The Role of Public Spending in Achieving Sustainable Economic Development: An Analytical Case Study of Algeria

دور الإنفاق العام في تحقيق التنمية الاقتصادية المستدامة: دراسة تحليلية لحالة الجزائر

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Abstract:

This study examines the role of public spending in promoting sustainable economic development in Algeria. Sustainable development integrates economic growth, social equity, and environmental protection, and public expenditure is a key policy tool to achieve these objectives. The research analyzes Algeria's spending patterns between 2019 and 2023, highlighting the country's heavy dependence on hydrocarbon revenues, which exposes fiscal policy to external shocks and limits long-term development potential. Findings indicate that while infrastructure, education, and health investments contribute positively to economic growth and human capital, inefficiencies, project delays, and misallocation reduce their overall effectiveness. Environmental spending remains limited, constraining progress toward sustainability goals. The study concludes that aligning public expenditure with sustainability priorities, improving governance, and diversifying revenue sources are essential to enhance developmental outcomes. These insights provide guidance for policymakers seeking to strengthen the efficiency and impact of public spending in resource-dependent economies.

Keywords: Public Spending ;Sustainable Economic Development; Infrastructure Investment; Human Capital.

Jel Classification Codes : E62; O1 ; H52 ; J24.

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الملخص:

تبحث هذه الدراسة دور الإنفاق العام في تعزيز التنمية الاقتصادية المستدامة في الجزائر. وتدمج التنمية المستدامة النمو الاقتصادي والعدالة الاجتماعية وحماية البيئة، ويُعدّ الإنفاق العام أداةً سياسيةً رئيسيةً لتحقيق هذه الأهداف. ويُحلل البحث أنماط الإنفاق في الجزائر بين عامي 2019 و2023، مُسلّطًا الضوء على اعتماد البلاد الكبير على عائدات المحروقات، مما يُعرّض السياسة المالية للصدمات الخارجية ويُحدّ من إمكانات التنمية طويلة الأجل. وتشير النتائج إلى أنه في حين تُسهم استثمارات البنية التحتية والتعليم والصحة إيجابًا في النمو الاقتصادي ورأس المال البشري، فإنّ عدم الكفاءة وتأخير المشاريع وسوء التخصيص يُقلّل من فعاليتها الإجمالية. ولا يزال الإنفاق البيئي محدودًا، مما يُعيق التقدم نحو أهداف الاستدامة. وتخلص الدراسة إلى أنّ مواءمة الإنفاق العام مع أولويات الاستدامة، وتحسين الحوكمة، وتنويع مصادر الإيرادات، أمورٌ أساسيةٌ لتعزيز نتائج التنمية. وتُقدّم هذه الرؤى إرشاداتٍ لصانعي السياسات الذين يسعون إلى تعزيز كفاءة الإنفاق العام وتأثيره في الاقتصادات المعتمدة على الموارد.

الكلمات الدالة: الإنفاق العام؛ التنمية الاقتصادية المستدامة؛ الاستثمار في البنية التحتية؛ رأس المال البشري.

تصنيف JEL: J24; H52; O1 ;E62

Introduction :

Over the past decades, sustainable economic development has emerged as a priority for many nations, particularly developing countries that seek to achieve long-term growth while ensuring social equity and environmental protection. In this context, public spending represents one of the most influential policy tools available to governments, as it enables the financing of essential infrastructure, human capital development, and social programs that support inclusive and sustainable development trajectories.

For Algeria, public expenditure has historically played a central role in economic management, largely due to the country's heavy reliance on hydrocarbon revenues. While periods of high oil prices have facilitated ambitious public investment programs, fluctuations in global energy markets have exposed structural vulnerabilities and raised concerns about the sustainability and effectiveness of public spending in promoting long-term development. These dynamics bring into question the extent to which Algeria's current spending patterns are capable of supporting a transition toward a more diversified and sustainable economy.

In light of these considerations, the present study aims to examine the role of public spending in achieving sustainable economic development in

Algeria. It seeks to analyze how public expenditure is allocated, its effectiveness in influencing key development indicators, and the structural challenges that may limit its developmental impact.

Based on this background, the main research problem can be formulated as follows: **To what extent does public spending contribute to achieving sustainable economic development in Algeria?**

To address this problem, the study adopts the following sub-questions:

1. What is the concept, nature, and economic role of public spending?
2. How can sustainable economic development be defined, and what are its fundamental pillars?
3. What analytical mechanisms link public expenditure to sustainable economic development, particularly in the context of developing economies such as Algeria?

Hypotheses : The study is guided by the following hypotheses:

H1: Efficiently allocated public spending positively supports sustainable economic development across its economic, social, and environmental dimensions.

H2: Misallocation, inefficiencies, and structural rigidities weaken the developmental impact of public spending.

H3: Aligning public expenditure with sustainability goals enhances economic diversification and resilience, especially in resource-dependent countries like Algeria.

Research Methodology : The study relies on a combination of:

Descriptive Method: To present theoretical concepts and describe public spending trends.

Analytical Method: To analyze data and interpret the relationship between public spending and development indicators.

Case Study Method: To deeply examine the Algerian context and assess the effectiveness of public spending within the national economic framework.

Research Importance : This study is significant because:

- It sheds light on the developmental role of public spending in an economy highly dependent on hydrocarbons.
- It contributes to understanding the link between fiscal policy and sustainable development in Algeria.
- It provides analytical insights that can support policymakers in enhancing the effectiveness of public expenditure.
- It adds to the academic literature on public finance and sustainable development in developing countries.

Research Plan : The study is structured into the following sections:

I. Concept of Public Spending
II. Definition and Pillars of Sustainable Economic Development Sustainable
III. The Analytical Relationship between Public Spending and Sustainable Economic Development.

1. Concept of Public Spending

1.1.Definition of Public Spending: Public spending, also known as government expenditure, refers to the total amount of resources disbursed by the public sector to fulfill the economic, social, and administrative responsibilities of the state. It encompasses all financial outflows made by national and subnational governments, public agencies, and institutions for the provision of goods and services that aim to satisfy collective needs and promote national development. In essence, public spending reflects the economic footprint of the government in a country's economy and is a principal instrument of fiscal policy (Musgrave & Musgrave, 1989).

From a public finance perspective, public expenditure is broadly defined as "all payments made by the government or public authorities in return for goods and services or as transfers to individuals and other sectors" (OECD, 2011). This includes both direct spending (such as salaries, construction of infrastructure, and purchasing of equipment) and indirect spending (like subsidies and social transfers). It is primarily financed through taxation, borrowing, and, in some countries, natural resource revenues.

Public spending is distinguished from private spending by its underlying motivation and objectives. While private expenditure is guided by profit maximization and individual preferences, public spending is aimed at promoting social welfare, addressing market failures, and achieving macroeconomic objectives such as stability, equity, and growth (Stiglitz, 2000). It therefore plays a foundational role in state-building, economic structuring, and social protection.

Public expenditure has both quantitative and qualitative dimensions. The quantitative aspect refers to the size of spending as a share of GDP, while the qualitative aspect relates to the composition, targeting, and efficiency of spending. According to the World Bank (2022), the effectiveness of public spending depends less on its volume and more on how it is prioritized, implemented, and monitored.

The concept of public spending also varies across different legal and institutional contexts. In some countries, it may include only budgeted expenditures, while in others, it may encompass extra-budgetary funds, public-private partnerships, or quasi-fiscal activities carried out by state-owned enterprises. This variation underscores the need for a clear and consistent classification of public spending to ensure transparency and accountability (IMF, 2021).

In summary, public spending is a complex and multifaceted concept that lies at the heart of public policy. A clear understanding of its definition, scope, and components is essential for analyzing its impact on development outcomes, especially in economies where government intervention plays a dominant role.

1.2. Types of Public Spending: Public spending can be categorized in various ways depending on the objective of analysis—whether economic, functional, or institutional. Understanding these classifications is crucial for assessing the efficiency, effectiveness, and developmental impact of public expenditures, particularly in developing countries where fiscal space is often constrained and needs are diverse.

1.2.1. Economic Classification: Current vs. Capital Expenditure One of the most common classifications distinguishes between current expenditure and capital expenditure.

Current expenditure refers to government spending on goods and services consumed within the current year and which do not result in the creation of assets. These include salaries and wages of civil servants, purchases of consumables, maintenance costs, subsidies, transfers, and interest payments on public debt. Although necessary for the functioning of the public sector, excessive recurrent expenditure can crowd out investments and contribute to structural deficits (Musgrave & Musgrave, 1989).

Capital expenditure, on the other hand, involves spending on assets intended to yield long-term benefits. This includes investments in infrastructure, such as roads, schools, hospitals, water supply, and digital connectivity, as well as capital transfers to public enterprises. Capital expenditure is generally regarded as more "productive" because it contributes directly to economic growth and structural transformation (Tanzi & Schuknecht, 2000).

In practice, the optimal balance between current and capital expenditure remains a major policy challenge. While developing countries often devote a large share of resources to recurrent expenditures like wages and subsidies for political or social stability, this can limit the space available for productive investments.

1.2.2. Functional Classification Public spending can also be classified according to the functional purpose it serves. The Classification of the Functions of Government (COFOG), developed by the United Nations and widely used by the IMF and World Bank, identifies ten major functions, including:

- General public services.
- Defense.
- Public order and safety.
- Economic affairs (e.g., infrastructure, transport).
- Environmental protection.
- Housing and community amenities.
- Health.
- Recreation, culture, and religion.
- Education.
- Social protection.

This classification allows policymakers and analysts to evaluate how governments allocate resources across sectors and to assess whether spending patterns are aligned with development priorities. For example, low spending on education and health may signal underinvestment in human capital, while disproportionate spending on defense could indicate political priorities overriding developmental needs (OECD, 2011).

1.2.3.Institutional Classification : A third classification focuses on the institutional unit responsible for the expenditure—central government, local governments, public enterprises, or special funds. This perspective is important for fiscal decentralization and public financial management reform. It allows for a more precise analysis of where spending decisions are made and how resources are managed across administrative levels.

In federal or decentralized systems, a significant share of public spending may be undertaken by regional or local authorities. While decentralization can bring services closer to citizens and improve responsiveness, it also requires strong institutional capacities and accountability mechanisms to ensure efficient use of public funds (World Bank, 2022).

1.2.4. Classification by Financing Source Public spending can also be categorized based on its source of financing, including:

- Tax-funded expenditure, which forms the bulk of spending in most countries.
- Debt-financed spending, often used to fund capital investment but may pose sustainability risks if not managed carefully.
- Natural resource revenues, especially in resource-rich countries like Algeria.
- Grants and external aid, relevant particularly in low-income countries.

Each source of financing has different implications for fiscal sustainability, intergenerational equity, and macroeconomic stability. For instance, heavy reliance on oil revenues, as in Algeria, creates exposure to price shocks and undermines long-term fiscal planning.

1.2.5. Developmental vs. Non-Developmental Expenditure: Some authors also distinguish between developmental expenditure, which includes spending on health, education, infrastructure, and innovation, and non-developmental expenditure, such as defense, interest payments, or general administration. This classification is useful when evaluating the contribution

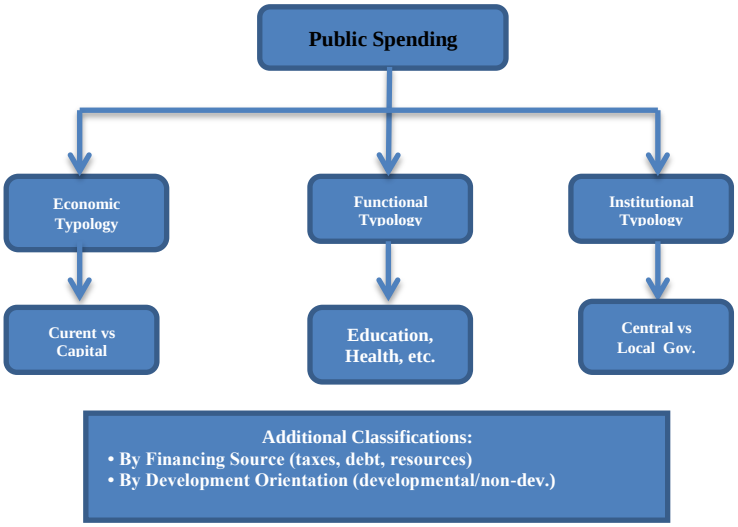
of public spending to long-term economic and social development (Stiglitz, 2000).

Analytical Implications Each classification of public spending offers a different lens through which to assess government policy and its developmental orientation. A balanced and well-structured spending profile is essential for inclusive and sustainable growth. Countries that rely excessively on recurrent expenditures or on sectors with low social returns may experience stagnation, while those that invest strategically in infrastructure, human capital, and institutional reform tend to achieve more resilient development outcomes.

In Algeria, for example, the dominance of recurrent expenditure—particularly subsidies and wages—has limited the fiscal space available for capital investment. Moreover, lack of alignment between spending and sectoral priorities, such as education reform or environmental sustainability, reduces the overall effectiveness of public expenditure (World Bank, 2023).

The following figure provides a visual synthesis of the economic, functional, and institutional classifications of public expenditure.

Figure01 :Typologies of Public Spending



Source: Adapted by the author based on OECD, 2011; Musgrave & Musgrave, 1989; World Bank, 2022

This diagram categorizes public spending according to economic, functional, and institutional criteria. It also includes secondary classifications such as financing source and developmental orientation. This multifaceted typology facilitates a comprehensive analysis of government expenditure patterns and priorities.

1.3 Objectives of Public Spending

Public spending is not an end in itself but a strategic instrument used by governments to achieve multiple objectives. These objectives reflect the state's role in addressing market failures, promoting equity, supporting economic stability, and enhancing long-term development. The following are the key objectives of public spending:

1.3.1. Provision of Public Goods and Services:These include non-excludable and non-rivalrous goods such as defense, justice, public infrastructure, and environmental protection. Government intervention ensures that such goods are accessible to all segments of society (Stiglitz, 2000).

1.3.2. Promoting Social Equity and Justice: Targeted social programs are especially important in addressing poverty and supporting vulnerable groups (World Bank, 2022).

1.3.3. Stabilizing the Economy: Public expenditure serves as a stabilization tool, especially in times of recession or crisis. Through counter-cyclical fiscal policies—such as increasing spending during downturns—governments can boost demand and mitigate unemployment. This Keynesian approach positions public spending as a shock absorber (Keynes, 1936).

1.3.4. Stimulating Economic Growth: Strategic investments in infrastructure, education, and innovation through public spending help drive long-term economic growth. Efficient capital expenditures create an enabling environment for private investment and productivity (World Bank, 2019).

1.3.5. Correcting Market Failures: Markets often fail to provide socially optimal levels of certain goods or services. Public spending can correct

these failures by financing goods with positive externalities—such as education, public health, and green energy (Tanzi & Schuknecht, 2000).

1.3.6. Strengthening State Legitimacy: Effective and visible public spending enhances citizens' trust in government. Delivering basic services and infrastructure improves the legitimacy of state institutions and fosters social cohesion, especially in fragile contexts (IMF, 2021).

The prioritization of these objectives differs by country. In Algeria, for instance, public spending has historically aimed to ensure social peace through large subsidies and public employment programs. However, increasing calls for reform highlight the need for more efficient and outcome-oriented spending.

1.4. Efficiency and Effectiveness of Public Spending:

Public spending is not only about how much governments spend, but also about how well they spend. The concepts of efficiency and effectiveness are central to evaluating the performance of public expenditure and its contribution to development outcomes. Especially in contexts of limited fiscal space—such as in many developing countries—the need for better spending rather than more spending becomes a critical policy imperative.

1.4.1. Understanding Efficiency and Effectiveness: Efficiency in public spending refers to the ability to achieve maximum output or results with a given amount of input or resources. It answers the question: Are we getting the most value for every dinar or dollar spent?

Effectiveness, on the other hand, is concerned with whether the spending achieves its intended objectives or outcomes. It asks: Is the spending delivering the desired social or economic impact?

According to the OECD (2011), technical efficiency is when resources are used without waste, while allocative efficiency refers to directing resources to their highest value use. Public programs can be technically efficient but still ineffective if their goals are poorly chosen or misaligned with citizen needs.

1.4.2. Indicators and Assessment Tools: Several tools and frameworks have been developed by international organizations to assess the performance of public expenditure. These include:

- Public Expenditure and Financial Accountability (PEFA) Framework.
- Public Expenditure Tracking Surveys (PETS).
- Performance-Based Budgeting (PBB).
- Cost-Benefit and Cost-Effectiveness Analyses.

These tools help identify leakages, inefficiencies, and areas for improvement across sectors such as health, education, and infrastructure (World Bank, 2022).

1.4.3. Common Sources of Inefficiency: Numerous empirical studies have shown that high levels of public spending do not always translate into improved development outcomes. Among the key sources of inefficiency are:

- Fragmented budgeting and lack of coordination between institutions.
- Weak procurement systems and cost overruns.
- Corruption and misallocation of funds.
- Overstaffing and low productivity in public administration.
- Subsidies that benefit the wealthy more than the poor.

Tanzi and Davoodi (1997) argue that in many developing countries, corruption acts as a tax on efficiency, distorting priorities and inflating project costs.

1.4.4. Effectiveness in the Algerian Context In Algeria, the high ratio of recurrent to capital spending, combined with broad and untargeted subsidies, has often limited the effectiveness of public expenditure. Despite large budgets allocated to housing, employment schemes, and infrastructure, outcomes in terms of job creation, service quality, and innovation remain below expectations (World Bank, 2023). The lack of monitoring and evaluation mechanisms, coupled with limited citizen participation in the budget process, reduces the feedback needed for policy improvement.

1.4.5. Improving Efficiency and Effectiveness :To enhance the value derived from public spending, governments should:

- Adopt performance-based budgeting with measurable outcomes

- Strengthen auditing and accountability mechanisms
- Promote transparency and public engagement in budget planning
- Prioritize evidence-based policy and evaluation of program impact
- Invest in digitalization to reduce leakages and improve service delivery

As noted by the IMF (2021), "**efficiency gains in public spending can deliver the same level of services at lower cost—or better services at the same cost.**"

Focusing on spending efficiency is particularly urgent in the post-pandemic era, where fiscal pressures are mounting, and governments must do more with less. In oil-dependent countries like Algeria, where revenues fluctuate, shifting the focus from quantity to quality of expenditure is essential for resilience and inclusive growth.

1.5. Public Spending in Developing Countries and Algeria: A Combined Analysis

1.5.1. Public Spending Trends in Developing Countries: In many developing economies, public spending plays a crucial role in financing infrastructure, social services, and economic development. However, rising debt levels and constrained fiscal space pose significant challenges. According to Reuters (2024), developing countries faced a record $1.4 trillion in debt service obligations, limiting their ability to fund essential services such as education, healthcare, and infrastructure.

Recent empirical research suggests that public investment—particularly in physical and human capital—has a stronger and more consistent impact on long-term growth than private investment in low- and middle-income countries (Ahamed, 2021). Moreover, improving the efficiency and targeting of public spending is critical to avoid waste and maximize development outcomes (World Bank, 2022).

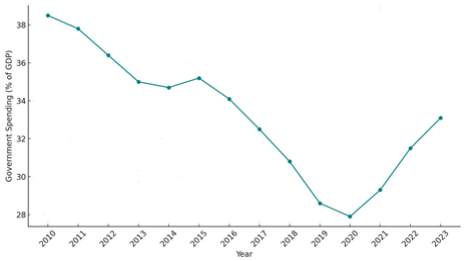
1.5.2. The Algerian Experience: Algeria is a resource-rich, upper-middle-income country with a public spending model largely shaped by hydrocarbon revenues. While the government allocates a significant share of GDP to public expenditure, the structure of spending is heavily skewed

toward current expenditures (wages, subsidies) rather than productive investment.

According to the World Bank:

- Government spending rose to 16.93% of GDP in 2023, up from 15.48% in 2022.
- Gross capital formation reached 37.7% of GDP, one of the highest ratios in the region.

Figure 2: Government Spending (% of GDP) in Algeria (2010–2023)



Source: Created by the author using data from https://www.theglobaleconomy.com/ and World Bank (2024).

Government spending in Algeria as a percentage of GDP has experienced notable fluctuations between 2010 and 2023. As illustrated in Figure 2, the ratio declined gradually from 17.2% in 2010 to approximately 16.9% in 2019. This trend coincided with the aftermath of the global oil price shock in 2014, when Brent crude prices fell from over $100 per barrel to below $40 by early 2016. Since Algeria's public finances are heavily dependent on hydrocarbon revenues—which account for nearly 95% of export income and over 60% of the national budget—this decline in oil prices led to reduced government revenues and fiscal tightening (World Bank, 2024, p. 3).

In response to this external shock, Algerian authorities implemented a series of fiscal consolidation measures, including a reduction in capital expenditure, cuts to public investment projects, and a freeze on recruitment in the public sector (International Monetary Fund, 2017, p. 9). These actions helped contain the fiscal deficit but also limited the government's capacity to stimulate growth through expansionary fiscal policy.

From 2020 onward, however, public spending started to rise again, reaching 16.93% of GDP in 2023. This shift reflects both the impact of the COVID-19 pandemic—which necessitated increased health and social expenditures—and the partial recovery in global oil prices. The Algerian government also introduced additional social programs, such as expanded unemployment benefits and subsidies, aimed at preserving social stability (TheGlobalEconomy.com, 2024).

The trajectory presented in Figure 2 highlights the vulnerability of Algeria's public spending patterns to commodity price cycles and underscores the urgent need for structural reforms aimed at fiscal diversification and efficiency (World Bank, 2024, p. 3; IMF, 2017, p. 12).

2. Definition and Pillars of Sustainable Economic Development Sustainable

economic development refers to a model of long-term growth that not only boosts economic performance but also ensures social equity and environmental responsibility. This concept gained prominence with the Brundtland Report, which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43).

The theoretical framework of sustainable development rests on three interrelated pillars: economic sustainability, social sustainability, and environmental sustainability. Each pillar targets a specific dimension of development, as presented in Table 1 below.

Table 1 : The Three Pillars of Sustainable Economic Development

Pillar	**Main Focus**	**Key Indicators**
Economic	Growth, efficiency, productive investment	GDP growth, employment rate, infrastructure investment
Social	Inclusion, equity, quality of life	Poverty rate, education levels, healthcare access, Gini index
Environmental	Resource preservation, ecosystem protection	CO_2 emissions, renewable energy use, biodiversity conservation

Source: Adapted from Barbier (1987) and Sachs (2015).

As Table 1 shows, sustainable development is not solely an economic objective. It is a multidimensional goal that requires governments to balance market performance with social justice and ecological integrity. To operationalize this model, countries increasingly align their policies with the United Nations 2030 Agenda and the 17 Sustainable Development Goals (SDGs), which integrate these three dimensions into measurable targets (United Nations, 2015).

This foundational understanding enables the exploration of how public spending can influence and support sustainable development, especially in resource-rich developing countries such as Algeria.

3. The Analytical Relationship between Public Spending and Sustainable Economic Development

Governments use public spending as a strategic instrument to drive sustainable economic development. This relationship is especially pronounced when expenditures target three core dimensions: economic growth, social welfare, and environmental sustainability (Barbier, 1987, p. 104; Sachs, 2015, p. 72). In practice, effective public investment should balance these goals, rather than prioritizing one at the expense of the others.

3.1 Linking Types of Public Spending to Development Dimensions

3.1.1 Economic Infrastructure and Growth: Investments in infrastructure such as transport, energy, and water directly enhance productivity and private sector activity (World Bank, 2019, p. 15).

For example, a 1% increase in public infrastructure investment correlates with a 0.6% rise in GDP per capita in developing countries (Ahamed, 2021, p. 8). Without such foundational spending, long-term, inclusive economic growth becomes unsustainable.

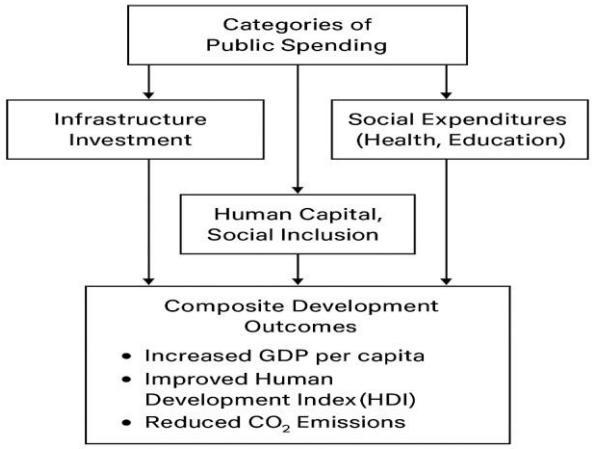
3.1.2 Social Spending and Human Capital : Allocations to education and healthcare enhance human capital a crucial ingredient for both economic expansion and social equity. UNESCO data show that a 10% increase in education spending can raise secondary school enrollment rates by up to 5% (UNESCO, 2020, p. 27). Moreover, greater health spending correlates with declines in child mortality and improvements in workforce participation (WHO, 2021, p. 13).

3.1.3 Environmental Spending and Sustainability: Public investments in environmental protection such as clean energy, waste treatment, and biodiversity promote long-term sustainability. Countries with higher "green public expenditure" tend to reduce CO_2 emissions by 0.2 % annually per 1% increase in green spending (IEA, 2022, p. 40). This demonstrates how well-targeted expenditures reinforce ecological goals.

3.2 Framework Linking Public Spending to Sustainable Development Outcomes:

To better understand the analytical link between government expenditure and sustainable development, a structured conceptual framework is proposed. Figure 3 illustrates how distinct categories of public spending—namely infrastructure investment, social services, and environmental protection—are associated with key development dimensions. These interactions ultimately influence national outcomes such as economic growth, human capital formation, and environmental sustainability.

Figure 3: A Structured Framework Linking Public Spending to Sustainable Development Outcomes



Source: Author's elaboration based on Barbier (1987), Sachs (2015), and World Bank (2019).

As shown in Figure 3, infrastructure investments stimulate productivity and economic growth, while social expenditures promote human capital and

social inclusion. Environmental spending ensures ecological balance and long-term sustainability. Together, these categories shape comprehensive development outcomes such as higher GDP per capita, improved HDI, and reduced CO_2 emissions (Barbier, 1987, p. 104; Sachs, 2015, p. 72; World Bank, 2019, p. 15).

3.3 Case Study: Algeria's Public Spending and Sustainable Development

3.3.1. Public Spending Patterns in Algeria: Between 2019 and 2023, Algeria's public finances remained highly dependent on hydrocarbon revenues, which constituted approximately 47% of total budget receipts and around 14% of GDP (World Bank, 2024, p. 45). Government spending stood at 16.93% of GDP in 2023, up slightly from 16.37% in 2022, as indicated by World Bank data (World Bank, 2024, p. 46).

Moreover, gross capital formation was recorded at US $95.64 billion in 2023, signaling continued emphasis on public investment in infrastructure (World Bank, 2024, p. 48). General government final consumption was reported at US $40.84 billion (World Bank, 2024, p. 47).

3.3.2. Linking Spending to Development Outcomes

- **Education and Human Capital:** Algeria allocated around 5.6% of its GDP to education in 2023. While this is a high ratio historically—to some extent associated with improved enrollment and literacy—it remains below the average of neighboring countries (World Bank, 2024, p. 50). Despite relatively strong spending, the Human Development Index (HDI) score improved by only 0.01 points annually between 2015 and 2020, suggesting limited structural impact (UNDP, 2021, p. 13).
- **Infrastructure and Productivity Public investment**: in major infrastructure projects—such as the East–West Highway (valued at approximately USD 11 billion)—dominated capital spending (IMF, 2018, p. 22). However, frequent delays and cost overruns, often exceeding 20%, diminished their effectiveness in boosting productivity (IMF, 2018, p. 24).
- **Healthcare and Social Inclusion:** The Algerian public health system provides universal coverage. In 2020, official sources recorded 586 public health facilities and 69,948 hospital beds (Ministry of Health, 2021, p. 9). However, maternal mortality rates remain above regional averages—about

112 deaths per 100,000 live births—indicating uneven quality of access (WHO, 2021, p. 32).

Table 2: Public Spending Categories and Related Development Outcomes

Spending Category	Key Public Expenditures (2019–2023)	Observed Development Outcomes
Education and Human Capital	≈ 5.6 % of GDP Continuous investments in schools, teacher recruitment, and literacy programs.	Improved enrollment and literacy rates. HDI increased only by 0.01 annually (2015–2020), indicating limited structural transformation.
Health and Social Inclusion	Universal public health coverage. 586 public health facilities and ~69,948 hospital beds	Expanded access to healthcare services. Persistent high maternal mortality (112 per 100,000 live births), reflecting uneven service quality
Infrastructure and Productivity	Major capital projects (e.g., East–West Highway, USD 11 billion). Gross capital formation: USD 95.64 billion (2023).	Improved connectivity and logistics capacity. Effectiveness reduced by delays and >20% cost overruns.
Environmental and Sustainability Spending	• Limited but increasing allocations to renewable energy, waste management, and environmental protection programs.	• Gradual progress toward sustainability goals. • Emissions reductions remain below global benchmarks.
General Government Consumption	USD 40.84 billion in 2023. Expenditures on public administration and service provision.	Supports macroeconomic stability and service delivery. • Limited direct impact on long-term structural development.

Source: World Bank. (2024). Algeria Economic Update 2024: Macroeconomic Developments and Public Finance Indicators. Washington, DC: World Bank Group.

The table displays Algeria's key public spending aggregates over the period 2019–2023 and highlights the structural characteristics of its fiscal policy. A central insight is the persistent reliance on hydrocarbon revenues, which accounted for approximately 47% of total budget receipts and 14% of GDP. This heavy dependence indicates a structurally vulnerable fiscal system, where government spending remains highly sensitive to international energy price fluctuations. As a result, fiscal sustainability is

exposed to external shocks, limiting the government's ability to maintain stable long-term development spending.

Government expenditure, recorded at 16.93% of GDP in 2023 compared with 16.37% in 2022, reflects only a moderate expansionary stance. Despite this slight increase, spending levels remain below those observed in diversified emerging economies, suggesting that Algeria's fiscal space is constrained by revenue volatility rather than insufficient demand for development-oriented investment.

Gross capital formation, estimated at USD 95.64 billion in 2023, indicates that the government continues to prioritize large-scale infrastructure projects as a driver of growth. However, previous IMF assessments have shown that major infrastructure projects—such as highways and transport corridors—often face delays and cost overruns exceeding 20%, reducing their potential impact on productivity and economic diversification. This means that while capital spending is quantitatively significant, its qualitative effectiveness remains limited.

General government final consumption, at USD 40.84 billion, underscores the large administrative and social expenditure commitments necessary to maintain universal access to basic services. Yet, as reflected in human development indicators, improvements remain modest. For instance, education expenditure at 5.6% of GDP has not translated into proportionate gains in HDI scores, which increased by only 0.01 points per year between 2015 and 2020. Similarly, despite substantial investment in health infrastructure—586 public facilities and nearly 70,000 beds—maternal mortality rates remain higher than regional averages, signaling gaps in service quality and regional equity.

Overall, the table reveals a structural imbalance: although Algeria allocates considerable resources to infrastructure and social services, the developmental return on spending remains below potential due to institutional inefficiencies, oil-price dependence, and limited economic diversification. Strengthening public financial governance, improving project execution efficiency, and expanding non-hydrocarbon revenue sources would enhance the developmental impact of public expenditure.

Conclusion :

This study set out to explore the role of public spending in achieving sustainable economic development in Algeria, a country whose fiscal trajectory remains heavily shaped by hydrocarbon revenues. Through conceptual analysis and a case-based examination of Algeria's expenditure patterns, the findings provide a clearer understanding of how government spending supports or limits progress toward long-term, inclusive, and environmentally responsible development.

In line with the research hypotheses, several key results emerge.

Results

First, efficiently allocated public spending does contribute positively to sustainable development, particularly through investments in infrastructure, education, and healthcare, confirming Hypothesis 1. However, the impact remains uneven due to persistent structural constraints.

Second, empirical evidence shows that misallocation, inefficiencies, and rigid institutional frameworks diminish the developmental returns of public expenditure, thereby validating Hypothesis 2. These inefficiencies reduce the transformative potential of public programs, especially in areas requiring long-term strategic planning.

Third, the analysis demonstrates that aligning spending with sustainability objectives can strengthen economic diversification and resilience, especially in resource-dependent contexts like Algeria, which supports Hypothesis 3. Yet, the degree of alignment between spending policies and sustainability goals remains limited.

Recommendations:

Based on these findings, the study offers several recommendations:

First, improving the efficiency and targeting of public spending particularly in human capital and green sectors is essential.

Second, strengthening institutional governance and monitoring systems would help reduce waste, enhance transparency, and improve project execution.

Third, Algeria should accelerate efforts to diversify fiscal revenues by expanding non-hydrocarbon sectors, thereby reinforcing financial stability

and enabling a more sustained development trajectory. Finally, adopting a sustainability-oriented fiscal framework aligned with international development goals, such as the SDGs, would provide clearer guidance for long-term policy planning.

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