

Algeria's social sustainability: A regional comparison study (1990–2020)**الاستدامة الاجتماعية في الجزائر: دراسة مقارنة إقليمية (1990–2020)****Nassira AOUDIA¹**¹Full-time lecturer at University Center of Tipaza (Algeria), aoudia.nassira@cu-tipaza.dz**Received:** 22/07/2023**Accepted:** 28/09/2023**Published:** 30/09/2023**Abstract:**

The definition of development has been evolved over time. In addition to the economic pillar, it includes social and environmental pillars in an interacting way, namely the sustainable development, in 1987. In 2015, the United Nations enacted the Sustainable Development Goals (SDGs) formally articulated and adopted in the 2030 Agenda, aiming for a more sustainable world by 2030. This study analyzes the social pillar of the sustainable development in Algeria, with a regional comparison to Morocco and Tunisia, throughout the period 1990-2020. The methodology adopted consists in analyzing 37 social indicators collected from the SDGs database published by the World Bank. These indicators reflect some targets of 06 goals of the 2030 Agenda (nutrition, health, education, gender equality, energy and peace and justice). The results show that the three regional countries had improved their social situation during the study period, but Algeria had not registered sufficiently good social results regionally.

Keywords: well-being; nutrition; health; education; gender equality.**JEL Classification Codes:** I1, I2, I3**ملخص:**

تطور تعريف التنمية بمرور الوقت. بالإضافة إلى الركيزة الاقتصادية، يشمل هذا التعريف، على الركائز الاجتماعية والبيئية بطريقة مترابطة، وهذا ما أطلق عليه اسم التنمية المستدامة، في عام 1987. في عام 2015، وضعت و اعتمدت الأمم المتحدة «أهداف التنمية المستدامة» في «خطة التنمية المستدامة لعام 2030»، بهدف تحقيق عالم أكثر استدامة بحلول عام 2030. تحلل هذه الدراسة الركيزة الاجتماعية للتنمية المستدامة في الجزائر، بمقارنة إقليمية مع المغرب وتونس، خلال الفترة الزمنية 1990–2020. تتمثل المنهجية المعتمدة في تحليل 37 مؤشراً اجتماعياً تم جمعها من قاعدة بيانات «أهداف التنمية المستدامة» للبنك الدولي. تعكس هذه المؤشرات بعض غايات ل 06 أهداف من «خطة التنمية المستدامة لعام 2030» (التغذية، الصحة، التعليم، المساواة بين الجنسين، الطاقة والسلام والعدالة). تظهر النتائج أن البلدان الإقليمية الثلاثة حققت تطوراً ملحوظاً خلال فترة الزمنية و لكن الجزائر لم تسجل نتائج جيدة اجتماعياً بما فيه الكفاية إقليمياً.

كلمات مفتاحية: رفاهية، تغذية، صحة، تعليم، مساواة.**تصنيفات JEL:** I1، I2، I3

INTRODUCTION:

In 1987, the Brundtland commission published a report titled “Our Common Future”. It reports that “Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future” (WCED, 1987, p. 39). Thus, the economic, environmental and social pillars are interwoven to form the "new" development.

In 2015, the United Nations enacted the Sustainable Development Goals (SDGs) also known as the Global Goals, as a global call to social, economic and environmental actions. The 17 SDGs are integrated to aim No Poverty (goal 1), Zero Hunger (goal 2), Good Health and Well-being (goal 3), Quality Education (goal 4), Gender Equality (goal 5), Clean Water and Sanitation (goal 6), Affordable and Clean Energy (goal 7), Decent Work and Economic Growth (goal 8), Industry, Innovation and Infrastructure (goal 9), Reduced Inequality (goal 10), Sustainable Cities and Communities (goal 11), Responsible Consumption and Production (goal 12), Climate Action (goal 13), Life Below Water (goal 14), Life on Land (goal 15), Peace, Justice and Strong Institutions (goal 16) and Partnerships to achieve the Goal (goal 17) (UN, What are the Sustainable Development Goals?, <https://www.undp.org/sustainable-development-goals?>).

- **Study problem**

The main question of this study can be formulated as follows. What is the state of the social pillar of Algeria in light of the SDGs, in comparison to Morocco and Tunisia during the period 1990-2020?

- **Objectives of the study**

This study aims to evaluate the social situation of Algeria compared to that of the neighboring countries (Morocco and Tunisia) during the period 1990-2020. This evaluation depends, first, on understanding the meaning of the social pillar of the sustainable development, and then, identifying the set of its corresponding indicators.

- **Hypotheses**

The definition of a socially sustainable society is not unique. Scholars measured and assessed social sustainability in different disciplines, contexts and perspectives (Wang, 2022, p. 25). We admit a definition based on physical (material living standards, health, physical and economic security) and emotional and social aspects (political voice and agency, social relationships, work and leisure, education, health and social relationship) (Rogers and others, 2012, pp. 4-6). In addition of the problem of confusion between social development and socially sustainable development, this definition cannot be referred to the notion of well-being for at least two reasons. First, well-being is a philosophical notion, so it is relative. Second, well-being is included in the goal 3 of the 17 SDGs (good health and well-being) which may reduce its scope of definition and eliminate other social goals.

- **Approach and tools used**

Based on the above assumptions, we will select the six (06) following goals from the SDGs: Zero Hunger (goal 2), Good Health and Well-being (goal 3), Quality Education (goal 4), Gender Equality (goal 5), Affordable and Clean Energy (goal 7) and Peace, Justice and Strong Institutions (goal 16) (UN, What are the Sustainable Development Goals?, <https://www.undp.org/sustainable-development-goals?>). Each goal is composed of many

targets (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>). On the basis of these targets, we will select and analyze the following thirty-seven (37) indicators, for which data are available, collected from the SGDGS database published by the World Bank (WB, SGDGS, <https://databank.worldbank.org>): prevalence of undernourishment (% of population); prevalence of wasting, weight for height (% of children under 5); prevalence of anemia among women of reproductive age (% of women ages 15-49); maternal mortality ratio (modeled estimate, per 100,000 live births); mortality rate, neonatal (per 1,000 live births); mortality rate, under-5 (per 1,000 live births), total; mortality rate, under-5 (per 1,000 live births), female; mortality rate, under-5 (per 1,000 live births), male; immunization, DPT (% of children ages 12-23 months); immunization, measles (% of children ages 12-23 months); immunization, HepB3 (% of one-year-old children); mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, total (%); mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, male (%); mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, female (%); incidence of tuberculosis (per 100,000 people); school enrollment, primary (gross), gender parity index (GPI); school enrollment, secondary (gross), gender parity index (GPI); school enrollment, tertiary (gross), gender parity index (GPI); children out of school (% of primary school age); literacy rate, youth total (% of people ages 15-24); literacy rate, youth male (% of males ages 15-24); literacy rate, youth female (% of females ages 15-24); women who were first married by age 18 (% of women ages 20-24); women Business and the Law Index Score (scale 1-100); proportion of seats held by women in national parliaments (%) (Goal 5); access to electricity (% of population); access to electricity, rural (% of rural population); access to electricity, urban (% of urban population); individuals using the Internet (% of population); intentional homicides (per 100,000 people); intentional homicides, male (per 100,000 male); intentional homicides, female (per 100,000 female); completeness of birth registration (%); completeness of birth registration, male (%); completeness of birth registration, female (%); completeness of birth registration, rural (%) and completeness of birth registration, urban (%). All these indicators are defined below from the same database of the World Bank (WB, SGDGS, <https://databank.worldbank.org>), in which it mentions the origin of each definition.

• Previous studies

We can mention the following studies regarding Algeria's social indicators:

-“*Evaluation Indicators Of The Algerian Education System - An Analytical Study –*” (written in English). It shows that the Algerian education system is characterized by significant student retention capacities (Bedoui & Mansouri, 2022, p. 86);

-“Promote gender equality and eradicate extreme poverty and hunger in the social dimension of sustainable development of the Algerian population” (written in Arabic). It illustrates that undernourishment decreased from 9.2% in 1999 to 5.5% in 2015; the ratio of girls to boys enrolled at both primary and tertiary school increased from 0,6 1971 to perfect equality in 2006; the literacy ratio decreased for both male and female from 85.4% and 62% in 1966 to 28.9% and 15.5% in 2008, respectively, but female had a higher literacy rate than men for all the period 1966-2008 and female labor force in non agricultural sector increased from 21.0% in 1980 to 33.8% in 2010 (Bouhafs, Abd al-Karim, 2017, pp. 41-52);

-“The reality of women's reproductive health in Algeria, compared to the Maghreb countries "Tunisia and Morocco"” (written in Arabic). It demonstrates that Tunisia performs better than

the other countries (Algeria and Morocco) in terms of maternal and infant mortality. Actually, from 1985 to 1989, maternal mortality in Algeria declined from 230 per 100,000 live births to 86.2 in 2008. For the years 2010 and 2012, maternal mortality was 44.8 and 112 in Tunisia and Morocco, respectively. As for infant mortality, it fell from 141.5‰ in 1970 to 22.4‰ in 2013 for Algeria. The similar rates were 16.0‰ for Tunisia and 28.2‰ for Morocco in 2011 (Benzaid, Abd al-Karim, 2016, pp. 167-176).

1- Selected goals and indicators related to the social pillar of sustainable development

1-1 Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

1-1-1 Target (2.2)

-eradicate all types of malnutrition, including the targets for stunting and wasting for children under the age of five, and address the nutritional needs of older people, pregnant and lactating women, and teenage girls (2.2) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-1-2 Selected indicators of 2.2 target

- prevalence of undernourishment (% of population);
- prevalence of wasting, weight for height (% of children under 5);
- prevalence of anemia among women of reproductive age (% of women ages 15-49).

1-2 Goal 3. Ensure healthy lives and promote well-being for all at all ages

1-2-1 Targets (3.1 ; 3.2 and 3.3)

- reduce maternal mortality ratio to less than 70 per 100,000 live births (3.1.);
- eliminate preventable infant and child mortality under 5 years of age, and reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births, respectively (3.2);
- end AIDS, tuberculosis, malaria and other neglected tropical diseases epidemics, and fight hepatitis, water-borne illnesses and other communicable diseases (3.3) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-2-2 Selected indicators of 3.1; 3.2 and 3.3 targets

- maternal mortality ratio (modeled estimate, per 100,000 live births);
- mortality rate, neonatal (per 1,000 live births);
- mortality rate, under-5, total (per 1,000 live births);
- mortality rate, under-5, male (per 1,000 live births);
- mortality rate, under-5, female (per 1,000 live births);
- immunization, DPT (% of children ages 12-23 months);
- immunization, measles (% of children ages 12-23 months);
- immunization, HepB3 (% of one-year-old children);
- mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, total (%);
- mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, male (%);
- mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, female (%);
- incidence of tuberculosis (per 100,000 people).

1-3 Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

1-3-1 Targets (4.1 ; 4.2 ; 4.3; 4.6 and 4.7)

- guarantee that all girls and boys complete primary and secondary education that is free, and equitable egalitarian, and produces learning results that are effective (4.1);
- guarantee that every girl and boy has access to quality early childhood development, care and pre-primary education so they are prepared for primary school (4.2);
- guarantee that all men and women have access to affordable and quality technical, vocational and tertiary education, including university (4.3);
- ensure that all youth and a substantial proportion of adults—men and women— achieve literacy and numeracy (4.6);
- significantly improve the availability of trained teachers, notably through international collaboration for teacher training in developing countries, particularly the least developed countries and small developing countries (4.7.c) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-3-2 Selected indicators of 4.1 ; 4.2 ; 4.3; 4.6 and 4.7 targets

- school enrollment, primary (gross), gender parity index (GPI);
- school enrollment, secondary (gross), gender parity index (GPI);
- school enrollment, tertiary (gross), gender parity index (GPI);
- children out of school (% of primary school age);
- literacy rate, youth total (% of people ages 15-24);
- literacy rate, youth male (% of males ages 15-24);
- literacy rate, youth female (% of females ages 15-24).

1-4 Goal 5. Achieve gender equality and empower all women and girls

1-4-1 Targets (5.3 and 5.5)

- stop all harmful behaviors, including female genital mutilation, child marriage and forced marriage (5.3);
- make that women have equal chances for leadership at all levels of decision-making in political, economic, and public life, as well as full and effective involvement (5.5) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-4-2 Selected indicators of 5.3 and 5.5 targets

- women who were first married by age 18 (% of women ages 20-24);
- women Business and the Law Index Score (scale 1-100);
- proportion of seats held by women in national parliaments (%).

1-4-3 Goal 7. Ensure access to affordable, reliable, sustainable and modern energy

1-4-4 Target (7.1)

- ensure that everyone has access to affordable, reliable and modern energy services by the year 2030 (7.1) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-4-5 Selected indicators of 7.1 target

- access to electricity (% of population);
- access to electricity, rural (% of rural population);
- access to electricity, urban (% of urban population);

-individuals using the Internet (% of population).

1-5 Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

1-5-1 Targets (16.1 and 16.3)

-lower all forms of violence and related death rates (16.1);
-encourage the rule of law at the national and international levels and guarantee that everyone has equal access to the justice system (16.3) (UN, Transforming our world: the 2030 Agenda for Sustainable Development, <https://sdgs.un.org/2030agenda>).

1-5-2 Selected indicators of 16.1 and 16.3 targets

-intentional homicides (per 100,000 people);
-intentional homicides, male (per 100,000 male);
-intentional homicides, female (per 100,000 female);
-completeness of birth registration (%);
-completeness of birth registration, male (%);
-completeness of birth registration, female (%);
-completeness of birth registration, rural (%);
-completeness of birth registration, urban (%).

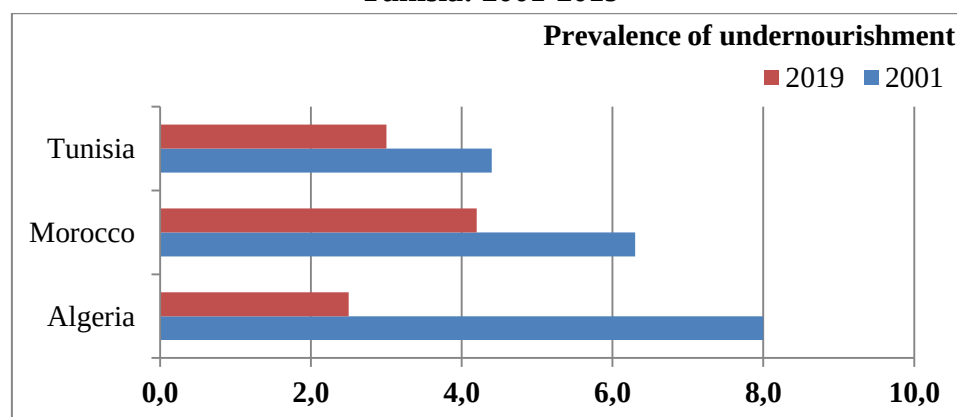
2- Results and discussion

2-1 Nutrition indicators

2-1-1 Prevalence of undernourishment

Prevalence of undernourishment (% of population) is the percentage of the population whose habitual food consumption is insufficient to meet the dietary energy levels needed to support a typical active and healthy life, according to Food and Agriculture Organization (FAO) (WB, SGDGs, <https://databank.worldbank.org>).

Fig (1): Prevalence of undernourishment, % of population, Algeria, Morocco and Tunisia: 2001-2019



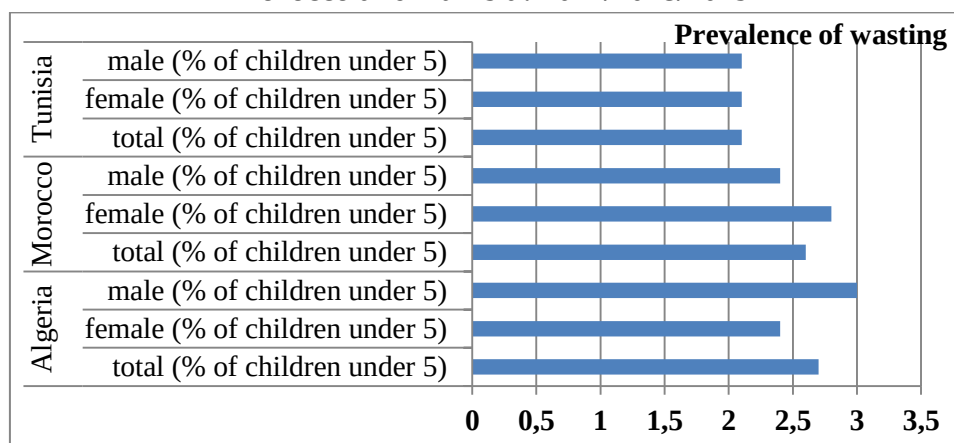
Source: Done by the Author from World Bank data base

Prevalence of undernourishment of Algeria, Morocco and Tunisia fell gradually from 8%; 6.3% and 4.4% in 2001 to 2.5%; 4.2% and 3%, respectively (**Fig (1)**). Regarding the population of Algeria in 2019 which is 42,705,368 (WB, Population, total –Algeria, <https://data.worldbank.org>), over one million Algerians (1,067,634.2) are undernourished.

2-1-2 Prevalence of wasting, weight for height

Prevalence of wasting, weight for height (% of children under 5) is the percentage of children under the age of five whose weight for height is more than two standard deviations below the median for the international reference population, ages 0-59, according to UNICEF, World Health Organization (WHO) and World Bank (WB, SGDGs, <https://databank.worldbank.org>).

Fig (2): Prevalence of wasting, weight for height, % of children under 5, Algeria, Morocco and Tunisia: 2017/2018/2019



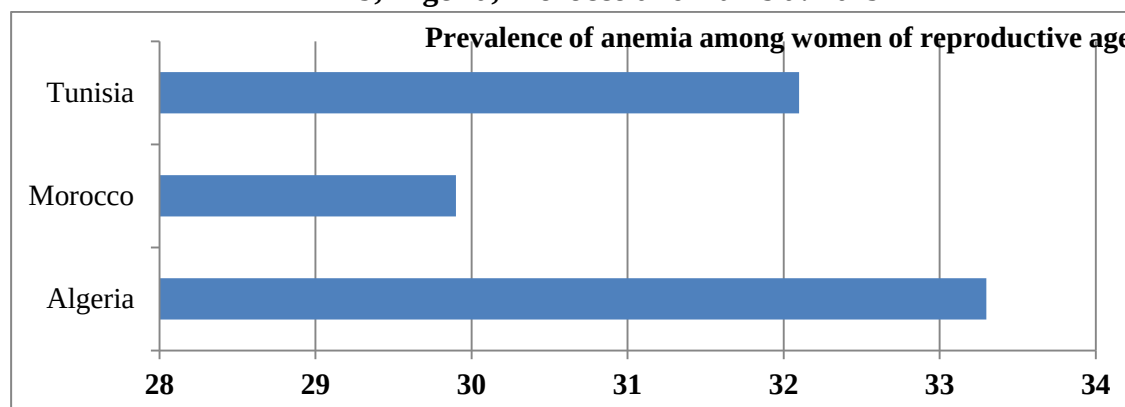
Source: Done by the Author from World Bank data base

We must mention that we don't have data for a comparable and recent year for the three countries at the same time. We decided to choose, for each country, the most recent year: 2019 for Algeria, 2017 for Morocco and 2018 for Tunisia. Algeria records the worst scores (for total and male). On the contrary, Tunisia registers the best ones (total, male and female) (Fig (2)).

2-1-3 Prevalence of anemia among women of reproductive age

Prevalence of anemia among women of reproductive age (% of women ages 15-49) is the combined prevalence of non-pregnant women with hemoglobin levels below 12 g/dL and pregnant women with hemoglobin levels below 11 g/dL, according to WHO (WB, SGDGs, <https://databank.worldbank.org>).

Fig (3): Prevalence of anemia among women of reproductive age, % of women ages 15-49, Algeria, Morocco and Tunisia: 2019



Source: Done by the Author from World Bank data

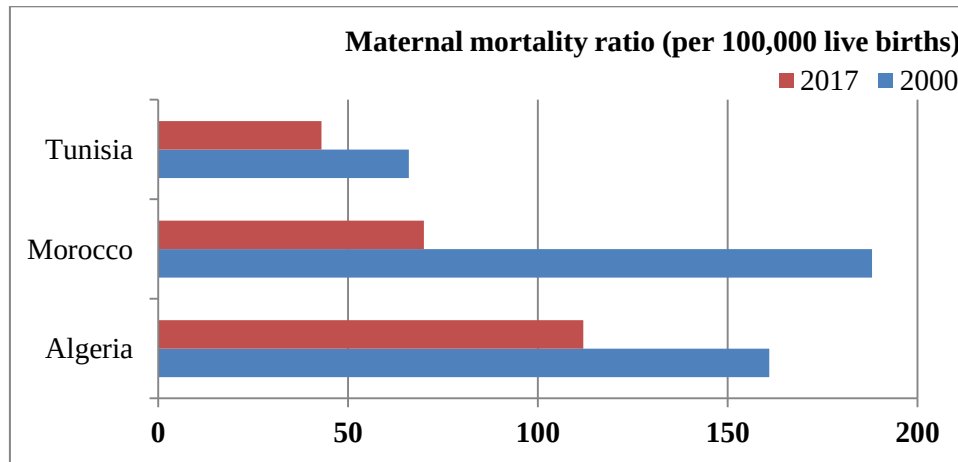
Algerian women of reproductive age are the most affected by anemia (33.3%) compared to Tunisian and Moroccan women (Fig(3)).

2-2 Disease and mortality indicators

2-2-1 Maternal mortality ratio

Maternal mortality ratio (modeled estimate, per 100,000 live births) measures how many women per 100,000 live births pass away from pregnancy-related reasons while they are pregnant or within 42 days following pregnancy termination, according to WHO, UNICEF, UNFPA and World Bank (WB, SGDGs, <https://databank.worldbank.org>).

Fig (4): Maternal mortality ratio, modeled estimate, per 100,000 live births, Algeria, Morocco and Tunisia:2000-2017



Source: Done by the Author from World Bank data

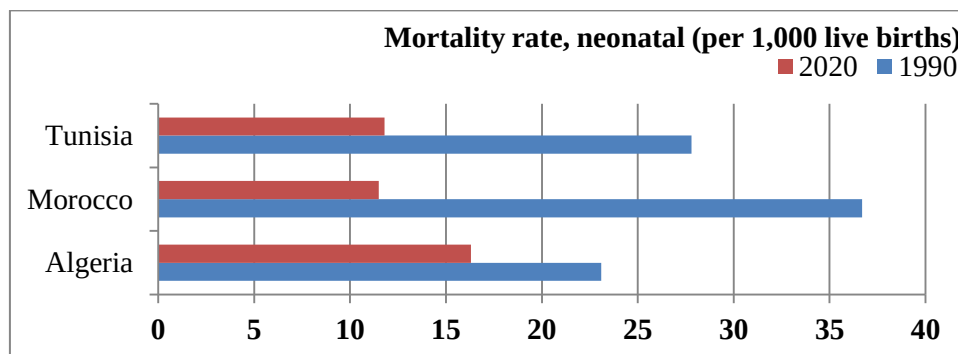
For all the countries, the maternal mortality ratio is decreasing. Morocco made the most efforts to lower maternal mortality during this period. In comparison to Algeria, Tunisia has performed the best. In reality, maternal mortality in Algeria is over 150 per 100,000 live births, compared to less than its third in Tunisia (Fig (4)).

2-2-2 Mortality rate, neonatal

-Mortality rate, neonatal (per 1,000 live births) is the number of newborns passing away before reaching 28 days old, per 1,000 live births in a given year, according to UNICEF, WHO, World Bank, UN (WB, SGDGs, <https://databank.worldbank.org>).

-Mortality rate, under-5 (per 1,000 live births) is the probability of 1 in 1,000, that a newborn child would pass away before turning five, according to age-specific mortality rates for the given year, as stated by the same source.

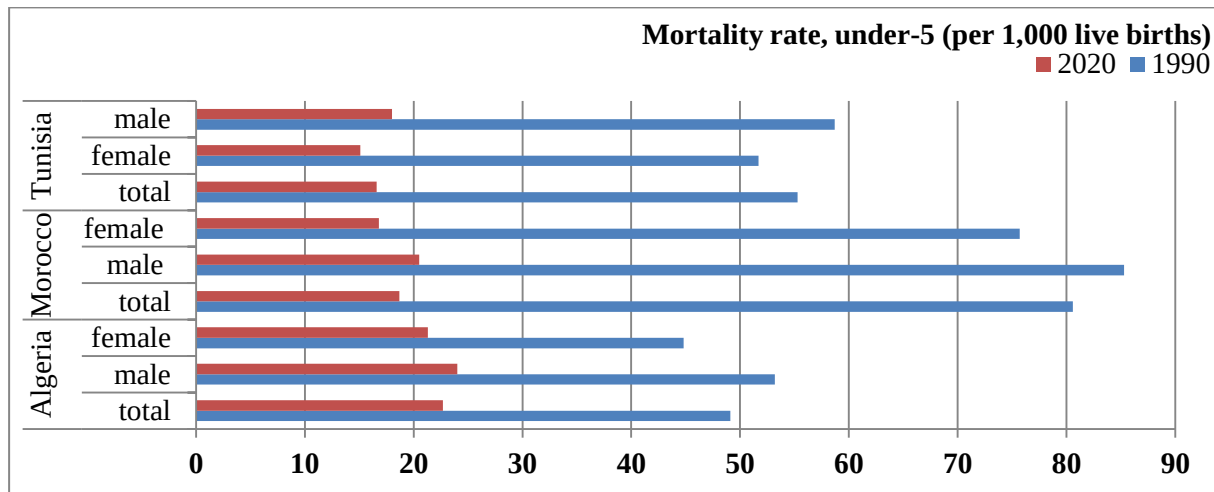
Fig (5): Mortality rate, neonatal, per 1,000 live births, Algeria, Morocco and Tunisia: 1990-2000



Source: Done by the Author from World Bank data

There is a positive evolution for all the countries from 1990 to 2000. The recent neonatal mortality rates of Tunisia and Morocco are equal. Algeria posts the worst results (**Fig (5)**).

Fig (6): Mortality rate, under-5, (total, male and female), per 1,000 live births, Algeria, Morocco and Tunisia: 1990-2000



Source: Done by the Author from World Bank data

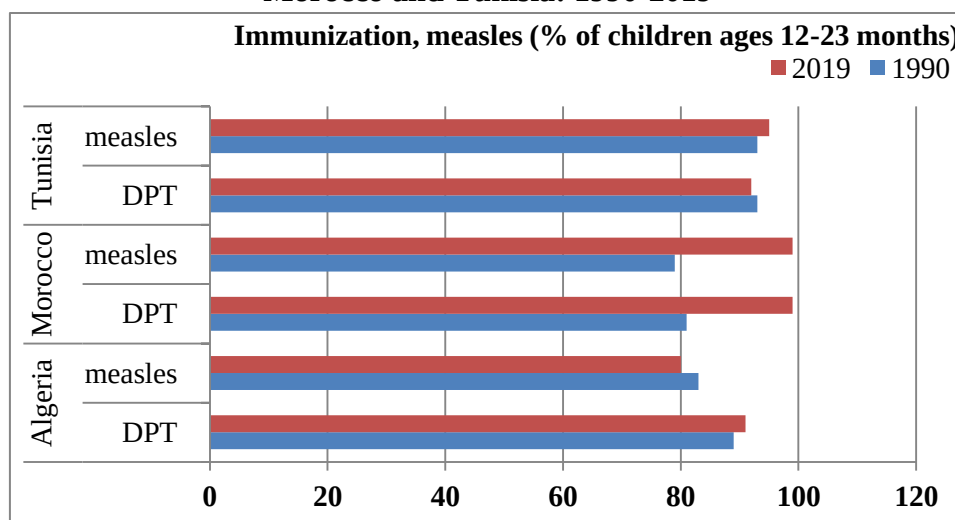
In 1990, Morocco registers the worst performance. In 2000, the poorest one is recorded by Algeria (**Fig (6)**).

2-2-3 Immunization, DPT and measles

-*Immunization, DPT (% of children ages 12-23 months)* measures the percentage of children ages 12-23 months who received DPT vaccinations. A child is considered sufficiently immunized against diphtheria, pertussis (or whooping cough), and tetanus (DPT) after receiving three doses of vaccine, according to WHO and United Nations International Children's Emergency Fund (UNICEF) (WB, SGDGs, <https://databank.worldbank.org>);

-*Immunization, measles (% of children ages 12-23 months)* indicates the proportion of kids aged 12-23 months who had received the corresponding vaccination. After one dose of vaccine, a child is deemed sufficiently protected against the measles, according to the same source.

Fig (7): Immunization: DPT and measles, % of children ages 12-23 months, Algeria, Morocco and Tunisia: 1990-2019



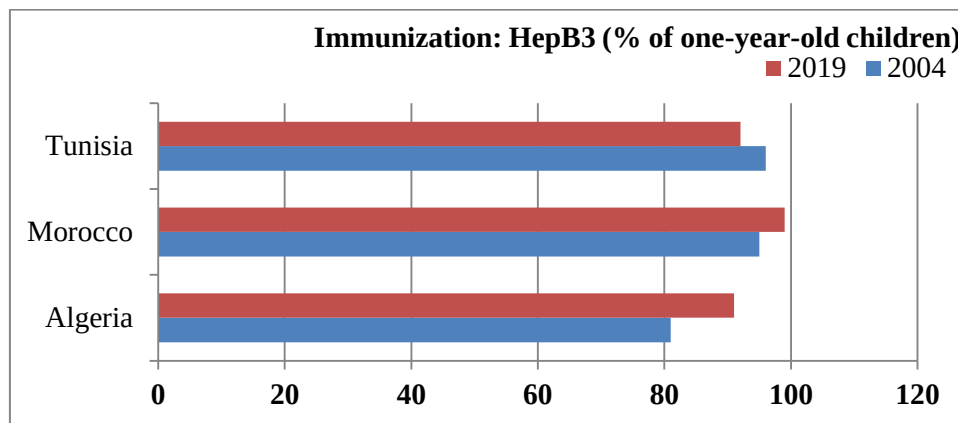
Source: Done by the Author from World Bank data

The best performance in 1990 is achieved by Tunisia. In 2000, Morocco registered the highest score, in contrast to Algeria which performs the worst throughout this time period (**Fig (7)**).

2-2-4 Immunization, HepB3

Immunization, HepB3 (% of one-year-old children) is the percentage of children aged 12-23 months who received a hepatitis B vaccination. When a child receives three doses, he is deemed sufficiently vaccinated, according to WHO and UNICEF (WB, SGDGs, <https://databank.worldbank.org>).

Fig (8): Immunization: HepB3, % of one-year-old children, Algeria, Morocco and Tunisia: 2004-2019



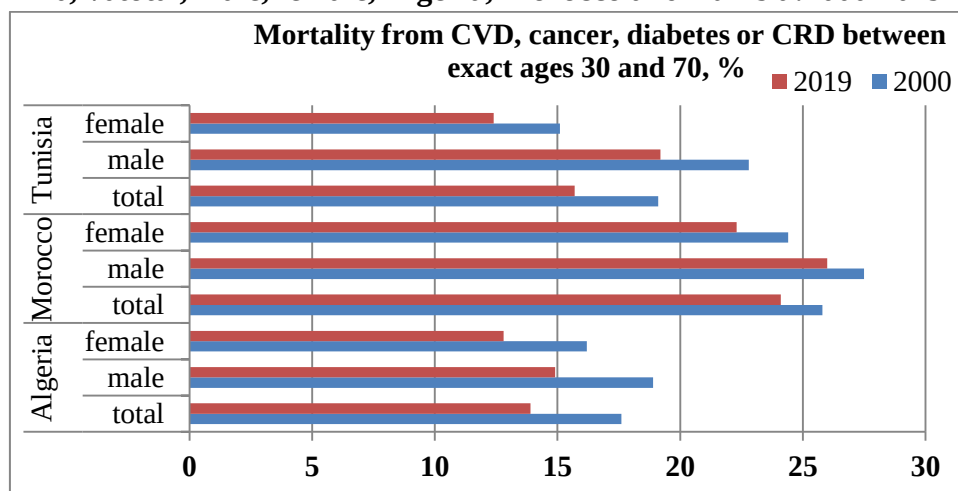
Source: Done by the Author from World Bank data

Children in Algeria are not as well protected against HepB3 as those in Tunisia and Morocco (**Fig (8)**).

2-2-5 Mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70

Mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70 (%) is the percentage of people in their 30s who would pass away before turning 70 from only the following reasons: cardiovascular disease (CVD), cancer, diabetes, or chronic respiratory disease (CRD). Three indicators are considered: total (%of population), male (%total male population) and female (%total female population).

Fig (9): Mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70, %total, male, female, Algeria, Morocco and Tunisia:2000-2019



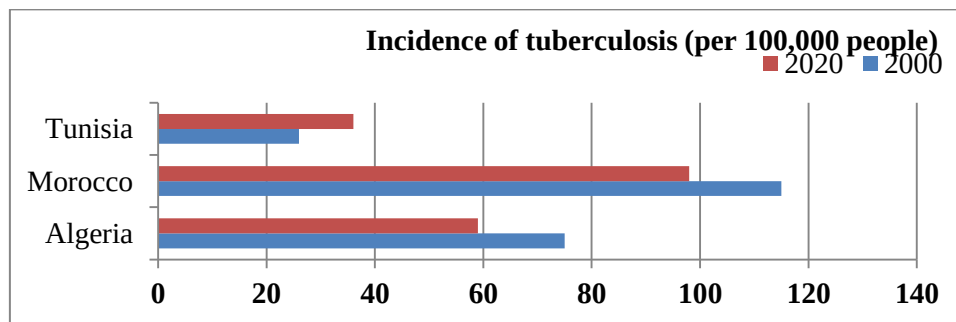
Source: Done by the Author from World Bank data

Mortality ratio had decreased during the last decade for all the countries of the study. The majority of cases involve males. Algeria had recorded the best performance for total and male categories (Fig (9)).

2-2-6 Incidence of tuberculosis

Incidence of tuberculosis (per 100,000 people) is the estimated number of new and relapse tuberculosis cases that occur in a given year, expressed as the rate per 100,000 population. Included are cases of all types of TB, including HIV-positive individuals, according to WHO (WB, SGDGs, <https://databank.worldbank.org>).

Fig (10): Incidence of tuberculosis, per 100,000 people, Algeria, Morocco and Tunisia: 2020-2000



Source: Done by the Author from World Bank data

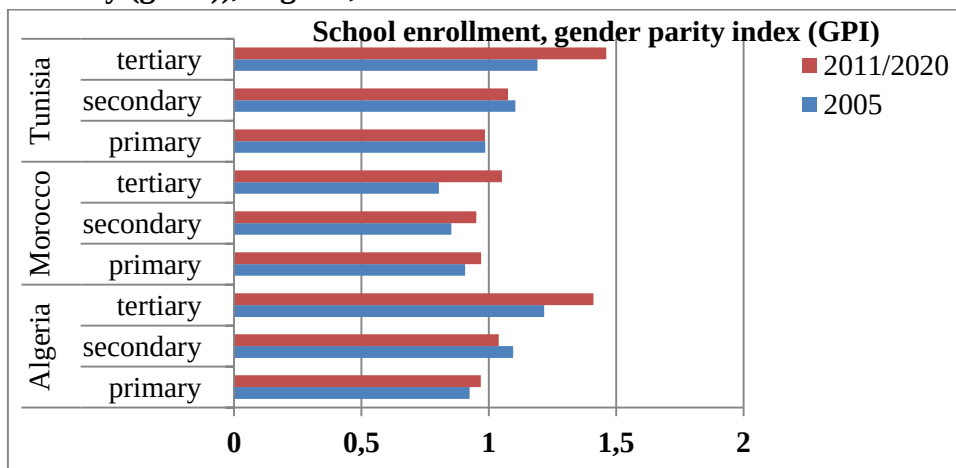
Regarding the prevalence of tuberculosis in the regional area, Algeria is third from the bottom, after Tunisia and Morocco (Fig (10)).

2-3 Equitable quality education indicators

2-3-1 Gender parity index (GPI) for gross school enrollment ratio

School enrollment, primary (/secondary, /tertiary), (gross), gender parity index (GPI) is the ratio of girls to boys enrolled at primary (/or secondary, /tertiary) level in public and private schools, according to UNISCO (WB, SGDGs, <https://databank.worldbank.org>).

Fig (11): Gender parity index (GPI) of school enrollment (primary, secondary and tertiary (gross)), Algeria, Morocco and 2018 Tunisia: 2005-2011/2020



Source: Done by the Author from World Bank data

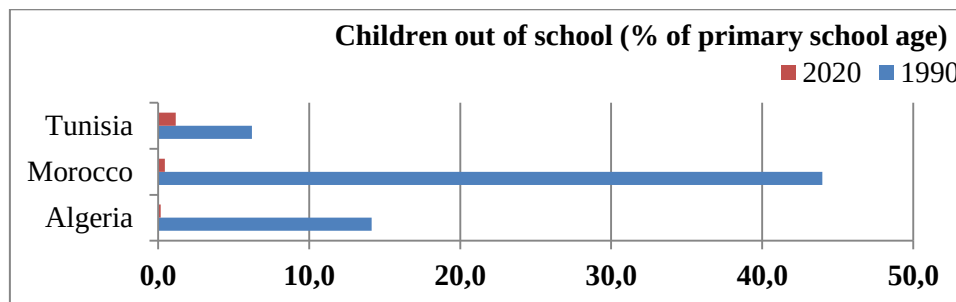
We do not have data for all the countries for one comparative and recent year. We selected 2020 as the most recent year for which some data were available, and used 2011 to complete the gap; in this case, secondary for both Algeria and Tunisia.

The results reveal similarities in data for primary school across all countries on the one hand, and for secondary education in Algeria and Tunisia on the other. In Algeria, there is an evolution of the ratio of girls to boys enrolled at both primary and tertiary school. In Tunisia, there is a perfect equality at the primary school (**Fig (11)**).

2-3-2 Children out of school

Children out of school (% of primary school age) is the proportion of children in primary school who are not enrolled in either primary or secondary education. Children in the official primary age group that are in preprimary education are considered as not in school, according to UNISCO (WB, SGDGs, <https://databank.worldbank.org>).

Fig (12): Children out of school, % of primary school age, Algeria, Morocco and Tunisia: 1990-2020



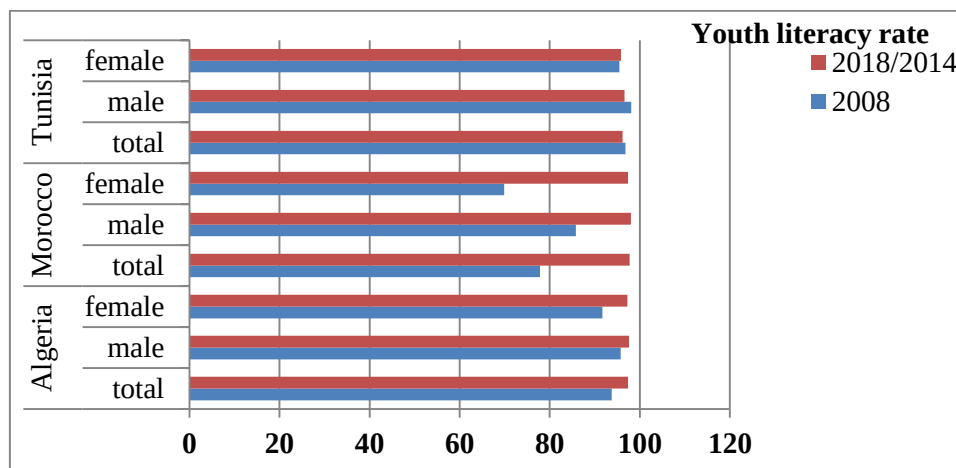
Source: Done by the Author from World Bank data

The situation between 1990 and 2020 has significantly changed, especially for Morocco (44% in 1990 and 0.4% in 2020). Due to rules requiring all children to receive the minimum amount of education necessary until they turn 16 years old, there are no children who are not in school in Algeria (0.2% in 2020) (**Fig (12)**).

2-3-3 Literacy rate, youth

Literacy rate, youth (% of people ages 15-24) is the percentage of young people (people ages 15-24) who can read and write with understanding a brief statement about their daily lives. Three indicators are considered: total (% of youth), male (%total male youth) and female (%total female youth), according to UNISCO (WB, SGDGs, <https://databank.worldbank.org>).

Fig (13): Youth (ages 15-24) literacy rate (total, male, female), Algeria, Morocco and Tunisia: 2008-2014/2018



Source: Done by the Author from World Bank data

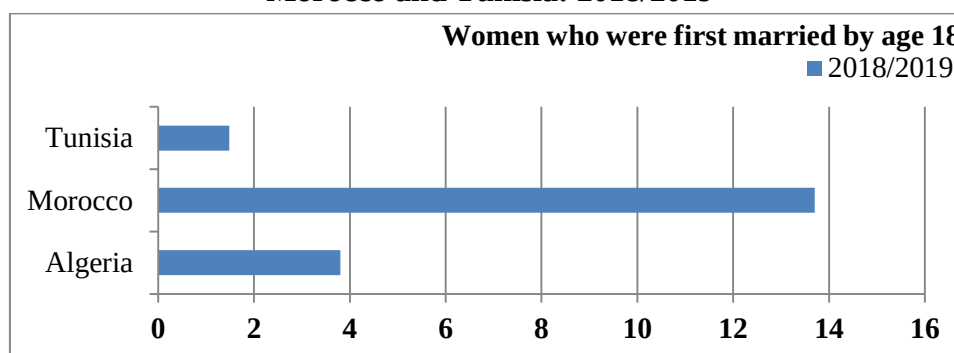
We examine the 2020 data for all the countries except for Tunisia where we explore the 2014. The results indicate that not all young people in all the countries are 100% literate. However, the values are very nearly 100%, but males enjoy greater privilege than females (**Fig (13)**).

2-4 Women empowerment indicators

2-4-1 Child marriage

Women who were first married by age 18 (% of women ages 20-24) is the percentage of women aged 20 to 24 who had their first marriage by age 18, according to UNICEF (WB, SGDGs, <https://databank.worldbank.org>).

Fig (14): Women who were first married by age 18, % of women ages 20-24, Algeria, Morocco and Tunisia: 2018/2019



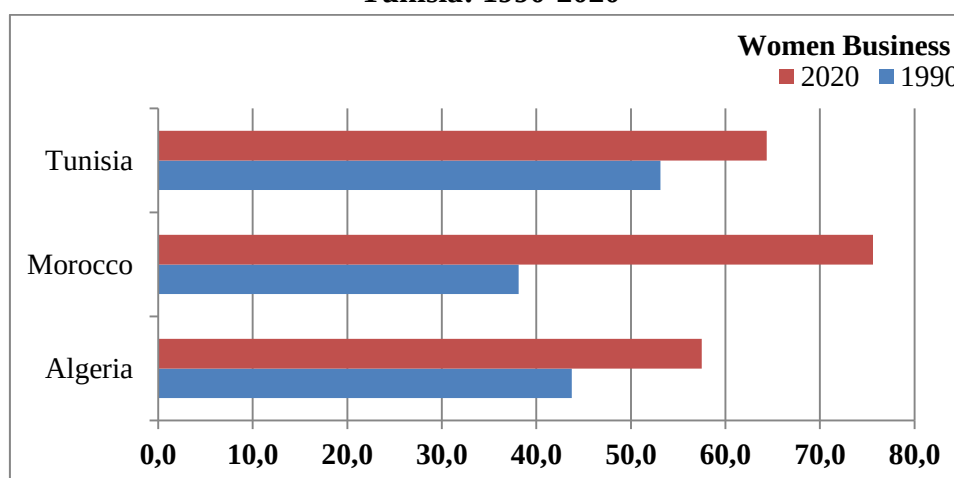
Source: Done by the Author from World Bank data

Data are available for Algeria for 2019, and for 2018 for the rest of the countries. Morocco is the most country where girls get married before turning 18. In fact, 13.7% of girls aged 20 to 24 had their first marriage by age 18 compared to 3.8% in Algeria and 1.5% for Tunisia (**Fig (14)**).

2-4-2 Women business

Women Business and the Law Index Score (scale 1-100) measures the impact of laws and regulations on women's economic opportunity through eight indices (Mobility, Workplace, Pay, Marriage, Parenthood, Entrepreneurship, Assets and Pension), with 100 being the maximum value (WB, SGDGs, <https://databank.worldbank.org>).

Fig (15): Women Business and the Law Index Score, scale 1-100, Algeria, Morocco and Tunisia: 1990-2020



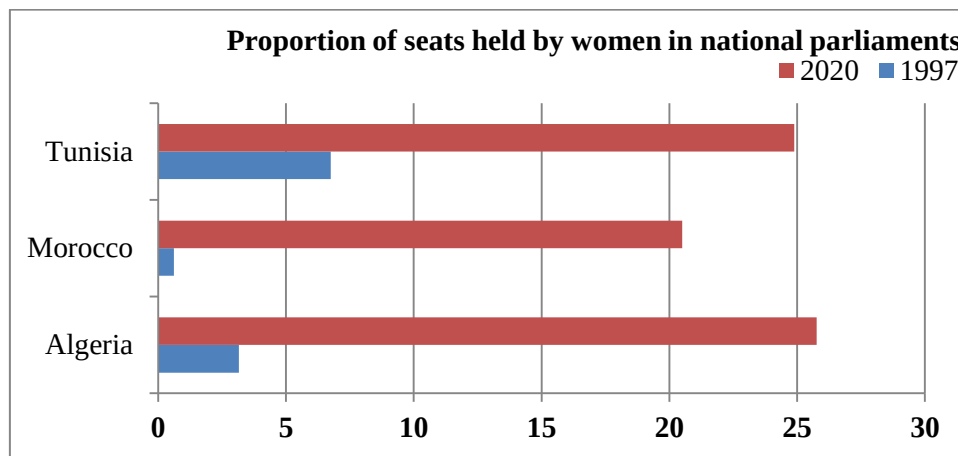
Source: Done by the Author from World Bank data

Between 1990 and 2020, the regional position of women business had developed. Algeria was last on the list, in 2020, with 57.5% compared to Morocco's 64.4% and Tunisia's 75.6% (**Fig (15)**).

2-4-3 Political weight

Proportion of seats held by women in national parliaments (%) is the percentage of parliamentary seats in a single or lower chamber held by women, according to UPU (WB, SGDGs, <https://databank.worldbank.org>).

Fig (16): Proportion of seats held by women in national parliaments, %, Algeria, Morocco and Tunisia: 1997-2020



Source: Done by the Author from World Bank data

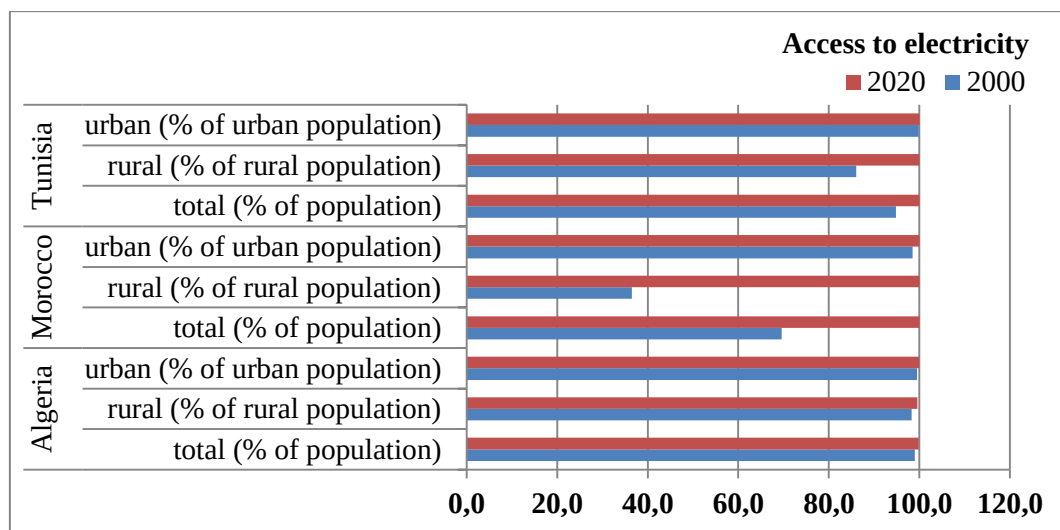
In 2020, women hold more than 25% of the seats in national parliaments for all the countries of study, an enormous increase from less than 7% in 1970 (**Fig (16)**).

2-5 Modern energy indicators

2-5-1 Access to electricity

Access to electricity, % total (/urban/, rural) population is the percentage of total (/urban, /rural) population with access to electricity (WB, SGDGs, <https://databank.worldbank.org>).

Fig (17): Access to electricity, (% of total,/rural,/urban population), Algeria, Morocco and Tunisia: 2000-2020



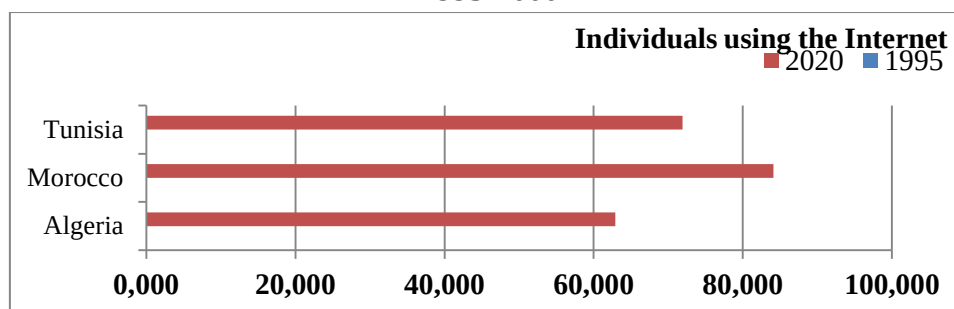
Source: Done by the Author from World Bank data

In Morocco and Tunisia, all residents—rural or urban—have access to electricity. In Algeria, 99% of this value is registered (**Fig (17)**).

2-5-2 Individuals using the Internet

Individuals using the Internet (% of population) are individuals who have used computers, mobile phones, PDAs, game consoles, digital TVs, etc. in the last three months, according to International Telecommunication Union (ITU) (WB, SGDGs, <https://databank.worldbank.org>).

Fig (18): Individuals using the Internet, % of population, Algeria, Morocco and Tunisia: 1995-2000



Source: Done by the Author from World Bank data

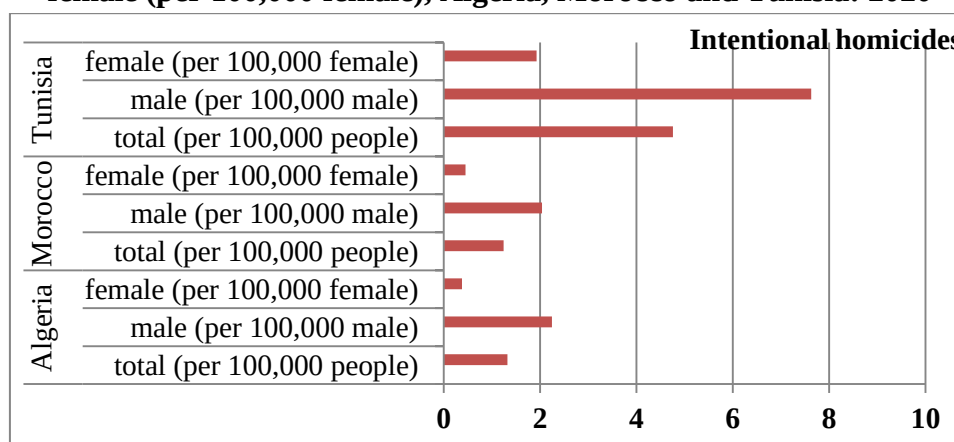
With 62.9%, Algeria sits at the bottom of the list. Morocco registers 84.1% and Tunisia 71.9%, in 2020 (**Fig (18)**).

2-6 Peace and justice indicators

2-6-1 Intentional homicides

Intentional homicides, total (/male, /female), per 100,000 people are the estimation of total (/male, /female) unlawful homicides purposely inflicted as a result of domestic disputes, interpersonal violence, violent conflicts over land resources, intergang violence over turf or control, and predatory violence and killing by armed groups. Intentional killing and killing in armed conflict are excluded, according to UN Office on Drugs and Crime's International Homicide Statistics database (WB, SGDGs, <https://databank.worldbank.org>).

Fig (19): Intentional homicides: total (per 100,000 people), male (per 100,000 male) and female (per 100,000 female), Algeria, Morocco and Tunisia: 2020



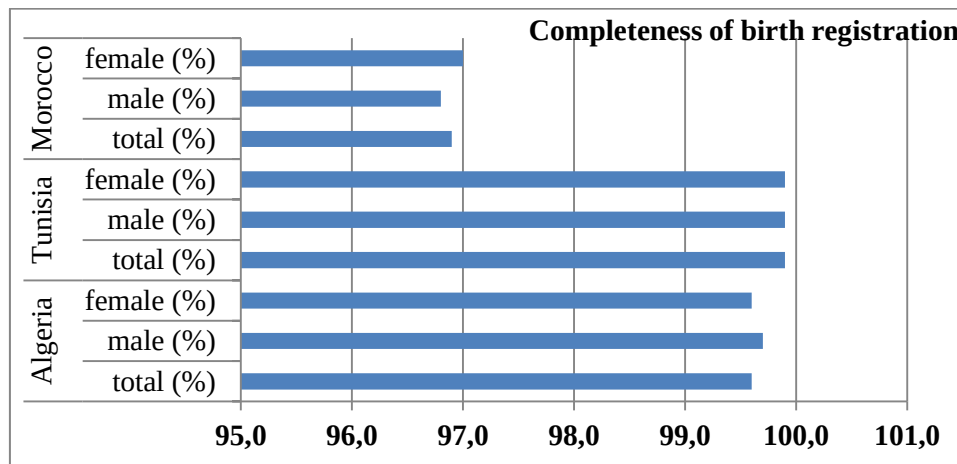
Source: Done by the Author from World Bank data

The percentage of intentional homicides in Tunisia is the highest, especially for men (7.6% of Tunisian male) (**Fig (19)**).

2-6-2 Completeness of birth registration by gender

Completeness of birth registration, % total (/male, /female) is the proportion of total (/male, female) children (total, /male, /female) under the age of five whose births were recorded, according to UNICEF (WB, SGDGs, <https://databank.worldbank.org>).

Fig (20): Completeness of birth registration (total, male and female), %, Algeria, Morocco and Tunisia: 2018/2019



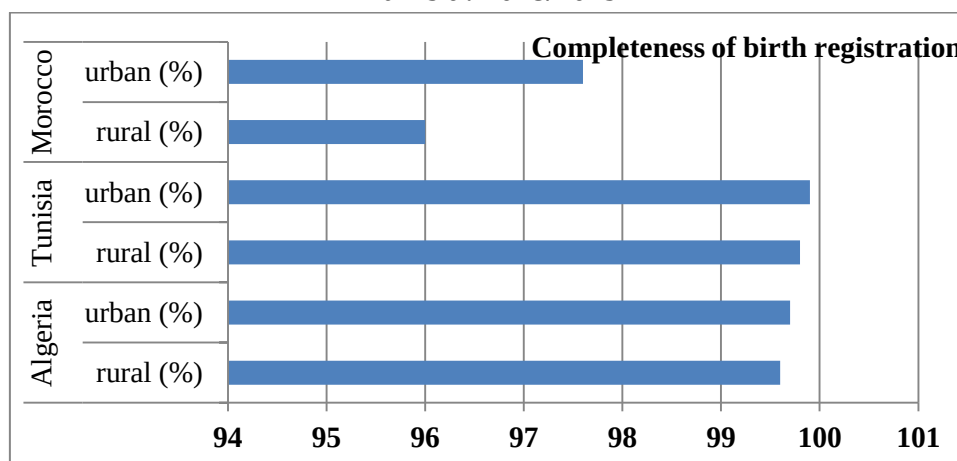
Source: Done by the Author from World Bank data

Data for Algeria are available for the years 2019, while statistics for the other countries are available for the year 2018. No country has birth registration that is 100%. Tunisia registers the best score, followed by Algeria and then Morocco (Fig (20)).

2-6-3 Completeness of birth registration by region

Completeness of birth registration, % rural (/urban) is the proportion of rural (/urban) children under the age of five whose births were registered, according to UNICEF (WB, SGDGs, <https://databank.worldbank.org>).

Fig (21): Completeness of birth registration (rural, urban), %, Algeria, Morocco and Tunisia: 2018/2019



Source: Done by the Author from World Bank data

While data for Algeria are available for 2018, data for the other countries are only available for 2018. Although rural values are plainly lower than urban ones, Tunisia registers the best score in that issue, followed by Algeria and then by Morocco. The range of all values is

between 96.0% and 99.8%. Even in urban areas, not all countries have 100% of the indicator's value (**Fig (21)**).

Conclusion:

In this paper, we evaluated the social pillar of the sustainable development in Algeria compared to regional countries (Morocco and Tunisia). This evaluation depended on the determination of theoretical and practical frameworks. The theoretical part was based on providing a definition of this pillar, regarding the fact that the 1987 sustainable development definition is not sufficiently developed to be explored. On the basis of the giving definition, we choose the corresponding goals from the list of 17 SDGs which are: Zero Hunger (goal 2), Good Health and Well-being (goal 3), Quality Education (goal 4), Gender Equality (goal 5), Affordable and Clean Energy (goal 7) and Peace, Justice and Strong Institutions (goal 16). Each goal is compromised from some targets. Depending on the data's availability, we choose their corresponding indicators in the SDGs database. In fact, thirty-seven (37) indicators were separately analyzed.

We can conclude by categorizing the results of this study for Algeria in three scales: the best, the median and the worst performance. By the best performance, we mean that Algeria registered the highest value of an indicator comparing to the other two countries. The lowest performance represents the inverse meaning. The median performance, meanwhile, refers to a situation in which Algeria records a result that falls between those registered by Morocco and Tunisia.

According to these scales, we can summarize the six (06) following results. First, in the nutrition indicators, Algeria recorded the poorest performance for wasting and a median performance for undernourishment. Second, for diseases and mortality indicators, Algeria performed the worst in terms of the majority of indicators (women of reproductive age affected by anemia, neonatal mortality rate, immunization (DPT, measles, HepB3) and prevalence of tuberculosis), but it performed the best in terms of Mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70 undernourishment. Third, for the equitable quality education indicators, Algeria registered the best performance for children out of school and the median one for youth literacy rate. Fourth, for women empowerment indicators, Algeria scored the best performance for the proportion of seats held by women in national parliaments, the median one for child marriage and the worst one in women Business. Fifth, in terms of modern energy indicators, Algeria recorded the worst performance for all the indicators (access to electricity and using the Internet). Sixth, in terms of peace and justice indicators, Algeria registered the median performance for all the indicators (intentional homicides and completeness of birth registration).

Overall, if we have to consider the scale of each indicator registered by Algeria in comparison with the other two countries, without weighting, we can conclude that the social pillar of Algeria is leaning towards the worst performance.

Algeria needs to improve the performance of the indicators of the study especially for those that have low values compared to the regional ones.

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