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Work Productivity and Opportunities for Sustainable Economic Development in Algeria

إنتاجية العمل وفرص تحقيق التنمية الاقتصادية المستدامة في الجزائر

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Abstract:

In this paper, we have systematically examined the relationship between economic outcomes and work productivity in the industrial sector, to create opportunities for sustainable economic development in Algeria. Our study is based on the method of ordinary least squares (OLS) method, we relied on a multiple linear regression model to link production with labor, capital and other inputs using annual data from 2011 to 2019 in Algeria. From the results of the study, we find that work productivity is one of the factors linked to economic diversification, and by changing the use of resources and methods that the Algerian economy depends on through the branches of the industrial sector, leads to the promotion of economic activity and the wheel of production, which creates some potential opportunities for economic sustainability.

Keywords: sustainable economic development; work productivity; industrial sector; Algeria.
JEL Classification Codes : J21, Z31, Q56

ملخص:

في هذه الورقة، درسنا بشكل منهجي العلاقة بين النتائج الاقتصادية وإنتاجية العمل في القطاع الصناعي، لخلق فرص للتنمية اقتصادية مستدامة في الجزائر. تعتمد دراستنا على طريقة المربعات الصغرى العادية، حيث اعتمدنا على نموذج الانحدار الخطي المتعدد لربط الإنتاج بالعمالة ورأس المال والمدخلات الأخرى باستخدام البيانات السنوية من 2011 إلى 2019 في الجزائر. من نتائج الدراسة نجد أن إنتاجية العمل هي من العوامل المرتبطة بالتنويع الاقتصادي، وانه بتغيير استخدام الموارد والأساليب التي يعتمد الاقتصاد الجزائري عليها عبر فروع القطاع الصناعي، يؤدي هذا الى دفع النشاط الاقتصادي وعجلة الإنتاج، مما يخلق بعض الفرص المحتملة للاستدامة الاقتصادية.

تصنيفات JEL: J21, Z31, Q56

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INTRODUCTION:

The Brundtland Commission published its report, Our Common Future, in 1987 to make connections between the problems of environmental stability and economic growth. This report did so by offering the commonly quoted definition of sustainable development, which is "development that satisfies the requirements of the present without compromising the ability of future generations to satisfy their own needs" (United Nations General Assembly, 1987, p. 43). Despite being rather hazy, this concept of sustainable development aims to maintain economic advancement and progress while protecting the long-term value of the environment. However, long before the late twentieth century, scholars argued that there need not be a trade-off between environmental and economic results. Where it appears, a staple of sustainable economic development is the ability to utilize output factors as a critical product factor. It has the potential to be considered work that actively supports other production. In such a way, work Productivity creates sources for the procreation and progress of other output factors, i.e., it creates sources for sustainably clever economic development. Additionally, work productivity is a key factor in any economy.

On this basis, it should be noted that economists very widely share the opinion that the economic growth of a country is closely related to work productivity. In other words, work productivity positively affects economic growth and development. It must be acknowledged that problems related to work productivity at different times of the economic cycle are relatively uncovered topics in the economic literature. Several studies show the wonderful effects of work productivity on economic growth and development because work productivity can complement different macroeconomic symptoms and provide a deeper perception of changes in the economy, particularly on rates of economic output growth in longer periods.

Algeria is dealing with the challenge of relaunching its economy by relying on greater diversification of its activities, an objective already targeted in the early 1970s. Over the last two decades, it has been crucial for Algeria to undergo some other economic transformation, particularly when oil prices have declined again. Therefore, today, the industrial sector is considered a strategic option to escape this situation and deal with imbalances. Algeria now has the opportunity to turn to this option to improve its economy and contribute to economic recovery and sustainable economic development.

Problematic: Work productivity is a measure of an economy's performance, and its development is a first-rate determinant of sustainable economic development and prosperity. Given this, in this paper we aim to answer the following question:

How can work productivity contribute to Algeria's sustainable economic development?

Therefore, this study attempts to extend the literature on economic transformation by considering the following research question: What is work productivity? What is the relationship between work productivity and sustainable economic development?

To answer the fundamental question, we based our study on these hypotheses, they are:

1st hypothesis (H_1): Work productivity has significant impact sustainable economic development in Algeria during the study period.

2nd hypothesis (H_2): Work productivity has no significant impact on sustainable economic development in Algeria during the study period.

This research aims to:

-To identify the implications of each level of work productivity on sustainable economic development and the relationship between these concepts with each other to achieve economic and social goals.

-Statement on the importance of work productivity at the global and Algerian levels.

-Learn more about Algeria's sustainable economic development requirements.

The study is significant because it illuminates the fact that rate of sustainable economic development is dictated by the rate of productivity of work. The current research attempts to convincingly show the relationship between work productivity and Algeria's sustainable economic development.

This article is divided into five sections: introduction; literature review; methodology and model specification; results and discussion; and conclusion.

1. Work Productivity and Sustainable Economic Development – literature review

This section reviews the empirical literature and considers the theoretical framework for the effect of work productivity on sustainable economic development.

1-1 Work Productivity

1-1-1 Work Productivity Concept:

In modern economies, the effort of the human factor to make the most efficient use of each unit of natural, human, financial, or information resources is an essential prerequisite for economic growth (Deaconu et al., 2018, p. 29). The derives productivity" derives from the Latin productio (production) and ducere (drive). It is generally defined as the relationship between the results obtained and the amount of work invested in it. In other words, as the ratio between the measured volume of production (outputs) and the measured volume of resources (inputs). Work productivity is the amount of output per work unit, where labour can be expressed in the number of work hours and the number of individuals employed (Deaconu et al., 2018, p. 30). Productivity contrasts the amount of economic output with the number of inputs (labour, capital, etc.) utilized to generate such products and services, to measure how effectively goods and services can be produced (Corsetti et al., 2014, p. 156).

Indeed, work productivity is the ability to flourish, produce, and be generative because it is a measure of the level of individual function in work that refers to the quantity or quality of work produced (Tentama et al., p. 318). The total factor productivity was introduced by Solow (1956) and Abramowitz (1956) and was theoretically formalized in the seminal paper of Solow (1957) according to the exogenous economic growth theory and measured through "the Growth accounting approach". Work productivity is linked to the elements in its composition by a functional mathematical relationship, in economic modelling the following function is frequently used that is:

$$Y=A.\ K^{\alpha}L^{\beta} \quad \text{..... Eqn (1)}$$

$$Y_t = A_t \cdot K_t^{a} \cdot L_t^{1-a} \quad \text{..... Eqn (2)}$$

In macroeconomics, the factors of production are:

- Physical capital (K), which is created for use in the production process. This includes things such as buildings, machines, computers, and other equipment.
- Labor (L) or input of skilled and unskilled activities of human workers.

- Land (P), which includes natural resources, raw materials, and energy sources, such as oil, gas, and coal.

This results in a productivity growth rate that is written as:

$$\hat{q}_t = \hat{A}_t + \alpha \cdot \hat{k}_t \quad \text{..... Eqn (3)}$$

where $\hat{A}_t$ and $\alpha \cdot \hat{k}_t$ represent respectively the contributions of capital intensity. This growth rate is expressed in terms of observable variables, Y, K, and L.

1-1-2 Importance of Work Productivity:

Labour productivity is important at least for this reason:

- Policymakers are curious about productiveness because productivity increase is typically the most consequential determinant of long-term economic boom and great improvements in individual living requirements.
- It drives economic growth; a productive economy means that it can produce more goods or services with the same amount of resources or produce the same level of goods and services with fewer resources.
- Productivity is one of the most essential variables in guiding economic production.
-Increased work productivity can increase the capacity to provide the most efficient and economical products and services.
- Boosting productivity is the only plan for prospering beforehand its population becomes ageing and is bringing more challenges as well as opportunities (Asenso-Okyere & Jemaneh, 2012, p. 35)
- Work productivity affects all of the variables of the economy, higher productivity leads to higher profits and more opportunities for investment, which can lead to higher wages and better working conditions. In the long run, increasing productivity is the key to job creation. In addition, increased productivity results in higher tax revenues.

Work productivity which it is based can complement other macroeconomic indicators and provide greater insight into economic changes, particularly economic output growth rates and related labour. Conceptually, Work productivity measures how many workers can produce a given amount of work in a given period and how much can ultimately be consumed.

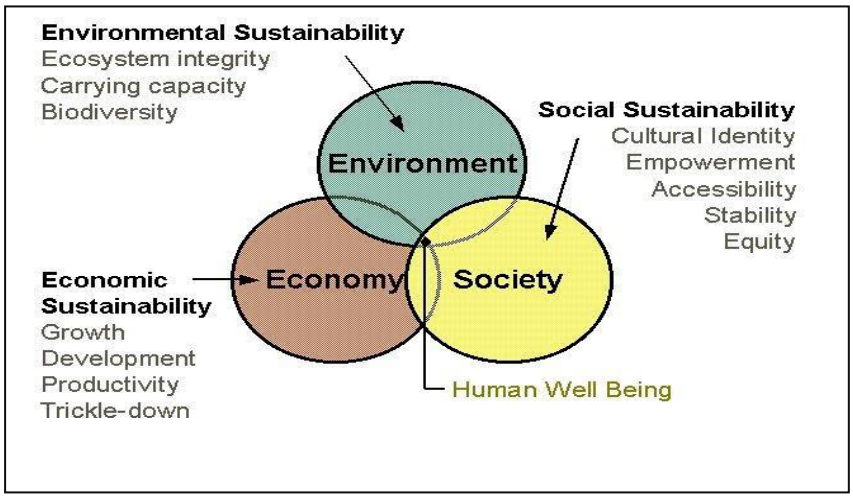
1-2 Sustainable Economic Development

1-2-1 Sustainable Development Concept:

The definition of sustainable development used by the UN is Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Emas, 2015, p. 3). The key and the main principle of sustainable development is the integration of social, economic and environmental issues into all aspects of decision-making (Highfill, 2002, p. 43). All other principles in the SD framework have built-in decision making at their core (Brodhag & Talière, 2006, p. 133). It is this ingrained idea of integration that separates sustainability from other forms of politics. The SDGs maintain environmental integrity to ensure the health and safety of human communities and life-sustaining ecosystems (Allen et al., 2018, p. 1456). Ensure social equality for the full development of all men and women, community development, and respect for diversity. Create an innovative and prosperous economy that is environmentally and socially responsible (Kroll et al., 2019, p. 4). Sustainable development: It is a development based on the integration of economic development and social affairs, taking into account the protection of the surrounding environment, in addition to a serious treatment of the needs of society at present without

compromising the well-being and quality of life for future generations.

Fig. (1): The coordinated relationship among the three dimensions of sustainability



Source: Kaivo-oja et al., (2014) «Relationships of the dimensions of sustainability as measured by the sustainable society index framework »

Figure 1 depicts the coordinated interaction between the economy, energy, and environment. The details of its performance are as follows. Sustainable development has three main dimensions: Economic Sustainability, Environmental Sustainability, and Social sustainability (Kaivo-oja et al., 2014, p. 41). Therefore, sustainable development has three components: The first is the social dimension, which includes issues such as cultural identity, self-determination, accessibility, and stability. The second is the economic dimension, which addresses issues like growth and productivity. The third is the environmental dimension, which addresses issues like ecosystem integrity and carrying capacity.

The connections between these many sustainability facets should be completely considered, and they shouldn't be separated from one another (Fallah Shayan et al., 2022). Economic development is built on the environment. The environment, which is a necessary prerequisite for both economic and social growth, can help and hurt that progress. Environmental degradation and pollution are now significant concerns that jeopardise public health and impede social and economic advancement.

1-2-2 Meaning of Sustainable Economic Development:

Environmental protection has suffered as a result of economic growth, particularly over the past two decades. Earth's natural resources have been used in environmentally wasteful and inefficient ways, with harmful results like lowered air quality and global climate change. Looking into the definition of economic development may well be confused about the content and use of concepts like economic growth and economic development, which demands for extra explanations. Thus, to stop any potential confusions with regard to the similarities and differences between economic development and economic growth. We glance at the two concepts as follows: economic growth regards the rise in leads to time, whereas economic development over time, the economic development theory has seen some highlights. When the state played a crucial part in advancing industrialization as a key axis of country’s development; this was followed by a period when the main target was placed in

modernization around the 70s, the essential needs growing for a brief period, with the interest directed towards development of human capital and redistribution. Then, the neoliberalism was born shifting the agenda towards trade and industrialization policies as import replacements. Economic development regards the rise in results at the identical time with enhancement of policies that focus on the social and political well-being of one country's people (Ranis & Fei, 1961, p. 537). Therefore, economic development captures indicators that concern both growth and well-being.

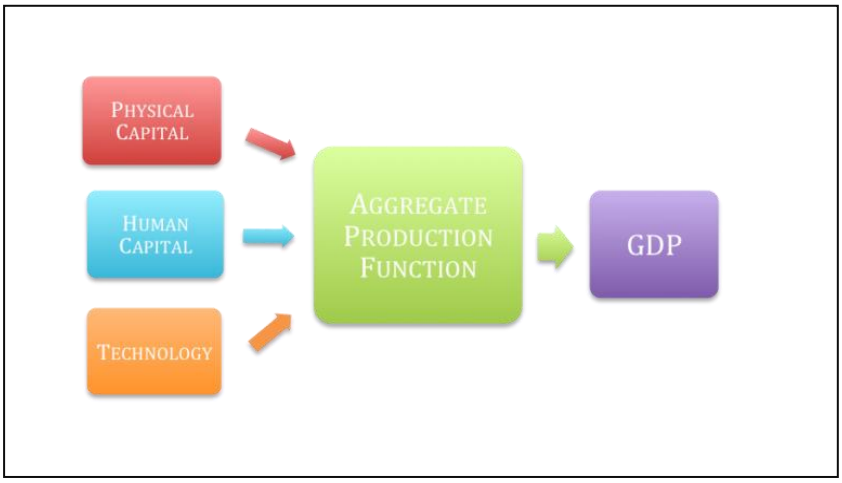
1-3 Sustainable Economic Development and work Productivity

The fundamental premise of sustainable economic development in every sector of the national economy is the efficient use of the three main production inputs: labour, land, and capital. We can indicate labour as a crucial production element. Human is the carrier of labour, a purposeful activity that activates other production forces and changes natural items into forms that satisfy people's needs and are essential to their existence (Ivanov, 2020, p. 90). By doing so, it establishes the requirements for its own reproduction as a factor at a higher level while also providing supplies for the reproduction and advancement of other production factors. In addition, a fast growth of production leads to negative implications on the environment, while a low one might cause unemployment and social problems (Suparman & Wahyuningsih, 2022, p. 56).

Sustainable development, unlike pure economic process, isn't focused mainly on just productivity increase, but on the responsible use of resources (Holmberg & Sandbrook, 2019, p. 22). A nation must take into account and safeguard the environment and natural resources that are essential to its present and future growth in order to practice truly logical and "effective governance. Any alternative strategy is futile. Thus, the relationships between the environment and development offer a compelling justification for environmental protection: enlightened self-interest. The field of sustainable development is built on the innate link between the long-term health of the environment and the economy. While within the neoclassical development model it is considered that economic process ensures the premises for sustainable development, some authors highlighted the requirement to seem more at the requirements to boost the standard of life, at the environmental and inequality issues. showed that sustainability is kind of a challenging objective that needs a balance within the way the production process takes place.

In Figure 2, we show the relationship between work Productivity and Economic Growth. We can formalize that sustained economic growth comes from increases in work productivity. In other words, we can formalize these ideas by introducing the concept of the aggregate production function. A production function is the performance of turning economic inputs such as labour, machinery, and raw materials into outputs. A microeconomic production function describes the relation between inputs and outputs. In macroeconomics, the add production function is the correlation between all inputs in the economy and GDP. The rise in work productivity associated with the advancement of economic growth is likely the cause of the economic expansion. In addition, one of the reasons for the economy's overall lack of competitiveness is the low level of work productivity.

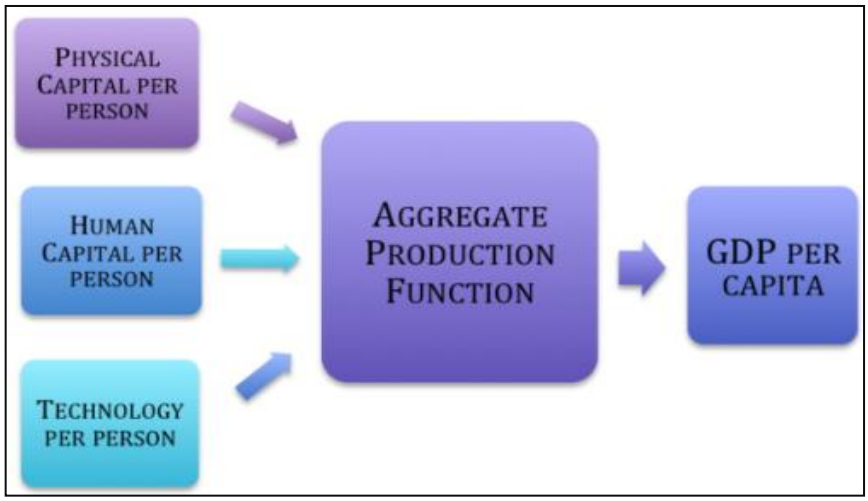
Fig. (2): The coordinated relationship among the work Productivity and Economic Growth



Source: 2020, Labour Productivity and Economic Growth, available on: https://cnx.org/contents/vEmOH-_p@4.44:Rb-3d3jw@6/Labor-Productivity-and-Economi

Figure 3 shows the coordinated relationship among the work Productivity and Economic Development. We show that real GDP per capita is widely used by economists as a stand-in for living standards. The aggregate per capita production function, seen in Figure 3 below, may be used to study how the standard of living changes over time. With the exception of dividing each component by the population, the aggregate per capita production function is essentially similar to the aggregate production function. The average amount of physical capital per person, human capital per person, and technological level per person make up the inputs. Over time, a higher quality of living results from increases in the amounts of physical capital, human capital, and technology per person.

Fig. (3): The coordinated relationship among the work Productivity and Economic Development



Source: Mersi, 2007, Productivity and Economic Growth, available on: https://www.treasury.govt.nz/publications/speech/productivity-and-economic-growth

We particularly take note that:

- Work productivity is accorded extrusion in banner growth account models tag Solow.
- The progress rate of per capita GDP is linearly dependent on technological progress, gross capital formation, the initial level of output per capita and labour productivity growth, deliberate as the growth rate of the value added per worker, as well as human capital formation.
- The quality of work employment will be necessary for sustaining growth of productivity.
- Productivity of work utilize as a production performer is generally explicit by the grade of work productivity.

Work productivity is the result of investment in human capital that translate into better skills and usage of technology for productive use.

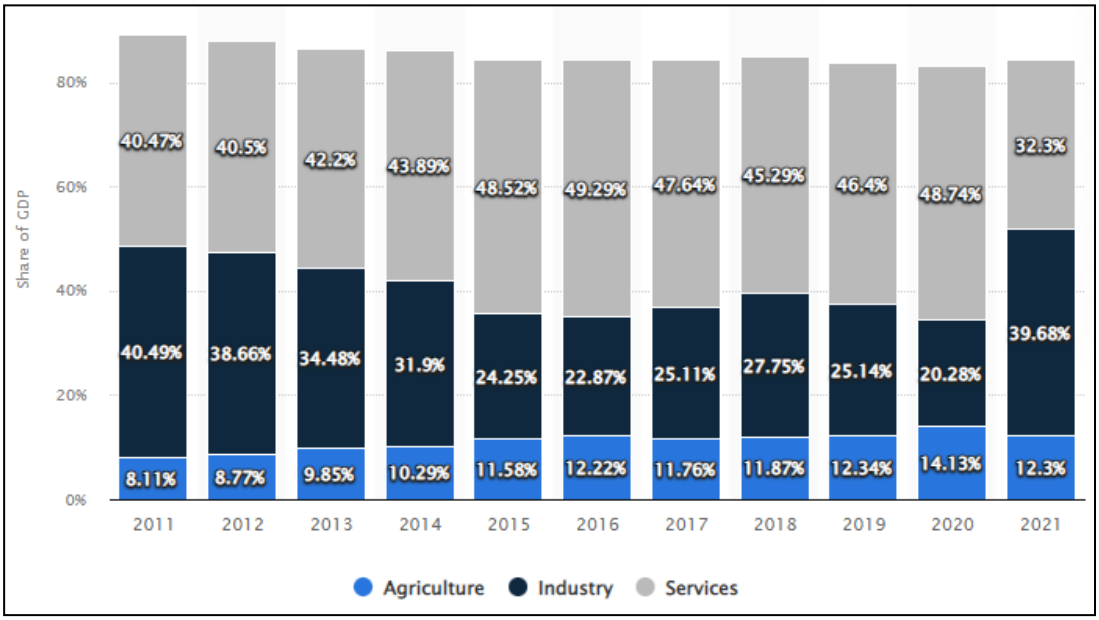
- Work productivity leads to sustainable growth and development economic.

Work productivity is outlined as the efficiency of human work utilized in conception of beneficial goods. It is expressed by the addition of goods per unit of the work input. The growth of work productivity is considered a primal factor for maintaining the economic growth under low inflation. The reason for economic growth is probably the growth of work productivity linked to the development of information technologies. The low level of work productivity in is one of causes of the low competitiveness of the economy as a whole.

1-4 The potential of the industrial sector in Algeria

Natural gas and oil have had dual sway on Algeria's industrial sector. First off, the industrial sector that deals with hydrocarbons is by far the biggest. Second, the primary source of investment capital for Algerian has been the proceeds from the export of oil, gas, and allied goods. The Algerian government continues to push to reduce a budget deficit caused by low oil and gas prices. This increases the contribution of industry to the national economy the industry now contributes 5.6% of the nation's GDP in terms of economic output.

Fig. (4): Distribution of gross domestic product (GDP) in economic sectors from 2011-2021



Source: Aaron O'Neill, 2022, Distribution of gross domestic product (GDP) across economic sectors Algeria, available on:https://www.statista.com/statistics/408037/algeria-gdp-distribution-across-economic-sectors/

It should be noted in Figure 4, that Algeria's industrial sector accounts for the largest share of GDP for many reasons. For years, the Algerian industrial sector contributed significantly to the strong impetus to the economy. This sector plays an important and effective role in the process of economic balance in our country. However, Algeria has been independent for 60 years, but it has not yet become an industrialized country. Crude oil is still exported from the nation. Crude oil exports account for more than 90% of export earnings and 70% of government revenue. Algeria's economy became fragile and unsteady as a result (Amira, 2022, p. 692).

1-4-1 The contribution of the industrial sector to the gross domestic product:

Table (1): The contribution of the industrial sector in the gross domestic product in Algeria

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Industry (Billion DA)	10730.9	11366.1	11329.9	11695	11028	11442	10362	11442	13814	13982
Percentage of industry contributio n in GDB	67.13	65.41	61.51	60.26	56.9	59.01	53.41	64.91	65.07	65.97

Source : based on ONS

Table 1 shows that the gross domestic product during the period was wobbling. It recorded a positive successive development with some declines falling again between 2011 and 2020 due to oil prices dropping. It should be noted that Algeria's industrial sector accounts for the largest share of GDP for many reasons.

1-4-2 The contribution of the industrial sector to the added value in Algeria:

Table (2): The contribution of the industrial sector to the added value in Algeria

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Industry (Billion AD)	7239.5	7756.2	7353.7	8225.8	5956.1	6070.56	5702.6	6019.56	6170.6	6070.6
Percentage of industry contribution in added value	64.16	62.64	57.42	62.09	47.89	46.52	43.52	49.52	46.52	51.12

Source: based on ONS

Table 2 shows that the contribution of the industrial sector to the added value in Algeria has experienced a real decline starting in the nineties of the last century, which has continued in recent years, but to lesser degrees. We see that t, to a lesser extent the building materials branch except of the years from 2011 to 2020, the performance of the industrial sector was characterized by fluctuation Positive growth in a particular 2016 year, to directly record a decline in the following year.

2. Methodology and Model Specification

2-1 Data and Variables:

On the basis of the official data supplied by the National Institute of Statistics (ONS) and data from the World Bank World (WDI), this study works with statistically and econometrically processed indicators of relevance for the analysis of Algeria's economic development: Gross Domestic Product per capita and Work Productivity.

Thus, we were interested in testing the following two research hypotheses:

H_1: There is a significant impact of work productivity on sustainable economic development in Algeria during the study period.

H_2: There is no significant impact of work productivity on sustainable economic development in Algeria during the study period.

After reviewing reviewed the work estimation methodologies, it is time to choose the best standard model that fits Algeria's situation. We should also evaluate the variables needed for each model before choosing the best model. The Cobb-Douglas model described was selected for three reasons: The absence of data for virtually all the variables that the models need is the first factor.

The second point is that the possibility of the various roles played by the production factors in the productive process and the potential for compensation between these components, particularly between labour and capital, are the main foci of attention in these functions.

The most popular method is based on the Solow model, a standard Cobb-Douglas production function that links output to input.

(Y) to capital (K) and labour (Y), assuming constant returns to scale.

$$Y = AK^{\propto}L^{1-\propto} \quad \text{..... Eqn (4)}$$

Given this specification, the total factor productivity (A) is stated as a residual (exogenous) as the only data are available for output, labour, and capital. This results in the following decomposition of the output change:

$$\frac{dY}{Y} = \frac{dA}{A} + \propto \frac{dK}{K} + (1-\propto)\frac{dL}{L} \quad \text{..... Eqn (5)}$$

2-2 Model Selection *:*

In this article, we used an estimation method based on a typical manufacturing process that links output to labour, capital, and other inputs. Based on aggregate data the from World Bank World (WDI), GDP per capita, and employment percentages.

We follow an estimation procedure and use a standard production as follows:

Where: year t= 2000,2001…..2014, Y is the GDP per capita adjusted for purchasing power parity and the inputs are: fixed physical capital K, number of persons employed L (to capture labour productivity) and T for technological progress of Algeria.

$$Y_{i,t} = f\,(K_{i,t}, L_{i,t}, T_{i,t}) \quad \text{..... Eqn (6)}$$

Our conception includes estimating a simple regression for each country based on the Solow growth model as presented in Equation 4. The results were used to get the elasticity of output with keep-to inputs and exogenous technical progress estimates for Algeria. We then proceeded to estimate equation 1 using least squares regression (OLS), where output per worker is treated as a dependent variable. The statistical method used is multiple regression analysis. Multiple regression analysis is a tool used to the effect of two or more independent

variables on one dependent variable to determine whether there is a correlational relationship or causal relationship between independent variables Xi, with a dependent variable Y.

The multiple linear regression equation is $Y = a + b_1X_i + b_2X_i + B_3X_{i+} \varepsilon$

Y = Variable dependent a = Constant b_1- b_2- b_3 = Coefficients ε = Error Term

- We get the following equation:

$$GDP/capita = a + b_1 K_i + b_2 Lbr_i + B_3 Tec_{i+} \varepsilon$$

-Variable dependent = GDP/capita

-Variable independent:

K_i = Capital: It is defined as spending on the acquisition of new capital goods, in addition to the renewals and improvements that take place on existing capital goods and is expressed as ls constant prices in US dollars for the year 2010. Reliance on World Bank data.

Lbri = labour: It is part of the labour r force, which expresses the number of workers aged 15 years and over, or in another sense, who contribute directly to economic activity.

Tech = Technologies (machinery and gear) used in industry.

By **inserting the logarithm (ln)** into the equation:

$$\ln (GDP/capita) = \ln a + b_1 \ln K_i + b_2 \ln Lbr_i + B_3 \ln Tech_{i+} \varepsilon$$

3. Results and Discussion

3-1 Result:

Table (3): Ordinary Least Squares (OLS)

Dependent Variable: ln (Y_IN)
Method: Least Squares
Date: 13/10/22 Time: 12:36
Sample: 2011 2019
Included observations: 9

	Coefficient	Std. Error	t-Statistic	Prob.
C	-19.84119	9.531830	-2.081578	0.1054
X Variable 1= $\beta_{1 \ln T}$	0.892537	0.310198	2.877313	0.0762
X Variable 2= $\beta_{1 \ln K}$	3.619320	1.183622	3.057834	0.1472
X Variable 3= $\beta_{2 \ln L}$	0.673260	0.250178	2.691123	0.1001

R-squared	0.873910	Mean dependent var	14.90589
Adjusted R-squared	0.822549	S.D. dependent var	0.318730
S.E. of regression	0.121146	Akaike info criterion	-1.286610
Sum squared resid	0.044029	Schwarz criterion	-0.993708
Log likelihood	12.91804	Durbin-Watson stat	2.420112
F-statistic	7.791308		
Prob(F-statistic)	0.081386		

Source: Extracted from Eviews V.10

Based on the results, it is known that the value of F-count > F-table (This shows that jointly the variables K, L and T) have affect GDP/capita.

Table (4): Result of the R^2 Test

Model	r	R Square	Adjusted R Square
	0.934842	0.8739310	0.822549

Source: Prepared by the authors based on Eviews V.10

The calculation results show that the coefficient of determination (Adj-R2) is 0.822549 or 82.2%. This means that as much as 82.2% of the GDP/capita is affected and explained by L, K and T. Meanwhile, 17.74 % is influenced by other variables.

From the results of the table above, it can be seen that :

K: p-value greater than 0.05 (p-value > 0.05) This means that we retain the null hypothesis and reject the alternative hypothesis. This shows that capital has a significant effect on GDP per capita.

Lbr: p-value greater than 0.05 (p-value > 0.05) This means that we retain the null hypothesis and reject the alternative hypothesis. This shows that labour has a significant effect on GDP/capita.

Tech: p-value higher than 0.05 (p-value > 0.05) This means we retain the null hypothesis and reject the alternative hypothesis. This shows that technologies have a significant effect on GDP/capita.

Based on hypothesis testing :

- **Accept** H_1: There is a significant impact of work productivity on sustainable economic development in Algeria during the study period.
- **Reject** H_2: Work productivity has no significant impact on sustainable economic development in Algeria during the study period.

3-2 Discussion:

Based on the results of the research and discussion above, shows that sustainable economic development in Algeria is significantly dependent on the development of the industrial sector, as this sector has valuable untapped and unexplored potentials that will be of tremendous to the country. By the rule of thumb and assuming that everything else remains equal/constant since the Algerian economic is going through a lot of transformation and a low of work productivity, the existence of a positive and significant impact of both physical capital and skilled labour and on the productivity of unskilled labour, and this explains the integrative relationship that exists between skilled and labour productivity and an attempt to achieve. In addition, to increase the manufacturing sector's productivity and utilization capacity, more efforts should be spent on capital infrastructure. Also, the government should reduce its tax burden on corporate income in order to attract more current and potential investors. Moreover, the quality of labour employment will be important for sustaining growth of productivity, and on upgrading technology to boost labour productivity, the better it stands to work to upgrade the industrial sector and try to improve performance.

Conclusion:

The aim of this study was to determine how the labor force performed economically, which was determined by a number of factors that helped raise the skill levels of the major groups as determined by Algeria's international standard classification. Because we are led to believe that this economic variable (work productivity) plays a crucial role in achieving a sustainable economy in Algeria, we thought it appropriate to investigate the possibility of energizing the human productive element in the Algerian economy for the best possible use of this resource to this additional productive element.

We have carried out a complete investigation into the function of this productive aspect in It is physical capital, and it was discovered that the labor component generally performed the intended function in the development and investment of the elements of the national economy in the industrial sector, as opposed to the physical capital, which had a negative influence on the national economy because of the availability of this component and what it implies in allotted money and technologies The formation of a thriving economy, which is what was required from this aspect, was made possible by sophisticated technology.

We can conclude that the literature and empirical findings clearly imply that labor productivity plays an important role in sustainable economic development across nations and is worth further investigation. Endogenous growth models, on the other hand, view capital as an input in production technology for innovation and long-term disparities in productivity as endogenous, whereas growth accounting techniques emphasize the importance of technical efficiency in influencing economic growth. Other macroeconomic indicators can be supplemented by labor productivity and the time series upon which it is based, which can also offer a deeper understanding of economic changes, particularly in terms of economic output growth rates and associated labor input over both short and long-term periods. Labour productivity counts the number of people who can do a particular amount of work in a specific length of time, as well as the total quantity that may be used. Given the results, we make the following recommendations:

- A balanced approach to the resources allotted to the industrial sector is necessary for sustainable economic development. Therefore, it is crucial to take into account the context and specifics at the system level, as well as the contribution of each industry, with convergent goals, in terms of outputs and productivity.
- The economies saw expansion driven by industry. This explains why a large proportion of employment in industry is bad for labour productivity, especially in Algeria. This suggests that Algeria should prioritize efforts to boost labour productivity, particularly in industry, in addition to maintaining a low unemployment rate.
- Achieving sustainable economic development should become the main goal and should be achieved by increasing the productivity of the workforce in various industrial sectors.
- The use of contemporary industrial technology and production processes that guarantee the reduction of production costs and to ensure the industrial sector's success in accomplishing Algeria's growth process.

Many opportunities can be achieved for economic development sustainability by the industrial sector in Algeria, but the issue is, are we going to take this opportunity to make changes?

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