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PRS NEWSLETTER

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Dear Readers,

The initial rollout of COVID-19 vaccines in the spring and early summer held the promise of a post-pandemic rebound, the start of our "new normal". Yet the summer is slowly coming to an end, and as we enter the fall season, the rapid rise in COVID-19 cases around the world driven by the Delta variant has stoked renewed uncertainty. Uncertainty, in many cases, breeds anxiety, which in turn may breed indecision and inaction.

The world cannot afford to enter a state of paralysis. The Sustainable Development Goals Report 2021, which was launched on the first day of the 2021 session of the High-level Political Forum on Sustainable Development (HLPF), concludes that the pandemic has derailed progress on all 17 Sustainable Development Goals (SDGs), which had already slightly fallen behind even before the outbreak of COVID-19. According to the report, in 2020, an additional 119-124 million people were pushed back into poverty and an equivalent of 255 million full-time jobs were lost.

These setbacks urgently call for deliberate, but bold action by "Governments as well as Parliaments, the UN system and other international institutions, local authorities, civil society, business and the private sector, the scientific and academic community – and all people" (§ 48, Agenda 2030) to reignite the SDGs and to unambiguously demonstrate our commitment to promoting economic growth with equity and social inclusion while protecting our environment.

PRS, which contributed to the chapter on SDG-9 in the Sustainable Development Goals Report and which is covered in this newsletter, continues to work for a better tomorrow. The Industrial Analytics Platform (IAP) is only one example of PRS's commitment to the achievement of the SDGs – it was selected as an example of good practices under the 2nd Open Call for SDG Good Practices, Success Stories and Lessons Learned. The IAP articles presented in this newsletter address topical issues ranging from digitalization and the Fourth Industrial Revolution to the circular economy to the future of global value chains and trade.

You will find many more interesting results of PRS's work in this newsletter, and I invite you to explore it and learn more about how PRS is contributing to building back better.

Hiroshi Kuniyoshi
Deputy to the Director General and Director ad interim of the Department of Policy Research and Statistics, EPR/PRS

Our newsletter mailings are a convenient way to stay connected and keep readers up to date on PRS's latest news. Previous editions of the newsletter are available here.
We welcome any feedback, comments and suggestions for further improvements at prsnewsletter@unido.org.

PUBLICATIONS

Journal Articles

On the evolution of comparative advantage: Path-dependent versus path-defying changes

By N. D. Coniglio, D. Vurchio, N. Cantore (UNIDO) and M. Clara (UNIDO)

This article appears in the Journal of International Economics, a primary outlet for theoretical and empirical research in all areas of international economics (Vol. 133). A country's specialization evolves over time in a dynamic process, with shifts in comparative advantages, resulting in new products being added to the country's export basket. The authors use a novel methodology to explore whether the patterns of specialization of a large sample of countries for the period 1995–2015 correspond to the predictions of the renowned Product Space framework. Despite finding evidence of path dependence, the analysis concludes that a significant number of new products added to countries' export baskets at a later stage were actually unrelated to those countries' initial specialization pattern. The study sheds light on the determinants of these path-dependent changes in countries' export baskets and shows that economic growth is weaker in countries with a higher degree of path dependence.

IAP Articles

Global maritime supply chains in times of COVID-19

By J. Hoffmann

The pandemic took the maritime transport industry by surprise and shed light on some of its long-term challenges. The industry's three main challenges are: (i) increasing supply chain resilience, which requires policymakers to proactively implement ambitious trade and transport facilitation reforms to reduce the impact of future disruptions. Many of these measures will hinge on the digitalization of trade procedures; (ii) policymakers must ensure that national competition authorities can monitor freight rates and market behaviour, i.e. transparency and collaboration along the maritime supply chain must be promoted, and potential market power abuse must be prevented; and 3) maritime transport needs to decarbonize, which will require the industry to undergo an extensive energy transition.

Leaders and laggards in the diffusion of industrial robots

By B. Dachs, X. Fu and A. Jäger

Country comparisons are an important means for innovation and technology policy as they reveal shortcomings of national innovation systems and point to possible areas for policy intervention. Deriving conclusions on robot adoption is particularly challenging, with country rankings differing considerably depending on data source. One main reason for diverging results on countries' robot adoption rates is the concentration of installations in a few very robot-intensive firms and industries. The number of installed robots is therefore a slightly misleading indicator for country comparisons. This fact casts some doubts on the results of empirical analyses on robots, productivity and employment, because the average effects may be debatable when robots are highly concentrated in just a handful of firms. This calls for international cooperation to identify indicators that will deliver unambiguous results.

The Circular Economy: From waste to resource through international trade

By M. Albaladejo (UNIDO), N. Mulder , P. Mirazo (UNIDO) and I. M. Jauregi

The circular economy aims to decouple economic growth from the consumption of finite resources by reducing waste, and in part by reinserting it into production processes. International trade can play a key role in this process, but several factors are holding back its potential contribution towards the circular economy. They include, for one, a lack of agreed definitions and common standards. Moreover, technical barriers and regulations limit the marketability and valorization of certain circular economy-related goods. In this context, specific trade instruments, such as dynamic pricing (based on carbon footprint), or certifications and standards that incorporate circularity principles, could boost the potential of the circular economy and trade nexus. Trade in circular goods partly depends on trade-offs between incentives (economies of scale, comparative advantage, technology) and disincentives (carbon footprint, missed opportunities for local industries). Accordingly, new governance models, international cooperation schemes and Fourth Industrial Revolution technologies could contribute to increasing the traceability and transparency of trade in waste and as such promote an SDG-oriented circular transition.

Digitalization and product upgrading in Indian firms

By K. Banga

Investment in digital capabilities can open new opportunities for developing country firms by reducing their production and transaction costs. An empirical analysis of a sub-set of Indian firms engaged in global value chains (GVCs) finds that firm-level digital capability has a positive effect on product sophistication, implying that GVC firms' product sophistication increases as they invest a larger share of their sales in technology. GVC firms that belong to more concentrated industries also produce more sophisticated goods, indicating that they generate larger profits that can be reinvested to create more advanced product lines. The study's results have several important policy implications: firm-level efforts and national policies must focus on building both hard and soft digital infrastructure in manufacturing and promote skills development among the manufacturing workforce. If supplier firms do not build their digital capacity, they risk

being excluded from future GVCs, while a more active approach towards digitalization can help developing country firms climb up the value chain ladder.

The impact of frontier technologies on inequalities across countries

By B. Freire

Only few countries produce the technologies driving the Fourth Industrial Revolution, though it is having an impact on all countries. Developing countries face two major challenges: this latest revolution involves digital technologies, i.e. addressing the digital divide is crucial. Secondly, these technological waves behave like 'real' ones, spreading first to more technologically advanced countries before engulfing the rest of the world. It will therefore take longer for developing countries to deploy such technologies in their production base. Higher readiness to use, adopt and adapt frontier technologies is associated with a higher level of economic diversification. Developing countries will therefore need to incorporate advanced technologies while continuing to diversify their production base by focusing on policy objectives that more closely reflect the maturity of the technologies they use. They must align their science, technology and innovation policies with industrial policy, focus on the development of training and digital skills as well as build their infrastructure with an emphasis on providing reliable access to electricity and connectivity to ensure that they do not fall further behind.

Is near-shoring likely to increase after COVID-19?

By O. van Zijverden, S. Kluge and B. Jovanovic

The period 1980 to 2010 was dominated by off-shoring, with companies moving their production to other countries in search of lower productions costs, which was made possible by technological advancements and faster and cheaper transport of goods. The marked slowdown in off-shoring activities since the financial crisis of 2008 is likely to further intensify following the COVID-19 pandemic. A survey of German firms confirms that many are thinking about near-shoring. The Western Balkan region is the first obvious choice because it is located in close proximity to the European Union, both geographically and culturally. They have the lowest wage costs on the continent and are perceived as having a skilled and educated labour force. The region's shortcomings are its weak governance and institutions, its poor infrastructure and the neglect of its education system. To fully benefit from potential near-shoring trends, Western Balkan economies will need to maximize their advantages and minimize their weaknesses.

The pandemic through a trade lens

By D. Gros

Global supply chains have proved to be less vulnerable than initially feared after the COVID-19 pandemic broke out. Instead of triggering a retrenchment from the division of labour, the pandemic seems to have reinforced multi-sourcing. Although governments around the world interfered in trade during the crisis to address acute shortages of key products, such as personal protective equipment (PPT) in 2020, large economies or trading blocs such as the EU have a sufficiently diversified supply base for the overwhelming majority of products and are not dependent on a single supplier. Although no detailed data on new trade barriers erected last year are yet available, it does not appear that

governments have resorted to protectionist measures; the strong expansion of trade in 2021 seems to corroborate this assumption. The general picture that emerges is that global supply chains have weathered the pandemic intact.

Other Publications

Chapter on SDG-9 in the Sustainable Development Goals Report 2021

The Sustainable Development Goals Report 2021 was launched on 6 July, the first day of the 2021 session of the High-level Political Forum on Sustainable Development (HLPF). The report, which is prepared annually by the UN Department of Economic and Social Affairs (UN DESA) using data and estimates from the Global SDG Indicators Database, highlights the impacts of COVID-19 on SDG implementation and identifies areas that require urgent and coordinated action. The Chapter on SDG-9 finds that global manufacturing production plummeted as a result of the COVID-19 crisis and that increased investment in research and development is essential for finding solutions to crises such as COVID-19. The development and production of COVID-19 vaccines in record time is one example of the power of technological innovation. In the latter half of 2020, economic recovery was fuelled by the manufacturing of medium- and high-tech products. However, vast swathes of the global population are still unable to connect, either through rural roads or cyberspace. A short video on SDG Report 2021 Goal 9 is available here.

Competitiveness Industrial Performance (CIP) Index - 2021 edition

The 2021 edition of the Competitiveness Industrial Performance (CIP) index is updated annually and provides a general overview of countries' relative industrial performance. It covers 152 countries and is based on three dimensions: (i) capacity to produce and export manufactured goods; (ii) technological deepening and upgrading, and (iii) world impact. The new edition covers data up to 2019. This year's update shows a strong consolidation at the top. Germany has ranked at the top of the index since 2001, while China has been claiming second place for a number of years. One noteworthy change compared to last year is the deceleration of the Republic of Korea, which dropped from 3rd to 5th position between 2018 and 2019, and now ranks behind the United States and Japan. Although the index's country coverage remains nearly identical, the new CIP update includes Libya for the first time. Due to the increased availability of export data, it was possible to analyse Libya's industrial performance. The country ranked 125th in 2019.

RECENT EVENTS

Online Workshop on Sectoral Industrial Policies for Cambodian Policymakers – Agribusiness, **24-25 June**

UNIDO and the Ministry of Industry, Science, Technology & Innovation (MISTI) jointly organized two online workshops on sectoral industrial policies targeted at Cambodian policymakers. This first workshop sought to outline the agribusiness sector's policy response to the COVID-19 pandemic. While food shortages and supply chain disruptions

seem to have been temporary, the main challenges for food security are now the loss of employment, income and livelihoods, which has affected the ability especially of the poor to access adequate and nutritious food. Mr. Iean Russell, Senior Policy Officer at FAO, emphasized "The economic crisis triggered increasing indebtedness and borrowing for consumption purposes, including for the purchase of food".

Production Transformation Policy Review (PTPR) of Egypt, 8 July

Over 100 participants joined the official launch of the *Production Transformation Policy Review of Egypt: Embracing Change, Achieving Prosperity*, an OECD publication co-authored by UNIDO, UNECA and UNCTAD. The launch was held during the 16th Plenary Meeting of the OECD Initiative for Policy Dialogue on Global Value Chains, Production Transformation and Development, from 6-8 July 2021. The PTPR of Egypt, the first PTPR carried out in Africa, was initiated at the request of the Ministry of Industry and Trade (MTI) and implemented in cooperation with the Industrial Modernisation Centre (IMC). PRS contributed to the overall report and authored part of Section 3 on "transforming industries." In his opening remarks, UNIDO's Deputy to the Director-General, Hiroshi Kuniyoshi, emphasized that industry—a cornerstone of structural transformation—must be developed in an inclusive and sustainable manner, and that the PTPR is an important guide in this direction. The issue in Egypt and beyond is not so much whether to industrialize but rather *how* to industrialize. Industrial policy is recognized for its contribution to achieving the Sustainable Development Goals (SDGs). The full report is available here.

High-level Dialogue on the Partnership in Action on Science, Technology and Innovation for SDGs Roadmaps, 9 July

At this event, the path forward for the Partnership in Action following the successful inception of the Global Pilot Programme on Science, Technology and Innovation (STI) for the SDG roadmaps was discussed. PRS's Fernando Santiago presented the progress made of the six pilot countries using STI for SDG roadmaps to connect national development strategies to the 2030 Agenda. He reiterated UNIDO's commitment to support capability building in Member States to achieve the SDGs and stated that UNIDO will continue to collaborate with EC/JRC to support Serbia and Ukraine, as well as other joining countries. Santiago emphasized that stronger international cooperation is necessary to make progress in STI and industrialization in order to contribute to more inclusive and sustainable development. The full report on the event is available here. The webcast video of the event can be found here.

Online Workshop on Sectoral Industrial Policies for Cambodian Policymakers – Textiles, 15-16 July

The second online workshop on sectoral industrial policies covered the garment, footwear and travel goods industry. The speakers underscored that the COVID-19 pandemic has pushed the industry towards a turning point that may require a review of its very foundations. Participants deliberated how to provide a common direction for the development of a more sustainable and environmentally friendly industry that will enhance its competitiveness, promote diversification of the economic base, and respond

to people's expectations and needs while at the same time contributing to the Cambodia 2050 strategy. Rubana Huq, former president of the Bangladesh Garment Manufacturers and Exporters Association, stated that one of the pandemic's positive effects is that it has brought all relevant stakeholders—manufacturers, the government and unions—to the table, and has demonstrated that recovery will require everyone to work together.

Smart Specialisation for Sustainable Development Goals, 21 July

This brainstorming workshop was organized by the Joint Research Centre (EU-JRC) as part of the development of S4 methodology (Smart Specialisation Strategies for Sustainability) and STI for SDG roadmaps development, with the aim of bringing together the pilot countries involved in the S3 for SDGs methodology. The status of S3 for SDG development in Czechia, Serbia and Ukraine were discussed, and other interested countries and regions presented their views on this approach and their own specific needs. PRS's Smeeta Fokeer discussed UNIDO's experience with greening of industrial policy and presented recommendations on policies that can contribute to the achievement of economic and climate goals, such as clean physical infrastructure investment, building efficiency spending for renovations and retrofits, natural capital investment for ecosystem resilience and regeneration, and improving the resilience of supply chains, including through increased adherence to circular economy principles. PRS's Fernando Santiago provided UNIDO insights on STI for SDG roadmaps and the perspective on the way forward in the Round Table on "Feedback and comments from interested countries, regions and partners – Aragon, Tunisia, Basque Country, Poland, JRC and UNIDO".

Science, Technology and Innovation policies for development in the context of the crisis generated by COVID-19, 3, 5, 10 and 12 August

This series of webinars was co-organized by the University of Talca (Chile) and the LALICS (Latin American Network for the study of Learning Systems, Innovation and Skills Construction) network, with the objective to reflect on the implications of the COVID-19 crisis on science, technology and innovation (STI) policies, specifically with reference to health issues, inequality, sustainability, the role of the State and governance. PRS's Fernando Santiago made an intervention in Session 4, providing insights on lessons learned about COVID-19's impact on the development of Latin America and the Caribbean's STI policy capacities, which result from the combination of various analytical, operational and political skills as well as from the mobilization of resources at different levels, including the systemic, organizational and individual levels. COVID-19 has unearthed several gaps in the region, which open opportunities for capacity building in the public sector. The target is to achieve a double objective: on the one hand, STI should contribute to resilience in the face of unexpected future shocks. On the other, it should enhance local governments' ability to strategically mobilize STI towards achieving long-term development objectives. A recording of Session 4 is available here.

PROGRAMMES AND PROJECTS

Consultations between the Government of Sudan and UNIDO on industrial policy

On 26-29 July, UNIDO representatives and stakeholders in Sudan held several meetings (combining online communication and local meetings) to discuss the potential to develop Sudan's industries and manufacturing sector. UNIDO, including PRS, is supporting Sudan's efforts to transform the country's economy based on sustainable development, higher productivity and increased value by conducting a diagnostic study on the industrial sector in collaboration with the Global Policy Incubator, which will be completed later this year. The study will provide a better understanding of the current state of Sudan's industrial development and set a baseline for formulating future action for inclusive and sustainable industrial development.