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Report of the United Nations Industrial Development Organization on industrial statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2021/224 and past practices, the Secretary-General has the honour to transmit the report of the United Nations Industrial Development Organization (UNIDO) on industrial statistics, which is before the Statistical Commission for information. The report provides updated information on the activities undertaken by UNIDO in the field of industrial statistics carried out since the publication of the previous report (E/CN.3/2019/12) and provides information on capacity-building and training activities undertaken for the implementation of international recommendations for industrial statistics.

UNIDO describes its role as a custodian agency for Sustainable Development Goals indicators related to industrialization. The report contains a summary of the activities carried out by UNIDO in terms of methodological development, global and regional reporting, and improvement of data availability for the indicators under its custodianship.

Some activities relating to industrial statistics that were previously undertaken by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat were transferred to UNIDO, which enabled UNIDO to assume full responsibility in that field and thereby streamline data reporting by national statistical offices. The report provides updated information on the status of this transfer of responsibilities and the initiatives undertaken by UNIDO to improve its catalogue of industrial statistics, especially as a response to the increased demand for timely information.

UNIDO also highlights the persistent data gaps in some key industrial statistics, especially in lower-income regions, which remain an obstacle for the comprehensive and timely monitoring of the Sustainable Development Goals.

The Commission is invited to take note of the report.

* E/CN.3/2022/1.



Report of the United Nations Industrial Development Organization on industrial statistics

I. Introduction

1. At its fiftieth session, held from 5 to 8 March 2019, the Statistical Commission, in its decision 50/112, welcomed the report of the United Nations Industrial Development Organization (UNIDO) (E/CN.3/2019/12) and expressed its support for the work programme on industrial statistics contained therein, including the expanded responsibility on industrial statistics after the transfer of activities from the Statistics Division to UNIDO. The Commission called upon UNIDO to allocate the resources necessary for timely data production and dissemination activities, while continuing to provide open access to global industrial data. The Commission reiterated the need for enhanced technical assistance to countries in the field of industrial statistics, and requested international development partners to increase assistance for capacity-building programmes in this field.

2. The present report provides updates on the recent activities of UNIDO in response to the Commission's requests. It is stated that several Goal indicators, especially those relating to inclusive and sustainable industrialization (Goal 9), are compiled from data produced by industrial statistics systems, thus requiring the further attention of national Governments and international development partners.

3. The report outlines the actions undertaken by UNIDO after the transfer of full responsibility for global industrial statistics from the Statistics Division of the Department of Economic and Social Affairs of the Secretariat to UNIDO.

II. Activities carried out in response to the Commission's requests

A. Implementation of international recommendations for industrial statistics

4. Since the publication of the previous report, significant progress has been made in implementing the most recent international recommendations for industrial statistics. According to the UNIDO databases, more than 110 countries now compile industrial data using revision 4 of the International Standard Industrial Classification of All Economic Activities (ISIC), while others are planning to introduce it in the coming years. The extensive introduction of revision 4 has contributed to greater consistency and international comparability of industrial data.

5. The number of countries that have conducted annual or periodic censuses or surveys of industries (establishments or enterprises) has also continued to increase. Most of the surveys cover the basic data items proposed in the International Recommendations for Industrial Statistics 2008. The number of countries producing monthly or quarterly estimates of production based on the International Recommendations for the Index of Industrial Production 2010 has increased and the access to these data have also improved. In many countries, this index is an important source of information for the construction of quarterly national accounts. The significance of short-term indicators such as the index of industrial production was widely recognized by policymakers after the onset of the coronavirus disease (COVID-19) crisis. Given that the pandemic led to heterogeneous effects across regions and activity sectors, data with proper disaggregation by industry can provide valuable information on sector-specific impacts and the extent of the recovery.

Countries have been progressively implementing the standards and recommendations proposed in the above-mentioned international recommendations, which have allowed them to produce a comprehensive set of sector-level data to improve business, trade and national accounts statistics and other economy-wide indicators. The increased availability of industrial data owing to rising demand for data from users in government, the private sector and development partners has contributed to a better understanding of industrial policy issues, including their integration into global value chains.

6. Countries are also using other data sources to meet the demand for industrial statistics. One such source has been economic censuses, which produce basic data disaggregated by economic activities. They have allowed many developing countries to update their business registers, improve survey frameworks and prepare more specialized surveys that require additional data. The use of administrative sources has also increased in industrialized and in emerging industrial economies. Administrative sources are not, however, always reliable, in some cases owing to insufficient coverage or weak updating of systems. UNIDO has examined the scope of big data in industrial statistics and concluded that its applicability in developing countries for international trade in industrial goods and services has potential. UNIDO will further explore the potential of alternative data sources, including big data, for industrial statistics.

B. International and regional workshops and capacity-building activities

7. UNIDO has continued to organize regional workshops for national statistical offices as one of the most cost-effective measures to inform national statisticians about the most recent international recommendations and best practices. As offices within the same region have many common issues, such workshops have provided space for deliberations on conceptual problems and to exchange experiences and best practices. Since early 2020, UNIDO has implemented most of its training and capacity-building activities through virtual means, owing to restrictions applied since the start of the COVID-19 pandemic.

8. Since the publication of its previous report to the Commission, UNIDO has conducted several national and regional workshops. It has also held discussions and consultations on the production and analysis of industrial statistics, including for the monitoring of Sustainable Development Goals, with government representatives from Armenia, Belarus, Bhutan, Colombia, El Salvador, Myanmar, Panama, Turkmenistan, Uzbekistan and Viet Nam, inter alia. Workshop and training activities specifically targeting Goal indicators are presented in paragraph 27 of the present report.

9. Within the scope of its technical assistance programme, UNIDO has implemented projects aimed at enhancing the capacity of countries to collect and analyse industrial statistics. Over the period from 2019 to 2021, UNIDO organized technical assistance projects in Cambodia, Cuba, Jordan, Oman and Saudi Arabia, as well as a regional project for countries of the Commonwealth of Independent States. New projects are in the approval process.

10. It should be noted, however, that the demand from national statistical offices for technical assistance is much higher than the current level of delivery. UNIDO is working to mobilize additional resources for this purpose. In some cases, for example those of Oman and Saudi Arabia, UNIDO has implemented technical assistance projects funded by the countries themselves. Similarly, the Governments of China, the Russian Federation and other countries have provided financial support to

UNIDO, not only for projects implemented in their own countries but also for those in other countries in their regions. Such support is highly appreciated.

III. United Nations Industrial Development Organization data collection and dissemination programme

11. UNIDO has global responsibility for the annual collection of general industrial statistics of the mining, manufacturing and electricity, gas, water supply and other utility industries (ISIC revision 4, sections B, C, D and E) at the three-digit and four-digit levels. It directly collects annual data from some 150 countries that are not members of the Organization for Economic Cooperation and Development (OECD) or the European Union, as outlined in paragraph 12. Countries are requested to report relevant data in accordance with ISIC revision 4 or revision 3. In 2019, the base year of all data produced by UNIDO was changed from 2010 to 2015.

12. Following the recommendations of the Commission at its twenty-seventh session, in 1993, international responsibility for the collection and dissemination of general industrial statistics was transferred from the Statistics Division to UNIDO and OECD in 1994. Moreover, an inter-agency agreement was drawn up between Eurostat and OECD, whereby OECD collects data directly from its member countries that are not members of the European Union and Eurostat collects business statistics for countries that are members of the European Union. UNIDO thus obtains data from European Union member countries directly from Eurostat and directly from OECD for non-Eurostat countries that are members of OECD. This process avoids duplication of effort. The official websites of national and supranational organizations provide direct access to primary data in many cases, especially for sub-annual indicators such as the quarterly or monthly indices of industrial production.

13. The demand for industrial statistics has increased significantly, especially in the context of the COVID-19 pandemic, which called for timely information for the study of the evolution of industrial production during the crisis and its economic impact. Since annual data series could not show sudden changes in production, monthly and quarterly indices of industrial production have become an important source of timely information. This has been especially relevant to estimate the impact of the crisis on Sustainable Development Goal 9 industry-related targets after the outbreak of COVID-19.

14. All data collected and maintained by UNIDO are made available through its online data portal, (<https://stat.unido.org/>). As of 2022, access to the databases will be free for all users, under the new UNIDO open data dissemination policy. Databases maintained by UNIDO can be divided into two groups based on the data source: (a) source data obtained directly from national statistical offices; and (b) source data obtained from UNIDO databases or the databases of other international organizations.

15. The following databases belong to the first category:

(a) Industrial Statistics Database (INDSTAT). This database is available in two versions: INDSTAT2 and INDSTAT4. The former contains time series data on the manufacturing sector at the two-digit level of ISIC revision 3. It is the largest international industrial statistics database of its kind. It provides annual data based on a single classification standard for a longer period, which makes it particularly valuable for long-term structural analysis. It contains eight principal indicators of industrial statistics, including the index numbers of industrial production. INDSTAT4 contains highly disaggregated annual data on the manufacturing sector since 1990 at the four-digit level of ISIC. The comparability of data over time and across countries has been the main priority in developing and updating this database;

(b) Mining and Utilities Statistics Database (MINSTAT). This is a unique database on mining and quarrying, electricity, gas, steam and air conditioning and water supply, sewage and waste management. In recent decades, a gradual depletion of natural resources has been observed worldwide. At the same time, demand for such resources as crude oil, natural gas and water has been soaring owing to rapid industrial growth and the overall increase in the world population. To respond to the rising demands from data users, UNIDO has made its database available since 2012. It contains annual data for more than 100 countries since 1995. Data are presented at the two-digit and three-digit level of ISIC revisions 3 and 4;

(c) Quarterly Index of Industrial Production. This database contains quarterly indices of industrial production at country level for sections B, C, D and E of ISIC revision 4, as well as at the two-digit level of ISIC revision 4 for manufacturing. The aim is to highlight short-term shifts in the output of different industries.

(d) Monthly Index of Industrial Production. This new database, started in early 2020, is a compilation of monthly indices of industrial production at the two-digit level of ISIC revision 4 for manufacturing for those countries that produce these data. It is a relevant source of timely information for the study of short-term trends and the analysis of the impact of shocks and policies.

16. The following databases are maintained for a number of economic indicators that are derived from data using sources belonging to UNIDO or external sources:

(a) Industrial Demand-Supply Balance Database (IDSB). This is maintained at the four-digit level of ISIC using data derived from INDSTAT and the International Trade Statistics Database (UN Comtrade). It includes data on domestic output and on imports and exports of manufactured goods. It presents apparent domestic consumption as the difference of domestic output and the trade balance;

(b) Manufacturing Value Added Database (MVA Database). This contains data for more than 200 economies since 1990. Data for the most recent years are estimated using nowcasting methods. Figures for most countries are taken from the Division's website and supplemented with national publications and UNIDO estimates;

(c) Competitive Industrial Performance Index. This is a composite measure of eight quantitative indicators of industrial performance. The indicators are compiled from data contained in UNIDO databases and UN Comtrade. It ranks the countries by index score and indicates the relative position of countries in global industrial development. The database contains absolute and index values of each component indicator since 1990;

(d) Sustainable Development Goal 9 data platform. This database, of which UNIDO is the custodian agency, contains the latest data for six Goal 9 indicators, with time series available since 2000. The data are derived from other UNIDO databases, national sources, the International Energy Agency, the International Labour Organization and the World Bank.

17. In addition, UNIDO compiles and disseminates the following statistical publications using the data from the databases mentioned above:

- (a) International Yearbook of Industrial Statistics (annual);
- (b) World Statistics on Mining and Utilities (biennial);
- (c) Competitive Industrial Performance Report (biennial);
- (d) Statistical Indicators of Inclusive and Sustainable Industrialization (biennial Goal 9 progress report);
- (e) Quarterly report on world manufacturing production (online only);

(f) Monthly update on world manufacturing production (online only).

18. All the publications are regularly distributed to national statistical offices. The release of new publications is announced through official UNIDO press statements and social media channels.

19. UNIDO is planning to expand its data catalogue to other areas of relevance for the industrial sector. This includes the industrial commodity production database, which was transferred from the Statistics Division to UNIDO in 2019. It will also include additional data series on the international trade of industrial goods, employment in industrial sectors and other areas, in addition to analytical indicators on factor productivity and industrial performance. These new data series will be produced and disseminated by UNIDO in the coming years.

IV. Statistics Division responsibilities

20. The Division retains responsibility for some relevant standards, classifications, guidelines, methodological recommendations and manuals in the field of industrial statistics. The main international recommendations are the International Recommendations for Industrial Statistics 2008 and the International Recommendations for the Index of Industrial Production 2010. The former is available in all official languages of the United Nations and online. The final edited version of the latter is available in English and online only. The main reference classifications mostly relevant for industrial statistics are ISIC and the Central Product Classification, which are also maintained by the Division. UNIDO participates as a member of the task team set up to conduct the revision of ISIC, in accordance with the decision of the Statistical Commission at its fifty-second session to initiate the revision of this international classification.

21. The Division plans to continue its collaboration with UNIDO and other stakeholders, including the regional commissions, in areas of methodology, classifications for industrial statistics and capacity-building to strengthen the industrial statistics work programme in countries. It should be noted that there is high demand for broader collaboration in areas of integrated economic statistics, policy linkages, for example the Sustainable Development Goals and other frameworks, and developing new techniques, tools and data sources, including linkages to statistical business registers, administrative data and big data.

V. Transfer of full responsibility for global industrial statistics

22. In accordance with the arrangements agreed to in relation to the decision of the Commission of 1993 in this regard, international responsibility for the collection and dissemination of general industrial statistics lies with the Division, UNIDO and OECD. UNIDO has been publishing the International Yearbook of Industrial Statistics since 1996. Data for this publication and for the database are collected from Eurostat for European Union members, from OECD for non-Eurostat countries that are members of OECD and directly from national statistical offices for other countries. UNIDO has been publishing World Statistics on Mining and Utilities biennially since 2010, including the first three editions based on data collected by the Division. Following the successful publication of those editions, activities relating to mining and utility statistics were formally transferred from the Division to UNIDO in 2015. The responsibility for the collection and dissemination of sub-annual data on the index of industrial production was also transferred to UNIDO in 2015.

23. As part of the remaining and final reassignment of activities from the Division to UNIDO, and following endorsement by the Commission in 2019, the responsibility for industrial commodity production statistics now lies with UNIDO. Working in close collaboration with the Division, UNIDO is currently integrating these statistics into its regular data production and will disseminate it as the Industrial Commodities Production Database (COMMDB). The first annual update cycle for this data under the responsibility of UNIDO is planned for 2022.

VI. Activities undertaken in the context of Sustainable Development Goal indicators

24. The 2030 Agenda for Sustainable Development has significantly increased the relevance of industrial statistics for global development. The Inter-Agency and Expert Group on Sustainable Development Goal Indicators has designated UNIDO as the custodian agency for six indicators relating to inclusive and sustainable industrialization under Goal 9, while industrial statistics are also used to compile other Goal indicators relating to efficient water use, material consumption and sustainable production. Rising demand for data from policymakers has created a unique opportunity for industrial statistics, but also important challenges. UNIDO has had to augment its capacity for global reporting and for responding to an increasing demand for industrial indicators within a relatively brief period.

25. Almost all Sustainable Development Goal indicators for which UNIDO is the custodian or co-custodian are classified as tier I indicators and are updated annually with broad country coverage. However, data on the size and contribution of small-scale industrial enterprises and their access to financial services remain limited. Goal indicator 9.3.1 is the only indicator for which UNIDO is the custodian agency that is still classified as tier II, with data covering only 67 economies worldwide. Although Goal indicator 9.3.2 was reclassified to tier I at the tenth meeting of the Inter-agency and Expert Group on Sustainable Development Goal Indicators, in October 2019, the data coverage remains sparse.

26. To complement global reporting efforts and provide detailed information on progress towards Sustainable Development Goal 9, UNIDO published reports entitled “Statistical Indicators of Inclusive and Sustainable Industrialization” in 2019 and 2021. The 2019 report provided an analysis of global progress towards inclusive and sustainable industrial development in the context of the 2030 Agenda. The 2021 report focused on the recent changes in industrial development induced by the global COVID-19 pandemic and how this affects the achievement of Goal 9. In addition to these publications, UNIDO prepared the report *How Industrial Development Matters to the Well-Being of the Population*, presenting statistical evidence on how the achievement of Goal 9 is closely linked to meeting the other Goals and targets of the 2030 Agenda.

27. UNIDO maintains an online database of the Sustainable Development Goal 9 industry-related indicators under its custodianship. The data are presented as annual time series starting from 2000. In addition, UNIDO developed tools to help Member States track their performance and progress on Goal 9 industry-related targets. The SDG 9 Industry Index was introduced to benchmark countries performance on Goal 9 industry-related indicators, currently covering 131 economies of the world. The Goal 9 progress assessment methodology was formulated to indicate how much progress has been achieved by countries and how likely is it that they will reach the target by 2030. Both methods have been implemented as an interactive online tool, the SDG 9 Industry Tracker, available at the UNIDO Industrial Analytics Platform (<https://iap.unido.org/>).

28. In December 2019, UNIDO hosted a workshop on data and statistics for evidence-based voluntary national reviews to bring together representatives from national statistical offices engaged in work on the Sustainable Development Goals and the national voluntary national review focal points engaged in policymaking to discuss and share best practices on how statistics can support a data-driven and evidence-based voluntary national review process. In May 2021, the Economic and Social Commission for Western Asia (ESCWA), in collaboration with UNIDO, organized a webinar on Goal 9 indicators for all producers of official statistics in the ESCWA region, with the objective of strengthening inter-institutional coordination and data flows, discussing the indicator metadata, improving statistical capacities in the production and use of official Sustainable Development Goal indicators and sharing country challenges in compiling data for Goal indicators. In 2021, the Statistical Institute for Asia and the Pacific of the Economic and Social Commission for Asia and the Pacific (ESCAP), in collaboration with UNIDO, launched an eLearning course on Goal 9, designed for government officials from national statistical offices, ministry of industry and other agencies involved in compiling, disseminating and analysing statistics on industry, innovation and infrastructure. Finally, UNIDO continues to participate in the Inter-Agency and Expert Group on Sustainable Development Goal Indicators and joined the task team on calculating aggregates for global Sustainable Development Goal monitoring under the auspices of the Statistics Division.

VII. Data gaps in industrial statistics

29. The critical data gap in industrial statistics in many developing countries, especially in sub-Saharan Africa, has been highlighted in recent UNIDO reports to the Commission. Industrial surveys remain the main source of data but are expensive undertakings. Analysis by UNIDO reveals that survey costs are much lower in countries in which they are regularly administered than in those with longer intervals. If a new survey is conducted several years after the previous survey, new investments need to be made to establish the survey framework, survey staff need to be retrained and computing facilities and applications need to be updated or newly created. If surveys are conducted annually or more frequently, institutional knowledge and capacity not only remain in national statistical offices, but also develop and mature.

30. In recent years, a premature deindustrialization process, represented by the falling share of manufacturing value added in gross domestic product, has been observed in several countries, including in some African least developed countries. Even though the economic growth prospects of many African countries are quite high thanks to their wealth of mineral resources and other raw materials, low labour costs and strong export potential, those countries have been unable to attract sufficient investment in industrial development. This is due partly to the lack of availability of basic data, because establishing any new business is considered too risky by investors when basic information required for decision-making is unavailable. In many countries, the ability of Governments and business leaders to formulate an effective national industrial policy has been seriously constrained by the lack of basic data. This gap was highlighted in the report prepared by UNIDO in the context of Africa Industrialization Week 2020.

31. The data gap has also been felt in many developing countries with reference to Sustainable Development Goal indicators, in particular relating to the size and contribution of small-scale industrial enterprises and their access to financial services (Goal indicators 9.3.1 and 9.3.2). Small industrial enterprises operate with a relatively low amount of capital investment and a predominantly local resource base, which explains their pivotal role in generating employment and self-employment, thereby

preventing a large segment of the population from falling below the poverty line. They also play a crucial role in the recovery of the global economy post-COVID-19. But given their small size and limited resources, they remain vulnerable to unexpected shocks, such as the COVID-19 crisis. Providing fiscal stimulus and access to financial services in support of small enterprises is essential to enabling them to survive and thrive during and after the crisis. However, the current system of industrial statistics in many developing countries is to collect data from the larger establishments above a certain size threshold, such as those that have 10 or 20 persons engaged. Furthermore, data by employment size and industry class are available for a limited number of countries only. Given their important role in sustainable industrialization, it is imperative that national statistical offices include small industrial enterprises in their future survey programmes.

32. Surveying small firms in developing countries is much more difficult than doing so for large enterprises. Significant efforts are generally required to build a reliable survey framework, especially as some activities are performed only seasonally, rendering it necessary to select the appropriate survey period. A proper sampling plan is required to ensure good representation of all geographical areas and activities. It is highly recommended that international agencies with experience in economic surveys collaborate in developing the necessary tools and methods and implement surveys in sample countries on a pilot basis. The experience acquired from such exercises could be extended to other countries.

33. Disaggregated data by industrial sector is also unavailable for many countries, or only available infrequently. This data gap remains an obstacle to monitoring progress on structural transformation and Goal 9, and in providing information for guiding policy and evaluating programmes implemented in support of the industrial sector.

VIII. Action to be taken by the Statistical Commission

34. The Statistical Commission is invited to take note of the present report.
