



Gender Analysis of the Contribution of Labour Utilisation to Improved Living Standards : A Retrospective and Prospective Analysis in Light of the New Development Model Recommendations

There remains a global under-utilisation of the female labour force in terms of gender disparities in labour market participation, particularly in emerging and developing economies. A number of research studies¹ have pointed out that gender inequalities penalise the growth potential of the economy and are a major impediment to starting a process of convergence towards advanced economies.

Labour utilisation (LU) in Morocco has contributed only marginally to the growth of GDP per capita, whereas it accounts for a large share of per capita income in advanced countries. In Morocco, the analysis of the components of labour utilisation shows a negative and restrictive contribution of the decline in female labour force participation to GDP per capita growth. The crisis generated by the Covid-19 pandemic has amplified this impact, due to the increase of the already existing fragility of the situation of women in the labour market.

While taking into account this context and realities, the recommendations highlighted in the Report on the New Development Model (NDM) call for the economic empowerment of women to be made a national priority and a guarantee for the establishment of the foundations for inclusive development. To achieve this, a number of targets have been identified in the report, namely, a gradual increase in the female labour force participation rate to 45% by 2035.

As such, this Policy Brief quantifies, using an accounting approach, the effect of the under-utilisation of the female labour force on the standard of living in Morocco, as well as the potential gains associated with increasing the integration of women into the labour market in light of the NDM recommendations.



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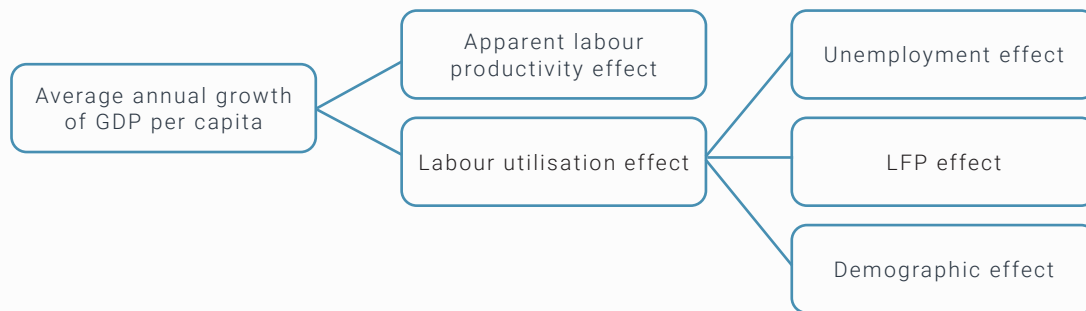
¹ DEPF, UN Women, EC-BSG, DUE, AFD (February 2021), "Economic Costs of Gender Inequalities in Market Labour in Morocco" and Ferrant, G. and A. Kolev (2016), "Does Gender Discrimination in Social Institutions Matter for Long-term Growth?: Cross-country Evidence", OECD Development Centre Working Papers, No. 330.

1. Brief overview of the conceptual framework of the analysis

Real GDP per capita, which is usually used to measure a country's standard of living, can be broken down into two specific effects: the labour utilisation (LU) effect and the apparent labour productivity (ALP) effect. The latter can, in turn, be segmented into two effects: total factor productivity effect and capital intensity

effect. As for the LU effect, it combines, in turn, three interdependent factors, namely: employment, the labour force participation (LFP) rate and demographics (see diagram below). The following analysis focuses more on the effect of the LU and its components on the GDP per capita according to gender and age groups.

The components of the GDP per capita



Box 1: Methodology for breaking down the GDP per capita²

Equation 1 highlights the breakdown of GDP per capita into the apparent labour productivity effect and the LU effect:

$$\frac{PIB}{POP_{tot}} = \underbrace{\left[\frac{PIB}{L} \right]}_{ALP} * \underbrace{\left[\frac{L}{POP_{tot}} \right]}_{LU} \quad (1)$$

Equation (1) can be developed using a detailed description of the labour supply:

$$\frac{PIB}{POP_{tot}} = \underbrace{\left[\frac{PIB}{L} \right]}_{ALP} * \underbrace{\left[\frac{L_f + L_m}{PA} \right]}_{LU} * \underbrace{\left[\frac{PAF + PAM}{P_{15+}} \right]}_{LU} * \left[\frac{P_{15+}}{P_{tot}} \right] \quad (2)$$

Or:

$$\frac{PIB}{POP_{tot}} = \underbrace{\left[\frac{PIB}{L} \right]}_{ALP} * \underbrace{\left[\left(\frac{L_f}{PAF} * \frac{PAF}{PA} \right) + \left(\frac{L_m}{PAM} * \frac{PAM}{PA} \right) \right]}_{LU} * \underbrace{\left[\left(\frac{PAF}{PF_{15+}} * \frac{PF_{15+}}{P_{15+}} \right) + \left(\frac{PAM}{PM_{15+}} * \frac{PM_{15+}}{P_{15+}} \right) \right]}_{LU} * \left[\frac{P_{15+}}{P_{tot}} \right] \quad (3)$$

It should be noted that the apparent labour productivity (ALP) effect is segmented into a total factor productivity (TFP) effect and a capital intensity effect with:

$$\frac{PIB}{L} = \underbrace{PTF}_{Productivity} * \underbrace{\left(\frac{K}{L} \right)^\alpha}_{Capital Intensity}$$

Whereby:

- | | |
|---|--|
| GDP : Gross domestic product (GDP) in real terms | P₁₅₊ : Population of working age 15 years and over |
| P_{tot} : Total population | PF₁₅₊ : Female population of working age 15 years and over |
| L : Employed population 15 years and over | PM₁₅₊ : Male population of working age 15 years and over |
| L_f : Female employed population | K : Capital input |
| L_m : Employed male population | TFP : Total Factor Productivity |
| PA : Population active de 15 ans et plus | α : Elasticity of physical capital to GDP |
| PAF : Active labour force 15 years and over | |
| PAM : Active female labour force 15 years and over | |

² It should be recalled that this analytical approach adopted is of an accounting nature, based on an ex-post breakdown of available statistical data.

2. The under-performance of the labour market, regard to the low participation of women in the labour force, has a negative impact on living standards in Morocco

The increase in GDP per capita between 2017 and 2019 is entirely attributable to the labour productivity effect (96%), while the contribution of the LU remains low on average (around 4%). It should be pointed out in this respect that capital intensity alone explains more than 95% of the apparent labour productivity effect, while total factor productivity contributes only slightly, or even negatively³.

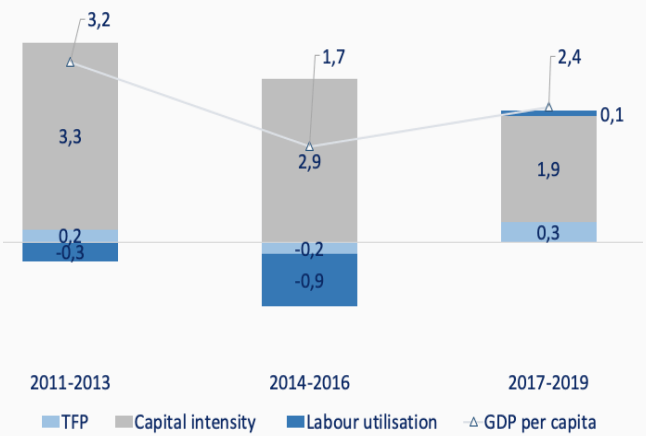
The three-year period from 2017 to 2019 saw a positive contribution of the LU to the evolution of GDP per capita of +0.1 points, whereby this contribution was negative in the periods 2011-2013 (-0.3 points) and 2014-2016 (-0.9 points) respectively.

In order to better understand the factors underlying the behaviour of the LU and to highlight the unexploited potential in this area, particularly in relation to the female labour factor, the following analysis focuses on the analysis of the three components of LU.

Graph 2 illustrates a structurally positive effect of demographics on GDP per capita and a negative effect of LFP, albeit improving. It should be noted in this respect that the contribution of LFP recovered significantly during the three-year period from 2017 to 2019 compared to the period 2014-2016, i.e. a 1-point gain bringing it to -0.4 points. On the other hand, the contribution of employment to GDP per capita growth improved significantly between 2016 and 2019 by becoming positive (+0.1 percentage points) compared to a negative effect during the periods 2011-2013 and 2014-2016 of -0.1 percentage points.

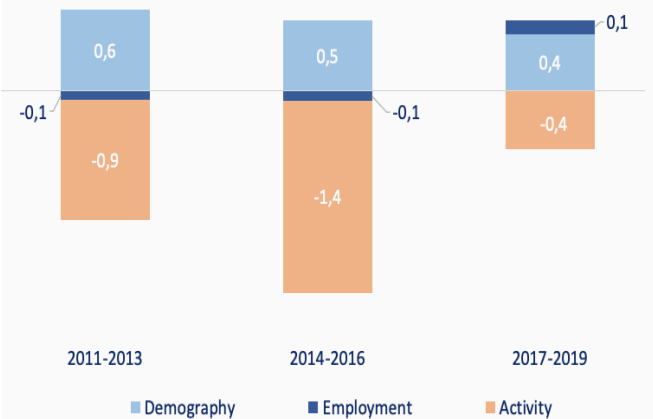
The gender analysis of the LU reveals that the female labour use contributed negatively to the evolution of the GDP per capita during the three triennia from 2011 to 2013, from 2014 to 2016 and from 2017 to 2019, respectively to the extent of -6.1%, -44.2% and -56.8% against contributions of -4.5%, -8.4% and +60.6% respectively generated by the male labour use (see graph 3).

Graph 1: Contribution of the different components of GDP per capita to its evolution (in percentage points)



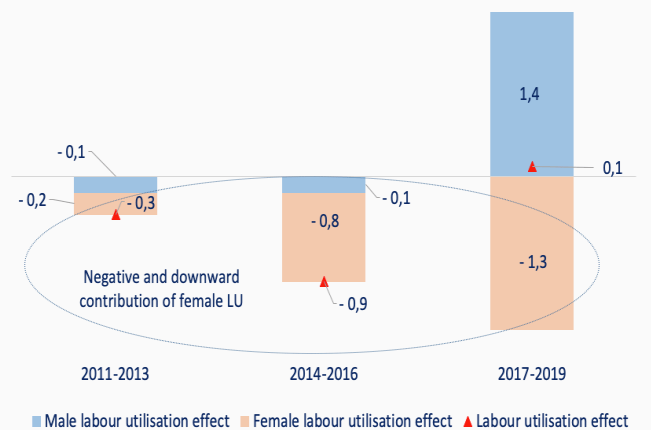
Source: DEPF calculation based on HCP data

Graph 2: Contributions of the three components of the LU to the improvement in living standards (in percentage points)



Source: DEPF calculation based on HCP data

Graph 3: Negative and downward contribution of female LU to the growth of GDP per capita (in percentage points)



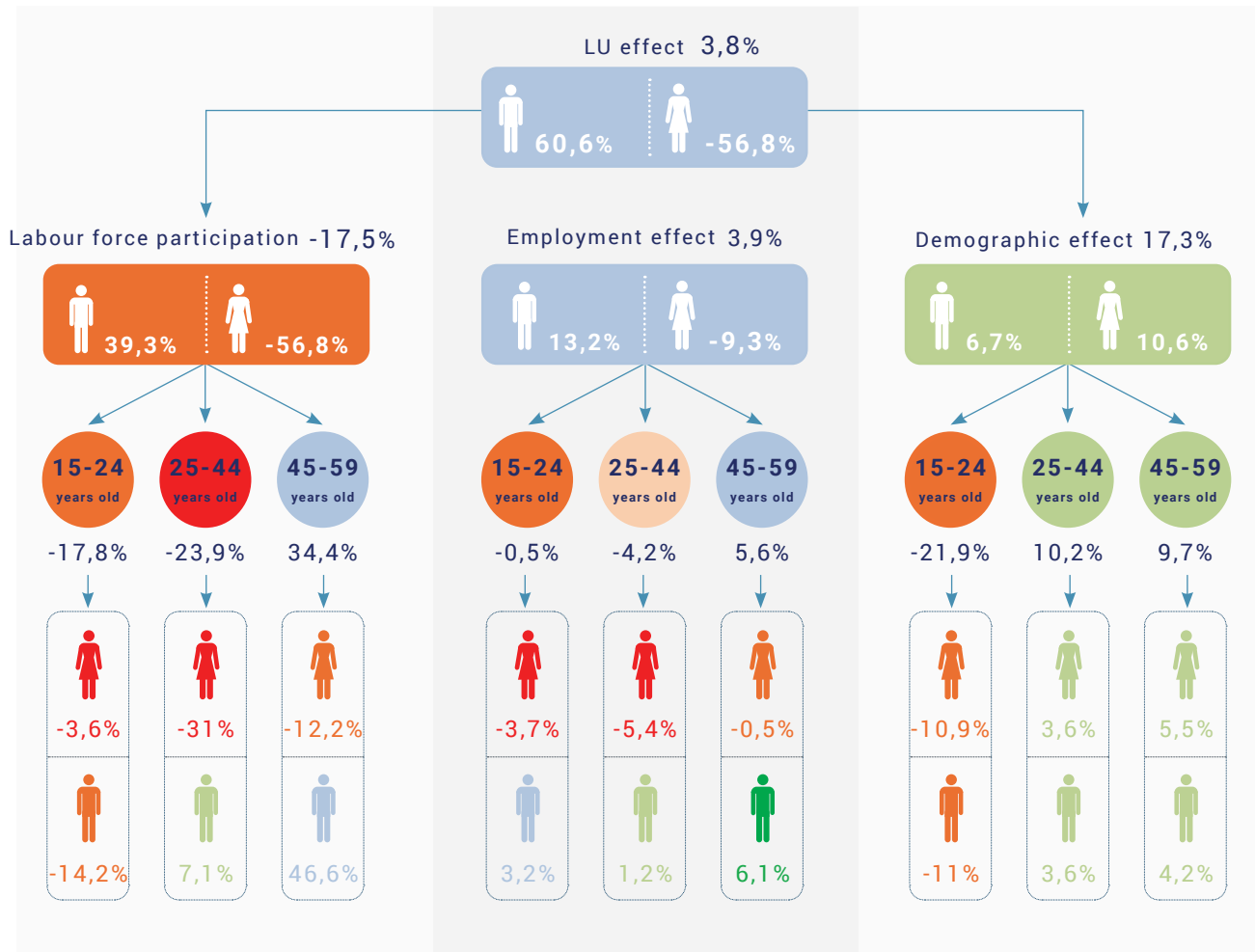
Source: DEPF calculation based on HCP data

³ The last three-year period 2017-2019 was characterised by a positive contribution of the TFP (+0.4 points) after a negative contribution of -0.2 points in 2014-2016.

The following tree structure provides a detailed overview of the contribution of the different components of the labour force by gender and age groups to the improvement of living standards. The different colours correspond to the sign and magnitude of the

change in contributions of these components between the two triennia periods of 2014 to 2016 and 2017 to 2019 (see the colour code to read the tree structure). Very different developments emerge, for instance, by gender and by age.

Gender and age analysis of the contribution of the three components of the LU to the evolution of GDP per capita between 2017 and 2019



Color code to read the tree structure :

- Positive et P2 > P1
- Positive et P2 < P1
- Positive P2 et Negative P1
- Negative P2 et Positive P1
- Negative et P2 > P1
- Negative et P2 < P1

P1: The period from 2014 to 2016 | P2: The period from 2017 to 2019

Source: Calculation and formulation DEPF

➤ **Increasing negative contribution of female labour force participation (FLFP) to GDP per capita growth**

The national labour force participation rate has experienced a downward trend between 2010 and 2019, from 49.6% to 45.8%, thus contributing negatively to the growth of GDP per capita by -17.3% in 2017-2019 compared to -77% in 2014-2016. This is mainly due to the negative contribution of FLFP, which decreased from -52% in 2014-2016 to -56.8% in 2017-2019, compared to a contribution of -26.1% and +39.3% respectively for male activity.

As illustrated in the diagram above, FLFP across all age groups contributes negatively to

the growth of the GDP per capita. Indeed, apart from the 15-24 age group, whose LFP levels fell, in connection with the increased access of young women and men to education and training, the 25-44 and 45-59 age groups had a significant negative impact on the growth of GDP per capita between 2017 and 2019, at -31% and -12.2% respectively. For men, these contributions amount to +7.1% and +46.6%. As for the LFP rates of women and men aged 60 and over, they in turn contribute negatively to the increase in GDP per capita by -10% and -0.3%.

➤ **Negative and declining contribution of women's employment to GDP per capita**

Contrary to the LFP rate, the employment effect (the share of employment in labour force) contributed positively to the improvement of living standards in Morocco between 2017 and 2019 at 3.9% compared to a negative contribution of -3.7% between 2014 and 2016. The gender analysis of this component shows a deterioration of female unemployment by 3.9 points between 2010 and 2019, reaching 13.5%⁴, a level higher than that of men, which improved from 8.9% to 7.8%. In view of these developments, female employment made a negative contribution to GDP per capita growth of -9.3% between 2017 and 2019, following -7.5% between 2014 and 2016, whereas male employment made an improved contribution of 9.6 percentage points, rising from +3.6% between 2014 and 2016 to 13.2% between 2017 and 2019.

In line with the trends followed by the LFP rates, the evolution of employment and its effects on living standards in Morocco highlights important differences, not only by gender but also by age. Thus, and contrary to men, women's employment, all age groups combined, has contributed negatively to the evolution of the GDP per capita, particularly among women aged 25 to 44 years with a contribution of -5.4% between 2017-2019 this being due to the high level of unemployment of young women on a national scale. As for male employment, its contribution remains positive and improved between the two three-year periods 2014-2016 and 2017-2019 for all age groups except for the 25-44 age group whose contribution, although still positive, has slowed slightly.

➤ **Positive, albeit slowing, effect of demographics on GDP per capita**

The demographic effect has contributed positively to the improvement of living standards in Morocco (+17.3% between 2017 and 2019 after +29.1% between 2014 and 2016), unlike the other two components of LU (LFP and employment). This observation applies to all age categories, with the exception of the 15- to 24-year-olds whose contribution to the evolution of the GDP per capita between 2017 and 2019 is negative for both women and men respectively by -10.9% and -11%.

It should be noted in this respect that the contribution of the female population over 25

years of age to the growth of GDP per capita remains positive and higher than that of men in the same age categories, i.e. a trend that is the opposite to the one observed for the other components of the LU (LFP and employment). In fact, women aged 25-44 and 45-59 contributed to the improvement in living standards by 6.6% and 5.6% respectively, while the youngest population contributed negatively (-10.9%). These trends also apply to the male population, but to a lesser extent (+3.6%, +4.2% and -11%).

⁴ This is equivalent to a drop in the labour market integration rate of women from 90.4% in 2010 to 86.5% in 2019.

3. Women's contribution to GDP per capita growth strongly affected by the Covid-19 crisis

Given the effects of the crisis linked to the Covid-19 pandemic, the year 2020 saw a year-on-year decline in GDP per capita of 7.1%. Along with this decline, there was a simultaneous contraction in ALP and LU of -2.4 points and -4.8 points respectively.

The year 2020 thus breaks with past trends, particularly in terms of the contributions of male LFP and unemployment to the evolution of GDP per capita, which have been negative. Concerning the contributions of FLFP and unemployment recorded during this year, they have maintained the same negative trends. This means that LFP and unemployment increased the contraction of GDP per capita in 2020 by 30.3% and 8.5% respectively for women and 1.2% and 33.9% for men.

Indeed, the LFP rate for women, which has been falling steadily, reached its lowest level since 1999 in 2020, i.e. 19.9% compared with 21.5% in 2019. The male LFP rate fell slightly by 0.6 percentage points from 70.7% in 2019 to 70.3% in 2020.

The unemployment rate for women, which is on average higher than that of men, increased by 2.7 percentage points from 13.5% in 2019 to 16.2% in 2020. As for men's unemployment, it was close to 10.7% in 2020 (exceeding the 10% threshold for the first time since 2005) compared to 7.8% the previous year.

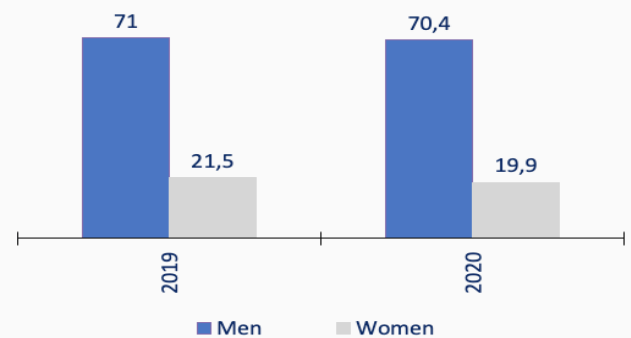
In this respect, it should be noted that measures to support job retention, particularly in favour of formal employment, through the granting of a fixed monthly payment of 2,000 dirhams to employees of companies affected by the Covid-19 crisis and affiliated to the CNSS⁵, have benefited men more than women. Indeed, according to HCP surveys, only 25% of women heads of household who benefited from the aid mechanisms provided by the public authorities actually benefited from this remuneration, and this was due to the low level of declaration of female employees to the CNSS⁶.

Table 1: Breakdown of GDP per capita development in 2020

	2020	
	In point	In %
GDP per capita = (1) + (2)	-7,1	100
ALP = (1)	-2,4	34,3
LU effect (2)=(3)+(4)+(5)	-4,8	67,4
- Men	-2,3	32,3
- Women	-2,5	35,6
Of which employment effect (3)	-3,1	42,8
- Men	-2,4	33,9
- Women	-0,6	8,5
Of which LFP effect (4)	-2,2	31,0
- Men	-0,1	1,2
- Women	-2,2	30,3
Of which demographic effect (5)	0,4	-5,8
- Men	0,2	-2,7
- Women	0,2	-3,2

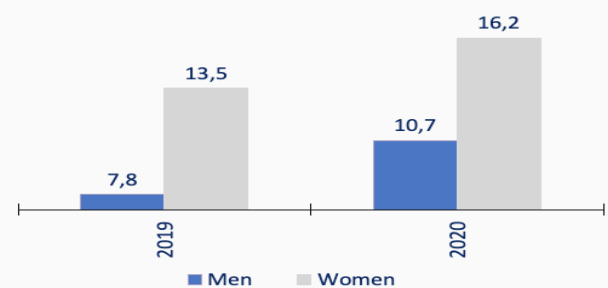
Source: DEPF calculation based on HCP data

Graph 4: Changes in the LFP of women and men (in %)



Source: DEPF calculation based on HCP data

Graph 5: Changes of unemployment of women and men (in %)



Source: DEPF calculation based on HCP data

⁵ This is one of the aid mechanisms for companies and employees affected by the Covid-19 crisis set up by the public authorities within the framework of the Economic Monitoring Committee (EMC).

⁶ Gender analysis of the impact of the coronavirus on the economic, social and psychological situation of households, HC P, UN Women, February 2021.

In the same context, the high levels of female unemployment recorded in 2020 can be explained not only by the loss of jobs caused by the cessation of economic activity during the period of lockdown, but also by the fact that, even when activity resumed, almost 22% of women who were active before lockdown remained inactive, compared with

only 7% of men. As a result, women are likely to face more difficulties in accessing new employment, mainly due to the weight of social norms that perpetuate the idea that men, as heads of households, should have privileged access to employment when work opportunities are limited⁷.

4. Prospective analysis to 2035 of the contribution of women to the improvement of living standards in Morocco in light of NMD recommendations

The analysis of the sub-components of the LU shows a negative and binding contribution of gender gaps in terms of access to activity and employment on the growth of GDP per capita. The crisis caused by the Covid-19 pandemic has amplified this negative impact by accentuating the already fragile situation of women in the labour market. In order to remedy this, action levers need to be identified and put into operation in order to successfully consolidate women's participation in economic activity, which constitutes an additional growth niche⁸.

Taking this situation into account and aware of the challenges it implies, the NDM Report calls for the economic empowerment of women, both in urban and rural areas, to be made a national priority in order to make it a powerful lever for the development of our country.

The roadmap framing the main orientations of the NMD aspires to a high level of inclusion and activity of women in the economic, social and political spheres, by fighting against all forms of exclusion and discrimination, through the setting of multiple targets to be achieved by 2035, namely

- Increase the FLFP rate to 25% by 2025 and 45% by 2035;
- Increase in the number of women in senior positions to 20% by 2025 and 35% by 2035;
- Establishing wage parity in the private sector, reducing the gender wage gap by 10 percentage points to 5% in 2035;

- Give all women the same opportunities as men to access education, protecting their fundamental right to compulsory education and childhood (zero underage working girls who do not attend school, zero underage marriages);
- Consolidation of the fight against illiteracy among women of all ages, mainly in rural areas.

The quantification of the potential gains in wealth creation resulting from the increase in FLFP levels by 2035, with reference to the roadmap set out in the NDM Report, was carried out according to the above-mentioned multifactorial approach and based on 5 scenarios, namely

- **Scenario 1:** this is based on the assumption that FLFP rate will increase to 45% in 2035, while maintaining the weight of the other components of GDP per capita unchanged;
- **Scenario 2:** combines the first scenario with an increase in TFP of 0.5% per annum by 2035;
- **Scenario 3:** known as the "trend" scenario, continues the average trends observed during the period 2011-2019;
- **Scenario 4:** includes scenario 3 and an increase in the FLFP rate to 45% in 2035;
- **Scenario 5:** incorporates scenario 4 and an increase in TFP of 0.5% per annum by 2035.

⁷ 2nd panel on the impact of the coronavirus on the economic, social and psychological situation of households, carried out by the HC P from 15 to 24 June 2020 on a representative sample of 2,169 households in order to understand the evolution of socio-economic and preventive behaviours in the face of this pandemic and to evaluate its repercussions on the various strata of the Moroccan population in terms of access to basic products, education, health, employment and income.

⁸ According to the study on the economic costs of gender inequalities in the labour market in Morocco (DEPF/UN Women/ CE-BSG/ DUE/ AFD, February 2021), an additional growth potential of up to 40% above the current level of GDP/capita could be generated by completely eliminating gender inequalities in terms of access to employment and by strengthening women's human capital.

It should be noted that the last three scenarios share the following commonalities:

- All three are based on the projections made by the Centre for Demographic Studies and Research (CERED) under the HCP and relating to the evolution by gender of the total population and the population aged 15 and over;
- The various growth projections assume that capital intensity evolves at its past trend rate;
- The evolution of employment results from the estimation of the elasticity of the LFP rate with respect to the weight

of employment in the working age population.

The results obtained suggest real possibilities of positive inflection of living standards in Morocco. They indicate that, even if the structure of the GDP per capita remains unchanged with respect to its level in 2019, the increase in the FLFP rate to 45% by 2035 (scenario 1) could generate, all other things being equal, an additional average increase in the GDP per capita of 1.7 growth points during the period 2022-2035. The cumulative effect of this increase and the increase in TFP gains (scenario 2) would generate average additional growth of 2.2 points.

Potential gains in terms of GDP per capita growth by 2035 under scenarios 1 and 2

GDP/capita	Change in %	Additional points		
	2017-2019	2022-2025	2025-2035	2022-2035
Scenario 1	2,4%	+1,1	+1,9	+1,7
Scenario 2	2,4%	+1,6	+2,4	+2,2

Source: Calculation and elaboration DEPF

Based on scenario 3, which is based on the continuation of past trends, it emerges that the induced improvement in the population's living standards is not significant, i.e. an expected increase in GDP per capita of 2.2% per annum between 2022 and 2035, compared with +2.4% per year between 2011 and 2019.

The fourth scenario illustrates additional gains associated with increasing the rate of integration of women into the labour market, and states that the rate of growth of GDP per capita will be more vigorous than the trend level, reaching +4.6% per year by 2035. This rate of growth would allow a multiplication of the GDP per capita by 2.

Growth scenarios for the Moroccan economy up to 2035

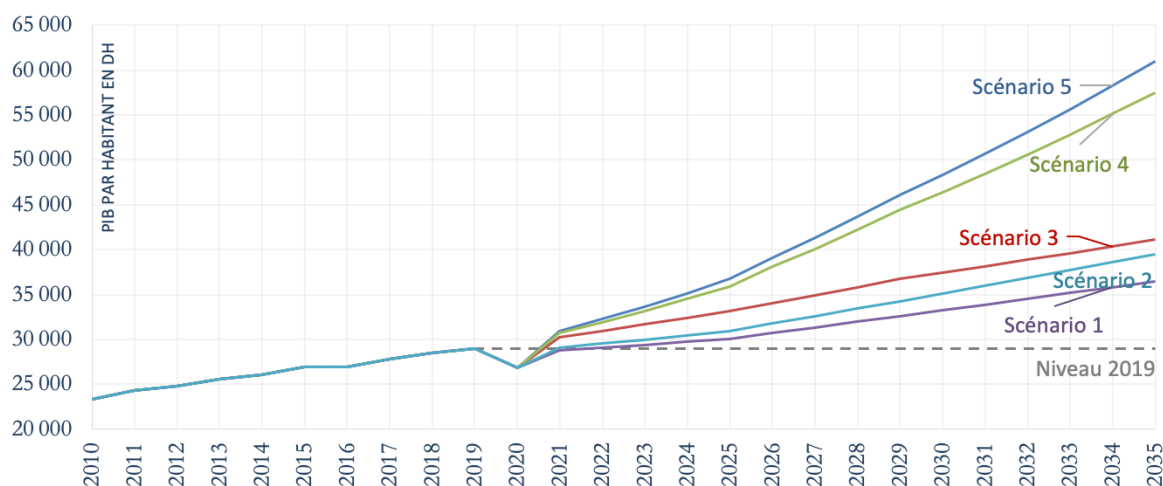
	Growth in % per year			
	2011-2019	Scenario 3	Scenario 4	Scenario 5
GDP per capita	2.4	2.2	4.6	5.0
GDP	3.4	3.2	5.6	6.0

Source: Calculation and elaboration DEPF

As for scenario 5, it indicates an improvement in the standard of living of the population at a much higher rate, under the combined effect of the increase in the LFP rates of women and productivity gains. This progression could be established at an annual rate of 5% during the period 2022- 2022.

This would lead to a 2.1-fold increase in GDP per capita, which would represent a substantial gain in the standard of living on a national scale, corresponding to an increase of 2.8 points compared to the trend scenario (scenario 3).

Graph 6: Scenario for GDP per capita growth to 2035



Source: Calculation and elaboration DEPF

5. Proposed NDM roadmap for strengthening women's inclusion in the labour market and economic activity

The realisation of the objectives and targets set by the NDM in terms of promoting gender equality and increasing women's access to economic opportunities could thus contribute to a gain in terms of GDP per capita growth that could reach up to 5% per year between 2022 and 2035. The process initiated by our country since 2002 in favour of systematically integrating the gender dimension into public policies, including sectoral policies, is set to be further consolidated, given that it has been identified by the NMD Report as the way to contribute to maximising the economic and social benefits of these policies and to make them a lever for accelerating the inclusive development to which our country aspires. The roadmap outlined in this report has dedicated a separate project to women's economic empowerment. This project is structured in three strongly interdependent components, namely

Component 1: Accessibility of women to economic opportunities

- Revision of certain regulatory and legislative provisions and their adaptation to the requirements of the promotion of women's employment;
- Introduction of tax incentives for companies that comply with the employment parity objectives;
- Alignment of the specifications for the development and management of industrial zones with the objectives of promoting female employment;

- Promoting women's entrepreneurship ;
- Raising women's awareness of financial education, managerial culture and capacity building in project development...

Component 2: Capacity building for women in training and education

- Use of online education platforms, targeting women with low levels of education as a priority;
- Capacity building for women in training and education, both in urban and rural areas;
- Deployment of incentives for female employees without diplomas;
- Initiation of awareness-raising campaigns emphasising the importance of girls' schooling as well as the importance of vocational training.

Component 3: Zero tolerance of violence against women

- Reform of the Penal Code and amendment of Law 103-13 on combating violence against women and broadening its scope to cover the various forms of harassment;
- Organisation of nationwide awareness-raising campaigns to decry the various forms of violence against women, etc.

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