

Letter from the Editor

A special issue of *Economía Teoría y Práctica* at the end of 2020, a time highlighted by a health crisis that has affected the entire world, triggering vast economic and social effects. The virulent spread of the Covid-19 pandemic surprised nations and led to over 90 million people infected, nearly two million deaths and numerous more potential cases. But it also lays bare the many frailties of the inhabitants of the planet, and of particular interest here, this country, which extend to many different spheres of society. Within this context, the articles published in this issue coincide in their intention to analyze problems associated with the effects of the SARS-Cov2 virus.

Despite the limited resources available for this issue of the magazine, the enthusiasm of the contributing colleagues for sharing theoretical and empirical reflections contributed to shaping the project into this issue. As Albert Einstein said: “There is a driving force more powerful than steam, electricity and atomic energy: the will.” We are also very grateful to UAM authorities, especially Dr. Abel Peñaloza Castro, general rector, and Dr. José Antonio de los Reyes, general secretary, for continuing to give the go-ahead for *Economía Teoría y Práctica* to keep on moving forward with its mission.

Countries adopted varied policies and strategies to contain the fast-spreading pandemic. In Mexico, productive activities identified as non-essential were partially or totally quarantined in April and May 2020. Alejandro Dávila Flores and Miriam Valdés Ibarra, researchers with the Coahuila Autonomous University Socioeconomic Research Center, took on the task of analyzing the effects of the policy adopted by the government on the Mexican economy. By using social accounting matrices, the co-authors of “Mexico. Economic Costs of the Closing of “Non-essential” Activities Due to the Covid-19 Pandemic. Multisectoral and Regional Analysis Using SAM Models” estimate such effects on production activities (33), agents (companies, homes, government and external sector) and income ranges (10 groups of homes) for seven mesoregions and 32 states in the country.

The detailed findings reported by Dávila and Valdés on the enormous impact of the fall in GDP on various industrial activities, job loss and the substantial decrease in household income are highly revealing for understanding how the poverty stain spreads more forcefully in the country. The final reflections by the authors

shake up the society that is suffering from the huge contraction of the economy, on top of the health and mortality havoc wreaked by Covid-19. “The pandemic has worked as a catalyst of structural, economic, environmental and cultural problems and technological trends. Countries that are able to interpret the signs of the times may emerge strengthened by this tough experience, while those that do not will deepen their weaknesses.” This article is highly recommended.

Other problems resulting from the situation arouse interest in taking new paths that could lead to solutions. One of them is the growing importance of digitalization for different activities carried out from a safe distance in the ongoing pandemic. Mónica Casalet, professor and researcher at the Latin American Faculty of Social Sciences (Flacso), expresses her concern beginning with the very title of her article “The Uncertain Future of Digitization in Mexico: Can It Take Off?”

The author explains the nature of the new digitalized manufacturing (industry 4.0) paradigm, progressive dissemination of digital knowledge to different productive and service activities, positive effects on productivity and operational flexibility, and the debate on reconfiguring business policies in a new industrial organization setting. Within the context in which industry 4.0 spreads at different speeds among countries, Mónica Casalet reports on her research on the process by which Mexican companies incorporate digital technologies. What internal and external obstacles are faced by companies in the automotive, aeronautical and computer services sectors to integrate digitalized technologies, including IoT, robotics, artificial intelligence, machine learning and blockchain, into their processes?

The challenges of companies, workers, clients and governmental entities to adopt digital technologies in the stay-at-home, social distancing environment of Covid 19 is very appropriately analyzed by the author. The study takes on special relevance as radical changes involve uncertainty, exacerbated by a setting of heterogeneous production structures, uneven levels of efficient connectivity, reduced R&D budgets and a USMCA with major technological gaps between Mexico and partner countries.

One crucial aspect in the current pandemic is analysis relative to the capability of countries’ pharmaceutical sectors to attend to health problems, especially during health emergencies. The article “Spread of Covid-19 in Light of Vaccines and Technological and Innovative Capabilities in Mexico’s Bio-Pharmaceutical Sector,” co-authored by the editor who penned this letter and Marco Antonio Pérez Méndez, both from the UAM-Iztapalapa department of Economics, addresses this topic. The authors pose three central questions: Can the spread of the SARS-Cov-2 virus be slowed by developing and ensuring access to several effective vaccines to immunize Mexico’s population? Considering the current health emergency, does Mexico have endogenous technological and innovation capabilities that can contribute to developing new vaccines and medications to improve the health system? What factors of the nature of innovation can help increase them?

After estimating the duration of the pandemic in Mexico by means of a simulation exercise, taking into consideration access to efficiency-approved vaccines among the population, Guzmán and Pérez propose a model based on information on patents granted to Mexican holders by the United States Patent and Trademark Office (USPTO) in classes related to medications and their products to estimate technological and innovation absorption capabilities in the Mexican bio-pharmaceutical sector and influencing factors. The findings are highly suggestive of activating policies that display synergies to promote technological and innovation capabilities. Strategic strengthening of the bio-pharmaceutical sector is one of the lessons this pandemic has taught.

Another realm faced with a considerable degree of complexity is that of education. How and under what conditions to provide continuity to courses at the different levels of schooling at this time of health crisis? Distance classes given via Internet, television and radio; a range of actions speedily adopted, spotlighting notable technological, economic and social differences that exist among countries. In his article titled “Covid-19 as an Accelerator of the Move towards a New Educational Model: Analyses, Challenges and Obstacles,” Ignacio Llamas, professor at the Iztapalapa Autonomous Metropolitana University, addresses the dynamic of such changes in the context of a historical perspective and differentiating the interaction between educational social and physical technologies.

Given the fast-paced adoption of the virtual model in teaching and schooling, due to the Covid-19 pandemic, the author is concerned with exploring where education systems are defined within the theoretical framework of structural functionalist evolutionism. Will these models offer better possibilities for meeting the needs of the education system and setting, especially the needs of production activities? What education reforms will be needed and what will the implications be? Reflections made by Ignacio Llamas with depth and rigor, essential at a time when Covid-19 acts as a catalyst for incorporating the tools of information technologies and communication in education.

The financial sphere has not escaped impacts in these times of Covid-19 or their negative effects for economies. Ricardo Mendoza-Rivera and Francisco Venegas-Martínez, both of the National Polytechnic Institute, and José Antonio Lozano-Díez, of Panamericana University, study the phenomenon in “Impact of the Covid-19 Pandemic on Relevant Financial Variables in Major Latin American Economies.” In particular, they ask: How are financial variables (stock indexes, exchange rates and interest rates) impacted by the SARS-CoV-2 mortality index, in the case of the six Latin American countries most strongly affected by the pandemic? The authors do a literature review that highlights the vulnerability of public health systems, local and global macroeconomic mechanisms in which clashes between supply and added demands occur, the presence of scenarios of uncertainty and their effects

on growth, investment, employment and trade. Furthermore, they identify specific studies on the state of financial markets vis-à-vis the global health crisis. The results of the empirical study help explain how effects of the pandemic connect with the financial arena and rethink fiscal and monetary policies that strengthen economies currently looking at far-from-favorable economic and social situations.

Finally, this special issue comes to a close by addressing a topic concerning the drop in international oil prices at a time when worldwide mobility and, therefore, fuel demand decreased notably. The article “Impact of Covid-19 on North American Energy Security,” co-authored by Rosío Vargas of the Center for Research on North America (UNAM) and Edgar Ocampo, consultant and advisor in the Senate of Mexico, aim their analysis at evaluating the consequences of the global health crisis on hydrocarbon industry production in the United States and the probable clash in the energy integration process with the two North American partner countries.

Within the crisis environment and considering the nature and high costs of exploitation, what consequences are visible and which ones can be seen in the hydrocarbon industry production chains in the United States? Facing these negative scenarios, how would they lead to energy security for the North America region, considering the interdependence among the countries that signed the USMCA and the proposals aimed at greater integration. Studying this sector, which has followed a course of lights and shadows, especially when Covid-19 demands rethinking the use of less polluting energies, cannot be argued with. Clearly, these times of crisis lead to intensifying innovative efforts that not only contribute to solving problems but to developing new technological and knowledge governance paradigms.

Many subjects for analysis remain in this issue’s pending file. Visible economic and social cracks will most likely deepen. We make a call to join together to produce new theoretical and empirical ideas that lay the groundwork for overcoming the numerous stumbling blocks that have been left in the way.

I conclude once again quoting Albert Einstein, who with highly Schumpeterian thinking claimed: “Crisis is the greatest blessing for people and nations, because crisis brings progress. Creativity is born from distress, as the day is born from the dark night.”

A warm embrace to our authors, referees, members of the editorial and scientific committee and, of course, readers. As 2020 comes to an end and the new year 2021 begins, we hope is for the preservation of health and work with harmony and intelligence.

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