removing the financial system and macroeconomics from threats to its stability.

D. CONCLUSION

The disappearance of a system based on the free play of market players supported by weak regulatory management has been marked by the massive paralysis of private investment in the energy and food sectors on a global scale, particularly gas and electricity. The effect is yet to be seen due to a significant economic recession, but it is unknown to experts that in 2023 there will be a recession. The recent economic recovery has led to an increase in energy demand and the first effects of the crisis are imminent, this of course due to the protracted war between Russia and Ukraine. The current government is late in reacting to problems that have structural characteristics that are impossible to solve in the short term.

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