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Dear Readers,

The fifth issue of the PRS newsletter appears at a time when we are facing a truly unprecedented situation. The COVID-19 pandemic has created a global crisis that is affecting every single one of us, our families, communities, businesses, industries, economies, health care systems and global society as a whole. This crisis has far-reaching effects on the industrial sector, and significant adaptations in manufacturing will be necessary to successfully navigate through the impending global recession and to deal with the exorbitant levels of unemployment worldwide. The PRS department is developing a series of policy briefs and analytical studies on the impacts of the COVID-19 outbreak on the industrial sector based on the latest findings and research, and in its pieces proposes best practices and policy measures to respond to the disruptions in economic activities and salvage the global economy. To date, pieces have been published on a number of relevant issues including how industrial policy can help mitigate the impact of the COVID-19 pandemic, the effect of the current crisis on the role of Industry 4.0, the manufacturing repurposing challenge, policy responses to COVID-19 in the Latin American and Caribbean region, the impact of the outbreak on industry in the Arab region, to name just a few. I highly recommend exploring these particularly valuable articles and opinion pieces that are available on UNIDO’s homepage and which are also briefly summarized in this newsletter.

I am confident that we will be able to effectively resolve the challenges we face in the recovery ahead if we continue to work together and pool our resources. Despite the many hurdles that lie in front of us, we will develop creative and sustainable solutions to successfully rebuild a strong global economy that is resilient and inclusive, leaving no one behind.

If you have questions related to the newsletter, please contact us at prsnewsletter@unido.org.

Hiroshi Kuniyoshi
Deputy to the Director General and Director ad interim of the Department of Policy Research and Statistics, EPR/PRS
The PRS Department is publishing a series of policy briefs and analytical opinion pieces on the impacts of the COVID-19 outbreak, incorporating the most recent findings and analyses to provide up-to-date information on best practices and policy measures to address the disruption in economic activities and the implications for industries, firms and society as a whole. New articles are continuously being uploaded, so make sure to check back regularly!

**Coronavirus: The economic impact**

The COVID-19 pandemic is severely impacting manufacturing production, particularly in developing countries, as demand from high-income countries is decreasing and global value chains are being disrupted due to delays in the delivery of necessary supplies and components. Containment policies introduced by governments, such as the restriction of movement of goods and people is exacerbating the situation. Government stimulus packages announced so far to assist businesses and to promote job retention are a welcome step to alleviate the economic damage caused by COVID-19. The short-term objective should be to address the immediate health crisis by supporting income-generating opportunities and to safeguard the operation of critical supply chains. The medium- to long-term goals should be interventions to cushion the economic fallout, restore supply chains, recover demand and incentivize productive investment.

**COVID-19 impacts on industry: policy recommendations for the Arab region**

The severity with which the COVID-19 crisis will hit Arab countries depends on the individual country’s degree of political stability and the resilience inherent in its economic structure. Service-oriented, oil export-dependent economies are particularly vulnerable, as global demand for fuel and energy has plummeted, slashing crude oil prices by 70 per cent. A predominantly young population faces the risk of pronounced unemployment, though they could also be a potential resource for effective national mass mobilization during recovery. Regional structural weaknesses can be turned into opportunities for cooperation in different industries such as hospital equipment, manufacturing inputs, infrastructure, agriculture, fisheries and water supply. Governments in the region should provide targeted and blanket fiscal support for people and businesses in the short term, and undertake efforts to alleviate structural imbalances through economic diversification in the medium term.

**Managing COVID-19: How the pandemic disrupts global value chains**

The collapse in production at the heart of many GVCs necessarily has implications for suppliers and consumers in countries further up and down products’ value chains. The cumulative effect of supply bottlenecks and falling consumer demand could increase the risk of global manufacturing entering a downward spiral, possibly causing tremendous damages to the operations of many cross-border supply chains. The debate around current and future policy responses has witnessed increasing calls for national re-examinations of established models, particularly with reference to the international production of goods. Substantial nationalization of supply chains, however, carries the risk of further reducing the diversification of suppliers and the opportunities for developing countries to benefit from integrating into the global economy.

**Managing COVID-19: How industrial policy can mitigate the impact of the pandemic**

Governments’ containment measures have shaken the foundations of the global economy’s three main pillars: demand, supply, and finance. Timely and coordinated action is crucial to mitigate the economic impacts and to create conditions to redress global economic activity, as the negative effects will neither be confined to the national level nor to a limited number of industries. Containment measures can only be effective, however, if sufficient savings and cash flow are available. Businesses will not be able to weather the economic downturn on their own, and recovery from the shock will likely not allow a return to pre-crisis normality. In the short term, policy measures should counteract increased risk aversion and the flight-to-liquidity. In the medium and longer term, policies should identify new alternatives for the organization of global production networks and diversify and reorient productive capabilities to build resilience against future disruptions.
COVID-19 critical supplies: the manufacturing repurposing challenge

One urgent problem as the global COVID-19 pandemic continues to unfold is the shortage of critical supplies. Policymakers are calling for firms across manufacturing sectors to temporarily repurpose their production to increase global production capacity. Repurposing is usually a temporary strategy and can be expensive and fraught with challenges. However, opportunities exist to leverage on proven designs and methods. Policy responses are therefore essential to help manufacturers exploit these opportunities and address repurposing challenges to facilitate the transition to the new “normal” after the COVID-19 crisis. The development of a rapid repurposing roadmap, reflecting national priorities and contexts, could help build a coherent and holistic structure to support effective policy responses.

Managing COVID-19: Between policy and politics in Latin America and the Caribbean

The fight against COVID-19 underscores asymmetric global power relationships between countries and between countries and transnational corporations. Governments in the LAC region should avoid the false dichotomy between protecting people or the economy – this should not, however, preempt measures to salvage the economy and maximize firm survival and employment. This can be achieved by supporting liquidity, restructuring debt and deferring payments to ease firms’ and people’s fiscal burden. Furthermore, demand-driven policies could bolster an inclusive and sustainable economic recovery. Domestic scientific and technological capabilities need to be strategically mobilized to supplement health and productive capabilities. Lastly, to successfully fight COVID-19, the region needs stronger political consensus, decisive all-of government approaches and multi-stakeholder participation.

Rescue industries and firms now: How to minimize the long-term negative impacts on economies and populations

Unlike the 2008 financial crisis, the COVID-19 pandemic started as a microeconomic problem. A spillover to the financial sector will turn it into an aggregate macroeconomic problem, with far more devastating consequences, making recovery all the more difficult. The primary objective of policy responses should therefore be to rescue existing firms and industrial ecosystems, which drive countries’ value creation and generate employment and incomes. Governments should support firms so they can continue to pay wages and salaries and retain employment despite reduced operations or temporary closures, thereby reinforcing both demand and the maintenance of supply capacity. Such measures will minimize costs in the long term. Another key priority is financial sector support to maintain liquidity and to ease the financial burden on firms, especially SMEs. Developing countries, in particular, cannot shoulder the burden of sustaining physical and human capital on their own, and coordinated action between governments, donors, international organizations, the private sector and NGOs is therefore crucial to ensure that developing countries’ need for assistance does not skyrocket in the long term.
COVID-19, poverty and why rescuing industry is a good strategy

While the different measures countries have taken to address the COVID-19 crisis may differ in scope and stringency, the common denominator is that all countries are facing a drastic reduction in demand for goods and services. This, in effect, has resulted in deglobalization in terms of shortening global value chains. What may be a temporary reduction in demand in industrialized countries could cause permanent damage to the manufacturing industry and productivity in developing countries, leading to a setback in recent advancements in the social dimension of industrial development, i.e. a significant increase in poverty and worsening income inequality. Developing countries fare worse because of their lower economic margins, weaker resilience and greater overall vulnerability. Governments in developing countries, together with industrial organization such as UNIDO must coordinate their efforts to support manufacturing industries and prepare them for speedy recovery to avoid a regression to past levels of poverty.

Statistics on COVID-19’s economic impacts

In uncertain times like these, policymakers need reliable data fast to monitor the ongoing economic situation. UNIDO’s Statistics Division has therefore intensified its efforts to make reliable information from national statistical offices available quickly. Aside from seasonally adjusted quarterly data, available on UNIDO’s statistics portal, UNIDO has started publishing unadjusted and seasonally adjusted monthly index data on industrial production. The preliminary data is based on observed index numbers of industrial production (base year 2015). The main results will be presented in detail in the next Quarterly Report on World Manufacturing Production in mid-June. UNIDO’s Statistics Division also provides an overview of COVID-19’s economic impacts. The most recent country data are presented to monitor changes in production. This reflects developments in the manufacturing sector and other industries in various countries.
THE VIET NAM INDUSTRY WHITE PAPER 2019 – MANUFACTURING AND SUBSECTOR COMPETITIVENESS

The Viet Nam Industry White Paper 2019 – Manufacturing and Subsector Competitiveness presents the results of the project Support to the Government of Viet Nam in the formulation of Sub-Sector Industrial Strategy and of the related Implementation Policy through Institutional Capacity Building.

The project’s objectives included 1) consolidating Viet Nam’s industrial policymaking capacity to eliminate institutional gaps and bottlenecks in the policy framework; 2) capacity-building in industrial intelligence, focussing on sector competitiveness and value chain analysis; and 3) providing support in the design of evidence-based subsector industrial strategies and policies, and developing the necessary tools to successfully implement these, among others.

The project finds that despite the remarkable achievements Viet Nam’s manufacturing sector has made so far, the country will soon not be able to postpone a re-structuring of its industrial sector away from excessive dependence on FDI and on low value, low-technology industries to avoid getting stuck in a low middle-income trap. If Viet Nam is to climb up the ladder and join more advanced economies, the government must focus on the production of higher value technological products by strengthening the domestic manufacturing system and its linkages to FDI. Viet Nam’s economy can thereby move away from dependence on external capital for productivity and refocus on the enhancement of labour and total factor productivity.

WORKSHOP ON SCIENCE, TECHNOLOGY AND INNOVATION FOR THE SDGS

A three-day multi-stakeholder meeting on science, technology and innovation (STI) for the SDGs 2020 took place at UNIDO headquarters in Vienna from 3-5 February. The workshop focussed on how to best structure the 2020 STI Forum in order for it to effectively contribute to the 2020 High-Level Political Forum on Sustainable Development (HLPF), and more broadly, to accelerate progress towards achieving the SDGs.

The workshop’s cross-cutting themes included 1) the role of traditional knowledge, 2) the potential impacts of emerging barriers for scaling up solutions, and 3) ways to ensure that STI benefits all, leaving no one behind. It also identified lessons learnt from the Technology Facilitation Mechanism (TFM) since its inception in 2015 to inform strategic planning in the near future.
STI ROADMAP FOR THE SDGS – SERBIA PILOT

Fernando Santiago (PRS) made a presentation at the kick-off meeting of the STI Roadmap for the SDGs’ Serbia pilot, which is being led by UNIDO in collaboration with the EU-Joint Research Centre (EU-JRC). This activity is part of UNIDO’s contribution to the Inter-Agency Task Team for the SDGs. Serbia—together with Kenya, Ethiopia, India and Ghana—is participating in the Global Pilot programme.

The workshop was opened by H.E. Slavica Djukic Dejanovic, Serbian Minister without portfolio in charge of population policy and Head of the Inter-Ministerial Working Group for the Implementation of the United Nations 2030 Agenda for Sustainable Development. The EU-JRC has supported Serbia in preparing the country’s Smart Specialisation Strategy (S3), which represents the foundation of the country’s STI Roadmap set to be presented later this year. Progress on Serbia’s Roadmap was supposed to have been reported at the Smart Specialisation Conference in Brussels, 5-6 March 2020, but the event was cancelled due to the COVID-19 outbreak.

CHAIN ANALYSIS TOOL (CAT) - A TOOL FOR COST STRUCTURE AND PROFIT MARGIN ANALYSIS ALONG VALUE CHAINS (INCLUDING AN ILLUSTRATIVE EXAMPLE OF VENEZUELA’S RICE VALUE CHAIN)

In their Working Paper, Hartwich et al. review the structure and uses of a standardized chain analysis tool (CAT) for quantitative analyses of costs and profit margins. The application facilitates the visualization and study of costs and profit margins along value chains. Data can be plotted to illustrate the progressive aggregation of costs and profit margins up to the final value of the product, i.e. the CAT can be used to illustrate how value is added along the chain. It can display the value addition for either the entire production chain or for specific segments of the chain only (e.g. primary production, post-harvest handling, various stages of processing and commercialization). Depending on the aim of the analysis, the input data can either be real values collected in the field or reflect theoretical scenarios, future projections, best practice scenarios or a goal or target price.

When new data are entered or any changes made to the parameters, the CAT automatically updates all graphs, thus facilitating the performance of dynamic analyses. It has been successfully used in the inclusive and sustainable development of seven agribusiness chains project within the framework of the UNIDO Venezuela Country Programme. The case of Venezuela showed that the CAT’s real value does not only lie in the analysis of data per se, but in its role to develop reference data that allow stakeholders to conduct evidence-based discussions and plan joint actions.
PCP EGYPT

PRS developed a diagnostic tool within the scope of the Programme Country Partnership (PCP) Egypt, which identifies areas of intervention and priority sectors. The tool was used to 1) embed proposals for technical cooperation in the country’s vision and industrial strategy; and 2) narrow down the field of potential interventions. The diagnostics phase is the first step towards the formulation of technical cooperation project proposals for stakeholders and donors. Egypt’s Minister of Trade and Industry Nevine Gamae and other ministry staff endorsed the key intervention areas identified (industrial policy and governance; investment promotion; Industry 4.0; green industry and regional value chains; industrial parks, smart cities, and regional inclusiveness) and priority sectors (food; textile and leather; furniture; chemistry and plastics, and electronics). The meeting between UNIDO and the Ministry of Trade and Industry was covered by the local media, and the Egypt PCP NCB (National Coordination Body) endorsed the meeting’s conclusions.

A REVOLUTION IN THE MAKING? CHALLENGES AND OPPORTUNITIES OF DIGITAL PRODUCTION TECHNOLOGIES FOR DEVELOPING COUNTRIES

In their IDR Background Paper A revolution in the making? Challenges and opportunities of digital production technologies for developing countries, Andreoni and Anzolin provide insights into how digital production technologies (including intelligent automated systems, robotization and additive manufacturing, as well as related data analytics such as Internet of Things, digital platforms and digital supply chains) are reshaping the process of industrialization in developing countries, and to what extent they can benefit from adopting such technologies in view of the binding constraints these countries face. Their study focusses specifically on the role basic and intermediate industrial capabilities play in the productive absorption and deployment of new technologies and their diffusion along supply chains.

Building on multi-country and multi-sectoral industry case studies, the unique challenges associated with the incremental absorption, retrofitting and effective deployment of new technologies and the licensing of digital platforms in global value chains are identified. The findings challenge the view that industrialization as a development strategy is no longer feasible or even desirable. Developing countries will have to build a robust industrial system within which these technologies can release their productivity potential to continuously and sustainably capture the “digital dividend”. Moreover, by engaging in industrial activities, developing countries can build and strengthen the set of digital skills, organizational capabilities and new business models needed to compete and succeed in the new technological paradigm.

MANUFACTURING GROWTH ACCELERATIONS IN DEVELOPING COUNTRIES

In their article “Manufacturing growth accelerations in developing countries”, published in the peer-reviewed academic journal Review of Development Economics, 23(4), Nobuya Haraguchi (PRS) et al. explore the factors that drove manufacturing growth accelerations between 1970 and 2014 based on a sample of 134 developing countries. The results reveal that human capital and institutions represent contextual factors that favour the growth of manufacturing, together with macroeconomic policies related to investment and openness to foreign trade and capital. The authors also find that the majority of these factors foster episodic accelerations of industry and thus contribute to a sustained process of industrialization, which characterized the process of economic growth of a few successful countries over the period 1970 to 2014.
FROM NEW TECHNOLOGIES TO INDUSTRIAL DEVELOPMENT... AND BACK

The Industrial Development Report 2020 Brief No. 1 maintains that the relationship between inclusive and sustainable industrial development (ISID) and new technologies is bidirectional, i.e. new technologies unlock product and process innovations that lead to the expansion of industries, the creation of job and income opportunities (both within and outside manufacturing), and to the greening of the economy, thereby contributing to the achievement of ISID. But at the same time, it is only by industrializing that countries, industries and firms can develop and maintain the necessary capabilities to engage in technological change.

INDUSTRIALIZATION IN THE DIGITAL AGE: MORE IMPORTANT THAN EVER

The Industrial Development Report 2020 Brief No. 2 reiterates that a strong link exists between countries’ industrial capabilities and the diffusion of new technologies both across and within income groups. Capabilities acquired in manufacturing production allow countries to successfully engage—either as producers or users—with advanced digital production (ADP) technologies. The lack of industrial capabilities represents a major barrier for the productive adoption of ADP technologies. Hence, for developing and emerging economies to fully engage with ADP technologies and move from being users to becoming producers of such technologies, they need to continually invest in upgrading their industrial capabilities. Industrial development is crucial for countries to capture the digital dividend.

ECONOMICS OF TECHNOLOGICAL LEAPFROGGING

In his IDR Background Paper Economics of Technological Leapfrogging, Lee argues that the answer to the question whether the Fourth Industrial Revolution (4IR) represents a window of opportunity for latecomer economies to leapfrog, i.e. to skip certain stages of advanced countries’ paths of technological development or to create their own path, depends entirely on the country’s response and readiness, namely its industrial policies, digital literacy, skill and education level compared to wage rates, and the country’s domestic market size and position in global value chains (GVCs). Policy recommendations on leapfrogging need to be tailored to the conditions of countries and firms.

For instance, countries with a manufacturing basis have the most promising potential to leapfrog from Industry 2.0 (mass production) to Industry 4.0 (smart factories), bypassing the intermediate stage of Industry 3.0 (automation). By the same token, path-creating type leapfrogging is more likely to be successful in start-ups because they have invested the least in existing modes of technologies or business models. Leader firms in emerging economies tend to have some experience with technology and absorptive capacity and are thus likely to be in a position to skip one or several stages. Laggard firms, instead, should not attempt pre-mature leapfrogging but should first build some absorptive capacity in their niche area and upgrade by moving up the higher end of the GVC.
The 2020 edition of the International Yearbook of Industrial Statistics—UNIDO’s main flagship statistical publication is now available. One of the major findings of the 2020 Yearbook is the declining rate of global manufacturing for a second consecutive year, which poses serious challenges to achieving Sustainable Development Goal 9 (SDG9). Global manufacturing value added (MVA) growth dropped to a marginal rate of 2 per cent in 2019. Contrary to the SDG9 target to significantly increase the share of industrial sectors in gross domestic product (GDP) and total employment, the share of manufacturing in industrialized and emerging industrial economies has dropped from 2010-2019. During the same period, the share of MVA in GDP in other developing economies and least developed countries (LDCs) rose marginally. The growth observed in developing countries so far falls short of the required pace to achieve the SDG targets. The Yearbook’s underlying data are available through UNIDO’s data portal https://stat.unido.org/.

HOW INDUSTRIAL DEVELOPMENT MATTERS TO THE WELL-BEING OF THE POPULATION

UNIDO Statistics published a report on How Industrial Development Matters to the Well-Being of the Population, which presents statistical evidence on how closely industrial development is linked to people’s living conditions and the quality of their lives. Countries’ development is often measured by their economic growth, defined in terms of rising levels of gross domestic product (GDP). However, GDP does not capture important quality of life elements or inequalities, which are essential for assessing any community’s well-being. The findings also show empirical evidence on how the achievement of SDG9 is linked to meeting the other goals and targets of the 2030 Agenda.
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We dedicate our bulletin to the broader readership, and we welcome any feedback that could help us improve the future editions.

Got any questions or suggestions? Let’s talk: prsnewsletter@unido.org

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