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North Africa facing the challenges of the Covid 19 crisis

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1. Summary

1. On the eve of the Covid-19 pandemic, North Africa economies are facing a slowdown in per capita GDP growth, structural fiscal and external deficits, and endemic unemployment. This economic performance is a symptom of structural weaknesses highlighted by the Covid-19 crisis. This crisis not only has short-term socio-economic impacts leading to a serious economic recession in the sub-region and a resurgence of poverty, but also has medium-term consequences because of the major changes it causes (reorganization of global value chains, acceleration of digitization in particular, etc.).

2. To cope with the consequences of the crisis, North African countries must carry out ambitious reforms to increase both their resilience to this lasting pandemic, and their adaptation capacity to meet medium-term challenges and reinvent their development models. To do this, they must accelerate their digital transformation, invest in human capital (education and health), stimulate their innovation capacities, strengthen state capacities and work towards greater economic integration in the sub-region.

2. Introduction

3. Socio-economic performance must be viewed from the perspective of the Covid-19 pandemic, which not only triggered the most serious economic crisis the world has experienced in over a century, but also brought about profound global changes that will have significant impacts on the development models of North African countries.

4. The first part of the Report provides a picture of North African countries in the light of the crisis generated by Covid-19 and its consequences on their economies not only in the short term (growth, employment, etc.), but also in the medium and long term, particularly on the development pathways of the countries in the sub-region. The second part proposes a synthetic score that can measure the sub-region's vulnerability to the pandemic in the health and socio-economic fields. Finally, the Report concludes with recommendations for public policies.

3. North African economies at the dawn of the post-Covid-19 era: structural weaknesses to be addressed to limit the impact of the crisis in the medium term

5. Our analysis begins by examining the macroeconomic conditions of North African countries at the dawn of the pandemic. These conditions reveal structural weaknesses that need to be reduced to enable societies in the sub-region not only to limit the negative impact of the crisis, but also to adapt to the profound changes it will generate.

3.1. Macroeconomic assessment at the dawn of the pandemic, showing that development models are running out of steam

6. At the dawn of the Covid-19 crisis, in spite of the differences existing between countries, North African countries are generally suffering from a loss of momentum in their development models with volatile growth, chronic budget and external deficits, high unemployment rates, and rising public debt (Table 1).

Table -1: Main macroeconomic indicators, North Africa, 2019

	GDP growth %	Inflation %	Unemployment rate %	Trade balance % GDP	Current balance % GDP	Budget Balance % GDP	Public debt % GDP	External debt % GDP
Algeria	0.8	1.95	11.7	-6.9	-	-9.6	45	0.01
Egypt	5.5	12.2	10.8	-12.5	-1.7	-8.2	78.4	29.2
Morocco	2.5	0.2	9.01'	-8.9	-4.1	-3.6	64.9	14.0
Mauritania	5.9	2.2	9.5	-7.4	-10.9	2	76.4	54
Sudan	-1.3	53.5	16.5	-1.46	-14.9	-10.8	200	-
Tunisia	1	6.7	14.9	-17.7	-8.5	-3.5	72.2	51.2

Source: national data (Central Banks, Ministries of Finance, and NSOs), except for Sudan (CBOS, IMF and World Bank). For Libya, data is not sufficiently available.

7. The Algerian and Sudanese economies were hit hard by the drop in oil prices that began in 2014. The growth of the Algerian economy slowed down to 0.8% in 2019 against 1.4% in 2018. The economy also suffered from a political crisis during the first three quarters, which ended with the holding of presidential elections in December 2019 and allowed the country to open new areas of reform. Sudan continues to suffer from the secession of 2011 which caused a loss of 75% of its oil export revenues. Growth in 2019 remained negative at -1.3%, against -2.3% in 2018, with a decline in activity in the services, real estate and agriculture sectors¹. The Mauritanian economy has been more dynamic over the period (5.9% GDP growth, against 2.1% in 2018), but growth remains volatile and dependent on mineral prices. The performance of the most diversified countries, namely Egypt, Morocco and Tunisia, is more disparate. The Egyptian economy grew by 5.5% in 2019, up from 2.1% in 2018, thanks to the manufacturing sector, natural gas, tourism, construction and telecommunications. In addition, the economy benefited from the reforms of the "**National Economic Reform Program**" initiated in 2016. Growth of the Moroccan economy slowed to 2.5%, from 3.1% in 2018, due to a -5.8% decline in value added in the agricultural sector (compared with a 3.9% increase in 2018). Dependence on climatic conditions and the insufficient job content of growth have led the country reflect on a new development model. The Tunisian economy continues to suffer from a political situation that is struggling to stabilize. GDP growth was only 1.0% compared to 2.5% in 2018 and 1.9% in 2017. This is explained by a decline of -0.7% in 2019 in the manufacturing industry (against + 0.3% in 2018 and + 0.5% in 2017), due to a decline in particular in the textile, clothing and leather sector (-3%) and the mechanical and electrical industries (-1.5 %) ².

8. On the fiscal front, North Africa is entering the pandemic with relatively large deficits and rising public debt. With the exception of Mauritania, in 2019 all countries posted a deficit of more than - 3.5% of GDP, reaching - 8.1% in Egypt, - 9.6% in Algeria, and - 10.8% in Sudan. In Algeria, public finances are suffering from the drop in oil prices and from expenditure that remains high, particularly social and operating expenditure. The country has, however, initiated a reflection on the rationalization of its public expenditure, like other countries in the sub-region (such as Egypt), to control subsidies and social transfers³. In Sudan, the very large budget deficit can be explained by massive subsidies on certain products (wheat and energy) and low revenue mobilization⁴. Mauritania has managed to maintain fiscal discipline by continuing to control its expenditures and

¹ Central Bank of Sudan, Economics and Financial Statistics review.

² Conseil d'Analyse Economique, Tunisie 2020, Revue de la Conjoncture Economique année 2019.

³ Réforme en cours par le Ministère des Finances.

⁴ IMF, Article IV, February 2020.

increasing domestic revenue. The country was thus able to generate a budget surplus for the second consecutive year of 2% of GDP in 2019, after 2.5% in 2018. Despite significant efforts and the reforms initiated in 2016, Egypt continues to have a large budget deficit (- 8.2% of GDP), although this is an improvement over 2018 (-9.7%). The government has launched an ambitious three-year plan to contain the budget deficit with fiscal accounts that remain under pressure, mainly due to tax revenues below their potential. In Morocco, the budget deficit stood at - 3.6% of GDP, against - 3.8% in 2018, thanks in part to tight control of ordinary spending. Finally, Tunisia is continuing to consolidate its public finances, thanks in particular to better tax revenue collection and more controlled growth of expenditure, especially operating expenditure. This has made it possible to reduce the budget deficit from - 4.8% in 2018 to - 3.5% of GDP in 2019. However, public debt reached 72.2% of GDP, resulting in a high debt service burden that absorbs 14.5% of current revenue.

9. In terms of inflation, the rise in prices remains under control except in Egypt, Sudan and Tunisia. In Egypt, inflation rose to 12.2% due to a new wave of fuel subsidy cuts in July 2019, which put additional pressure on consumer prices⁵. In Tunisia, although it has slowed down, inflation remains high, standing at 6.7% against 7.3% in 2018⁶. The monetary policy conducted by the Central Bank of Tunisia has slowed the pace of inflation, notably with an increase in the base rate in February 2019 of 100 basis points.

10. Finally, on the external front, all countries in the sub-region have a large trade deficit reflecting their difficulty in improving their competitiveness and better integrating into global value chains. In Algeria, under the combination of lower oil prices and a reduction in production, the trade balance deficit rose to - 6.9% (against - 6.7% in 2018)⁷. In Sudan, the trade balance deficit reached - 1.46% of GDP, also due to the decline in hydrocarbon exports. In Mauritania, the deficit stands at - 7.4%, an improvement of 11.9% compared to 2018, thanks in particular to a 26% increase in exports, mainly attributable to higher exports of iron ore and gold. Egypt suffers from a structural trade deficit (- 12.5% of GDP in 2019) due to the low competitiveness of its exports, a significant share of incompressible imports (the world's largest importer of wheat), and an industrial production which depends up to 40% on imported inputs. Morocco's trade balance is also suffering from a structural deficit, particularly with Europe. In 2019, the trade deficit amounted to - 8.9% of GDP. Likewise, Tunisia suffers from a structural deficit with the EU which accounts for nearly 75% of its exports. The country has a trade deficit of - 17.7% of GDP with a growth rate of imports (5.4%) lower than that of exports (7.0%)⁸.

3.2. Strengths and weaknesses of North African economies in the Covid-19 era.

11. The performance described above largely reflects structural weaknesses that will determine the future impact of the Covid-19 crisis in the medium term, which can be summarized in eight main stylized facts.

12. ***A relatively low growth of revenues:*** all countries in the sub-region have experienced a slowdown in growth since the early 2000s. This low per capita GDP growth can be explained both by relatively low total factor productivity growth and by structural change that does not contribute sufficiently to productivity growth.

13. ***Unequal diversification among countries and low structural transformation throughout the sub-region:*** The sub-region has experienced a change in the structure of its economies over the past 20 years, with a reduction in the share of agriculture in favor of industry and services. This

⁵ Central Bank of Egypt statistics.

⁶ Banque Centrale de Tunisie, Statistics, accessed July 2020.

⁷ Statistiques, Office National des Statistiques, accessed July 2020.

⁸ Banque Centrale de Tunisie, Périodique de Conjoncture N°127–Avril 2020.

diversification of production has been accompanied, at least in Egypt, Morocco and Tunisia, by a diversification of exports. However, the economies of North Africa as a whole remain much less diversified than comparable middle-income countries. This low level of diversification has negative effects on productivity.

14. ***Insufficient job creation, especially for qualified young people:*** North Africa is plagued by endemic unemployment due to insufficient job creation to absorb labor force growth. Over the 2000-2009 period, the growth rates of the labor force and employment were 2.4% and 3% respectively, they became 1.6% and 1.2% respectively between 2010 and 2018, resulting in a gap of 5% over the period⁹. The unemployment rate is close to 10% (Algeria, Egypt, Mauritania, Morocco), and exceeds 16% in other countries, while it is only 6.8% on average in Africa. Unemployment particularly affects young people, with unemployment rates above 30%, except in the case of Mauritania and Morocco. Unemployment also strongly affects women with rates above 20%.

15. ***A private sector that suffers from relatively low financial development:*** In North Africa, small and medium-sized enterprises (SMEs) absorb between 24% to 46% of total employment¹⁰, thus constituting a great potential for reducing high youth unemployment and contributing to poverty reduction efforts. Egypt, Algeria, Morocco and Tunisia are among the countries with the lowest formal sector entry densities, suggesting difficulties for young firms to enter markets¹¹. There are many reasons for low private sector development, but one of the major obstacles identified by firms is access to finance. For North African countries as a whole, the financing gap is very large: for Morocco and Egypt, for example, the current supply of loans to small and medium-sized enterprises is well below the average for developing countries (14% of GDP) and represents less than half of potential demand¹². The total SMEs financing gap for these two countries is thus estimated at about USD 66.4 billion in 2018.

16. ***Countries unequally anchored in global value chains (GVCs) and struggling to move up the value chain:*** Integration into the GVC, which is uneven across the sub-region, is linked to the degree of economic diversification and has an influence on the pathways for exiting the crisis. Three countries, Egypt, Morocco and Tunisia, are integrated into the GVCs to different degrees. Tunisia has a relatively high level of integration with about 45% of its exports showing a link with GVCs. In 2015, 43% of the value added of Moroccan exports was linked to value chains. Finally, Egypt is less integrated into GVCs, with only 10% of its exports linked to GVCs in 2018. The other countries of the sub-region are not yet truly integrated into the GVCs¹³. Many studies indicate that the post-Covid-19 era will be marked by the strengthening of local value chains. In this perspective, North Africa would benefit from developing its economic integration, particularly to take full advantage of the African Continental Free Trade Area (AfCFTA). Indeed, North Africa is one of the least integrated sub-regions in the world, and the least integrated in Africa. In 2018, intra-North African exports accounted for only 5.1% of North Africa's exports, compared to 10.5% for COMESA or 19.8% for SADC¹⁴.

⁹ ILO Statistics, accessed July 2020.

¹⁰ Indicateurs MSME. 2020, <https://www.smefinanceforum.org/>.

¹¹ Rijkers, B., Hassen A., Freund, C. & Nucifora, A. (2014). Which Firms Create the Most Jobs in Developing Countries? Evidence from Tunisia. *World Bank Policy Research Paper*. Washington, DC.

¹² Bruhn, M., Hommes, M.; Khanna, M., Singh, S., Sorokina, A., Wimpey, J.S.. (2017). MSME finance gap: assessment of the shortfalls and opportunities in financing micro, small, and medium enterprises in emerging markets (English). Washington, D.C.: World Bank Group.

¹³ EBRD, Global Value Chains Diagnostic, 2019.

¹⁴ Author's calculation from UNCTAD trade data.

17. ***A capacity of absorption and technological development still insufficient:*** The ongoing technological revolution, with an acceleration in the adoption of its tools induced by the Covid-19 crisis will have significant economic repercussions at the global level, especially on the economic development trajectory of developing countries. This technological capacity building will be a key factor of success for North African countries. The performance of North African countries, in comparison with their counterparts, is rather weak. Various indicators of technological development and innovation show this. In the area of innovation for example, Tunisia is the North African country with the highest score (35.8) and Algeria the one with the lowest score (23.1), compared with an average of 40 for the comparator emerging countries and 58.3 for the reference developed countries (Global Innovation Index 2019). On the other hand, some countries in the region have relatively good performance in terms of human capital, which could prove to be a decisive asset in the post-Covid-19 era.

18. ***Major efforts to be made in terms of digitization of the economy:*** Digitization is expanding all over the world, but much remains to be done to bring North African economies into the digital age. Digitization depends on several factors, including, as a priority, the development of infrastructure, particularly in terms of access to the internet and electronic payment methods. Although internet access has improved, the access rate is still very low in many countries of the sub-region, as is 4G coverage. In the field of digital public action, the ranking of North African countries is rather low. E-commerce also remains poorly developed in North Africa, even though the crisis has shown that it could be an important means of limiting the decline in demand induced by containment measures.

19. ***State Capacity Deficit:*** State capacity includes fiscal capacity and governance. Fiscal capacity is both the state's ability to collect revenue (mainly taxes) and to spend. This last point is important because the efficiency of public spending is a major issue, especially in times of reduced budget resources. The budget deficit is an endemic problem in North Africa, even though most countries have made efforts to rationalize their public finances. Total public debt has increased considerably since 2008 and is well above the African average. External debt increased from 11.4% of GDP in 2015 to 44.6% in 2018. The increase in debt led to an increase in debt service to 4% of GDP, a level well above the African median¹⁵.

3.3. A vulnerability score to quantify the impact of vulnerabilities on systemic risk related to the pandemic

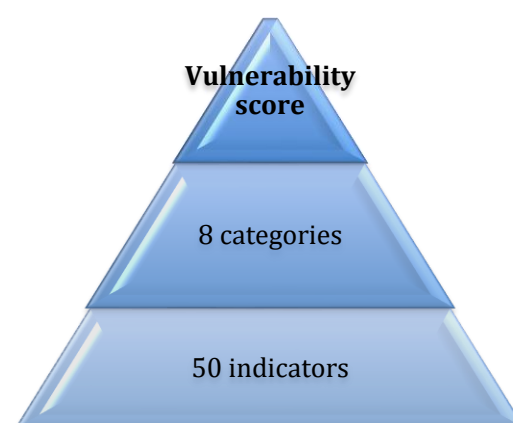
20. We propose the first vulnerability score for North African countries to pandemic risk, which summarizes the degree of exposure to the pandemic in terms of both human and economic damage, whether observed or expected. The purpose of the score is to reveal the sources of vulnerability to pandemic risk. The construction of the score is based on a scoring method inspired by the one used by the Financial Stability Board and the Basel Committee to measure systemic financial risk. Systemic risk and pandemic risk are indeed similar in their impulse and propagation mechanisms.

21. Each country is characterized by a set of 50 indicators divided into 8 categories of vulnerability.

¹⁵ Economic Report on Africa, UNECA, 2019.

Figure 1: Categories of pandemic score

Category 1: Spread of the virus,
Category 2: Health vulnerability,
Category 3: Health capacities,
Category 4: Economic vulnerability of the population,
Category 5: Economic structure,
Category 6: Fiscal capacity,
Category 7: Capacity to adapt,
Category 8: Governance.



22. Each category has a score. From the scores per category, we construct an aggregate score for the 149 countries in the sample. By convention, the higher the score, the more vulnerable the country is to the risk of a pandemic.

23. As shown in Table 2, the vulnerability scores of the five North African countries are broadly similar. However, in detail, two countries present the highest risks and stand out slightly from the other countries in the region. These are Algeria with a score of 82 and Mauritania with a score of 78. Next comes Egypt with a score of 68, followed by Tunisia and Morocco with scores of 60 and 57 respectively.

Table 2: Score by category of North African countries

	Score	Cat. 1	Cat. 2	Cat. 3	Cat. 4	Cat. 5	Cat. 6	Cat. 7	Cat. 8
Algeria	82	57	50	74	40	92	53	95	188
Egypt	68	42	76	72	60	80	93	81	44
Morocco	57	35	52	72	62	68	74	62	36
Mauritania	78	41	43	86	143	59	101	96	59
Tunisia	60	40	60	73	44	59	109	65	28

Source: Author's calculation.

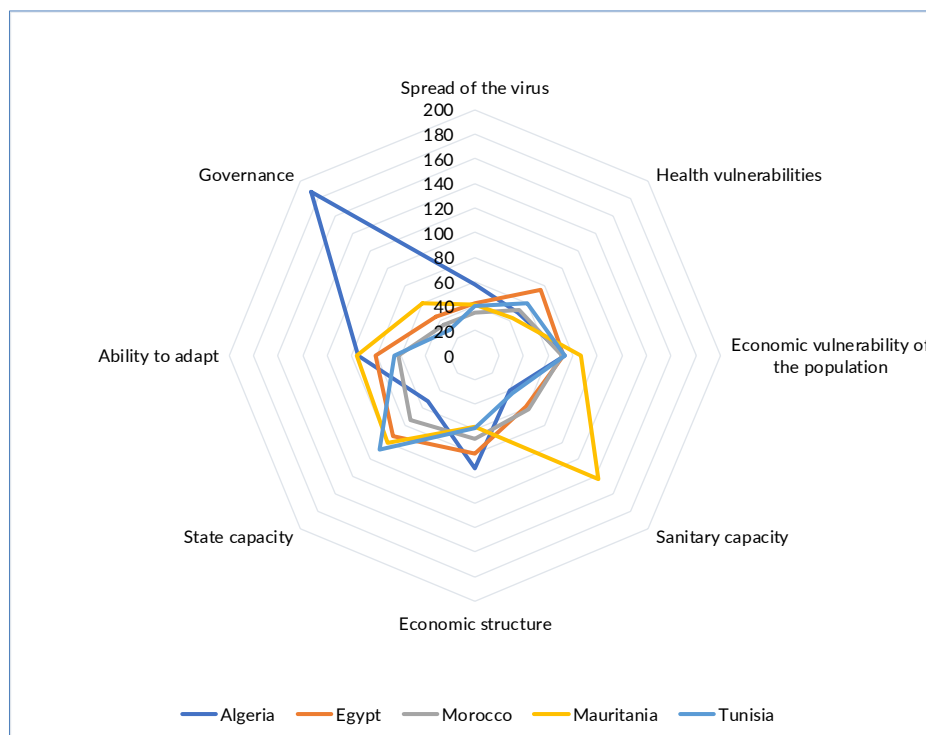
Note: Category 1: Spread of the virus, Category 2: Health vulnerability, Category 3: Health capacity, Category 4: Economic vulnerability of the population, Category 5: Economic structure, Category 6: Budget capacity, Category 7: Ability to adapt, Category 8: Governance.

24. Algeria, with 38,583 confirmed cases as of 17 August 2020 and 1,370 deaths, or 32.4 deaths per million inhabitants, is the most affected country in the area ahead of Morocco (42,489 cases and 658 deaths, 18.3 deaths per million inhabitants) and Mauritania (6,701 cases and 157 deaths, 35.7 deaths per million inhabitants). These differences are reflected in the score for the "Spread of the Virus" category. It can be observed that health vulnerabilities are slightly higher in Egypt than in the other countries in the zone. Mauritania has the highest level of vulnerability in terms of health capacity due in particular to the difficulties of the public health sector in this country.

25. With regard to the economic vulnerability of the population, Mauritania has the highest score. Algeria and Egypt have the highest vulnerability scores in terms of their economic structure. In terms of budget capacity to face the economic risk associated with the pandemic, our score

shows that Tunisia and Mauritania have the lowest budgetary and fiscal leeway. Mauritania has the highest vulnerability in terms of its adaptive capacity. Competitiveness and human capital indicators are factors that explain this performance. Finally, in the "Governance" category, Algeria has the greatest vulnerabilities, with rather mixed performance according to available governance indicators.

Figure 2: Comparison of scores for North African countries



Source: Vulnerability scores for each category are the authors' calculations.

26. The radar in Figure 2 provides a visual comparison of the main vulnerabilities in North African countries. Mauritania has very high health vulnerabilities and, to a lesser extent, high economic vulnerabilities. Algeria, for its part, has significant vulnerabilities related to degraded adaptive capacities and governance indicators. The risks for Egypt stem primarily from health factors, its adaptive capacity and its economic structure. Tunisia and Morocco have lower levels of vulnerability than the other countries in most areas.

4. Structural strengths and weaknesses of North African economies to meet the challenges of the pandemic in the short and medium term:

27. The Covid-19 crisis calls into question national development strategies and undoubtedly rebalances the priorities of countries in the sub-region. While developed countries have been able to partly absorb the shock of containment by resorting to telework and e-commerce, developing countries have not been able to do so, due both to a lack of sufficient e-capacities and to the structure of their economies (developed informal sector, low economic complexity, etc.).

28. In the social sphere, the weakness of social systems in North African countries has emerged as a glaring truth, with an extremely limited capacity (albeit to varying degrees depending on the country) to rapidly deploy resources to support the most vulnerable populations in the short term. The lack of solid systems for compensating workers who are employed or downsizing has proven to be a major handicap in sustaining economic activity.

29. In light of the issues involved in managing the crisis in the short term and its challenges in the medium term, Table 3 presents a brief analysis of the sub-region's strengths and weaknesses, both from an internal and external perspective. Here, new technologies are presented as both an opportunity and a threat. They are an opportunity insofar as their more rapid adoption may make it possible to respond more effectively to the challenges related to economic and social development. However, they pose a threat because of their potential for destroying jobs, growing inequalities (widening of income gap between skilled and unskilled workers, for example), and the risk of economic downgrading of North African countries (and developing countries in general).

Table 3: SWOT matrix

Internal	Strengths <ul style="list-style-type: none"> - Young and relatively educated population - Natural resources - Market size, potential for economic integration - Cultural proximity 	Weaknesses <ul style="list-style-type: none"> - Economic diversification - Absorption and technological development capacities - Economic complexity - State capacities
External	Opportunities <ul style="list-style-type: none"> - Development of local value chains - Proximity to Europe - Digitization and new technologies 	Threat <ul style="list-style-type: none"> - Digitalization and new technologies - Climate change - Epidemics

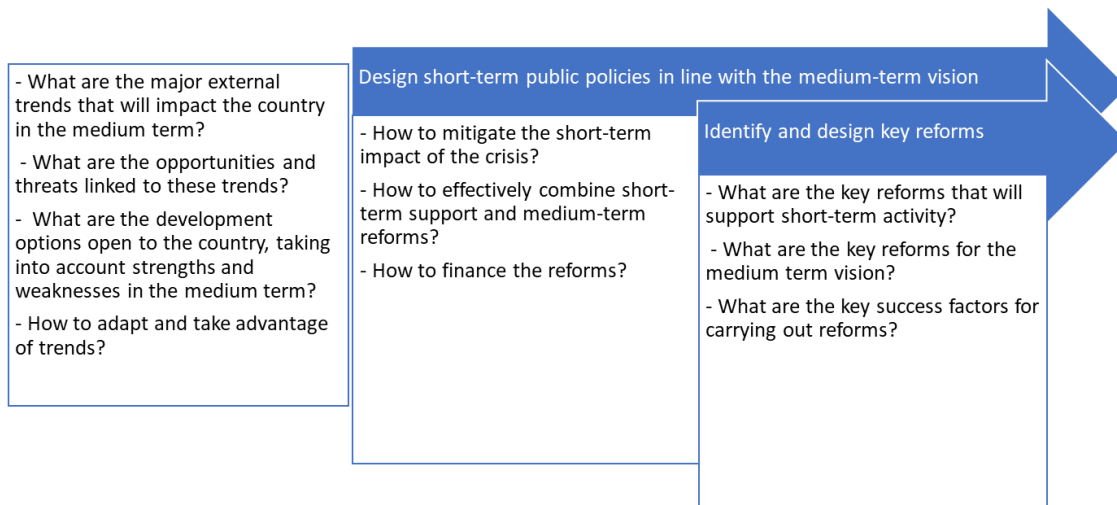
30. Climate change has been introduced as a potentially significant external threat because of its consequences that are expected to be felt in the near future, probably within the next 10 years. The economic consequences of global warming will manifest themselves through damage to property and infrastructure, loss of productivity, mass migration and threats to the security of countries. What aggravates the effects of global warming is, on the one hand, the temporal proximity between its effects and the current crisis and, on the other hand, the negative impact of the crisis on policies to combat global warming. Thus, North African countries, and all developing countries, will have to face multiple challenges, which affect all areas, both economic and social, as well as institutional.

5. Recommendations: Reforms to deal with the consequences of the Covid-19 crisis in the short and medium term

31. The objective of this section is not so much to propose a list of reforms to address all the structural problems of North African countries, as to propose a comprehensive approach and some key reforms to engage the sub-region more serenely in the post-Covid-19 era. The approach we propose combines: (i) a medium-term vision, (ii) consistency between short- and medium-term reforms, and (iii) identification of key reforms.

Figure 3: Approach to carry out reforms

Develop a medium-term vision



32. The development of a medium-term vision is of paramount importance since the crisis will bring about profound changes with potentially significant consequences on the development strategies of the countries in the sub-region. Several countries have initiated discussions to develop a medium-long term vision, such as the new development model in Morocco or Vision 2035 in Algeria. These reflections, updated to withstand the changes that the current crisis will bring about, may thus constitute a new vision of economic and social development in the medium term (10 or 15 years). The articulation of short-term public policies (to curb the crisis) with the medium-term vision is critical because it makes it possible (i) to take into account future changes in order to put in place the right incentives, (ii) to rationalize the allocation of public resources (for example, to limit spending with little social return in the medium term), and (iii) to increase the effectiveness of public policies. Finally, the last step in the process is to identify and design the key reforms, those that will form the basis of all reforms to achieve the objectives of the medium-term vision. It is precisely these reforms that we will now discuss.

33. Health vulnerabilities in the broadest sense (factors in the spread of the virus, health vulnerabilities and health capacities) depend, in addition to structural factors (population density, urban density, etc.), primarily on capacities (medical structures, doctors, etc.) which are the result of long-term investments. Thus, it may seem difficult to reduce these vulnerabilities in the medium term without a significant increase in investment in health and more generally in the social system. However, in the short term, it is necessary to take measures that can increase the health and economic resilience of North African countries in the face of a pandemic that has not yet been controlled.

In terms of health:

- Better target prevention and care policies to the most vulnerable populations. Taking risk factors into account should make it possible to concentrate health resources on patients most likely to develop severe forms of the disease. It should also generalize the testing policy as much as possible, especially in countries with the greatest health vulnerabilities (Mauritania and Egypt, in particular). In a word, collective resources must be directed where the risks are highest.
- At the same time, since building the physical and human capacity of the health system takes time, its effectiveness should be addressed, and new technologies should be deployed to address capacity constraints in the short and medium term.

- Reduce tariff or non-tariff barriers to trade to ease in medical equipment and supplies, of course, but more generally in all basic necessities.
- In the medium term, governments must provide their healthcare systems with the necessary resources to deal with the risk of a pandemic: this involves recruiting and managing the careers of doctors and hospital staff¹⁶, allocating sufficient operating budgets to hospitals and healthcare institutions, increasing salaries, modernizing patient care processes (less bureaucracy), and optimizing the patient's healthcare pathway in order to increase the efficiency of the healthcare system.

In terms of economic vulnerabilities:

34. In the short term, government efforts should continue to focus on implementing emergency measures and promoting economic recovery. These include the following:

- Supporting access to financing (via, for example, devices such as guaranteed loans, or the postponement of maturities, debt smoothing, etc.); supporting employment, via cost-cutting mechanisms, time smoothing of taxes, training subsidies (to facilitate reconversions); and achieving a shock of administrative simplification to significantly reduce the constraints weighing on companies.
- Supporting demand, through a better targeted social policy in favor of the populations most affected by the economic crisis (workers in the informal sector, etc.). New technologies can be of great use in rapidly developing a social information system to better understand the social situation of each individual and be able to implement more targeted policies.

35. The final step in the process is to identify and design the key reforms, those that will form the basis of the reform package to achieve the objectives of the medium-term vision. The choice of these key reforms will be critical in view of the scale of the changes expected in the medium and long term, the increase in uncertainty in a context of growth that is likely to be more volatile, and the need to build resilience and adaptive capacities. Thus, five areas of reform are likely to meet this objective:

Area 1: Encourage the adoption and adaptation of digital technologies

With (i) the development of human resources, (ii) a reformed education system that integrates new technologies into education, (iii) a “digital plan” aimed at the accelerated development of e-government, (iv) massive investment in digital infrastructures, (v) the development of the regulatory framework, (vi) the development of the “data” economy.

Area 2: Develop human capital through education and social protection

Use new technologies to meet short- and medium-term capacity constraints.

Area 3: Stimulate innovation capacities

Develop a culture of (economic, social, institutional, etc.) innovation that must spread throughout society. Invest in R&D. Improve the quality of public regulation to create a more competitive environment.

Area 4: Strengthen the capacity of the State

Strengthen taxation capacity (simplification, integrity, compliance, etc.), and accelerate digitization in the mobilization and management of tax revenues. Develop a culture of public policy evaluation and transparency of the government budget.

¹⁶ Retention of doctors is of crucial importance given the brain drain that some countries (such as Algeria, Morocco or Tunisia, for example) suffer from.

Area 5: Strengthen economic integration of the sub-region

Develop real cooperation between countries to pool resources to develop a common technological capacity and offer North African companies a large market. Greater cooperation, particularly in investment in infrastructure (physical and digital), education, R&D, and of course in the regulatory field to facilitate trade (physical and electronic) and investment, will be critical to position the sub-region in GVCs and also to take full advantage of the AfCFTA.

6. Conclusion

36. North African countries will be under very strong pressure to carry out far-reaching reforms in many areas (health, education, the economy, governance, etc.) in a context of economic recession and severe strains on public finances. The measures taken by governments to deal with the crisis in the short term must be consistent with "structural" reforms in order to rationalize public spending and increase their efficiency. In this context, institutional reforms to improve governance is critical as all of society's capabilities and potential, particularly in terms of innovation, will have to be mobilized. Inclusive and participatory governance, based on the principles of transparency, will be an asset in designing and effectively implementing reforms to enable countries of the sub-region to enter the post-Covid-19 era with confidence.

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