



MUNDP 2020
COMMITMENT TO DEVELOPMENT

RESEARCH REPORT

UNITED NATIONS INDUSTRIAL DEVELOPMENT
ORGANIZATION (UNIDO)

PROMOTING INCLUSIVE AND SUSTAINABLE
INDUSTRIALIZATION IN ACCORDANCE TO SDG9

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Basic Overview of the Issue

Though industrial development seems to have become a part of humans' lives, 4 billion people still do not have access to internet, which is seen today as an indispensable part of human life and moreover, 2.6 billion people on earth still do not have constant access to electricity. It is the most certain that industrial revolution is still a continuing and developing progress, and there are parts of the world that are far behind the rest. In addition to this, some of the industrialized countries have systems that are barely sustainable, and many others lack inclusivity, as everyone can't access industrial developments freely. Therefore, it is a crucial issue to tackle in order to improve prosperity.

SDG 9 (Sustainable Development Goal 9) is one of the 17 frameworks set by the UN, that sets global targets and indicators that aim to improve infrastructure and industry of countries. It was started in 2015, along with the other SDGs. The SDG outlines 8 targets, and several indicators for these targets. Targets 1 and 4 aim to develop sustainable infrastructure and reduce environmental impact while doing so. Target 2 aims to promote sustainable and inclusive industrialization, which is the scope of this research report. Target 3 focuses on creating more accessible financial systems to promote small-scale businesses. Target 5, on the other hand, focuses on enhancing scientific research. The last three targets, Targets A, B, and C, aim to support less developed countries by means of improving their infrastructure, technology development and research. The indicators aim to evaluate whether the targets are reached, by looking at GDP, employment rates, CO2 emission, and other measurable like the proportion of population covered by mobile network.

Explanation of Important Terms

Industrialization

Industrialization is building a socioeconomic order that possesses industrial features as a main part of every system. Building modern airports, roads, railways, equipping factories with automated production lines, etc. In other words, industrialization is enhancing elements of daily life by using technology to foster humans' lives.

Research & Development

Research and Development, or R&D, is effectively using research to develop older technology, or come up with a new innovation. The term is used widely in the



business world, as many big companies have an R&D department that they make huge investments to improve their profitability.

Import Substitution Industrialization

ISI (Import substitution industrialization) is when a country tries to industrialize by replacing foreign imports by domestic products. In this way, the country tries to lessen their economic dependency to other countries. ISI develops in three main stages. At the first stage, basic goods that are normally imported from outside countries are changed with ones that are produced domestically. During the second stage, more expensive imported products are changed with domestic ones. And in the last stage, the domestic products are sold to outside countries, meaning they are exported.

Sustainability

Sustainability refers to longevity of a system considering its impact to the environment. Sustainability can be broken into 3 sub-branches: economic, environmental, and social. Economic and environmental sub-branches are highly related to the agenda item at hand. In the past, many industrial applications were problematic due to high environmental impact via air, soil and water pollution. It is important to consider environmental impact while developing infrastructure. Economic sub-branch, on the other hand, considers how financial systems can be structured to make them resilient to crises and be prepared for future advancements.

Detailed Background of the Issue

Industrial Revolution, dating back to 1760, was a significant milestone in human history as machine manufacturing took over handcraftsmanship, creating a massive boost in production efficiency. Starting in Britain, the Industrial Revolution caused the country's economy to massively develop, as they could supply more products both to inner and outside markets. Other than technological improvements, like the invention of steam engine and power loom, the Industrial Revolution changed many socioeconomic features. As production became faster and cheaper, sources and distribution of wealth drastically changed and land was no longer bringing the most prosperity, while international trade became a trend.

However, the term Industrial Revolution gained more meanings over time, and as



industrial changes were happening, new milestones were set. The Second Industrial Revolution happened in 1900s, as new resources like metal alloys were becoming more popular and new methods of production supported by computers were being developed. The Third Industrial Revolution (also referred as the Digital Revolution) involved the use of Internet and automated production lines. Lastly, the Fourth Industrial Revolution (also referred as Industry 4.0) brought cloud systems and new technologies like artificial intelligence. These improvements evidently changed how people live today, socially and economically.

Even though this industrialization process happened very rapidly, it is very inconsistent around the globe, as stated in the introduction section. Less economically developed countries lack the necessary infrastructure, technology and regulations to even start industrialization, let alone sustaining it. Others that are developed mostly can't cope with environmental sustainability, as problems like water pollution high CO2 emission still exist today. Lastly, in most less economically developed countries, very few number of people in proportion to the population is employed in manufacturing, and traditional sectors like agriculture are still the main source of income. As a way to tackle this issue, the UN came up with SDG 9, which will be examined more in depth within three sub-sections: infrastructure, research and development, and lastly finance.

Infrastructure

Infrastructure is a very broad term that can refer to physical or non-physical systems that are required for a country to function. Physical infrastructure consists of elements like roads, railways, airports, electric and phone lines and utilities like water, schools, hospitals, etc. Non-physical infrastructure can refer to law enforcement, healthcare system, telecommunication, financial systems and many more. It is very important to note that these systems go hand-in-hand, meaning most of the infrastructural systems are dependent on others.

Not all types of infrastructure have to be developed and maintained by governments. A private company, for example, can own and operate an airport by itself. However, governments have to put up regulations in order to keep infrastructure sustainable and consistent.

In less economically developed countries, lack of infrastructure is very problematic



that even basic necessities like water can't be supplied to the public. The most basic infrastructural systems, as one can guess, are the most crucial ones. A country can continue without constant internet access, but they can't offer their citizens a good living without constant water access. Investments to these infrastructural systems can bring a burden on countries' economies, which is the main reason why they are lacking it in the first place.

A target in SDG 9 that focuses on infrastructure is to develop infrastructure "to support economic development and human well-being, with a focus on affordable and equitable access for all." Looking at the indicators of this target, which are about transportation, we can understand that the SDG 9 starts its infrastructural development from building roads and other means of transportation.

Another target that SDG 9 has is about reducing environmental impact and improving resource use efficiency. The target states that in order to increase sustainability, the infrastructural and industrial developments should be made while considering environmental impact, and the SDG measures CO2 emission for that reason.

Research and Development

Research and Development, or R&D in short, is an industrial term that is used to explain the innovative and technological work that companies carry out in order to produce new products and services. Companies from a diversity of sectors make huge investments to their R&D departments in order to surpass others by coming up with better products. Without R&D, it will be harder for a company to keep up with the market trends as well. However, it is R&D isn't only important for a company's long-term profitability, but also highly important for industrialization and humanity as well. For example, a pharmaceutical company that conducts R&D can come up with a cure to an existing disease.

SDG 9 tackles research and development as well, and aims to increase the number of people per population that is working for R&D. The SDG also measures how much money is spent for research and development as a proportion of GDP.

Finance

Money certainly plays a huge role in industrialization. All of the investments that are made to improve infrastructure, industrial development, and R&D are significantly dependent on how much money countries and companies can spend for this matter. Therefore, as



stated earlier, money is probably the most important limiting factor that hinders industrialization, especially in less economically developed countries. SDG 9 tries to tackle this with one of its targets by aiming to create more accessible financial systems and more affordable credits, especially in Africa. As these countries do not have the sufficient funds to spend for industrialization, it is very important that outside more economically developed countries make investments in these less economically developed countries.

Major Parties Involved

DSDG

DSDG (The Division for Sustainable Development Goals) is an acting body of the UN that serves as the secretariat of the SDGs, which is a division under the UNDESA (United Nations Department of Economic and Social Affairs). The division is involved with updating the progress of each SDG, coming up with GSDR (Global Sustainable Development Report), and providing assistance and support for the goals. They also take the necessary action to direct necessary funds to subjected countries in accordance with the decisions made by the UN bodies.

UNDP

UNDP (United Nations Development Program) approaches the SDGs from an integration perspective. They assist countries budget and plan projects towards a more sustainable feature. The body facilitates cooperation of governmental and non-governmental organizations to help this process. With a holistic approach, UNDP emphasizes SDG 9 to foster innovation and industrialization as a way to boost prosperity, provide new jobs, and overcome environmental challenges.

UNIDO

UNIDO is a special agency of the UN that works to promote industrialization all throughout the world by using the SDG 9. The agency defines inclusive and sustainable industrial development as the root of increasing wealth. Inclusive, meaning that industrialization should reach each and every part of the world, and sustainable meaning that the whole process should be bearing environmental concerns in mind. The agency works



together with the other UN agencies to achieve its goals. Its mission is outlined in the *Lima Declaration*, which you can find in the Relevant International Documents section.

Chronology of Important Events

Date	Description of Event
1760-1830	Industrial Revolution
1870-1914	Second Industrial Revolution
1950-1970	Third Industrial Revolution
17 November 1966	UNIDO was established
2000-now	Fourth Industrial Revolution
6 December 2013	The <i>Lima Declaration</i> came out
12 November 2015	Global Manufacturing and Industrialization Summit happened for the first time
25 September 2015	The 2030 Agenda for Sustainable Development was carried out, which contains Sustainable Development Goals

Relevant International Documents

- UNGA Resolution titled “Transforming our world: the 2030 Agenda for Sustainable Development”, 25 September 2015 (A/RES/7/1)



https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

- GSDR 2019, 11 September 2019

https://sustainabledevelopment.un.org/content/documents/24791GSDR_press_release_for_11_Sept.pdf

- Economic and Social Council Report on “Progress towards the Sustainable Development Goals”, 8 May 2019 (E/2019/68)

<https://undocs.org/E/2019/68>

- Lima Declaration, 6 December 2013

https://www.unido.org/sites/default/files/2014-04/Lima_Declaration_EN_web_0.pdf

Past Attempts to Resolve the Issue

As the issue of industrialization is a relatively broad one, it would be rather smarter to look at how countries tried to tackle this issue in the past. The Sub-Saharan region, for example, is a part of the world that is usually said to be the least industrialized. During mid 1900s, most of the Sub-Saharan countries tried to implement import substitution industrialization. Even though ISI was successful in other countries like Brazil, for Sub-Saharan countries, it didn't work out as well since the countries were overly dependent on imports, the domestic goods that they focused were things like diamond, silver, and gold which weren't as simple to carry out the first stage of ISI. However, countries like Japan, Indonesia, and Malaysia used ISI combined with other policies, and were fairly successful.

From the sustainability perspective, there are many countries that are making significant effort into reducing their carbon emission rates like Norway. The country created a carbon tax in the past, which helped them fund renewable energy production. Today more than 90% of the country's electricity is provided by renewable sources.

Another example is Mali. In 2003, the government of Mali started a project in which they aimed to promote renewable energy usage, especially to women. With the support of UNDP, Government of Mali established solar panels in around 300 villages all around Mali.



The panels were handed over to the local women, who then used the energy from the panels for electricity for water heaters, dryers, cookers, fridges and freezers, etc. This way, the women could both make money from the solar panels, and also save money that would otherwise be spent to electricity bills. This example not only tackles sustainability, but also inclusivity, as women are by percent less occupied in industrial jobs.

Solution Alternatives

As explained earlier, there are three main sides of the industrialization issue: infrastructure, R&D, and finance. While coming up with solutions to these, delegates should keep in mind that the focus of this agenda item is to promote industrialization that is inclusive and sustainable. So it is extremely important that the solutions apply to a diversity of socioeconomic backgrounds and that they take environmental concerns into concern. It is also encouraged to come up with solutions that are parallel to SDG 9 targets and indicators.

Solution alternatives can include directing international investments to regions that are in need to improve infrastructure. However, these investments should be carefully regulated to protect the host country from becoming economically dependent. Delegates can come up with completely new ways to facilitate these investments, or make improvements on already existing UN work.

It is important that countries' economic conditions improve, so that money can be spent on infrastructure and R&D, therefore; delegates should consider what domestic improvements can be made in a country to improve its economy. An improved or region specific Import Substitution policy, for example, can be a good solution to start economic growth in certain countries.

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Useful Links

<https://sustainabledevelopment.un.org/sdg9>

<https://sdg-tracker.org/infrastructure-industrialization>