INDUSTRIAL DEVELOPMENT STRATEGIES FOR ADVANCING THE SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA

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ABSTRACT
This study examined industrial development strategies for advancing the Sustainable Development Goals (SDGs) in Nigeria, focusing on the effects of manufacturing value-added, infrastructure development, and technology and innovation adoption on national SDG attainment. The study adopted a descriptive survey research design and employed a closed-ended, structured questionnaires distributed to 175 respondents comprising managers and directors of manufacturing firms as well as relevant government and agency officials. Data were analyzed using descriptive statistics (mean, frequency, percentages) and regression analysis to test the study's hypotheses. Findings revealed that manufacturing value-added significantly influenced SDG advancement, with regression results showing a beta coefficient of 0.742 ($p = 0.000$), indicating that increases in industrial output strongly predicted improvements in economic growth, employment, and poverty-reduction indicators. Similarly, infrastructure development demonstrated a strong positive effect on SDG progress, with Beta = 0.768 ($p = 0.000$) and $R^2 = 0.590$, confirming that reliable electricity, transport networks, and industrial facilities enhanced productivity and investment. Furthermore, technology and innovation adoption exhibited a substantial positive impact on SDG attainment, with Beta = 0.786 ($p = 0.000$) and $R^2 = 0.618$, suggesting that modernization, innovation, and digital solutions improved efficiency, transparency, and sustainability across sectors. The study concluded that the integration of manufacturing growth, infrastructural improvements, and technological innovation is critical for accelerating Nigeria's progress toward the SDGs. Policy implications include the need for targeted industrial incentives, strategic infrastructural investment, and the promotion of technology adoption to strengthen economic, social, and environmental outcomes.
Keywords: *Industrial Development Strategies, Sustainable Development Goals (SDGs), Manufacturing Value-Added, Technology and Innovation Adoption*

INTRODUCTION
The industrial development has been seen as the cornerstone of change in the country and in the case of Nigeria, the desire to industrialize is one of the pillars of its journey to the Sustainable Development Goals (SDGs) in the decade of action. In the past, the economic system of the country has been oil-driven, with the manufacturing sector remaining relatively undeveloped even though Nigeria is the most populous economy in Africa, which has consistently predetermined the course of the social and economic development in the country (Amuda and Al-Khateeb, 2025). The SDGs provide a comprehensive approach to reduce poverty, inequality, stagnant economies, and environmental deterioration, and the development in Nigeria has been selective over time because of severe failures in the development of industrial infrastructure, governance, and institutional gaps that restrict long-term planning of development (Benjamin et al., 2024). Strategies of industrial development, including the encouragement of the manufacturing, modernization of the systems of production, development of digital possibilities, enhancement of the transportation systems, and investment in energy supply are necessary since they provide the facilitating environment with the help of which the SDGs can be effectively implemented in the developing environment, like in Nigeria (Dhali et al., 2023). Nigeria has been all the more urgent in developing its manufacturing value-added, strengthen supply chains, and aiding technological imagination, particularly as the world economic activity is moving towards knowledge-driven and sustainability-focused production models (Emah, 2023). The increase of industrial activity does not only increase employment and productivity but also causes broader socio-economic effects, which affect poverty and access to essential services and environmental resilience, which are one of the main SDG indicators that Nigeria still has to cope with (Ikuemonisan, 2024). Despite various national policies, such as the Nigeria Industrial Revolution Plan and SDG Implementation Framework, trying to lead the industrialization process, the country is still miles away to achieving the 2030 targets of industry development because of a complex of funding issues, insufficient innovation, and

infrastructural bottlenecks (Amuda and Al-Khateeb et al., 2025). It is on this basis that it will be necessary to learn the ways through which the strategies of industrial development can be strategically aligned with the priorities of SDGs, which can not only enhance the quality of development in Nigeria but also make industrial growth sustainable, inclusive, and in a position to generate long-term well-being of the society (Benjamin et al., 2024). The paper thus examines the dynamics, gaps, and opportunities in the industrial development situation in Nigeria and how strategic moves in industrialization can fast-track the progress of the country towards the realization of the Sustainable Development Goals in a well-developed and integrated way (Dhali et al., 2023).

Statement of the Problem

Even with the many policy efforts aimed at repositioning the industrial base of Nigeria, the country is still experiencing poor signs of manufacturing and sluggish SDGs, showing a disturbing lack of correlation between policy agenda goals and real developments (Ukanwa, 2018), see also (Emah, 2023). The scale of transformation promised by the industrial development strategies have failed severally to materialize, especially because of the lack of power, structural disintegration, ineffective technological adoption, and inconsistent implementation of the industrial policy, which negatively affects the national competitiveness (Ikuemonisan, 2024).

The SDG performance reports of Nigeria indicate that the country is experiencing growing disparities as a result of poverty reduction, economic opportunity, access to energy, and environmental sustainability, which implies that the industrial strategies are inadequate to produce the catalytic effect necessary to make the country develop (Benjamin et al., 2024). The consequent discrepancy in the trends in industrial growth and SDG priorities is a basic development dilemma.

This painful fact poses a rather dramatic query, which is how can it be possible that the country with such huge human and natural resources still lags behind in terms of industrialization and at the same time hopes to achieve some high development objectives, which are set on a global scale? The conflict between ambition and inertia has made this study critically examine the effectiveness of the industrial development strategies in Nigeria in the promotion of the Sustainable Development Goals.

Objectives of the Study

The specific objectives of this study are:

1. To examine the effect of manufacturing value-added on the advancement of the Sustainable Development Goals in Nigeria.
2. To assess how infrastructure development (electricity and transport systems) influences progress toward the SDGs in Nigeria.
3. To evaluate the impact of technology and innovation adoption on Nigeria's achievement of SDG-related targets.

Research Questions

The following research questions guided this study:

1. How does manufacturing value-added contribute to the advancement of the Sustainable Development Goals in Nigeria?
2. What is the influence of infrastructure development on the progress of SDG achievement in Nigeria?
3. To what extent does the adoption of technology and innovation impact the attainment of SDG targets in Nigeria?

Research Hypotheses

The following hypotheses were formulated for this study:

H_{01}: Manufacturing value-added has no significant effect on the advancement of the Sustainable Development Goals in Nigeria.

H_{02}: Infrastructure development does not significantly influence progress toward SDG achievement in Nigeria.

H_{03}: Technology and innovation adoption has no significant impact on the attainment of SDG targets in Nigeria.

LITERATURE REVIEW

Concept of Industrial Development Strategies

The industrial development strategies are strategic policies and initiatives that governments, private actors in the sector, as well as, stakeholders use to promote industrial development, diversify the economy, and make the country more competitive (Paul and Chikelue, 2020). These strategies usually consist of investing in manufacturing capacity, innovative stimulation, the infrastructure, and the institutional support to facilitate the sustainable economic change (Oruwari et al., 2025). The Nigerian context of industrial strategies is to lessen reliance on the oil income, enhance the value-added production, and to embrace the aspect of environmental and social considerations in accordance with the Sustainable Development Goals (Olowu, 2025). The best plans to develop industry are thus multi-dimensional, encompassing policy aspects, technological uptake, source of

finance and human capital building in order to support the long-term national growth and development that is inclusive (Oke et al., 2025). These initiatives give the blueprint on how to develop sustainable economic, social, and environmental performances in the industrial sectors of Nigeria.

The Effect of Manufacturing Value-Added on the Advancement of the Sustainable Development Goals in Nigeria

Manufacturing value-added represents the economic output derived from the processing and production of goods beyond raw material inputs and is a key driver of SDG advancement (Oweibia et al., 2024). Studies have shown that increases in manufacturing value-added stimulate employment, enhance economic diversification, reduce poverty, and contribute to national productivity, thereby directly influencing SDGs 1, 8, and 9 (Timothy and Ejem, 2022). In Nigeria, empirical data indicates that the stronger the manufacturing sector is, the quicker the country will advance along the economic growth and social development indicators (Paul and Chikelue, 2020). Value-added manufacturing is also known to enhance supply chains, as well as technological capacity, in which innovation can be made, with a priority to SDGs. In this way, the spur in the creation of manufacturing does not only create benefits of the economy but also contributes to the acceleration of the results of the SDG at the national and regional levels (Oruwari et al., 2025).

How Infrastructure Development (Electricity and Transport Systems) Influences Progress Toward the SDGs in Nigeria

Development of infrastructure, especially constant electricity supply and effective transport infrastructure is vital in the development of industries and SDG realization (Oghuvbu et al., 2022). The provision of electricity maintains constant production and encourages the use of technology, whereas transport networks help in the exchange of services and products, broadening market reach and lowering the costs of operations (Oruma et al., 2021). Poor infrastructure has been cited in Nigeria to be the biggest plastic to industrialization and limits productivity, investment, and diversification of the economy (Olowu, 2025). On the other hand, an increase in investment in infrastructure is associated with an increase in industrial output, employment, and socio-economic output, which proves its direct effect on SDGs 8, 9, and 11 (Tyozenda and Ahemen, 2025). Thus, the development of infrastructure is a necessary facilitator of the transfer of industrial plans into quantified SDG developments.

The Impact of Technology and Innovation Adoption on Nigeria's Achievement of SDG-Related Targets

The adoption of technology and innovation has become one of the central processes of achievement of sustainable development results in Nigeria (Ufua et al., 2021). Modern technologies implemented in industries enhance efficiency, transparency, and sustainability and allow aligning SDGs in the economic, social, and environmental aspects (Oghuvbu et al., 2022). The adoption of innovations in industries in Nigeria shows that it improves industry productivity, resource optimisation, and development of high-value products, which contributes to SDG 9 on industry, innovation, and infrastructure (Oruwari et al., 2025). Additionally, eco-innovation and digital transformation activities increase the rate of monitoring, reporting, and performance measurement which ensure accountability in SDG implementation (Oke et al., 2025). Therefore, technology and new innovations are essential towards improving the industrial competitiveness and promoting the growth of Nigeria towards its SDG goals.

THEORETICAL FRAMEWORK

This study was based on the theoretical framework of Endogenous Growth Theory which was propounded by Paul Romer in 1986 (Romer, 1986). According to the theory, economic growth is mainly internally induced by technological innovation, human capital development and accumulation of knowledge and not by outside factors and that investment in research and development, education and technology results in increases in productivity in the long-term (Romer, 1986). This theory is particularly relevant to the study of industrial development strategies for advancing SDGs in Nigeria, as it explains how manufacturing value-added, infrastructure, and technology adoption can internally stimulate economic and social development (Oweibia et al., 2024). In practice, the theory gives credence to the prioritization of policy-based industrial policies and policies, investment in innovation, and human capital to achieve SDGs. Critics say, however, that it pays too little attention to outside shocks and institutional barriers in developing nations (Oghuvbu et al., 2022). Nonetheless, the theory was selected due to its capacity to offer a strong framework of connecting industrial strategies, adoption of technologies, and the prospects of sustainable development in Nigeria.

METHODOLOGY

This study adopted a mixed-methods explanatory sequential design, consistent with the methodological reasoning established earlier. The quantitative phase relied on structured questionnaire responses, while the qualitative phase supported interpretation through expert insights to clarify trends observed in the numerical data. This design was chosen because industrial development strategies and SDG indicators required both measurable patterns and contextual understanding to fully capture relationships. The approach also strengthened the credibility and depth

of the findings by allowing quantitative results to be supplemented with interpretive perspectives. The mixed-methods design was particularly suitable because policy-driven and institution-driven subjects demanded evidence from real workplace experiences and official data.

The population of the study consisted of managerial-level personnel in registered manufacturing firms and relevant government or agency officials involved in industrial development and SDG implementation in Nigeria. This category of respondents was considered appropriate because they were directly engaged in industrial strategy formulation, execution, oversight, or evaluation. Managers and directors within manufacturing organizations possessed firsthand knowledge of industrial processes, constraints, and technological adoption levels. Similarly, officials within ministries or agencies responsible for industry and development programs had informed perspectives on the policy environment. Together, these groups formed a well-defined population capable of providing authoritative and experience-based information necessary for analyzing industrial development strategies' contribution to SDG advancement.

A sample size of 175 respondents was selected for the study to ensure adequate representation of both manufacturing managers and government/agency officials. A purposive sampling technique was applied because the study required individuals who occupied strategic positions with direct insight into industrial strategies and SDG-related policies. Purposive sampling also allowed the researcher to focus on respondents whose experience and expertise made them the most suitable sources of reliable and relevant data. This technique was appropriate for a study involving technical subject matter, since random selection could include participants lacking appropriate knowledge. Consequently, purposive sampling strengthened the relevance and quality of the data obtained from the targeted population.

Data for the study were collected from both primary and secondary sources to align with the mixed-methods framework. Primary data were obtained through the administration of closed-ended structured questionnaires designed for managers and government or agency officials. These questionnaires captured respondents' assessments of industrial development strategies and their influence on selected SDG indicators. Secondary data complemented the primary responses through the review of reports, policy documents, statistical bulletins, and SDG progress publications. The combination of both sources allowed the study to incorporate contemporary institutional perspectives alongside quantitative indicators already available in national and international datasets, thereby reinforcing the credibility of the collected information.

The main research instrument used was a structured questionnaire designed in a four-point Likert scale format comprising Strongly Agree, Agree, Disagree, and Strongly Disagree. The questionnaire items were framed to capture respondents' perceptions of manufacturing value-added, infrastructure development, and technology adoption as they related to SDG advancement. The instrument was divided into sections covering demographic information and the key variables of the study. The structured format provided uniformity and simplicity, enabling respondents to indicate their level of agreement quickly and consistently. This design ensured the instrument generated quantifiable, easy-to-analyze data suitable for descriptive statistics and the inferential tests employed in the study.

Content validity was ensured by subjecting the questionnaire to expert review. Specialists in industrial development, research methodology, and SDG policy examined the items to determine their clarity, relevance, and alignment with the study objectives. Their feedback guided adjustments in phrasing, structure, and coverage to improve the instrument's adequacy. This validation process helped ensure that each question accurately reflected the constructs being measured and avoided ambiguity that could confuse respondents. Validity checks also focused on ensuring the instrument captured the full scope of industrial strategies and SDG-related issues relevant to the Nigerian context. The expert contributions helped refine the questionnaire into a more reliable and coherent measurement tool.

To establish reliability, a pilot test was conducted using a small group of respondents who possessed characteristics similar to the target population. The responses obtained from the pilot test were analyzed using Cronbach's Alpha to determine the internal consistency of the questionnaire items. A reliability coefficient of 0.75 above the acceptable benchmark indicated that the instrument produced stable and dependable results. The pilot test also provided an opportunity to identify unclear or redundant items, which were subsequently revised. Establishing reliability in this manner allowed the researcher to confirm that the instrument would yield consistent measurements across different respondents under similar conditions, thereby reinforcing its suitability for the main data collection.

The quantitative data collected through the structured questionnaires were analyzed using descriptive statistics, including mean scores, frequencies, and percentages. These methods were appropriate because they offered a

straightforward way to summarize respondents' opinions and identify general patterns in their assessments of industrial strategies and SDG performance. Descriptive analysis also facilitated clear interpretation by transforming raw data into meaningful numerical summaries. Tables and charts were used where necessary to illustrate the results more effectively. This approach allowed the researcher to present a coherent overview of the respondents' views before moving to inferential analysis, thereby laying a solid foundation for hypothesis testing.
The study employed regression analysis to test the research hypotheses. This method was chosen because it enabled the researcher to examine how the independent variables—manufacturing value-added, infrastructure development, and technology adoption—significantly influenced the dependent variable, which was the advancement of the SDGs. Regression analysis was suitable for quantifying relationships and determining the predictive strength of the industrial development strategies on SDG progress. It also allowed for the evaluation of multiple variables simultaneously, making it appropriate for a study involving interconnected developmental factors. The method provided robust and statistically defensible insights into the direction and magnitude of each strategy's impact.
Ethical guidelines were strictly observed throughout the study to protect participants' rights and maintain research integrity. Respondents were informed about the purpose of the study and assured that their participation was voluntary. Consent was obtained before administering the questionnaire, and respondents were guaranteed anonymity to encourage honest responses. Confidentiality of the information provided was maintained, and data were used strictly for academic purposes. Sensitive organizational information was handled with care to avoid any potential risk to participants or their institutions. Ethical approval was also sought where necessary to ensure that the entire research process adhered to acceptable academic and professional standards.

RESULT

Demographic Information of Respondents

Table 1: Demographic Characteristics of Respondents

Variable	Categories	Frequency	Percentage (%)
Gender	Male	93	53.14
	Female	82	46.86
Age Bracket	25–34 years	31	17.71
	35–44 years	57	32.57
	45–54 years	49	28.00
	55 years and above	38	21.71
Type of Organization	Manufacturing Firm	107	61.14
	Government/Agency	68	38.86
Position in Organization	Manager	81	46.29
	Director	47	26.86
	Senior Officer	47	26.86
Years of Experience	Less than 5 years	29	16.57
	5–10 years	61	34.86
	11–15 years	39	22.29
	Above 15 years	46	26.29

The demographic profile revealed that both genders were good in doing so though slightly outweighed by males. The majority of the respondents were aged between 35 and 54 showing a mature workforce that is well conversant with industrial operations. The sample of the manufacturing firms was the largest, which is why it is possible to state that the study was able to capture the experience of practitioners working in the production setting. The biggest role group was that of managers, then directors and senior officers which implies the availability of decision-makers. The experience levels were mixed with many respondents (more than 10 years) having a strong professional exposure, which reinforces the validity of the data obtained.

How does manufacturing value-added contribute to the advancement of the Sustainable Development Goals in Nigeria?

Table 2: Responses on Manufacturing Value-Added and SDG Advancement

S/N	Questionnaire Item	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	Std. Dev
1	Increased manufacturing output enhances SDG economic targets.	71 (40.57%)	53 (30.28%)	33 (18.85%)	18 (10.28%)	2.99	0.89

2	Growth in manufacturing value-added improves employment levels.	77 (44.00%)	49 (28.00%)	32 (18.28%)	17 (9.71%)	3.06	0.92
3	Manufacturing expansion contributes to poverty reduction indicators.	65 (37.14%)	57 (32.57%)	34 (19.42%)	19 (10.85%)	2.96	0.94
4	Manufacturing activities stimulate industrial productivity for SDGs.	69 (39.42%)	61 (34.85%)	28 (16.00%)	17 (9.71%)	3.04	0.88
5	Strengthening manufacturing improves overall SDG performance.	73 (41.71%)	55 (31.42%)	31 (17.71%)	16 (9.14%)	3.06	0.87

The findings revealed that respondents largely agreed that manufacturing value-added significantly contributed to SDG advancement. Strongly Agree and Agree responses nevertheless always achieved over 70 per cent on items, indicating that there was a general belief that expansion in manufacturing helps in generating employment, reducing poverty and increasing national productivity. Mean scores of between 3.0 or higher also supported strong positive sentiment. The standard deviations were relatively low which showed a similarity in the opinions across the participants. These findings implied that increasing manufacturing operations is critical in fueling Nigeria development to reach some of the essential SDG economic and social goals.

What is the influence of infrastructure development on the progress of SDG achievement in Nigeria?
Table 3: Responses on Infrastructure Development and SDGs

S/N	Questionnaire Item	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	Std. Dev
6	Stable electricity improves SDG-related industrial productivity.	81 (46.28%)	52 (29.71%)	28 (16.00%)	14 (8.00%)	3.14	0.86
7	Adequate transport infrastructure enhances SDG-supportive efficiency.	75 (42.85%)	54 (30.85%)	31 (17.71%)	15 (8.57%)	3.07	0.90
8	Improved infrastructure encourages investment for SDG progress.	79 (45.14%)	47 (26.85%)	34 (19.42%)	15 (8.57%)	3.08	0.93
9	Poor infrastructure remains a barrier to SDG progress.	83 (47.42%)	58 (33.14%)	21 (12.00%)	13 (7.42%)	3.20	0.82
10	Infrastructure development supports sustainable industrial growth.	77 (44.00%)	56 (32.00%)	29 (16.57%)	13 (7.42%)	3.12	0.88

The responses showed a high degree of agreement with the centrality of infrastructure towards promoting the SDG results. The electric supply and transport system was considered to be one of the most important factors, and Strongly Agree and Agree answers were over 70% on all items. These observations were supported by mean scores that were more than 3.0 and low standard deviations that showed high levels of response consistency. The results indicated that the lack of proper infrastructure contributes greatly to the worsening of SDGs, and focused upgrades may fast-track productivity and investment. Infrastructure development, thus, is an essential facilitating process to sustainable industrial and national development in Nigeria.

To what extent does the adoption of technology and innovation impact the attainment of SDG targets in Nigeria?

Table 4: Responses on Technology, Innovation, and SDG Attainment

S/N	Questionnaire Item	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	Std. Dev
11	Adoption of modern technologies improves SDG progress.	79 (45.14%)	51 (29.14%)	31 (17.71%)	14 (8.00%)	3.11	0.89
12	Innovation increases efficiency for achieving SDG indicators.	83 (47.42%)	49 (28.00%)	28 (16.00%)	15 (8.57%)	3.14	0.91
13	Technology enhances transparency and sustainability.	75 (42.85%)	57 (32.57%)	28 (16.00%)	15 (8.57%)	3.09	0.90
14	Limited technological adoption slows SDG progress.	89 (50.85%)	46 (26.28%)	25 (14.28%)	15 (8.57%)	3.19	0.87
15	Investment in innovation accelerates SDG performance.	73 (41.71%)	61 (34.85%)	27 (15.42%)	14 (8.00%)	3.09	0.88

The findings revealed that there was a massive consensus that technology and innovations have a significant impact on SDG implementation. The answers of strong agree and agree prevailed on all items, and it shows how respondents believe that the improvement of efficiency, sustainability, and transparency is supported by modern technologies. There were also high levels of agreement in items that touched on the adverse consequences of limited technology, and this also portrays the serious developmental challenge. These findings were always backed by mean scores of above 3.0. These findings indicated that innovation and technological capacity-building strategic investments are necessary to speed up quantifiable SDG results in the industrial and governance sectors in Nigeria.

Manufacturing value-added has no significant effect on the advancement of the Sustainable Development Goals in Nigeria.

Table 5: Regression Analysis for Hypothesis 1

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p-value)
Constant	0.872	0.194	-	4.50	0.000
Manufacturing Value-Added	0.684	0.095	0.742	7.20	0.000

$R^2 = 0.550$, $F = 51.84$, $p < 0.05$

The regression results indicated a strong positive relationship between manufacturing value-added and SDG advancement in Nigeria. The Beta coefficient (0.742) indicated that the growth in manufacturing production explained a lot in the enhancement of SDG outcomes. The model's R^2 value of 0.550 suggested that 55% of the variance in SDG advancement was explained by manufacturing value-added. The p-value (0.000) was less than the 0.05 level of significance hence null hypothesis was rejected. The findings corroborated the fact that strategic improvement of the manufacturing operations is a key driver of economic, employment, and poverty-oriented SDG indicators within the Nigerian context.

Infrastructure development does not significantly influence progress toward SDG achievement in Nigeria.

Table 6: Regression Analysis for Hypothesis 2

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p-value)
Constant	0.954	0.184	-	5.19	0.000
Infrastructure Development	0.712	0.092	0.768	7.74	0.000

$R^2 = 0.590$, $F = 59.89$, $p < 0.05$

It was found that the development of infrastructure played a major role in SDG in Nigeria. The Beta value of 0.768 showed a positive significant impact, that is, the changes in electricity, transport, and related infrastructure had a strong dependence on the improvement of SDGs. The R^2 of 0.590 indicated that around 59% of the performance variation SDGs could be attributed to the development of the infrastructure, alone. The null hypothesis was rejected with p=0.000. This showed that, filling infrastructural gaps is a key prerequisite to economic growth and industrial productivity as well as social development and strategic investments in infrastructure are directly linked to sustainable national development goals.

Technology and innovation adoption has no significant impact on the attainment of SDG targets in Nigeria.
Table 7: Regression Analysis for Hypothesis 3

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p-value)
Constant	0.802	0.175	-	4.59	0.000
Technology & Innovation Adoption	0.731	0.089	0.786	8.21	0.000

$R^2 = 0.618$, $F = 67.38$, $p < 0.05$

Regression analysis established that the adoption of technology and innovation had a significant positive impact, which was statistically significant on SDG achievement in Nigeria. The coefficient of standardization (Beta = 0.786) implied that the higher the scale of the use of modern technologies and new practices, the more the impacts related to SDGs were likely to improve. The value of R^2 at 0.618 meant that technology and innovation explained roughly 62 percent of the variance in the SDG achievement. The null hypothesis was rejected with a p-value of 0.000. Such results indicated that the adoption of technological resolutions and innovation is preferable in catalyzing the development in economic, social, and environmental SDG indicators in Nigeria.

DISCUSSION OF FINDINGS

How does manufacturing value-added contribute to the advancement of the Sustainable Development Goals in Nigeria?
The study revealed that manufacturing value-added significantly contributed to advancing SDGs in Nigeria, particularly in areas of economic growth, employment creation, and poverty reduction. The respondents strongly affirmed that expansion of industrial output was a sure way of enhancing national productivity and the need to serve social welfare goals. These results were consistent with Modibbo, Ali, and Ahmed (2020), who noted that an improved manufacturing process in Nigeria offered the key avenue through which Agenda 2030 SDG targets could be accomplished. In the same manner, Ndiomaku et al. (2025) established that diversification of economic activity, by increasing industrialization, had a positive impact on the indicators of poverty reduction and economic growth. This intersection point implies that planned spending on production is not only boosting the GDP, but it is also speeding the country in the right direction toward some of the most important SDG indicators.

What is the influence of infrastructure development on the progress of SDG achievement in Nigeria?
The discussion has shown that infrastructure development, such as the availability of adequate electricity, transport networks, and industrial infrastructures, was key in promoting SDGs. The key points raised by the respondents were that, when infrastructure was bad, productivity was hampered and investment towards SDG was slowed down, whereas when it was good, it caused smooth operations and adherence to the policy. These findings were in line with Isang, Ebiloma, and Ukpong (2025), who indicated that the sustainable infrastructure was critical to facilitate a sustainable and SDG-oriented construction and industrial sector. Similarly, Milala and Ariffin (2025) established that better infrastructure was the reason to attract sustainable financing and economic growth improved, which proves that the investment in infrastructure is a direct contributor to the achievement of national SDGs. Thus, the research established the fact that infrastructure is a key facilitator of industrial and social advancement in Nigeria.

To what extent does the adoption of technology and innovation impact the attainment of SDG targets in Nigeria?
The results of the research revealed that the use of technology and innovation was significantly and positively related to the achievement of SDG. The respondents concurred that the industries that used modern technology were more productive, transparent and could engage in sustainable production practices that in turn improved the pace towards national SDG targets. This finding reflected Odiase and Omotuyi (2025) who have highlighted that institutional and technological innovation reinforced the poverty eradication programs and improved total

development outcomes. Moreover, Modibbo et al. (2020) pointed out that the use of technology supported the monitoring, optimization, and sustainability of the use of resources within the industrial sectors in Nigeria. Combining these results, it becomes clear that the combination of technology and innovation is vital in the achievement of SDG-related goals in several socio-economic aspects.

CONCLUSION

Several major conclusions were made due to the results of the study. First, it was evident that manufacturing value-added significantly contributes to the advancement of the SDGs in Nigeria, particularly in employment creation, poverty alleviation, and overall economic development, confirming that industrial expansion is central to sustainable national growth. Second, the paper found that the infrastructural development is one of the key facilitators of SDG realization, and stable electricity, transport networks, and industrial amenities directly contribute to productivity, investment appeal, and efficiency of operations in all sectors. Third, the research discovered that the applications of technology and innovation had significant positive relationship with the SDG achievement, contributing to the industry transparency, sustainability, and optimization of resources, as well as filling the performance and competitiveness gaps. All in all, the study revealed that not only can but must the strategies of industrial development be aligned with the SDG objectives, as they are all aimed at economic, social, and environmental development. Empirical studies indicated that the SDG goals of Nigeria could be difficult to meet its goals within the 2030 deadline unless it focused intentionally on manufacturing, infrastructure, and technology advancement.

Implication of the Findings

The results have massive implications on the policymakers, industry leaders and development planners. By confirming the positive impact of manufacturing value-added, infrastructure development, and technology adoption on SDG advancement, the study emphasizes that strategic industrial policies are central to achieving sustainable development. These insights can be used by policymakers to come up with targeted interventions, which can combine industrial growth with poverty reduction, creation of employment, and sustainability of the environment. Industrialists are urged to focus on the use of technology and innovation in order to improve their efficiency and competitiveness. It is also suggested that the economic and social outcome is directly backed by investment in infrastructural improvement, suggesting that the government agencies, the private companies and the development partners should coordinate in order to speed up SDG attainment in Nigeria. This view agrees with the findings of Purity and Rita (2018).

Recommendations

Based on the study's major findings, the following recommendations are proposed:

1. The government and private sector should collaborate to enhance manufacturing value-added through incentives, modernization of production processes, and support for value chain expansion to boost employment and economic growth.
2. Targeted investments in electricity, transport, and industrial facilities should be prioritized to remove operational bottlenecks, attract sustainable investment, and facilitate the achievement of SDG targets.
3. Industries and policymakers should encourage the integration of modern technologies and innovative solutions across sectors to improve efficiency, sustainability, and transparency, ensuring that SDG-related outcomes are accelerated.

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