

Trends in Morocco's Global Ranking

Strategic Dashboard

Eighth Edition

November 2020

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INTRODUCTION

The **8th edition of the Strategic Dashboard published in November 2020** provides an overview of **Morocco's global ranking** across a number of areas, spanning politics, economy, society, culture and the environment. It comprises 200+ strategic indicators, broken-down along the Institute's ten strategic watch categories (DVS). The number of indicators per category does in no way prejudice the importance of that category. It is rather a function of statistical data availability for the selected category.

A number of studies have revealed limitations to some of these indicators. These indicators, according to IRES, do not necessarily fully capture advances made by the Kingdom of Morocco. Inclusion in this document in such instances, is purely for the sake of consistency with International Organizations publications using these indicators to assess Morocco.

Indicator data was collected from a variety of sources, including: national agencies such as the Office of the High Commissioner for Planning (HCP), ministerial departments, the Foreign Exchange Office, and international bodies that include the World Bank, IMF, OECD, UNDP, WHO, FAO, and CEPII.

Indicator-specific alert thresholds are determined by IRES. In the absence of a universal method, indicator-specific alert thresholds were calculated using a variety of methods. The most commonly used are the following two.

When data is abundant, the first consists in classifying the international community into three groups with identical country-count. Thresholds retained thus correspond to middle and top third cluster averages.

In the case of scarcer data, a second method, based on the following thresholds is used:

- Averages established by international organizations, namely:
 - UNDP figures for countries with medium and high human development; and
 - World Bank figures for middle and high income countries.
- Standards set by international organizations such as the WHO and the IMF.

Dial indicators, illustrating Morocco's positioning with respect to alert thresholds, were generated using Business Object software integration of strategic dashboard statistical data. This report seeks to analyze Morocco's ranking and relevant

trends over time. Positions gained or lost in Morocco's global ranking are assessed on a like for like basis.








































The 2020 edition was compiled against a backdrop dominated by the Covid-19 pandemic, making it difficult for some international organizations to update indexes. This edition differs from previous ones by integrating new strategic indicators, specifically targeting the fight against hunger, energy transition, the state of biodiversity, social mobility, vaccination, industrial attractiveness, the development of smart cities, the protection of intellectual property and gender disparities.

The following summary table highlights areas where Morocco's global ranking over the last two decades has either improved, stagnated, or declined.

Analysis of 8th edition strategic dashboard results yet again highlights **the need for Morocco to strengthen immaterial capital as a lever to boost global ranking**. Furthermore, the Covid-19 pandemic crisis brought to light the importance of repositioning People and Nature at the center of the development debate.

A glossary of definitions, as established by national and international organizations, of all the indicators making up the strategic dashboard, is annexed to this document.

SUMMARY TABLE

	Morocco's Global Ranking	Period	Ranking Trend
Overall Wealth and Immaterial Capital	Overall Wealth and Immaterial Capital	2000-2014	
	PPP GDP per capita	1995-2017	
Strategic Watch Area (DVS)			
DVS n°1: Securing Relative Strategic Resource Independence and Sustaining Natural Capital	Fight against Hunger	2006-2020	
	Food Dependency	1999-2019	
	Food Sustainability	2017-2019	
	Energy Dependency	1999-2018	
	Energy Transition	2019-2020	
	Environmental performance	2000-2020	
	Biodiversity	2005-2016	
	Natural Resource Governance	2009-2016	
	Natural Capital Air	2000-2016	
	Water Resource Availability	1998-2018	
	Water Resource Management	1998-2018	
	Natural Capital Soil	1998-2020	
DVS n°2: Preserving territorial integrity and building resilience in the face of transnational threats	Peace and Stability	2007-2020	
	Global Security	2007-2018	
	Homeland Security	2003-2018	
	Vulnerability to terrorism	2002-2019	
DVS n°3: Building social capital and converting it into a competitive edge	Human Development	1998-2019	
	Prosperity and Well-being	2009-2019	
	Inclusive Growth	2017	
	Human Capital	2013-2018	
	Social Mobility	2020	
	Happiness	2010-2019	
	Child Rights	2013-2020	
	Education expenditure per pupil as % of GDP/ capita	1998-2018	
	Education System Quality	2001-2016	
	Education: Schooling and literacy	1998-2019	
	Education: Vocational training	2000-2019	
	Education: School Dropout	1999-2018	
	Basic Health: Life expectancy at birth	1998-2018	
	Basic Health: Fertility	1998-2017	
	Basic Health: Vaccination	1998-2018	
	Basic Health: Expenditure as % of GDP and Access	1998-2018	
	Medical and paramedical supervision	1998-2018	
	Road Safety	2000-2019	
	Living Conditions: Access to water and electricity	1998-2019	
	Living Conditions: Sanitation and Road accessibility	1998-2017	
	Living Conditions: Poverty and Inequality	1998-2018	
	Employment and Unemployment	1998-2019	
	Quality of Life	2015-2020	

	Morocco's Global Ranking	Period	Ranking Trend
DVS n°4: Improving governance systems to international standards	Rule of Law and Democracy	2006-2019	
	Public and Private Sector Governance	1998-2018	
	Civil Liberties and freedom of information	2003-2017	
	Freedom of the press	1994-2018	
	Open Data	2015-2018	
	Political stability	1998-2017	
	Effectiveness and transparency of public policy	2003-2016	
DVS n°5: Climate change and natural disasters preparedness	Climate Change Performance	2005-2020	
	Quantitative impact of extreme weather events	2004-2017	
	Natural Disaster Management	2011	
	Natural Disaster Risk Exposure	2013	
DVS n°6: Successful integration into emerging global geo-economic and geopolitical order	Competitiveness, FDI and tourism attractiveness	2000-2019	
	Country Brand	2011-2020	
	Socio-economic and political change management	2013-2019	
	Price stability	1998-2019	
	State of public finances	1999-2019	
	Trade balance	1999-2019	
	Financial system	1999-2019	
DVS n°7: International migration watch and Morocco's readiness in the face of issues and challenges	Immigration	2000-2017	
	Economic ties to the diaspora	1998-2019	
DVS n°8: Successful territorial development	Urban governance	1998-2017	
	Smart Cities	2013-2020	
	Road and infrastructure networks	1998-2016	
	Rail density	1998-2017	
	Air and Marine connectivity	2004-2019	
DVS n°9: Integrating Morocco into the global knowledge economy	Enrollment rate in higher education	2001-2018	
	Innovation, research and development	1998-2018	
	Intellectual property	2016-2020	
	Digital inclusiveness	2013-2020	
	Talent competitiveness and attractiveness	2014-2019	
	Cyber security	2014-2018	
DVS n°10: Monitoring national and international societal developments	Gender inequality	2000-2020	
	Youth future prospects	2003-2016	
	National attachment	2003-2016	
	Importance of family and religion in personal life	2007-2016	
	Traditional solidarity	2001-2016	
	Institutional solidarity	2001-2016	
	Confidence in Sovereign State institutions	2001-2016	
	Confidence in Representative institutions	2011-2016	
	Interpersonal trust	2011-2016	
	Political bond	2007-2016	
	Civic involvement	2007-2012	

Caption			
Upward		Good	
Stable		Average	
Downward		Poor	
Missing historical data			

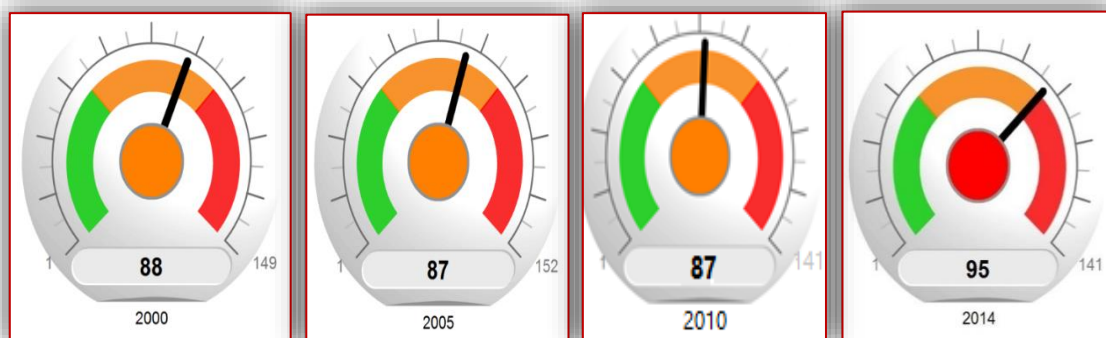
Overall Wealth and Immaterial Capital

Overall wealth per capita

(Source: IRES calculations _ World Bank data)

While improving since 2000, Morocco's ranking on overall wealth per capita fell by 8 spots between 2010 and 2014. Although not commensurate with the country's substantial investment effort, this is driven mainly by the slowdown in economic growth from 5.2% in 2011 to 2.7% in 2014. Morocco's ranking on this indicator stands to gain, where Morocco were to successfully operationalize its new Constitution, enshrining an immateriality-based approach.

Morocco's ranking in terms of overall wealth per capita

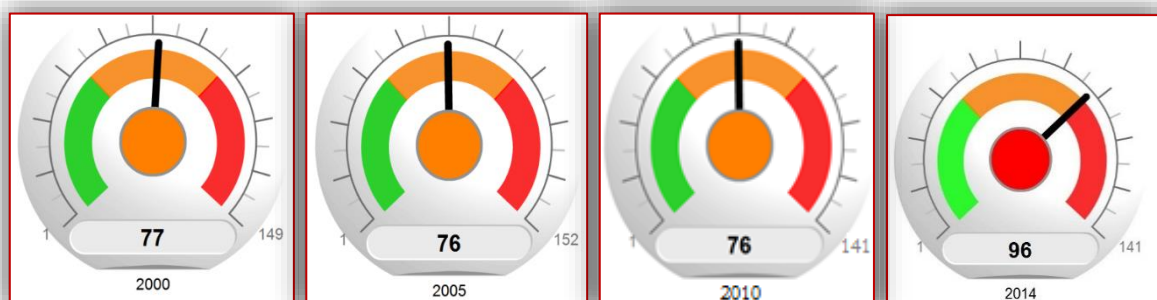


Immaterial capital per capita

(Source: IRES calculations _ World Bank data)

Immaterial capital accounts for three quarters of Morocco's overall wealth, a level in the vicinity of that of OECD countries (80%). **The Kingdom's global ranking on immaterial capital per capita, improved significantly, gaining four spots between 2000 and 2005.** The country's global ranking, however, fell significantly between 2005 and 2014, driven mainly by inadequate levels of human capital. Multiple reforms undertaken by Morocco to bolster human capital have yet to produce results commensurate with the country's development requirements.

Morocco's ranking in terms of immaterial capital per capita



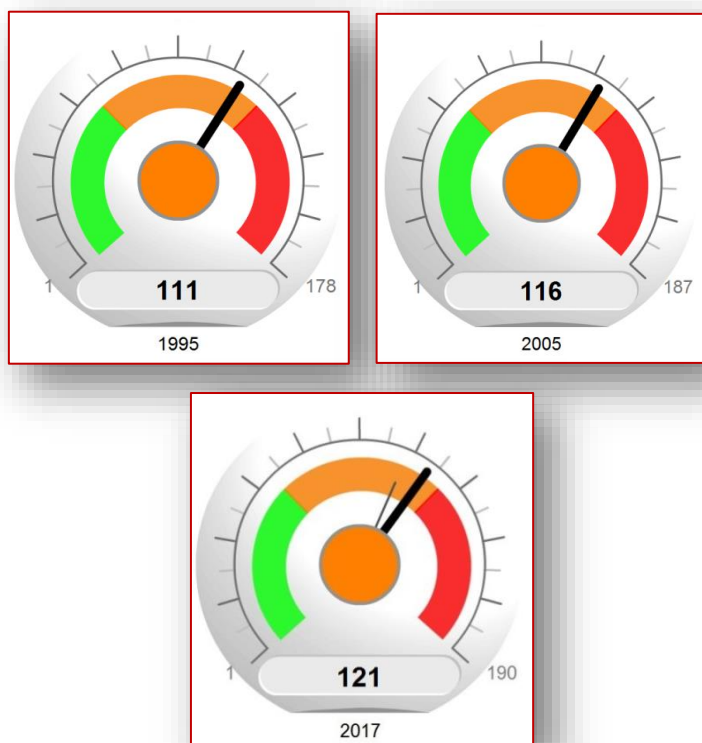
Overall Wealth and Immaterial Capital

GDP per capita in constant 2011 PPP dollars

(Source: IRES calculations _ World Bank data)

Morocco's international ranking on GDP per capita in Purchasing Power Parity (PPP) fails to reflect the country's economic potential.

Morocco's ranking in terms of PPP GDP per capita

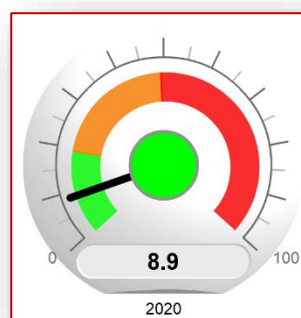
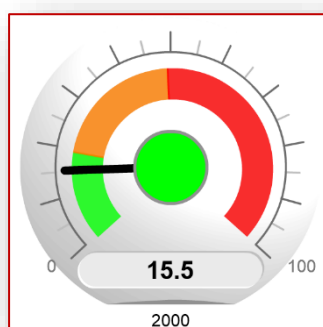


Food resources

World Hunger Index

(Source: IRES calculations _ Concern Worldwide/ Welthungerhilfe)

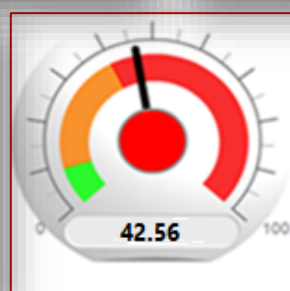
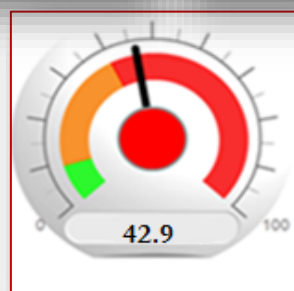
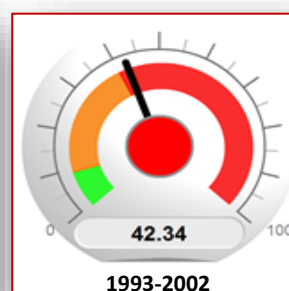
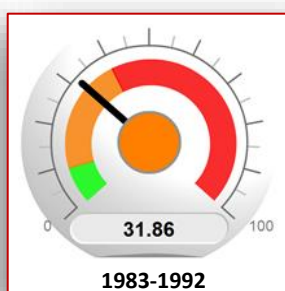
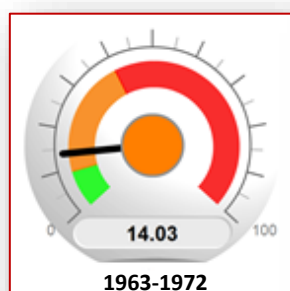
Morocco improved ranking on this index reflects ongoing commitment to attain Sustainable Development Goals, and Goal No. 2 on combating hunger in particular.



Cereal import dependency rate (%)

(Source: IRES calculations _ FAO data)

Greater long-term import dependency for cereals due to population growth and the high frequency of droughts. Considerable scope for technical progress, if mobilized, could more than offset the adverse effects of climate change, notably productive capacity degradation.



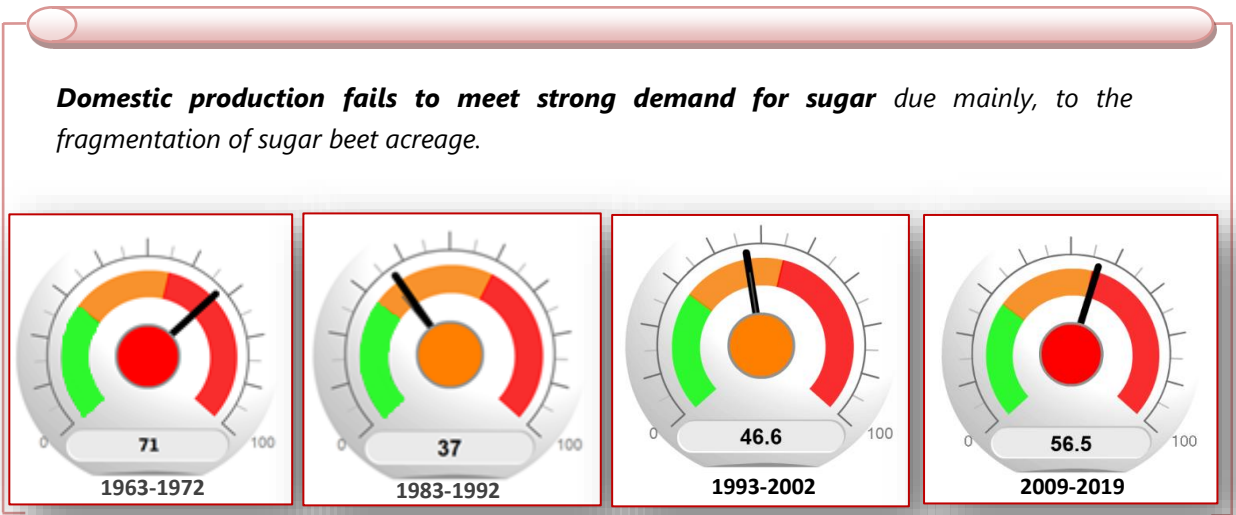
2003-2008

2009-2019

Food resources

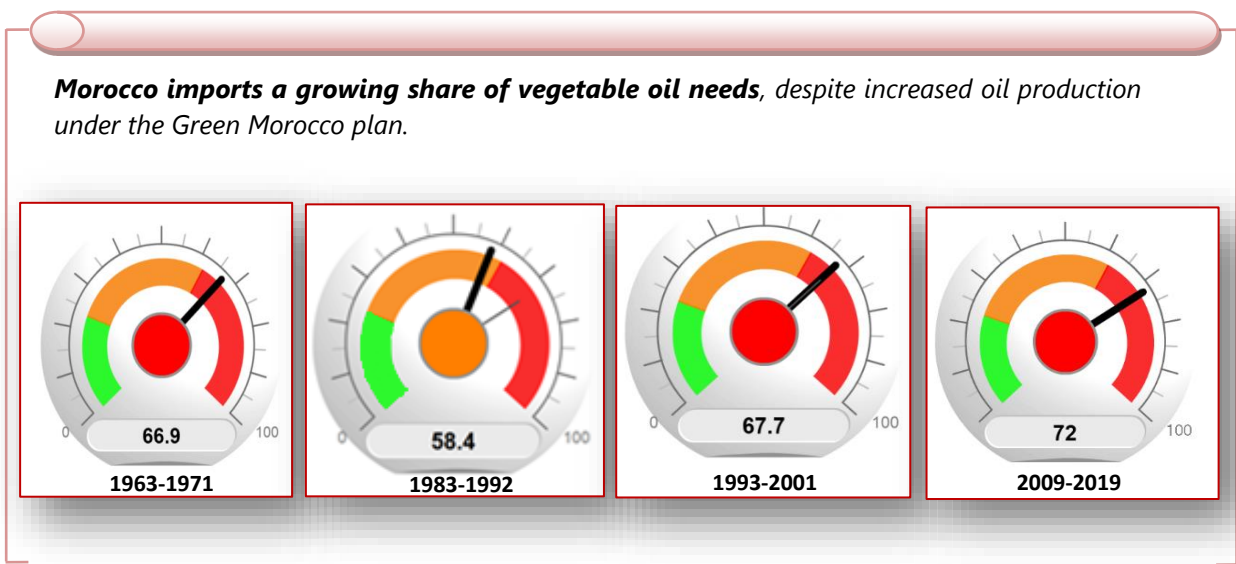
Sugar import dependency rate (%)

(Source: IRES calculations _ FAO data)



Vegetable oil import dependency rate (%)

(Source: IRES calculations _ FAO data)

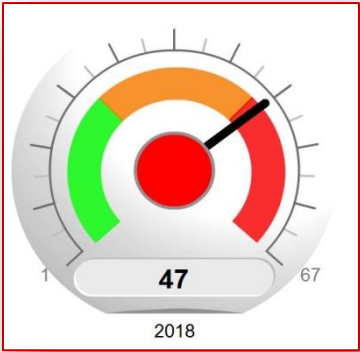


Food resources

Food Sustainability Index

(Source: IRES _ Economist Intelligence Unit (EIU) calculations; Barilla Center for Food & Nutrition (BCFN))

Lagging food sustainability is largely attributable to consumer behavior patterns, food waste, inadequate storage and refrigeration facilities, and difficulties in meeting the challenges of sustainable agriculture.

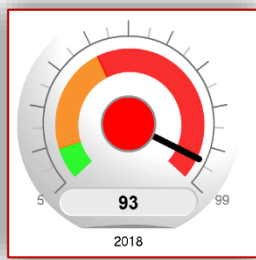
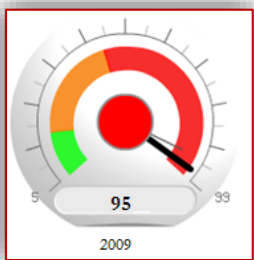
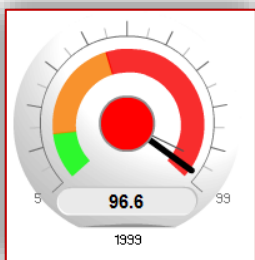


Energy resources

Energy dependency rate (%)

(Source: IRES Calculations _ Ministry of Energy, Mines and Environment; World Bank)

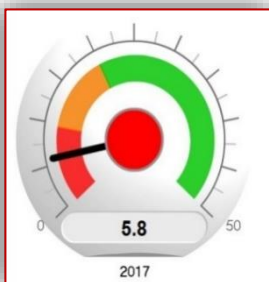
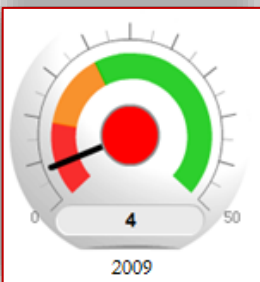
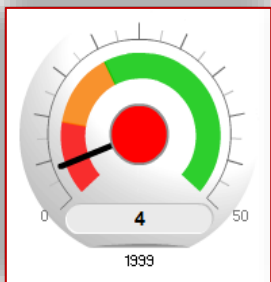
Very high energy dependency levels have prompted Morocco to develop hydroelectric production and in 2009 to launch a bold renewable energy development project, a policy to enhance energy efficiency and **a strategy to strengthen regional cooperation on this issue.**



Share of renewable energies in the energy balance (%)

(Source: IRES Calculations _ Ministry of Energy, Mines and Environment; World Bank)

Renewable energies accounted for 5.8% of the energy mix in 2017, and are projected to grow to around 20% by 2030.

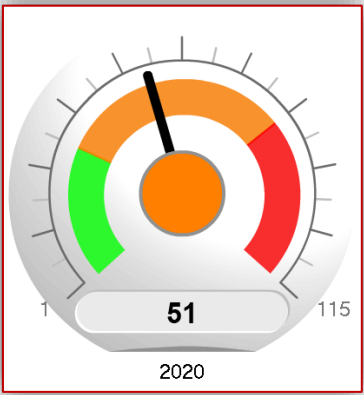
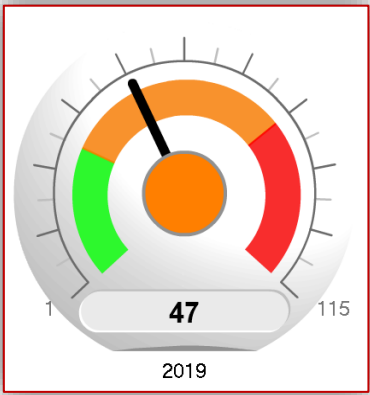


Energy resources

Energy Transition Index

(Source: IRES Calculations _ World Economic Forum)

Morocco ranks somewhere in the middle on this index. This is to be improved were the Kingdom to successfully accelerate renewable energy development in line with Royal Orientations, and further promote energy efficiency.

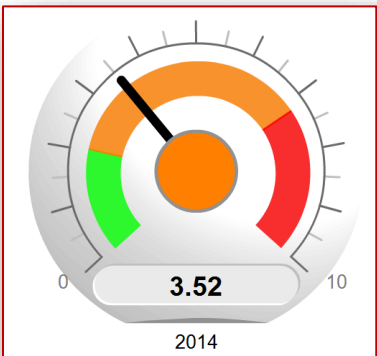
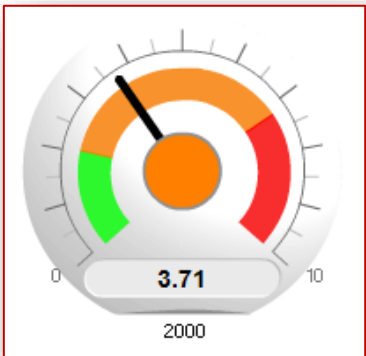


Natural capital

Environmental degradation costs as a % of GDP

(Source: IRES Calculations _ World Bank)

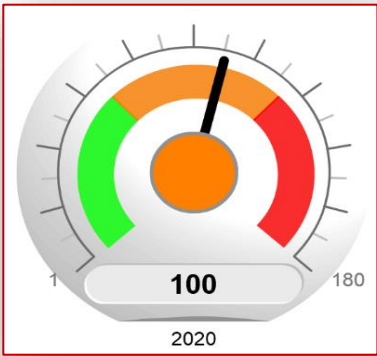
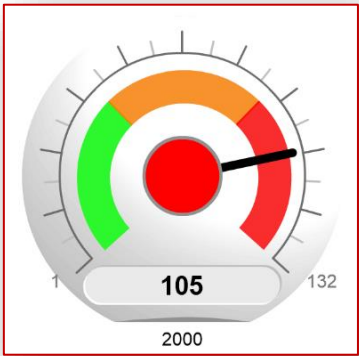
The average cost of environmental degradation is estimated by the World Bank at around 4% of GDP for 2014. This is alarming insofar as Morocco spends less than 1% of annual GDP on environmental preservation.



Environmental Performance Index

(Source: IRES Calculations _ Yale University)

Considerable progress in Morocco's environmental performance, mainly through improved air quality, better management of forest resources and expanded wastewater networks.



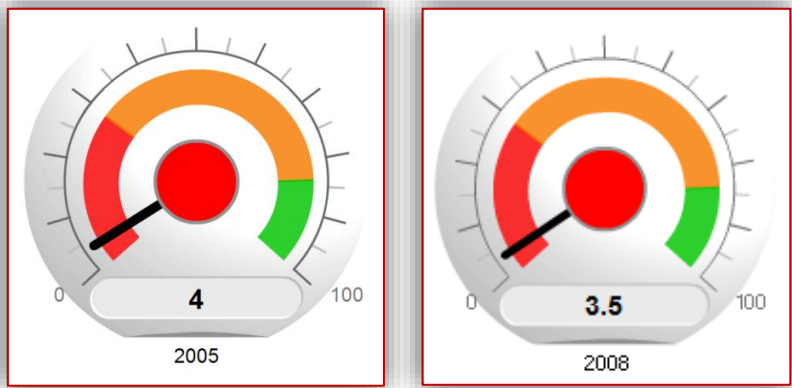
Natural capital

Biodiversity Benefits Index

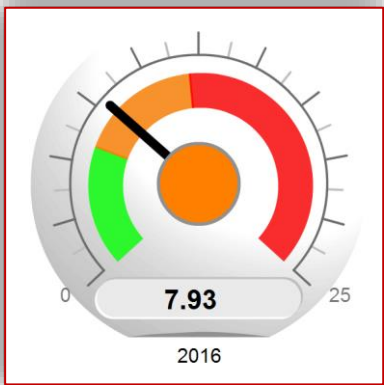
(Source: IRES Calculations _ World Environment Fund, International Union for Conservation of Nature)

Biodiversity in Morocco is under great strain, with a significant proportion of indigenous species either vulnerable or critically endangered. The country's Biodiversity Benefits Index score confirms this.

Biodiversity Benefits Index



Threatened species (% of total)

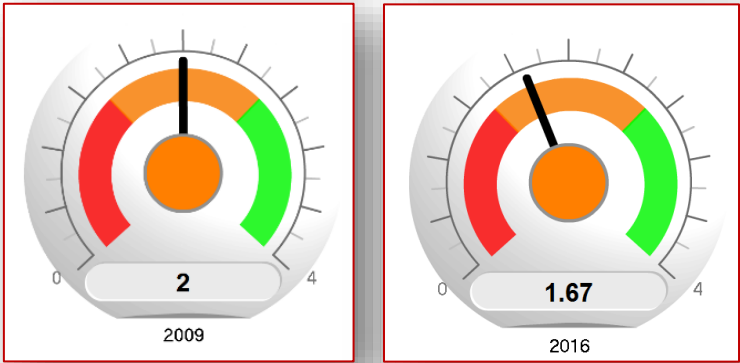


Natural capital

Natural Resource Governance Index

(0 = weak governance; 4 = good governance) (Source: IRES Calculations _ CEPII)

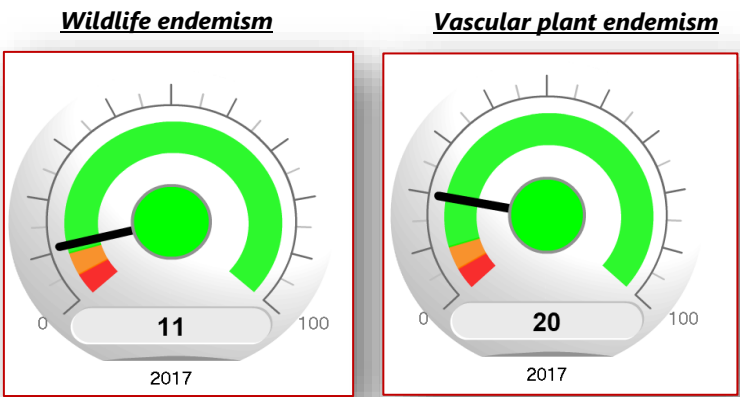
Morocco's global ranking on natural resource governance appears to have leveled off. Morocco's score does not reflect commitment to the issue, as evidenced notably by numerous reforms initiated, to ensure sustainability, guarantee optimal resource quality and establish solid foundations for sectoral competitiveness. There is room to improve Natural resource governance in Morocco.



Rate of endemism

(Source: IRES Calculations _ Haut-Commissariat aux eaux et forêts et à lutte contre la désertification - High Commission for Water and Forests and the Fight against Desertification)

The geographical situation of Morocco, at the crossroads of Africa and Europe and of Mediterranean and Atlantic, confers biodiversity hotspot status upon it, with a very large number of endemic species.



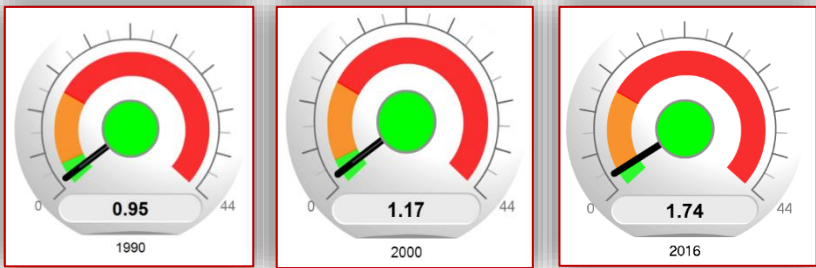
Natural capital
Air

Greenhouse gas emissions

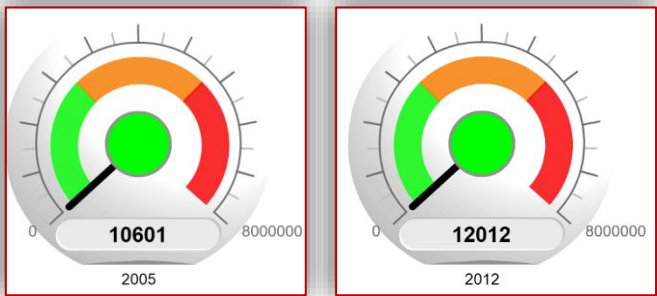
(Source: IRES Calculations _ World Bank; Emission Database for Global Atmospheric Research)

Morocco is a country with low greenhouse gas emissions, but is highly vulnerable to global warming. Potential impacts of climate change on water resources and food security require the implementation of a comprehensive adaptation policy.

CO2 emissions in metric tons/capita



Methane emissions in kiloton of CO2 equivalent

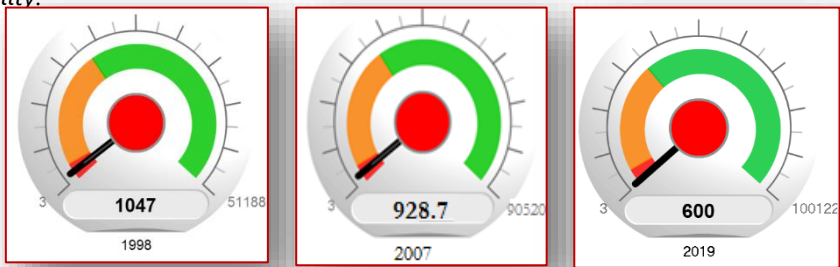


Natural capital
Water resources

Renewable water resources in m³ /capita/year

(Source: IRES Calculations _ FAO _ Aquastat)

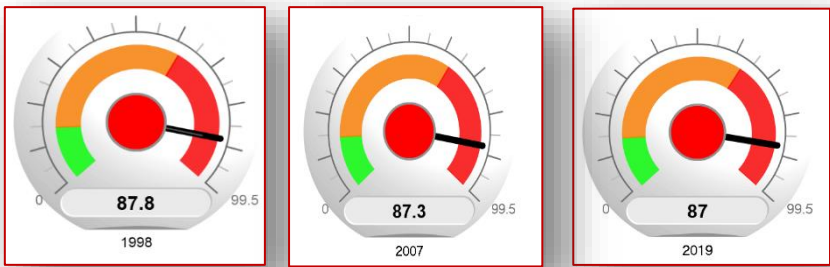
Relatively limited availability of fresh water: Despite a surface resources mobilizing policy, recognized by the international community, Morocco faces water scarcity because of growing demand, inadequate resource management and a decline in water supply, particularly as a result of climate change.
The Kingdom should implement a NEXUS-type (water, energy, agriculture, ecosystems) integrated environmental policy, capable of preserving and ensuring "water capital" sustainability.



Annual freshwater withdrawals for agriculture as % of total withdrawals

(Source: IRES Calculations_ FAO _ Aquastat)

Agriculture, including animal husbandry, consumes a substantial portion of available surface resources and does so inefficiently. Hence the need for rational water demand management and adequate mobilization of non-conventional water resources notably via seawater and brackish water desalination and the exploitation of atmospheric humidity.

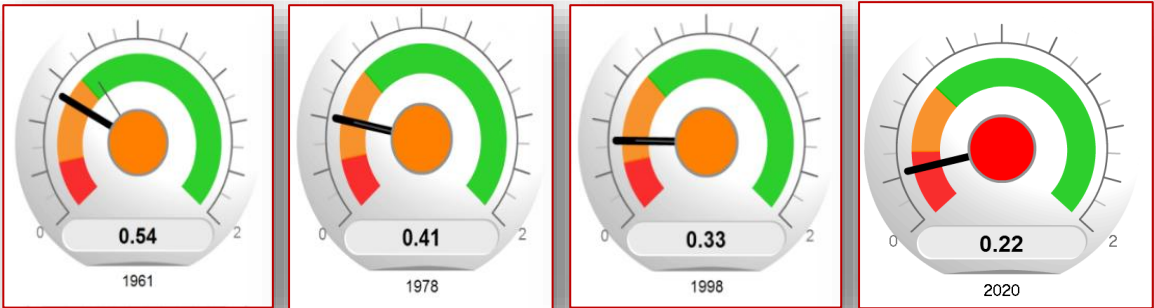


Natural capital
Soil

Arable land in hectares per capita

(Source: IRES Calculations _ HCP ; FAO)

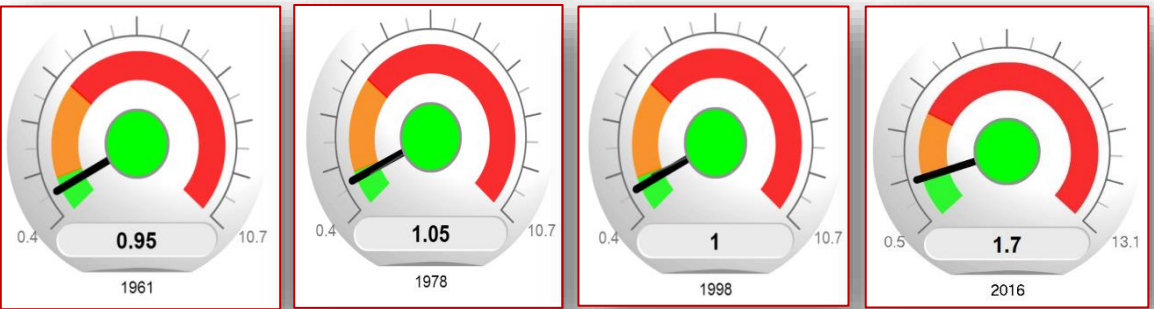
Sizeable reduction in useable agricultural area per capita due to both population growth and climate change, debasing farmland suitability for certain crops to lower classes, mainly because of shorter vegetative periods.



Ecological footprint in hectares per capita

(Source: IRES calculations_ Global Footprint Network)

Expanded footprint, mainly as a result of population growth, changing consumption patterns and of Morocco's **need for naturally productive land and maritime areas to produce the resources it consumes and absorb the waste it produces.**

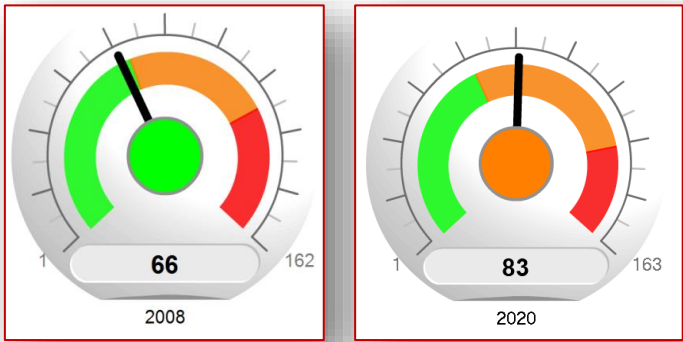


Global security

Global Peace Index

(Source: IRES Calculations _ Institute for Economics and Peace)

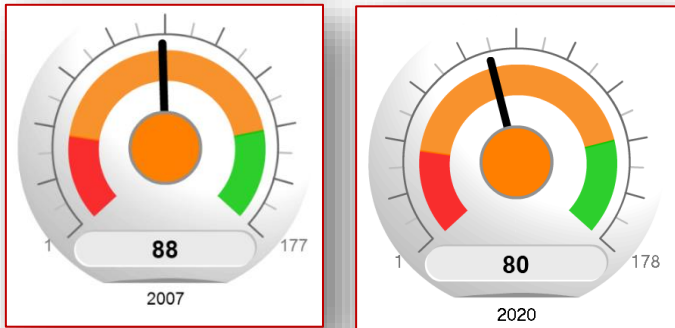
Morocco's ranking on this index declined, possibly due to external factors of regional instability and internal factors of recent social unrest in a number of regions across the Kingdom. It should however be mentioned that the Kingdom **is the 6th most peaceful country in the Middle East and North Africa (MENA)**, a region that is home to many of the world's major conflicts.



Fragile State Index

(Source: IRES Calculations_ Fund for peace)

Morocco's middle of the road ranking on this index is undermined by a number of factors, including community grievances, migration and brain drain, and uneven economic development.

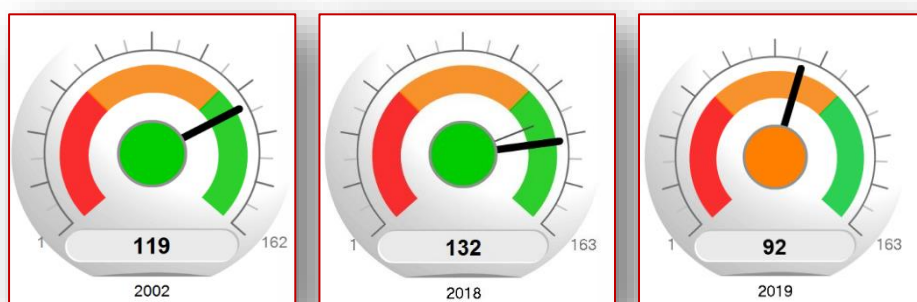


Global security

Global Terrorism Index

(Source: IRES Calculations_ Institute for Economics and Peace)

*Despite active engagement in the fight against terrorism and societal choices focused on openness and the promotion of a moderate and tolerant Islam, **Morocco, until recently a "no terrorist impact" country, entered the "very low impact" category in 2019.** This is likely linked to the 2018 terrorist attack involving the murder of two young Scandinavian tourists by individuals pledging allegiance to the Islamic state.*

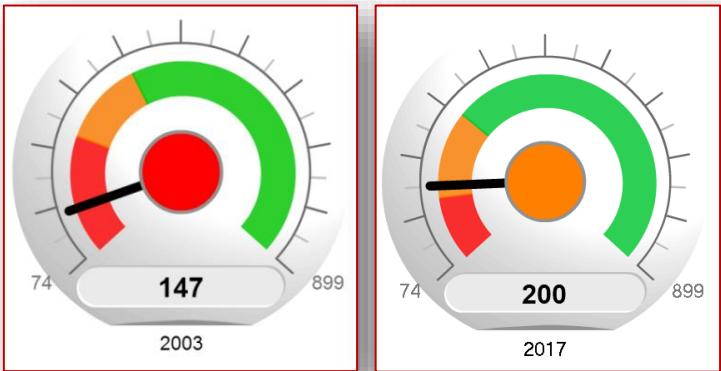


Homeland Security

Number of police officers per 100,000 population

(Source: IRES Calculations _ UNODC data)

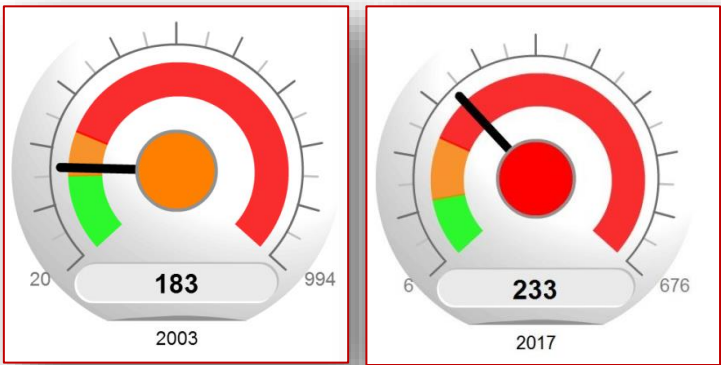
Growing numbers of police officers, while still insufficient to address the changing nature of crime in all its forms.



Number of detainees per 100,000 population

(Source: IRES Calculations _ UNODC data)

The prison population grew between 2003 and 2017. Greater recourse to temporary detention contributed to prison overcrowding. This situation can be improved with adjusted sentencing and alternative sanctions to relieve prison overcrowding.

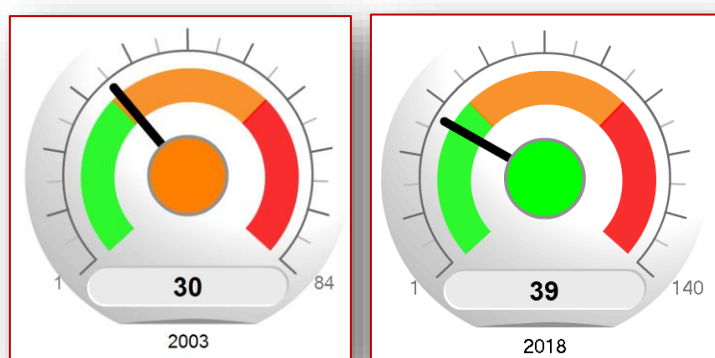


Homeland Security

Voluntary homicide rate per 100,000 population (ranking)

(Source: IRES calculations _ UNODC data)

Morocco's improved global ranking on this index, reflects, among other things, the effectiveness of preventive actions by law enforcement agencies in the fight against crime.

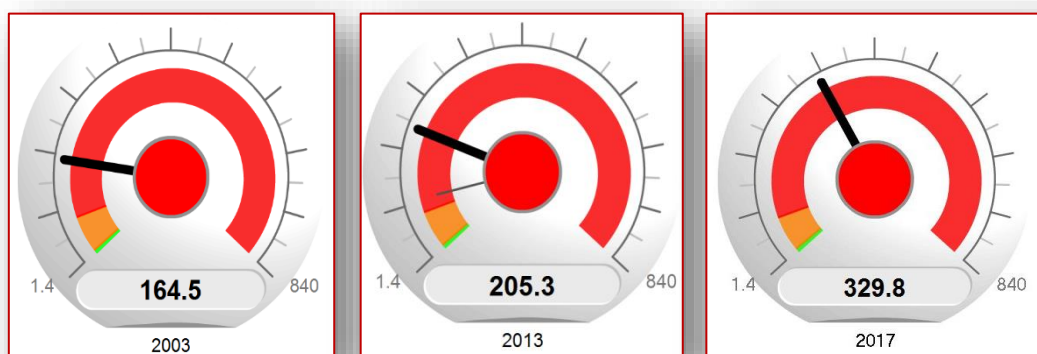


Homeland Security

Aggression rate per 100,000 population

(Source: IRES Calculations _ UNODC data)

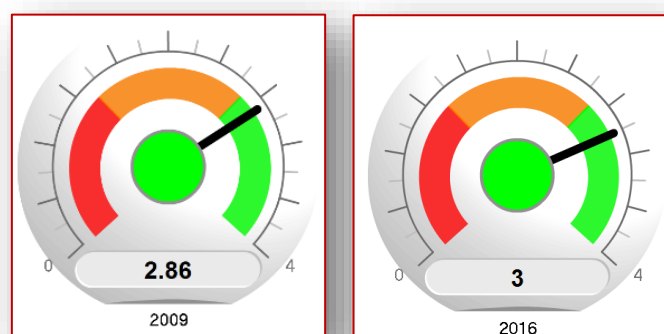
The aggression rate increased by 60% between 2003 and 2017, due mainly to higher consumption of psychotropic drugs, relatively uncontrolled urbanization and rising inequalities.



Internal Public Security

(0 = very low security; 4 = high security) (Source: Calculations IRES _ CEPIL)

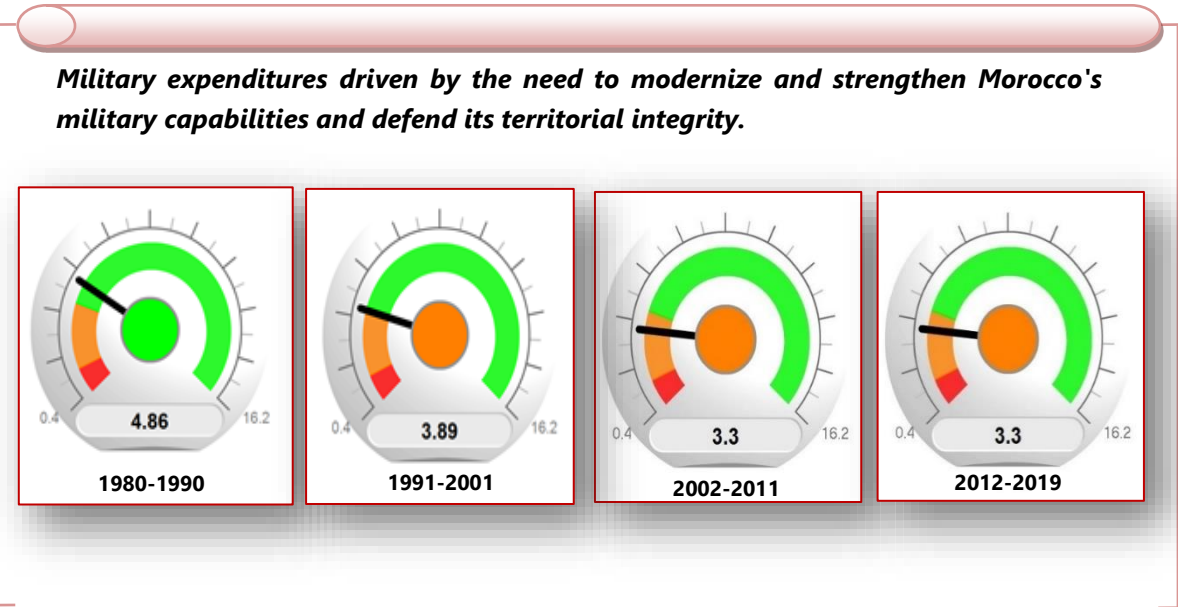
Elevated internal public security levels in the Kingdom due in particular to the creation of new security structures, enhanced operational capacity, and training of law enforcement officials in new forms of crime. Furthermore, adoption of community-based law enforcement and increased public awareness as to citizens' role as partners to these forces should further strengthen internal security levels across the country.



Defense

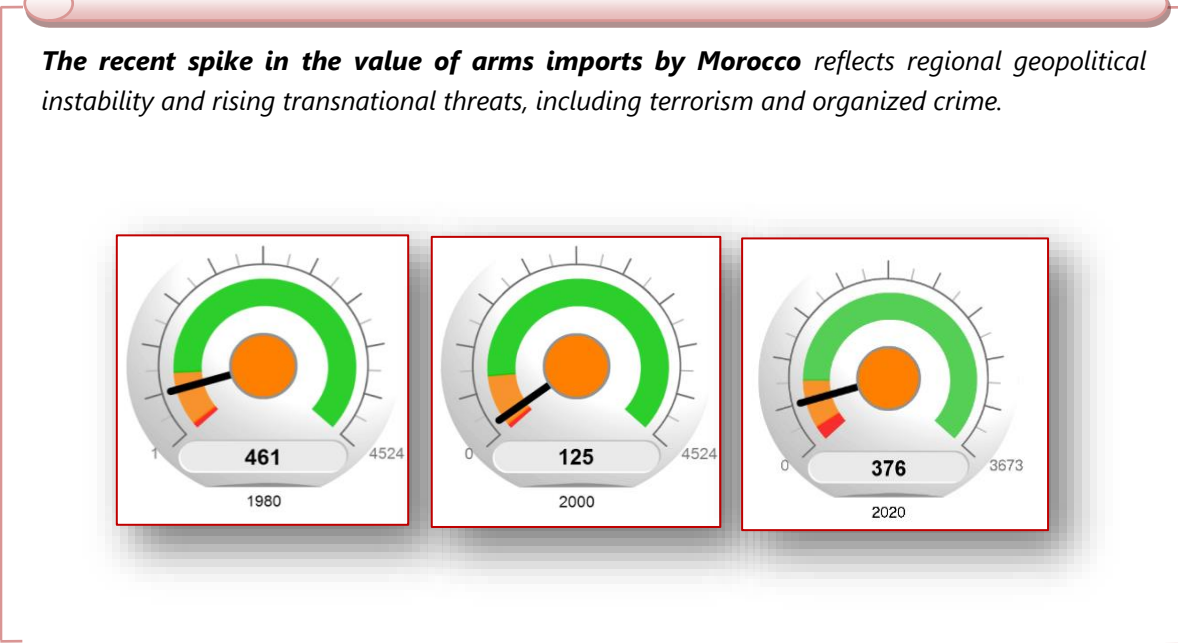
Military expenditure as a % of GDP

(Source: IRES Calculations _ SIPRI)



Arms imports in millions of dollars

(Source: IRES Calculations _ SIPRI)



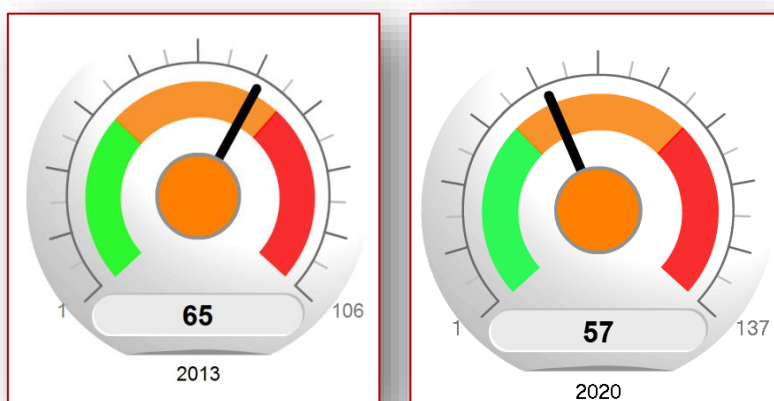
Defense

Global firepower Index

(Source: IRES Calculations _ Global Firepower)

Significant improvement in Morocco's international ranking in terms of military strength.

According to the "Global Firepower" Institute, Morocco ranks 57th globally and **6th in Africa** in 2020 in terms of military capabilities.

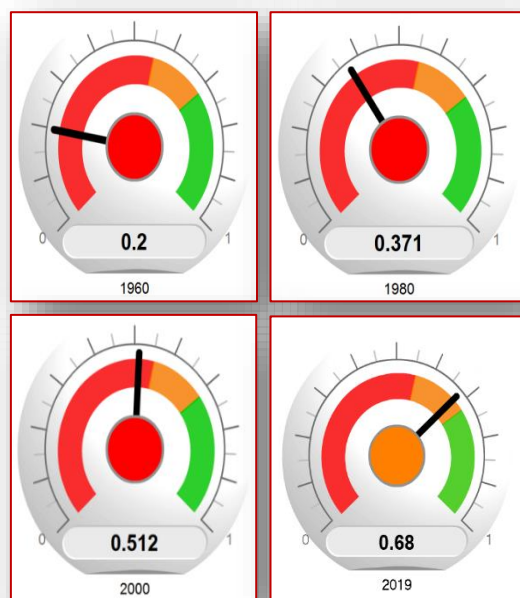


Human Development

Human Development Index

(Source: IRES Calculations _ UNDP; Conseil Supérieur de l'Education, de la Formation et de la Recherche Scientifique
- Higher Council of Education, Training and Scientific Research)

The Human Development Index (HDI) grew threefold since independence. Morocco however, still **rank 121st out of 189** countries on this index and is adversely impacted by average schooling duration for Moroccans, estimated at only 5.5 years in 2019 compared to 6.7 years for countries with average human development and 12.2 years for countries with very high human development.

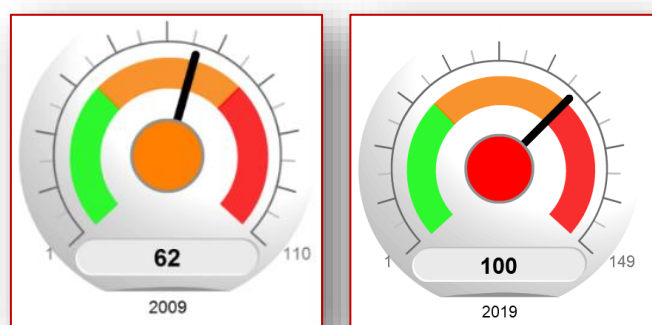


Human Development

Index of prosperity and well-being

(Source: IRES Calculations _ Legatum Institute)

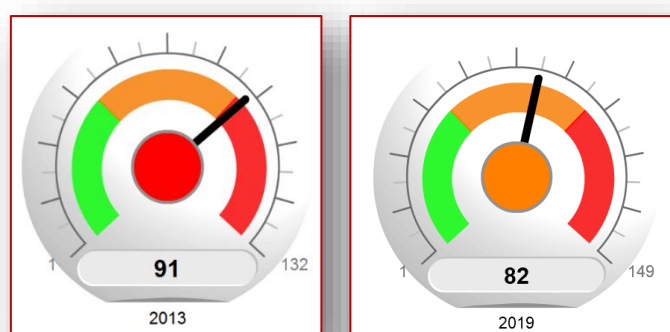
Morocco's ranking on prosperity and well-being is relatively worse. This is essentially the result of the country's underperformance in terms of social capital, education, and governance. Morocco, nonetheless, continues to rank well on index components inherent to security and natural environment.



Social Progress Index

(Source: IRES Calculations _ Social Progress Imperative)

Significant improvement in Morocco's ranking on this index that classifies countries in six categories according to social progress. Morocco falls into the 4th category, comprising countries underperforming in the areas of advanced education and social inclusion.

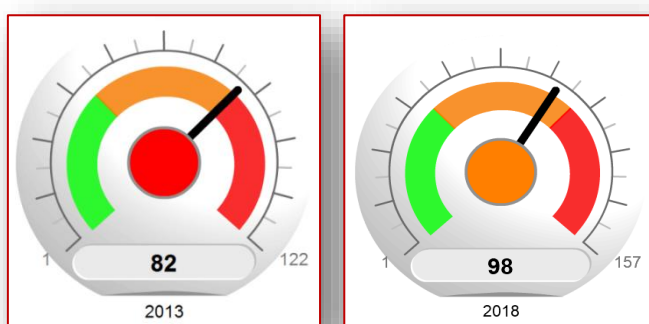


Human Development

Inclusive Growth Index

(Source: IRES Calculations _ World Economic Forum)

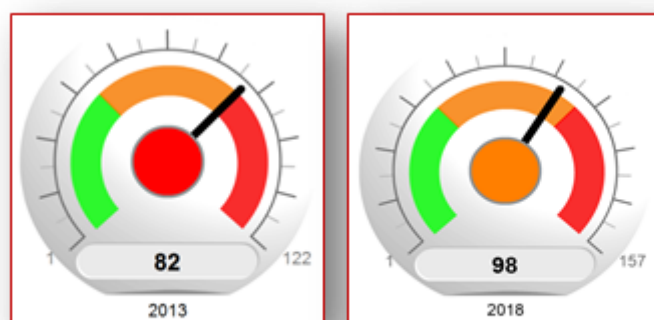
Morocco ranks well on this index, which classifies developing countries according to inclusive growth levels. Morocco performs particularly well in the areas of intergenerational responsibility and equity. This performance is be improved by substantially raising per capita income levels and permanently eradicating multidimensional poverty.



Human Capital Index

(Source: IRES Calculations _ World Economic Forum)

While improving, Morocco's ranking on this index remains undermined by an underperforming education system and inadequate public policies for youth employment and elderly welfare. Planned government reforms to address these issues should, however, gradually make up for lost ground.

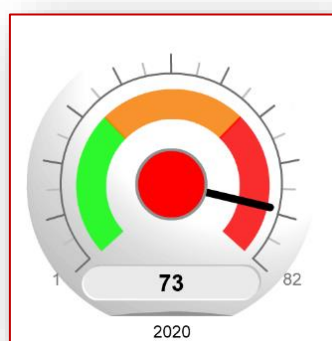


Human Development

Global Social Mobility Index

(Source: IRES Calculations _ World Economic Forum)

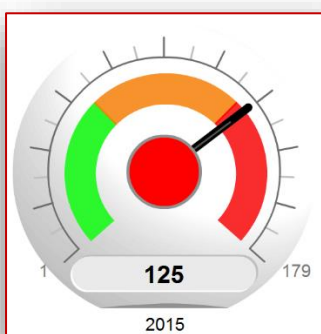
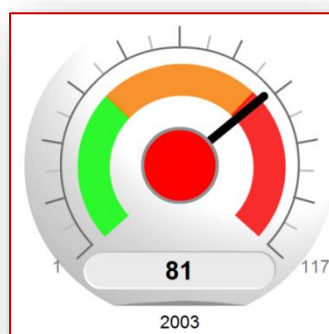
The social ladder in Morocco is broken: Morocco ranks at the bottom on this index. This confirms the priority that should be given to strengthening human capital, fighting inequality and promoting youth employment.



Index of Maternal Well-Being

(Source: IRES Calculations _ Save the children)

Morocco ranks among countries not providing optimal conditions for mothers to properly care for their children. The ranking stems from the persistence of inequalities in mothers' access to care, albeit to a lesser extent than in the past.

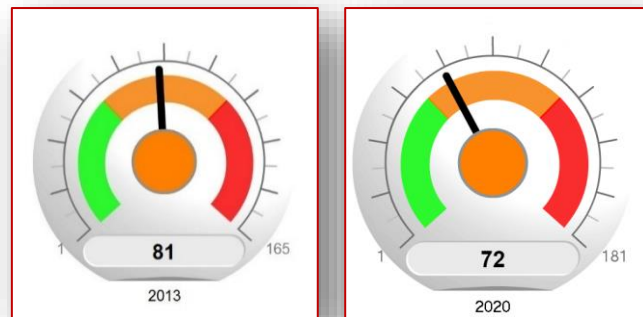


Human Development

KidsRights Index

(Source: IRES Calculations _ KidsRights; Erasmus School of Economics)

Advances in Morocco's global ranking on this index, are to be further consolidated should the Kingdom successfully implement provisions of the 2011 Constitution as well as all international protocols and conventions aimed at advancing this population group, faced with a range of problems spanning from social injustice (inequality, poverty ...), poor education and health to pedophilia.

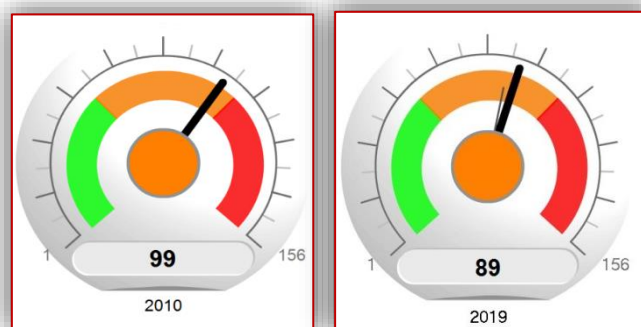


Human Development

World Happiness Index

(Source: IRES Calculations _ UN _ Sustainable Development Solutions Network)

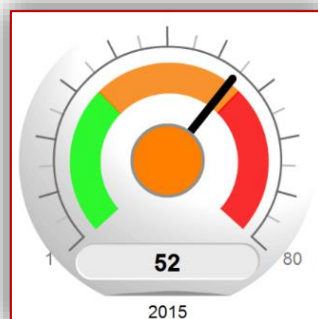
Morocco's global ranking on this index is to be further improved were the Kingdom to significantly raise per capita income level, consolidate social cohesion, and improve public health levels.



Quality of Death Index

(Source: IRES Calculations_ Economist Intelligent Unit)

Morocco's ranking on this index is particularly impacted by palliative care patient backlogs, absence of a dedicated public policy, shortage of human resources, and unequal access to care.

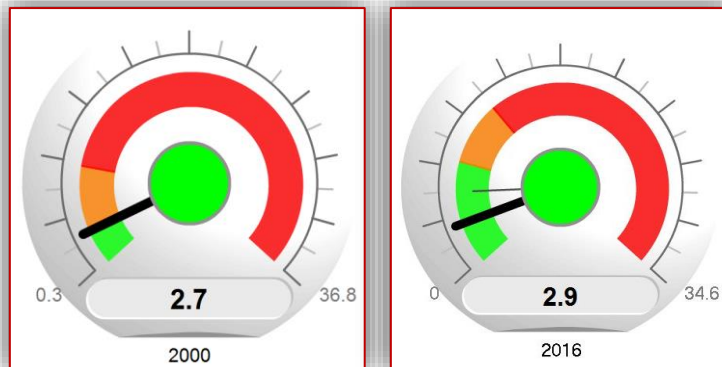


Human Development

Suicide rate per 100,000 population

(Source: IRES Calculations _ WHO)

While suicide rates in Morocco are below global averages, the recent spike in suicide rates must be taken seriously. Implementation of a suicide prevention guide and development of support associations for vulnerable populations, together with increased public awareness on the crucial role of families, could curb the recent uptick in rates.



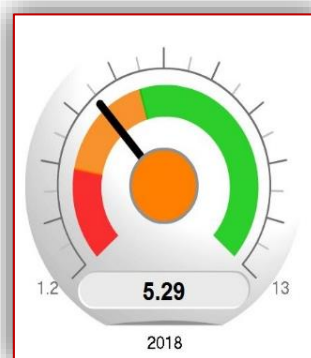
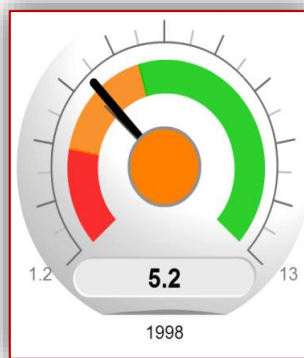
Education

Education expenditure

Public expenditure on national education as % of GDP

(Source: IRES Calculations_ MENFP; UNESCO)

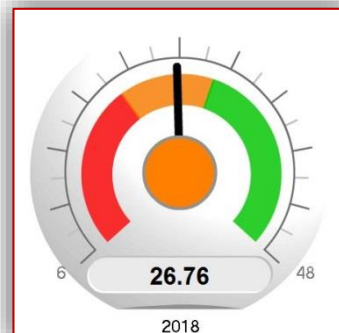
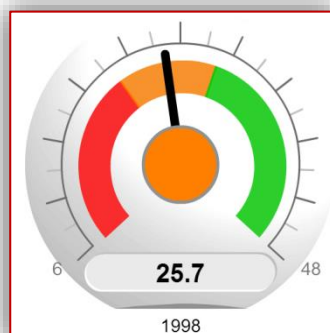
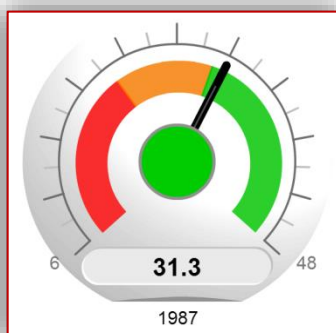
Significant education spending as a percentage of GDP. The return on this investment, however, remains insufficient in view of high dropout rates and deteriorating educational system quality.



Public expenditure on national education per pupil as % of GDP/capita

(Source: IRES Calculations_ UNESCO)

Public expenditure on education per student, as a proportion of GDP per capita, remains inadequate.



Education

Education system quality

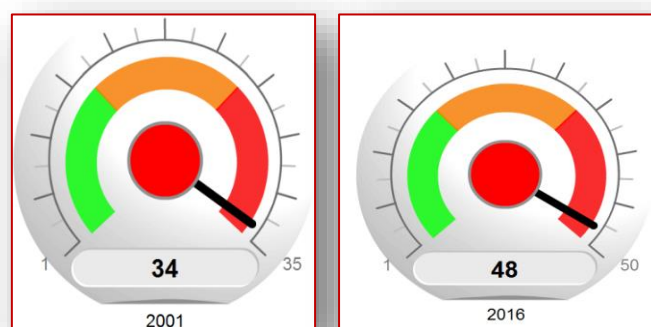
Morocco's global ranking on international "PIRLS and TIMSS" tests

(Source: IRES Calculations _ International Association for the Evaluation of Educational Achievement)

Morocco's poor ranking on international PIRLS and TIMSS tests, confirms a quality problem in the national education system. PIRLS and TIMSS assessment results for Morocco are respectively 358 points in 2016 and 377 points in 2015, well below global averages of 450 for PIRLS and 485 for TIMSS.

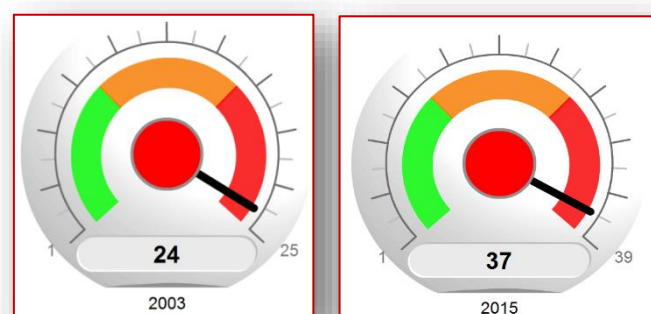
Morocco's global PIRLS ranking

(For students enrolled in basic education grade 4)



Morocco's global TIMMS ranking

(For students enrolled in basic education grade 4)



Education

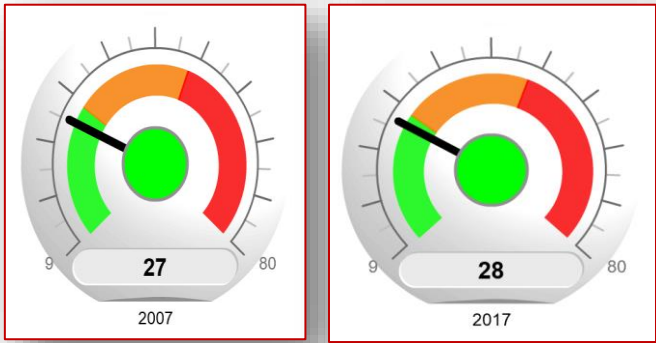
Education system quality

Pupil-teacher ratio in primary education

(Source: IRES calculations _ UNESCO data)

Morocco stands among countries with an acceptable pupil-teacher ratios in primary education. Significant disparities, however, exist between urban and rural areas and between public and private education systems.

Students per teacher



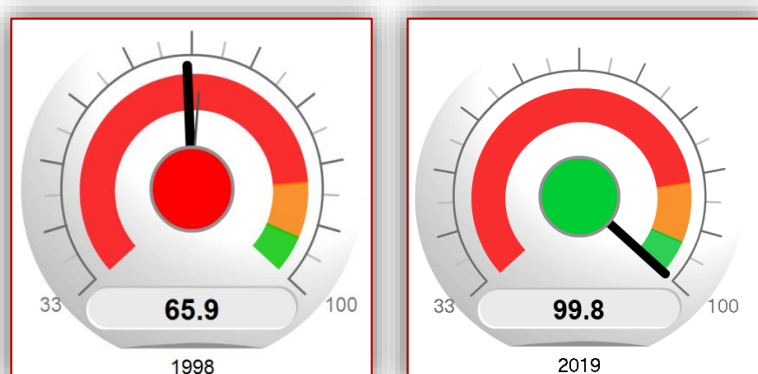
Education

School enrollment

Net enrollment rate in primary education (% of 6-11 age group)

(Source: IRES calculations _ UNESCO data)

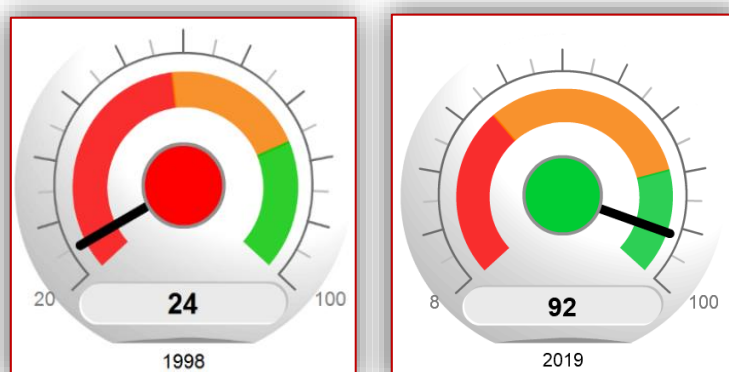
Universalization of schooling at the primary education level. Yet basic education mainstreaming conceals shortcomings on the quality front.



Net enrollment rate in secondary middle school (as a % of the 12-14 age group)

(Source: IRES calculations _ UNESCO data)

Significant improvement in secondary middle school enrolment rates.



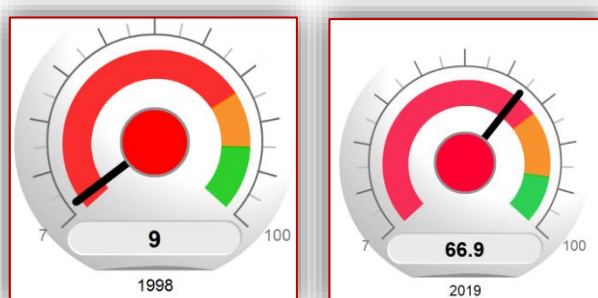
Education

School enrollment

Net enrollment rate in upper-secondary education (% of 15-17 age group)

(Source: IRES calculations _ UNESCO data)

Upper secondary education net enrollment rates remain insufficient, despite progress made during the 2000s. This undermines the country's human capital development.

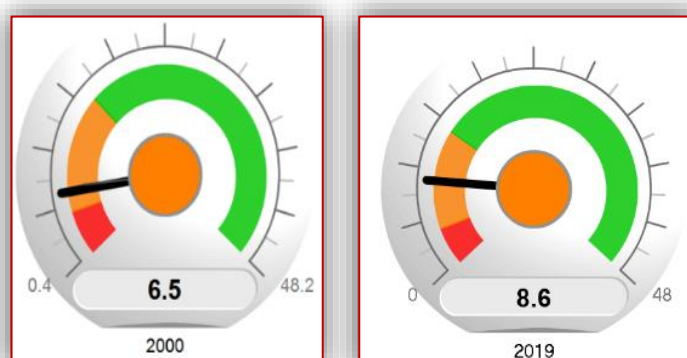


Vocational education

Percentage enrolled in secondary vocational education (%)

(Source: IRES calculations _ UNESCO data)

Enrollment rates in secondary vocational education improved between 2000 and 2019. Vocational training is poised to play a crucial role in the years to come, with a major reform underway, mainly consisting of the creation of craft and skills cities in each region.



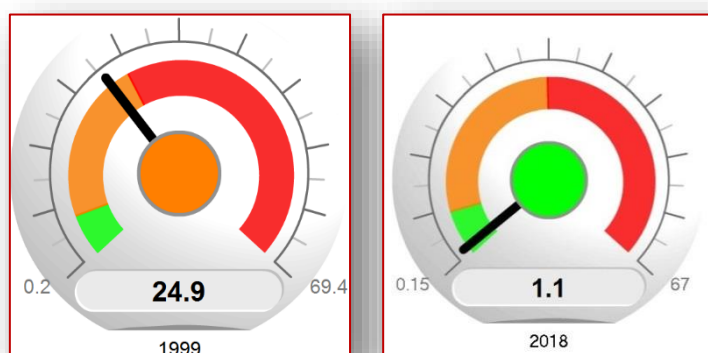
Education

School dropout

Cumulative dropout rate in primary education (%)

(Source: IRES calculations _ Ministry of National Education and Vocational Training; UNESCO)

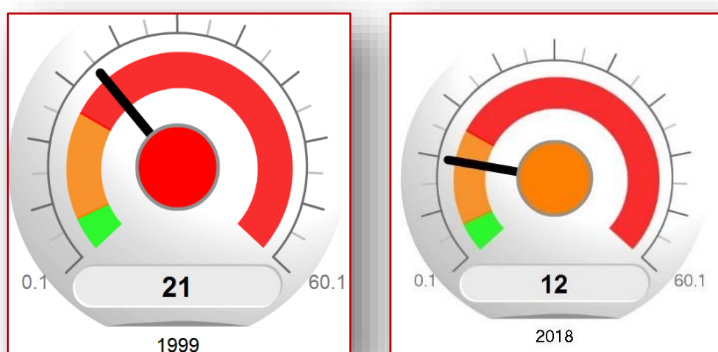
Cumulative dropout rates in primary education fell significantly between 1999 and 2018, as a result of numerous programs implemented by public authorities to address this issue.



Cumulative drop-out rate in lower and upper secondary education (%)

(Source: IRES calculations _ Ministry of National Education and Vocational Training; UNESCO)

Cumulative dropout rates in secondary education fell by nearly 43% between 1999 and 2018. The rate reached in 2018, however, remains relatively high.



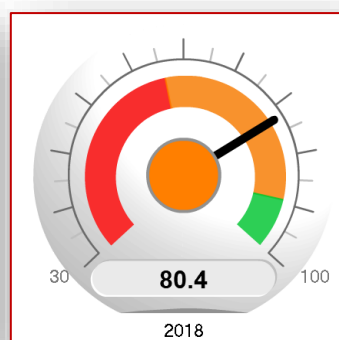
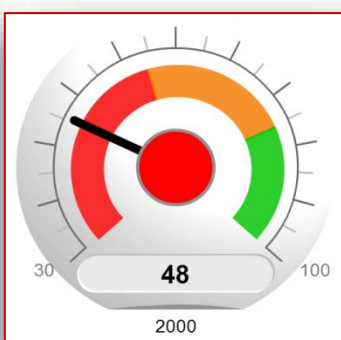
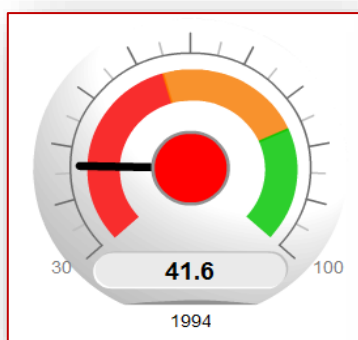
Education

Literacy

Adult literacy rate as % of population aged 15 and over

(Source: IRES calculations _ Ministry of National Education and Vocational Training; UNESCO)

Adult literacy has improved significantly between 2000 and 2018. Government and civil society efforts, particularly after the 2005 launch of the National Initiative for Human Development, have yet to eradicate illiteracy, which continues to undermine Morocco's competitiveness and remains a handicap in its global ranking.



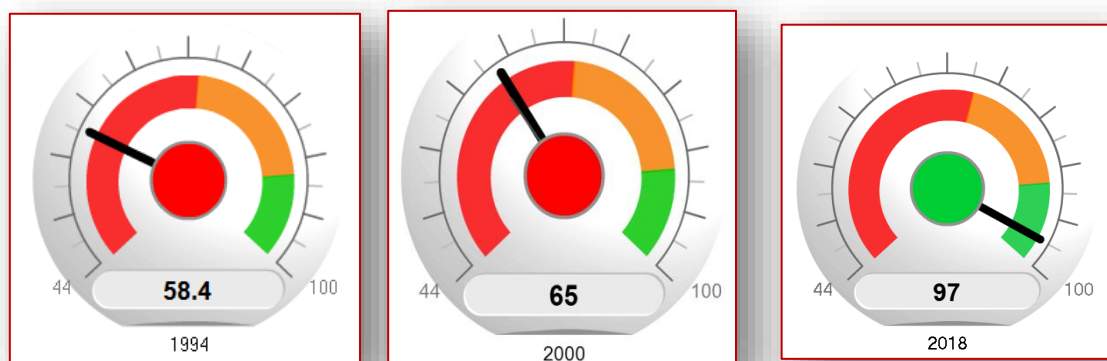
Education

Literacy

Youth literacy rate as % of population

(Source: IRES calculations _ Ministry of National Education and Vocational Training; UNESCO)

Literacy rates for young people aged 15 to 24, are up almost 40 points between 2000 and 2019 in line with basic education first cycle universalization.



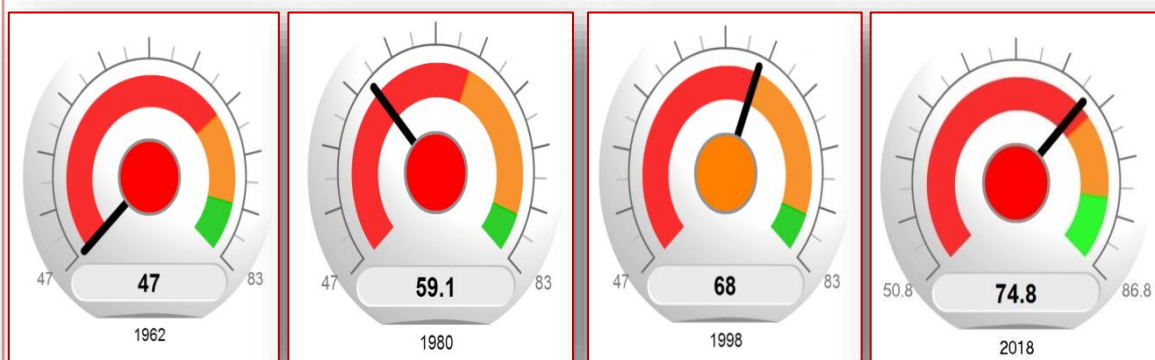
Health

Life expectancy at birth and fertility

Life expectancy at birth

(Source: IRES calculations _ Ministry of Health; WHO)

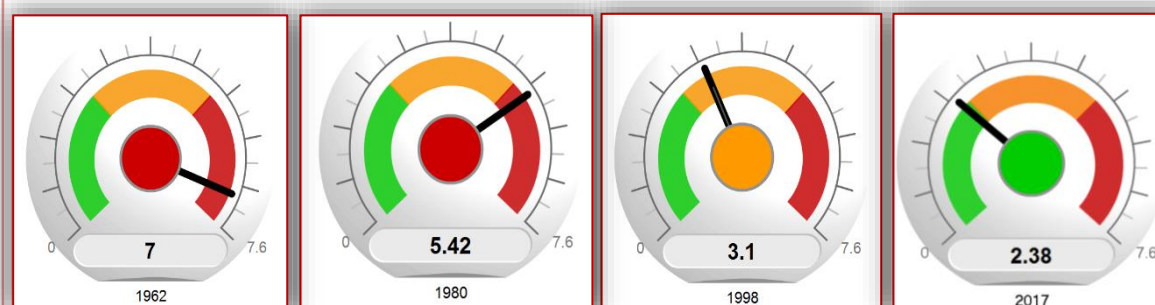
Life expectancy at birth improved by nearly 28 years since the early 1960s, with the gradual extension of medical coverage and advances made by Morocco in the field of preventive health.



Total fertility rate

(Source: IRES calculations _ Ministry of Health; HCP; WHO)

The demographic transition is coming to an end with significant declines in population fertility, as measured by the total fertility rate, under the combined effect of later age at first marriage, increased use of contraception, and increased employment of women. Current fertility levels hover around the generational replacement level.



Health

Vaccination

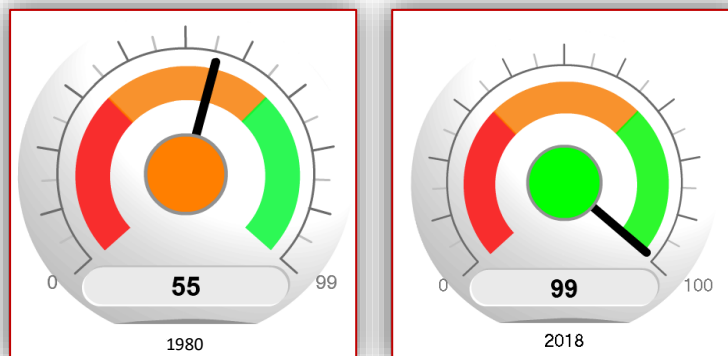
Vaccination: DTP1 coverage rate

(Source: IRES calculations _ UNICEF)

The national immunization program launched in 1987 achieved 95% national immunization coverage for target diseases. The Diphtheria, Tetanus, and Poliomyelitis vaccine, often used as an international immunization coverage proxy, was administered to 99 percent of infants in Morocco by 2018.

It is now important to preserve advances in infant and childhood immunization and to enrich the immunization program going forward by incorporating other vaccines proven effective in other countries.

DTP1 dose coverage rate (%)
(Diphtheria-Tetanus-Polio Vaccine - first dose)



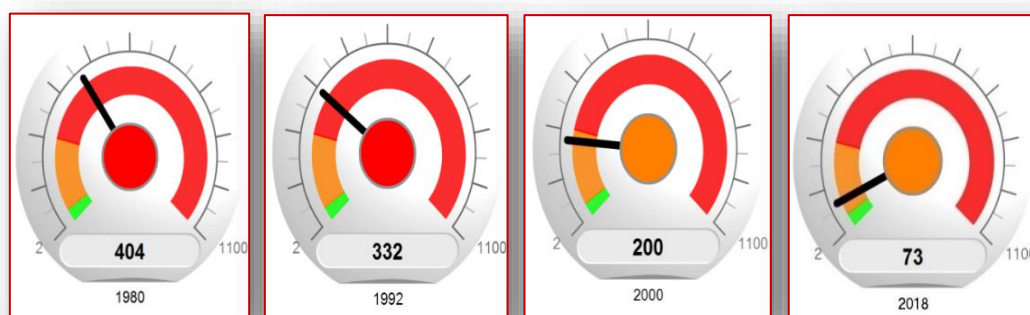
Health

Maternal and infant mortality

Maternal mortality

(per 1,000 live births) (Source: IRES calculations _ Ministry of Health; WHO)

Significant decrease in maternal mortality, due to increasingly supervised deliveries. Additional efforts are needed, however, to catch up with the performance of advanced countries.

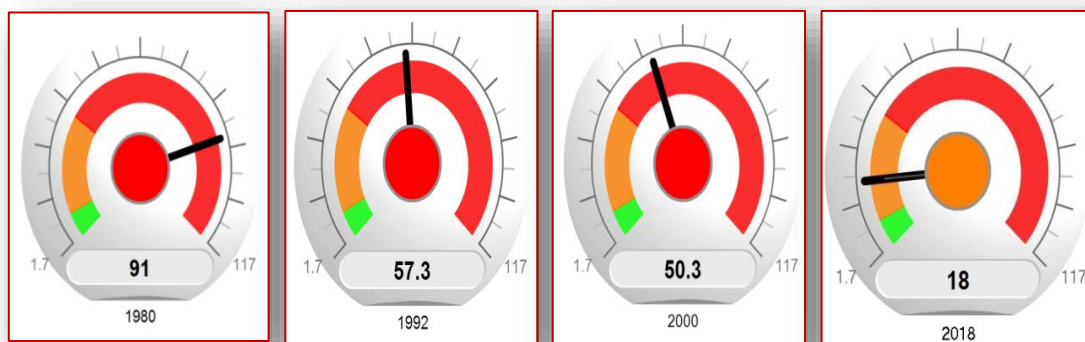


Infant mortality rate

(per 1,000 live births)

(Source: IRES calculations _ Ministry of Health; WHO)

Encouraging progress in the fight against infant mortality, down 64% between 2000 and 2018. This rate, however, remains high in rural areas, particularly the remote ones.



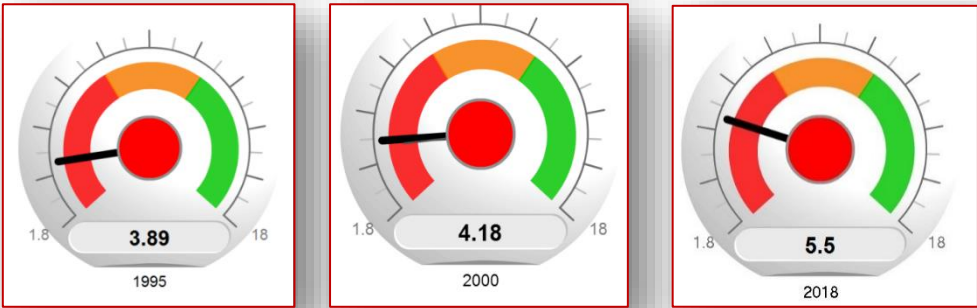
Health

Health expenditures

Total health expenditures (% of GDP)

(Source: IRES calculations _ WHO)

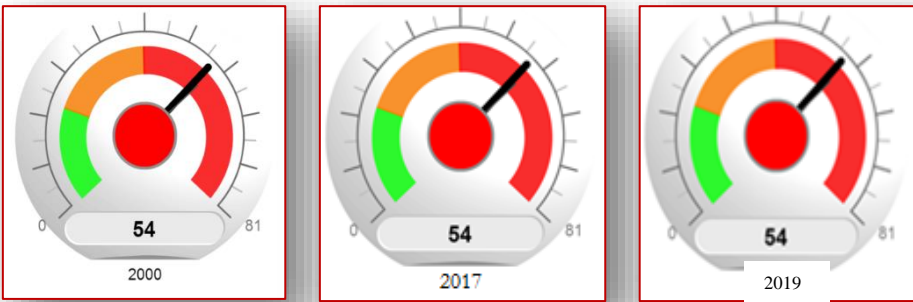
Overall health spending as a % of GDP has increased steadily over the last two decades. These expenditures remain nevertheless insufficient to tackle traditional diseases, and even more so for major pathologies and the Covid-19 pandemic.



Household expenditure as a % of total health expenditure

(Source: IRES Calculations _ WHO Database)

Access to health services is far from universal and remains conditioned by household solvency levels, which still account for more than half of total health expenditures. To remedy this, Morocco introduced basic compulsory health insurance (AMO) and medical assistance for the economically disadvantaged (RAMED). The ongoing reform aims to generalize social security coverage for Moroccans within five years.



Health

Medical supervision

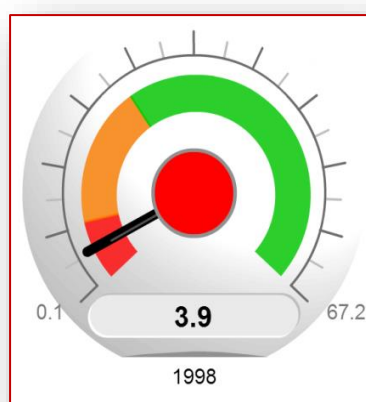
Medical and paramedical density per 10,000 population

(Source: IRES calculations _ Ministry of Health; WHO)

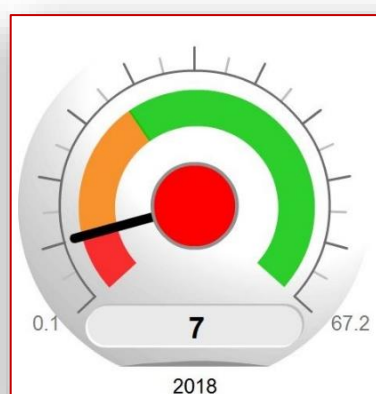
Medical and paramedical supervision in Morocco (16 per 10,000 population, including 7 doctors and 9 nurses) remains below the critical threshold of 25 per 10,000 inhabitants set by the World Health Organization.

Just as everywhere else, the 2020 health crisis confirmed the imperative of prioritizing health in Morocco, by transforming a decried health system into a high-performance one. Significant efforts are to be made to specifically strengthen medical and paramedical densities to improve patient care and prepare for possible future pandemics.

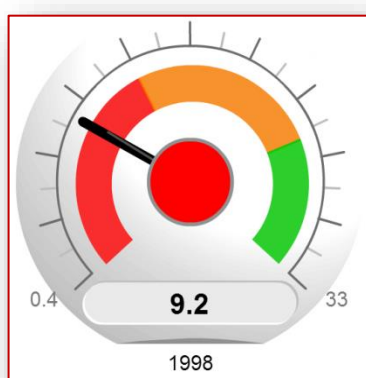
Medical Density



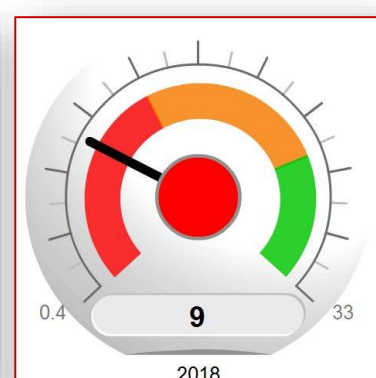
Medical Density



Paramedical density



Paramedical density



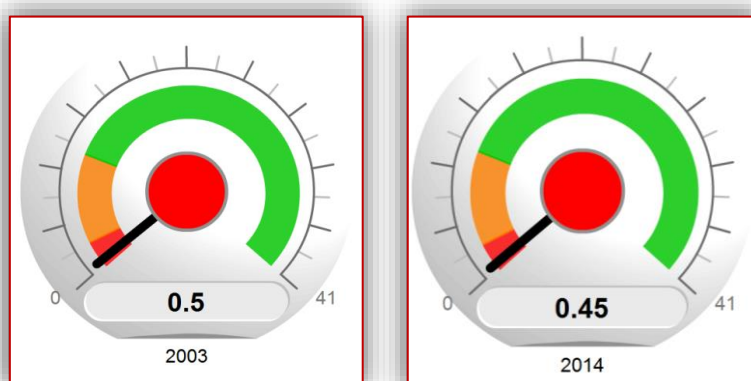
Health

Medical supervision

Number of psychiatrists per 100,000 population

(Source: IRES calculations _ Ministry of Health; WHO)

Mental medicine in Morocco is still in its infancy: the number of psychiatrists per 100,000 inhabitants remains derisory and far below World Health Organization standards, i.e., the normative interval [2.5; 10].

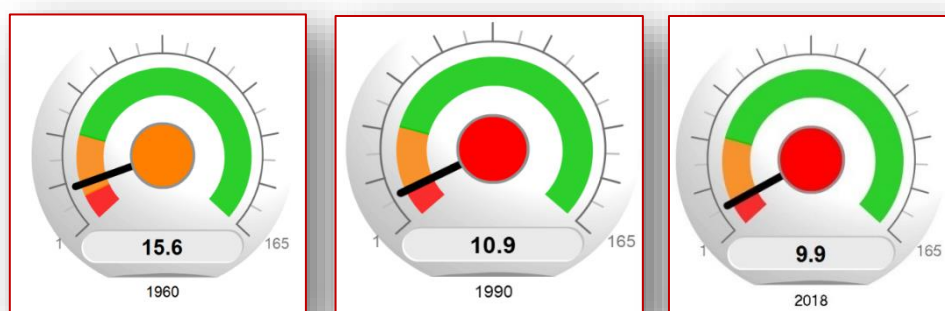


Hospital bed density

(Hospital beds per 10,000 population)

(Source: IRES calculations _ Ministry of Health; WHO)

The number of hospital beds per 10,000 inhabitants continues to drop, despite Morocco's efforts in this area. Current supply remains out of step with rapidly growing demand, resulting from both population growth and especially medical coverage mainstreaming. Well beyond the Covid-19 pandemic, increased bed density is essential to ensure sustainable care for people with severe pathologies.

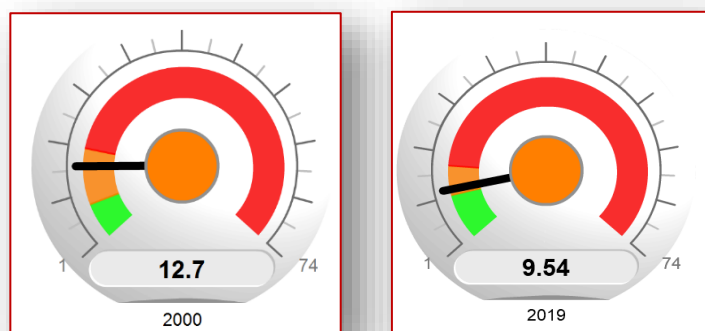


Road safety

Estimated number of road fatalities (per 100,000 inhabitants)

(Source: IRES calculations _ WHO)

Road fatalities as a proportion of total population have dropped sharply as a result of recent road safety measures. The 2019 rate, however, remains a cause for concern. This is mainly attributable to non-compliance with traffic regulations, the rapid growth in national vehicle numbers, the condition of vehicles and roads, and poor civic behavior on the part of some road users.

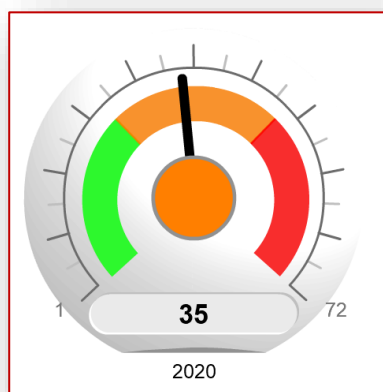
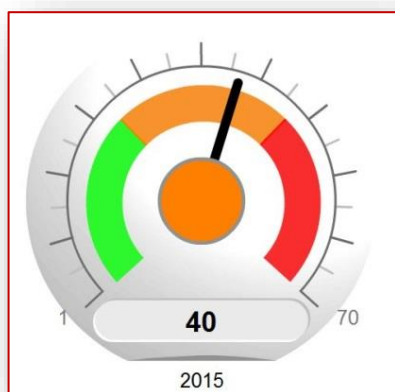


Living conditions

Best Countries for quality of life

(Source: IRES Calculations _ Reptrak)

Middle ground ranking for Morocco on this index. The IRES study on the global reputation of Morocco indicates the Kingdom enjoys a **good external** reputation on the "Quality of Life" dimension.



Living conditions

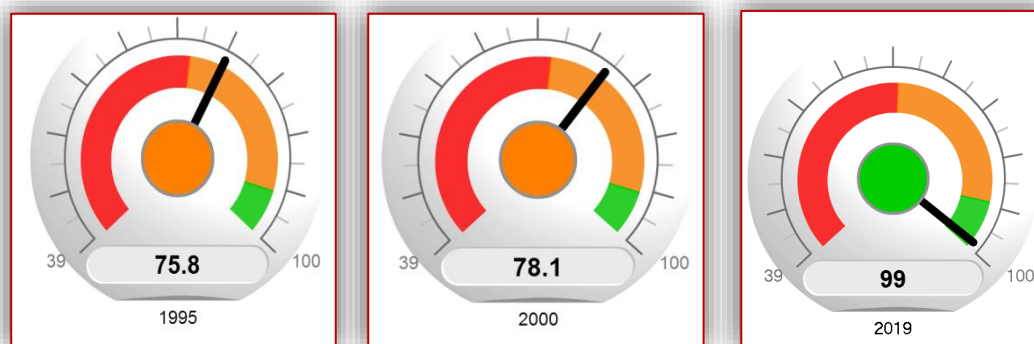
Water and electricity

Access rate to improved drinking water sources

(% of population)

(Source: IRES Calculations _ World Bank)

There is genuine progress in access to improved drinking water sources, thanks in particular to the Consolidated Drinking Water Supply Program (PAGER), launched in 1995.

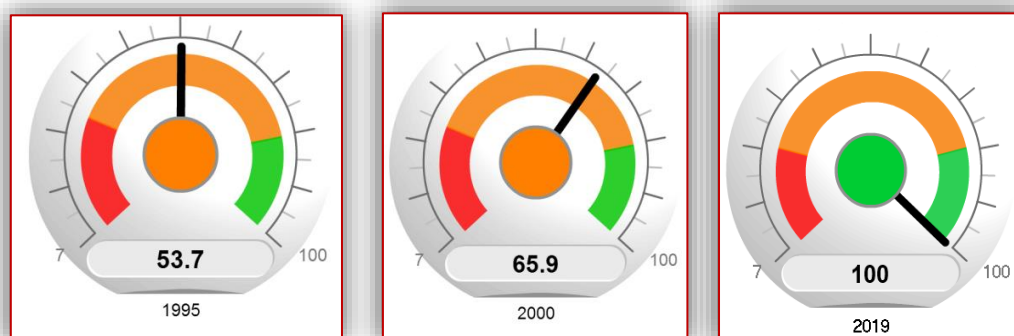


Rate of access to public power systems

(% of population)

(Source: IRES Calculations _ World Bank)

Morocco's considerably improved ranking on this indicator is driven by a rural electrification policy that has generalized public access to the electricity grid. Introduction of the Global Rural Electrification Program (PERG) tripled rural electrification rates over the last 20 years.



Living conditions

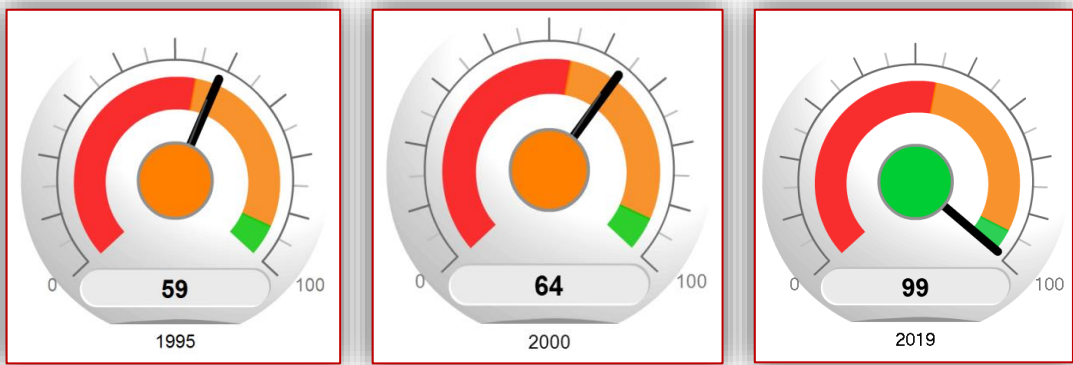
Sanitation and access improvement

Rate of access to improved sanitation facilities

(% of population)

(Source: IRES Calculations _ World Bank)

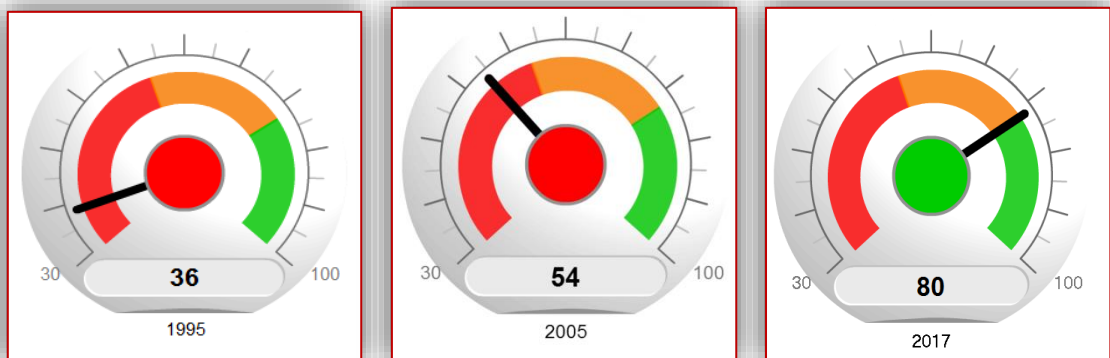
There has been significant improvement in urban populations' access to basic sanitation infrastructure rates over the last two decades.



Rural population road accessibility rate

(Source: IRES calculations _ Ministère de l'équipement, du transport, de la logistique et de l'eau (Ministry of Equipment, Transport, Logistics and Water))

Implementation of the National Rural Roads Program (PNRR) has opened up rural areas, particularly those bordering major urban centers. A number of rural areas remain, however, excluded from this process.

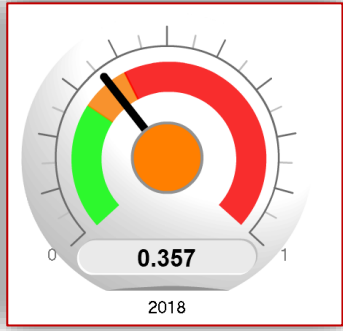
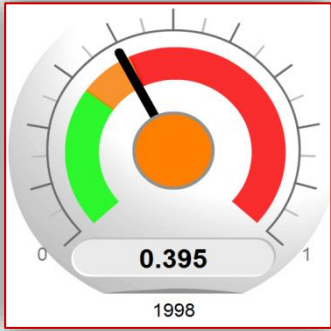
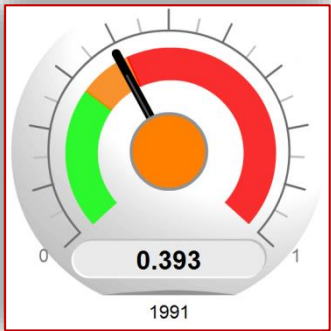


Living conditions
Inequality and poverty

Gini Index

(Source: IRES calculations _ HCP; ONDH; UNDP)

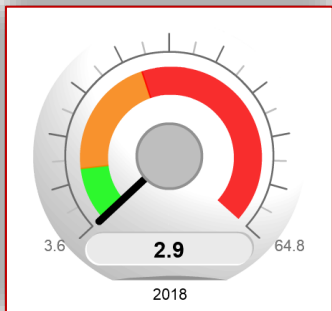
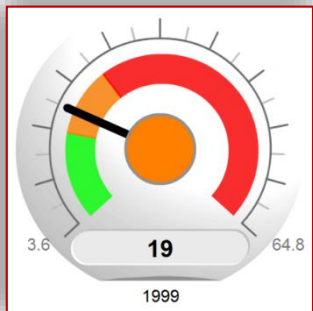
The Moroccan economy's growth model still generates inequality. Despite human development policies, the GINI index has stagnated over the last two decades.



Relative poverty rate

(Source: IRES calculations _ HCP; World Bank)

Morocco's relative poverty rate dropped by a factor of six between 1999 and 2018, thanks to gradual improvement in standards of living and development of income-generating activities, particularly in rural areas. The standstill in economic and commercial activities during the second quarter of 2020, however, in the wake of confinement measures, could push a significant portion of Moroccans into poverty, particularly those operating in the informal sector.



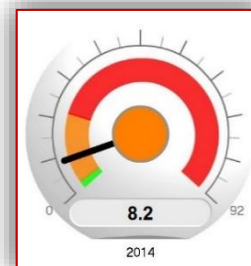
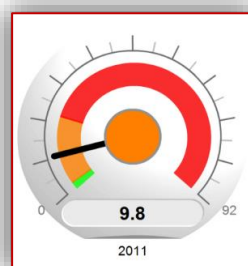
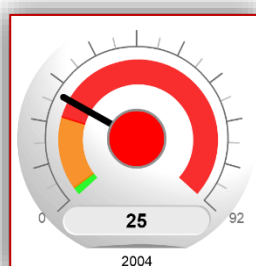
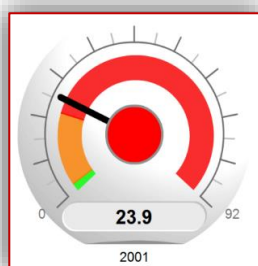
Living conditions

Inequality and poverty

Multidimensional poverty rate

((Source: IRES calculations _ HCP; UNDP)

***Reduced levels of deprivation in education, health and household living conditions,** largely as a result of public policies putting people at the heart of development and, starting in 2005, of actions initiated as part of the National Initiative for Human Development, targeting the most vulnerable in particular.*



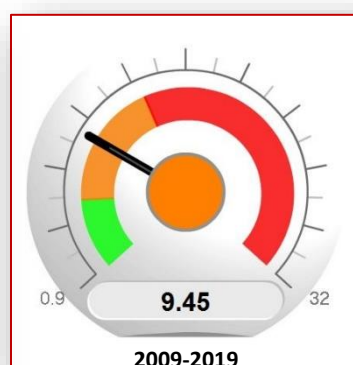
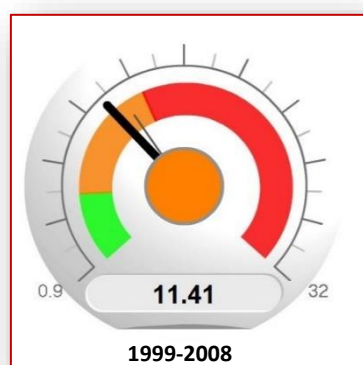
Living conditions

Employment and Unemployment

National unemployment rate (%)

(Source: IRES calculations _ HCP; ILO)

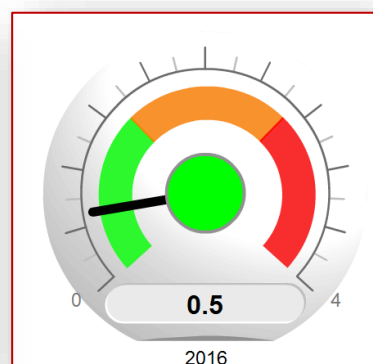
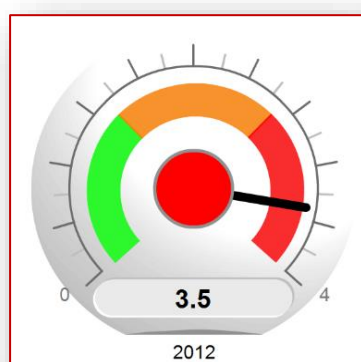
Unemployment has declined over the last two decades, but remains high. In today's more challenging international economic context, unemployment primarily affects young graduates, in part because of a gap between training and labor market needs. The High Commission for Planning projects this rate to reach 14.8% by end of 2020, in the wake of the Covid-19 pandemic.



Extent of informal work

(0 = not at all important; 4 = very important) (Source: IRES calculations _ CEPIL)

Significant improvement in Morocco's ranking on this indicator contrasts with the fact that the informal sector, a source of income for nearly 4.5 million Moroccan households, continues to play a major role in the economy. The 2020 health crisis revealed the need to quickly implement a comprehensive strategy to integrate this sector into the formal economy.

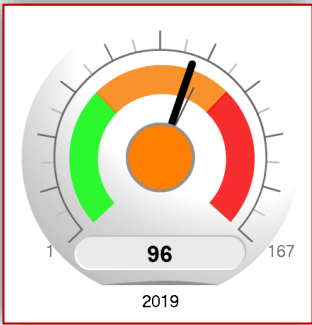
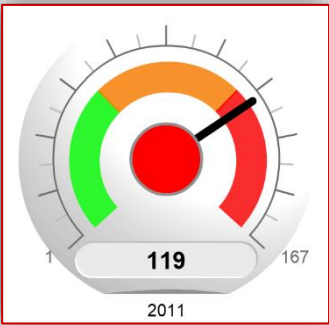
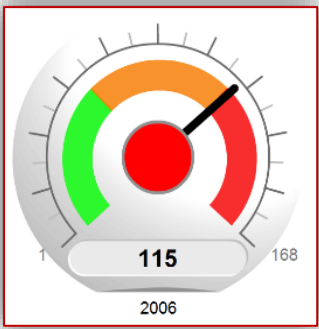


Democracy

Democracy Index

(Source: IRES Calculations_ Economist Intelligence Unit)

Morocco's ranking on the democracy index improved over the 2010 decade, reflecting progress in building institutional capital, as evidenced by the adoption of the 2011 Constitution.

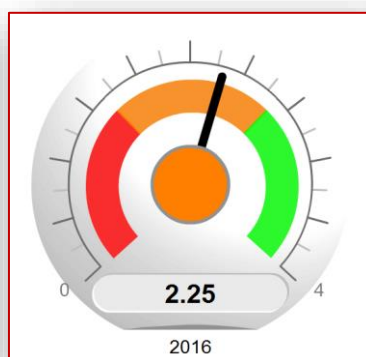
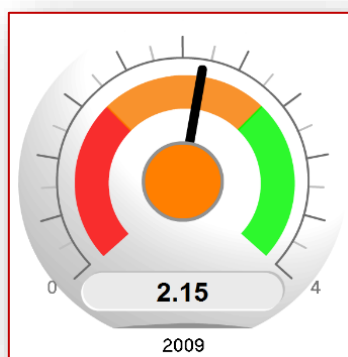


Democracy

Civil liberties

(0 = very little freedom; 4 = strong freedom) (Source: IRES Calculations _ CEPII)

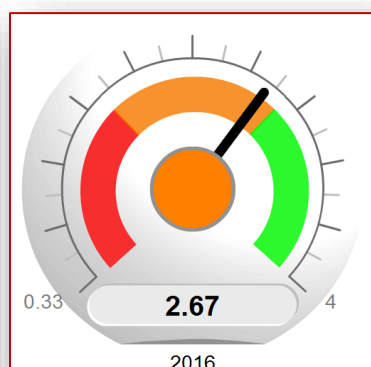
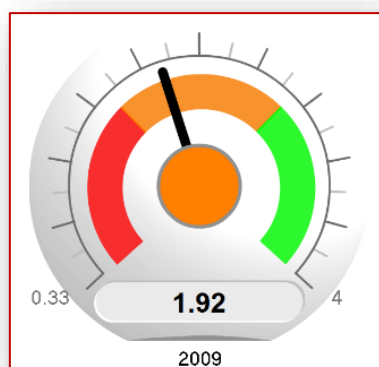
Morocco's ranking on this index improved slightly, largely as a result of advances in freedom of demonstration, respect for minority rights and freedoms, and equal treatment of citizens in interacting with government agencies.



Freedom of Information

(0 = no freedom of information; 4 = strong freedom of information) (Source: IRES Calculations _ CEPII)

Significant progress in Morocco's ranking on this index as a result of a number of constitutional reforms enabling citizen's access to information and plurality of opinion.

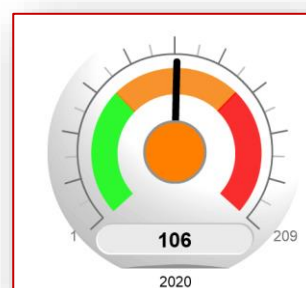
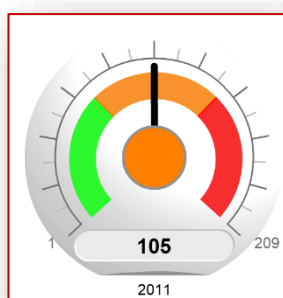
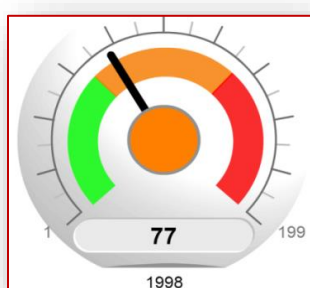


Public sector and governance

Rule of Law Index

(Source: IRES Calculations _ World Bank)

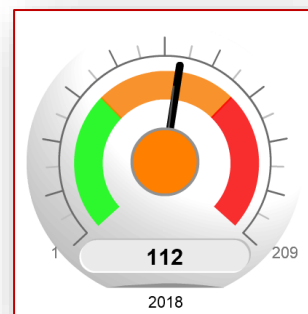
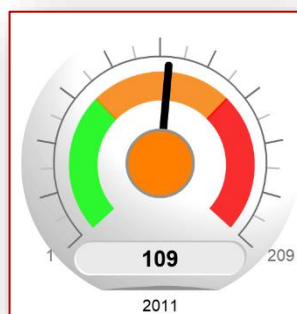
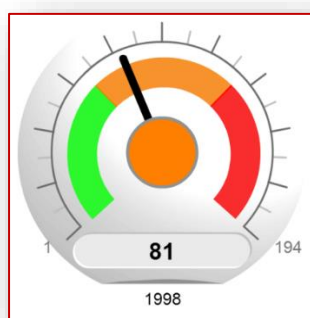
The global ranking of Morocco on the rule of law index is paradoxically worse in 2020 than it was in 1998. Beyond mere institutional considerations, consolidation of the rule of law in Morocco depends, in particular, on genuine independence of the judiciary.



Government Effectiveness Index

(Source: IRES Calculations _ World Bank)

A drop in Morocco's ranking on the Government Effectiveness Index, reflecting the need for comprehensive public administration reform.

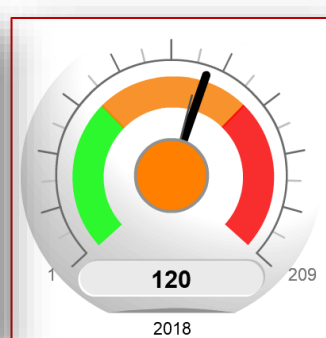
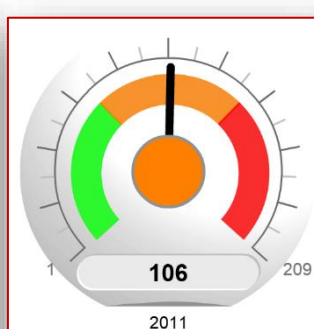
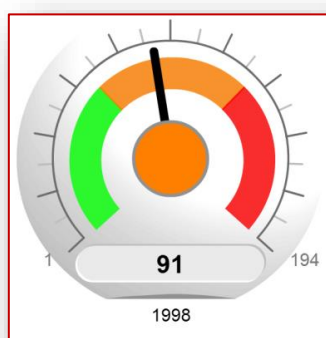


Public sector and governance

Regulatory Quality Index

(Source: IRES Calculations _ World Bank)

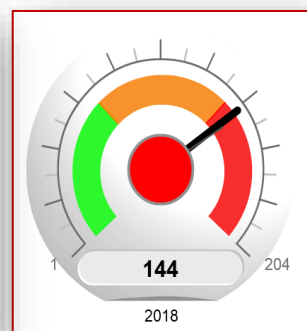
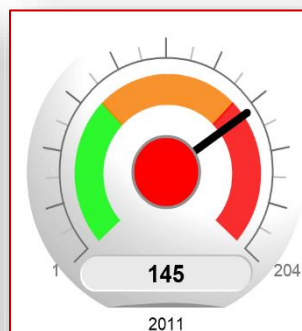
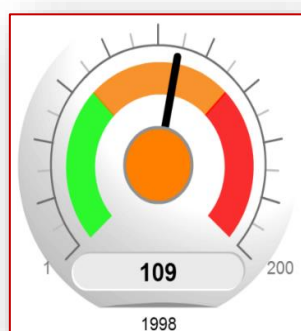
Morocco's global ranking on this index declined against a background of substantial regulatory reforms to stimulate private sector development.



Expression and Accountability Index

(Source: IRES Calculations _ World Bank)

Morocco's global ranking on this index fails to account for achievements under the 2011 Constitution in terms of guaranteed citizen fundamental rights. These achievements are to be consolidated going forward by broadening freedom of expression.

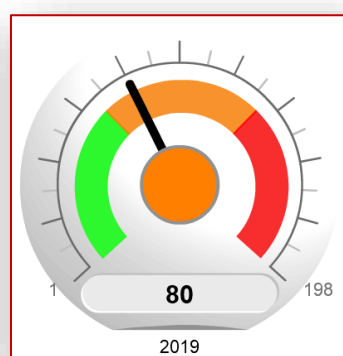
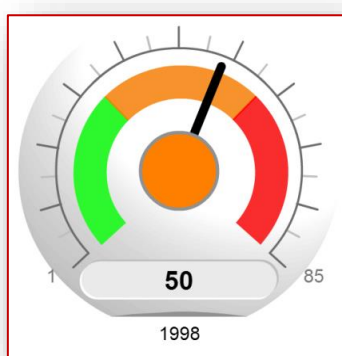


Public sector and governance

Corruption Perception Index

(Source: IRES Calculations _ Transparency international)

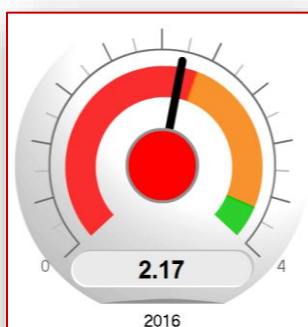
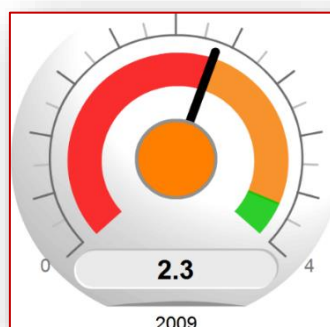
Morocco is still prey to this phenomenon, impacting citizen confidence and business climate. The National Survey on the Social Bond, conducted by IRES in 2016, identified **corruption as a major obstacle to peaceful coexistence.**



Public service territorial coverage

(0 = low coverage; 4 = fully covered) (Source: IRES Calculations _ CEPII)

A slight decline in Morocco's ranking between 2009 and 2016 on public services territorial footprint in the areas of education, health, access to drinking water, energy, and transportation.

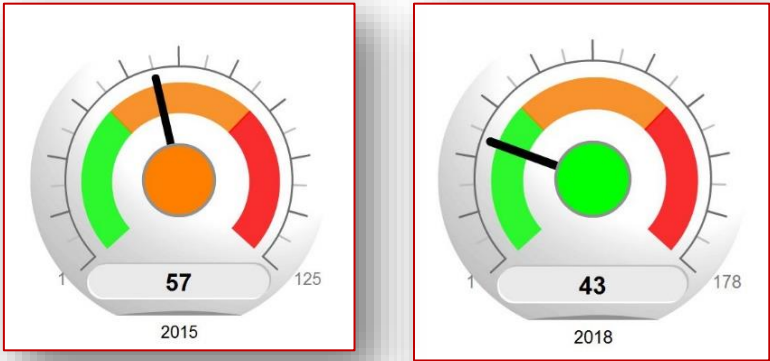


Public sector and governance

Open Data Inventory Index (ODIN)

(Source: IRES Calculations _ Open Data Watch)

Significant improvement in Morocco's global ranking on this index. The Kingdom, having been the first African country to equip itself with an open data platform, ranks first in North Africa. The country would benefit from implementing a genuine open data strategy that is consistent with the legal framework, specifically legislation on information access rights and the protection of personal data.



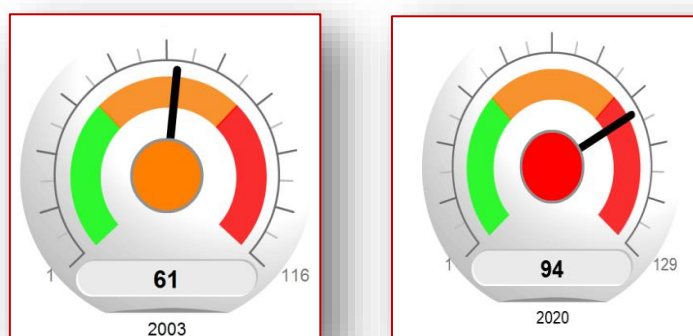
Public sector and governance

Bertelsmann Stiftung's Transformation Index

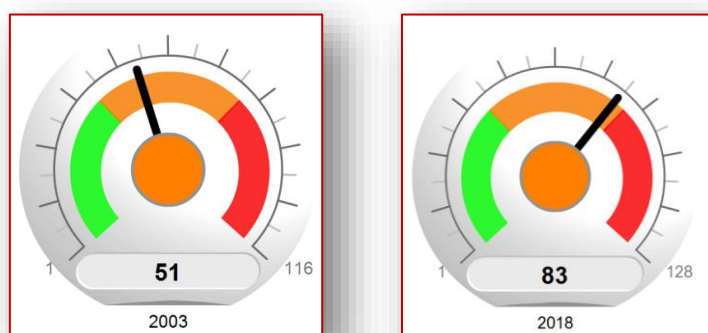
(Source: IRES Calculations _ World Bank)

Morocco's global ranking on these indices declined, despite political and socioeconomic transition reforms and measures undertaken by the Kingdom. The ranking is to be improved were Morocco to successfully and fully operationalize the 2011 Constitution, enshrining a democratic approach based on the rule of law and principles of social justice.

Ranking of Morocco on the "Status Index" (first component of the "Bertelsmann Stiftung's Transformation Index")



Ranking of Morocco on the "Management Index" (second component of the "Bertelsmann Stiftung's Transformation Index")

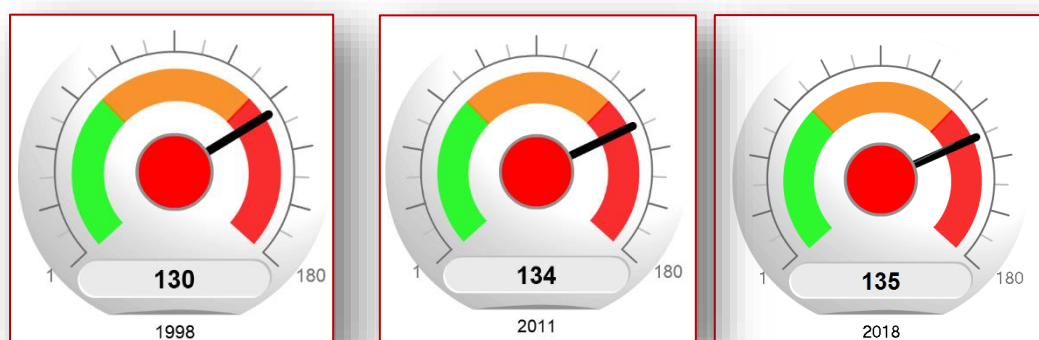


Public sector and governance

Freedom of the Press Index

(Source: IRES Calculations _ Freedom House)

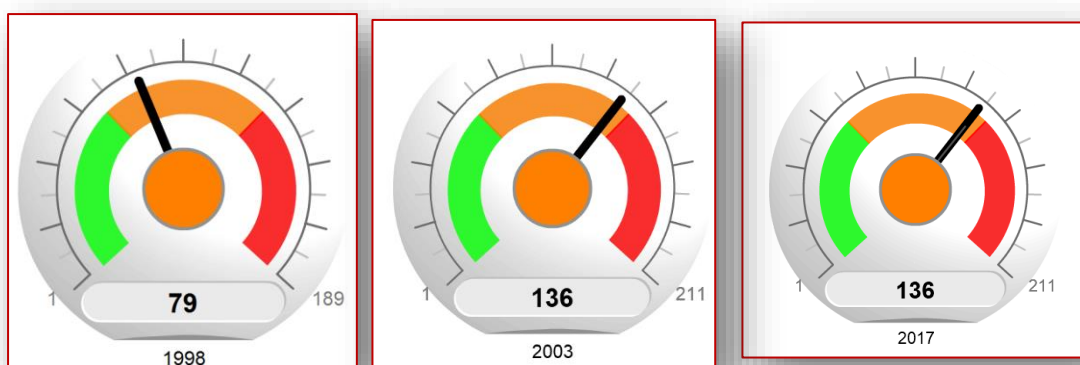
Morocco's global ranking on this index fails to reflect advances made in promoting freedom of the press.



Index of political stability and absence of violence and terrorism

(Source: IRES Calculations _ World Bank)

Morocco's global ranking on this index declined between 1998 and 2017, due in part to increased transnational threats.

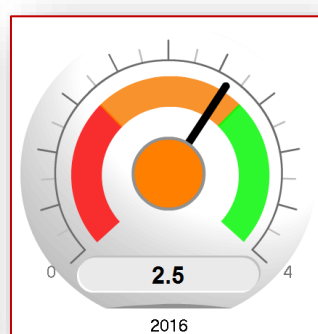
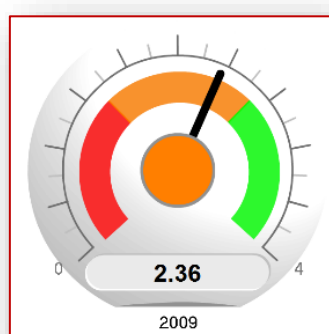


Public sector and governance

Political Institution Operations

(0= Very numerous irregularities; 4 = Perfectly regular) (Source: IRES Calculations _ CEPII)

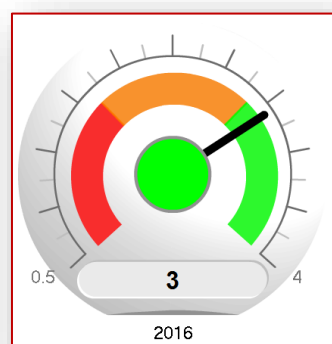
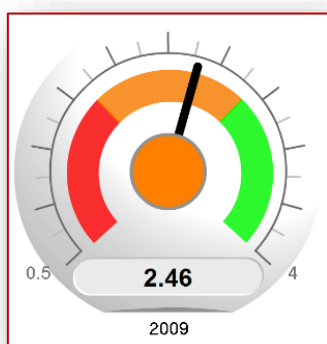
Morocco's improved global ranking on this index is to be consolidated with steps to address gaps in the political landscape and to ensure institutional transparency and good governance.



Economic policy transparency

(0= very low transparency; 4 = high transparency) (Source: IRES Calculations _ CEPII)

Morocco's good ranking on this index reflects the government's practice of broadcasting economic policy via communication networks and incorporating this policy in the public debate.

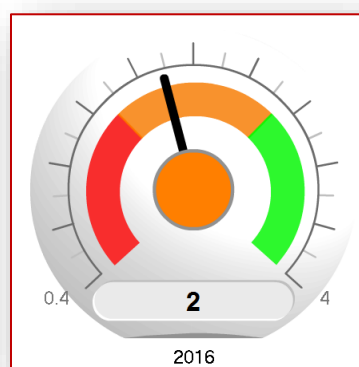
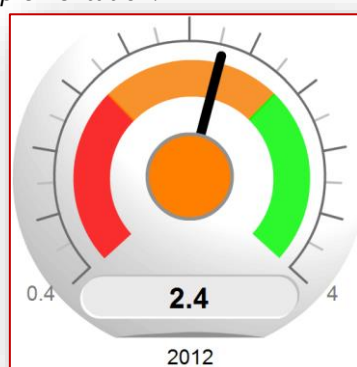


Public sector and governance

Sectoral reform capacities

(0 = low capacity; 4 = high capacity) (Source: IRES Calculations _ CEPII)

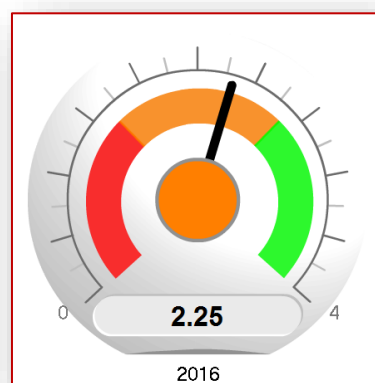
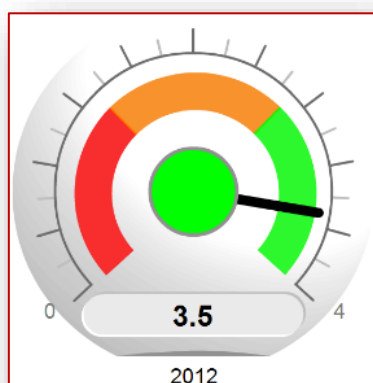
Morocco ranks somewhere in the middle on government capacity to decide on and implement sector reforms. Additional efforts are required, particularly in terms of effective reform implementation.



Long-term sectoral strategies

(0 = very weak strategic vision; 4 = strong strategic vision) (Source: IRES Calculations _ CEPII)

Morocco lost ground on this index ranking, despite implementation by the government of long-term strategies aimed at human capital development, land use planning, environmental protection and the international and regional integration.

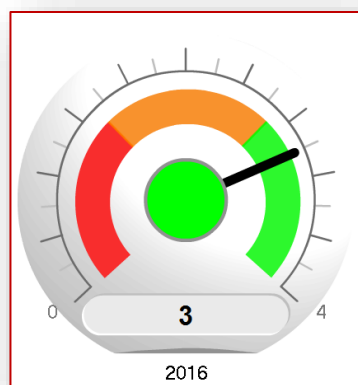
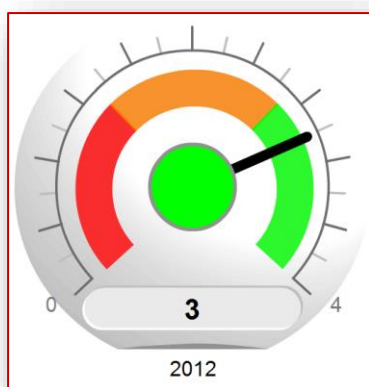


Public sector and governance

Support for vibrant emerging sectors

(0= poor support; 4 = perfect support) (Source: IRES Calculations _ CEPII)

Morocco ranks favorably in this index, sustained by the development of vibrant new sectors including the automotive and aeronautics industries.

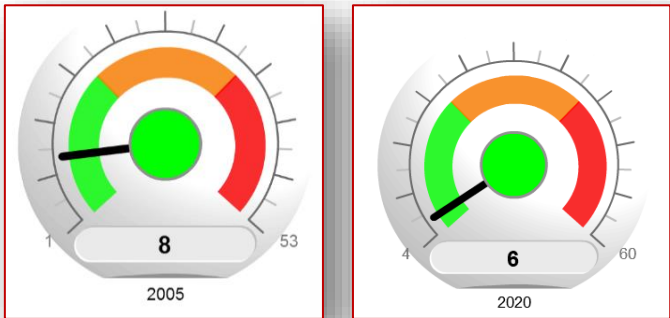


Climate change

Climate Change Performance Index

(Source: IRES Calculations _ Germanwatch)

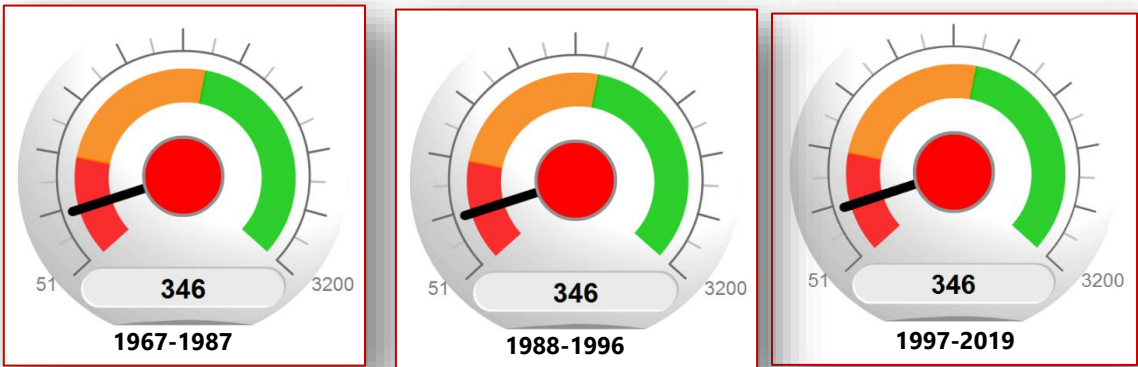
Morocco ranks highly on this index, in view of the country's low contribution to greenhouse gas (CO2) emissions and continued commitment to the fight against climate change.



Average rainfall in mm/year

(Source: IRES Calculations _ World Bank)

Water is crucial to the development of Morocco, a semi-arid country. 20-year averages for a number of stations nationwide indicate a stagnation in rainfall volumes over a ten-year period, along with increased frequency of intense rainfall.

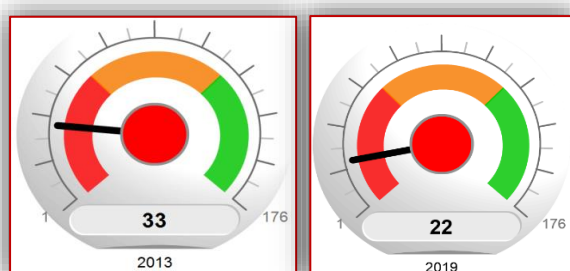


Climate change

Exposure to climate change risks

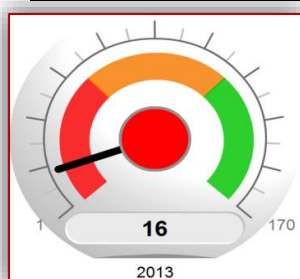
The following four "World Resources Institute" indicators, released in 2013, and updated in part in 2019, are based on average country exposure to risks related to water, arguably the most strategic of resources.

Water stress



*Morocco stands among countries at **risk of water stress**, owing to rising demand at a time of declining water supply, primarily as a result of climate change.*

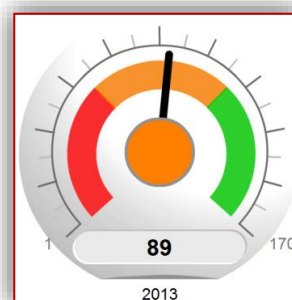
Inter-annual water variability



*Morocco, a semi-arid country, has a **high degree of inter-annual variability** in water availability. It ranks **16th out of 170 countries** on this dimension.*

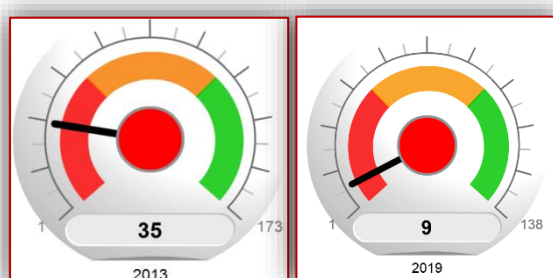
Seasonal water variability

*Morocco is among countries with **medium to high seasonal water variability**. It ranks **89th out of 170 countries**.*



Drought severity

*Morocco ranks as **medium to high in drought vulnerability**.*

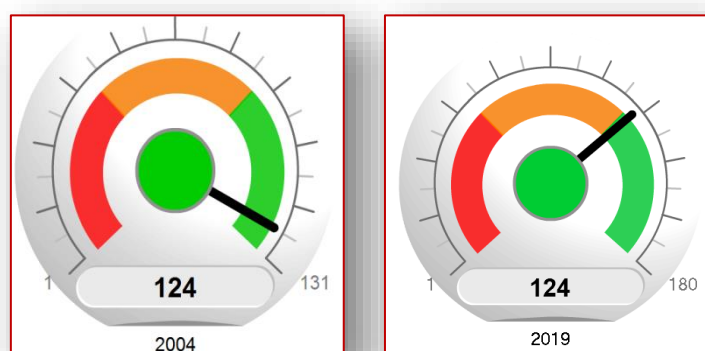


Natural disasters

Global Climate Risk Index

(Source: IRES Calculations _ Germanwatch)

Morocco faces a number of climate risks, specifically drought and floods, the economic and human costs of which are relatively high. Climate change, a global challenge, must be incorporated into all national public policies.

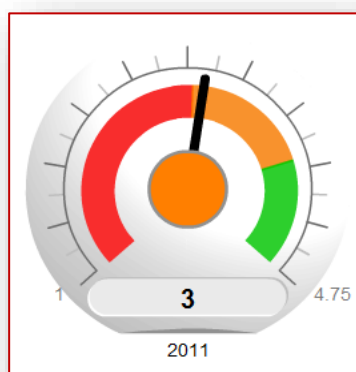


Natural Disaster Risk Reduction Progress Score

(from 1 poor to 5 very good)

(Source: IRES Calculations _ World Bank)

Morocco ranks somewhere in the middle on natural disaster risk management. National capacities are to be strengthened by expanding early warning systems to all regions and to all hazards, and by genuine institutional coordination in this area.

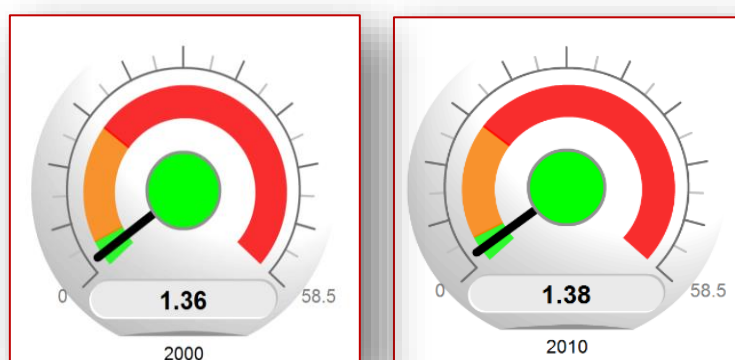


Natural disasters

Risk of marine submersion (Population living at altitudes under 5m as a % of total population)

(Source: IRES Calculations _ World Bank)

1 out of 72 Moroccans live on land that is vulnerable to marine submersion. Sea level rises could accelerate in the future causing significant risks of coastal erosion, submergence of coastal plains and salinization of water tables.



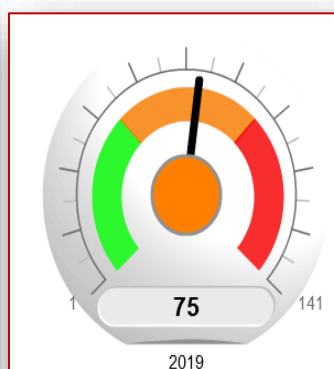
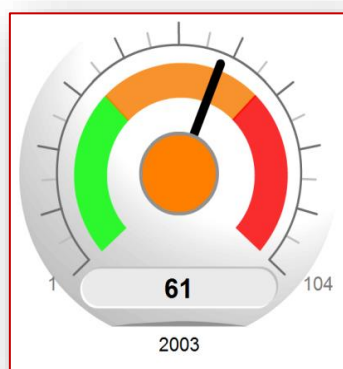
Ensuring globalization readiness

Competitiveness/ Attractiveness

Global Competitiveness Index

(Source: IRES Calculations _ World Economic Forum)

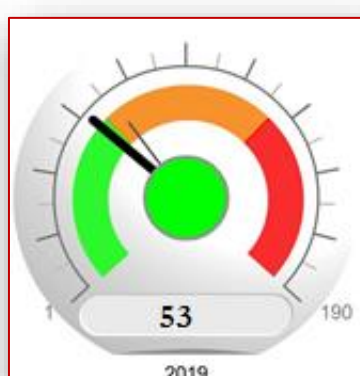
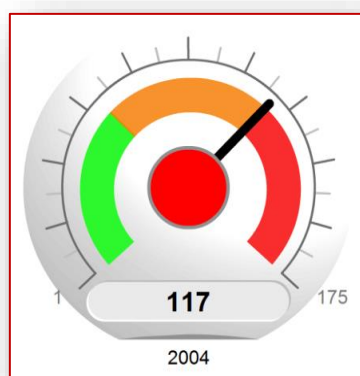
Morocco's slightly improved global ranking on this index is commensurate with government efforts in terms of sustained infrastructure development and enhanced logistics competitiveness.



Doing Business Index

(Source: IRES Calculations _ World Bank)

Morocco significantly improved its global ranking on ease of doing business, gaining 75 spots between 2004 and 2019, driven by progress in areas such as business creation, transfer of ownership, loan access, protection of minority investors, and cross-border trade.



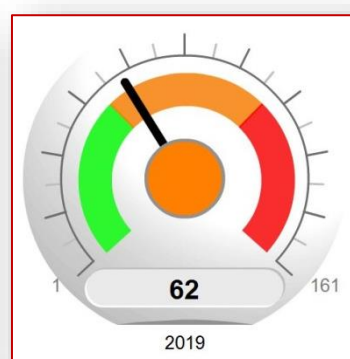
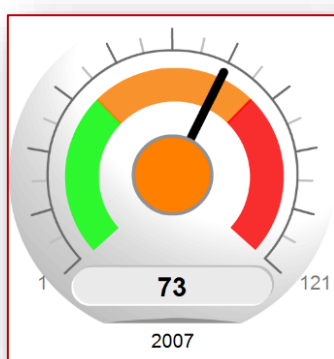
Ensuring globalization readiness

Competitiveness/ Attractiveness

Best Countries for Business Index

(Source: IRES Calculations _ Forbes)

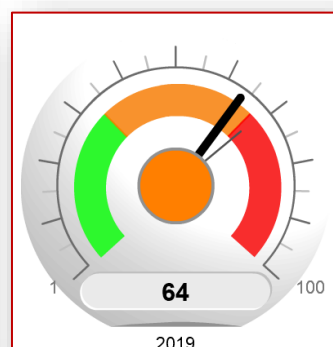
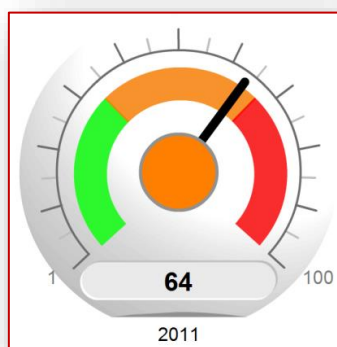
Considerable improvement in Morocco's global ranking on this index. Morocco gained 35 spots between 2007 and 2019, as a result of efforts to improve the general business climate in the Kingdom.



Brand Finance Nation Brands

(Source: IRES Calculations _ Brand Finance)

The global ranking for brand-Morocco does not account for the country's numerous assets. This ranking is largely attributable to the absence of both an integrated strategy for brand-Morocco and active communication on the Kingdom's global image.



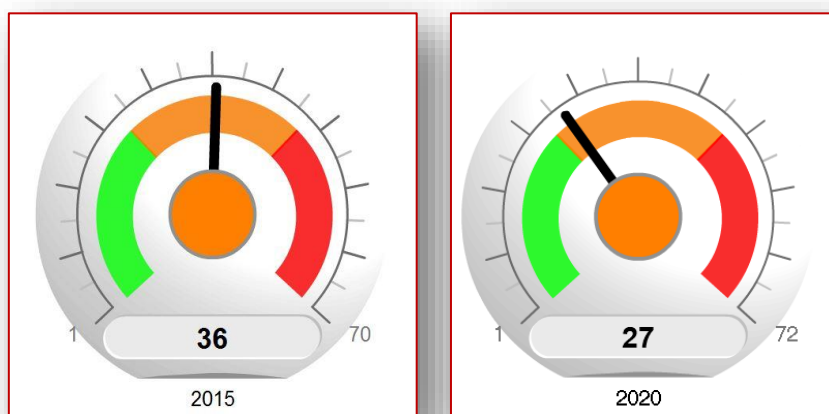
Ensuring globalization readiness

Competitiveness/ Attractiveness

Reprtrak Country Reputation Index

(Source: IRES Calculations; Reprtak)

Significant improvement in Morocco's global ranking on this index. In 2020 -the year of Covid-19-, Morocco entered the select group of top 30 nations on reputation. The country's international reputation exceeds that of Indonesia and the BRICs and far surpasses that of Turkey and all Arab and African countries.



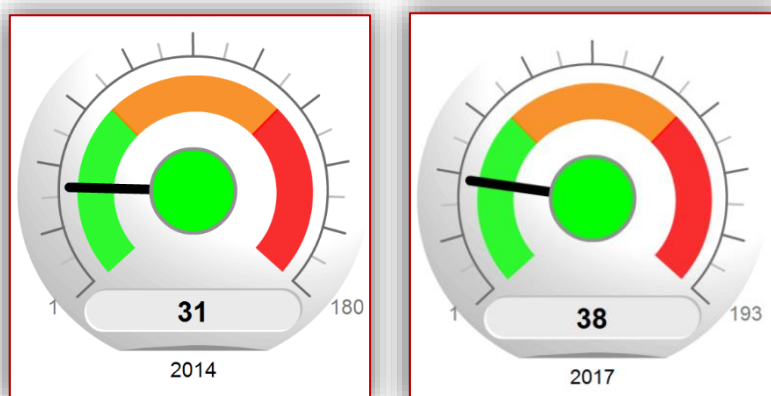
Ensuring globalization readiness

Competitiveness/ Attractiveness

Bloom Consulting Country Brand Ranking

(Source: IRES Calculations _ Bloom Consulting)

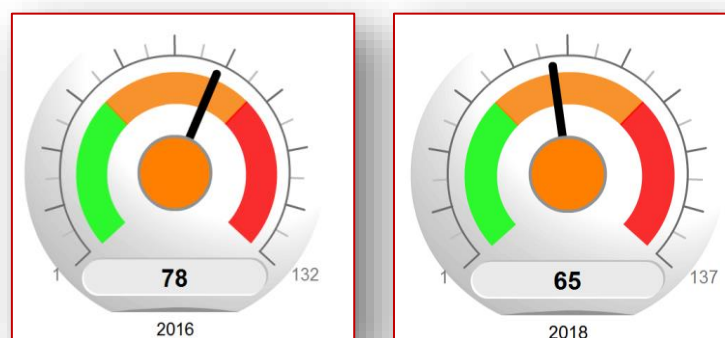
Morocco's excellent ranking in terms of tourist sector attractiveness, confirms its status as a tourist destination of choice in Africa and the Southern Mediterranean.



Global Entrepreneurship Index

(Source: IRES Calculations _ The Global Entrepreneurship and Development Institute)

Improved ranking for Morocco on this index, coming in at 5th in Africa. This ranking is sustained by the country's ability to develop new products and integrate new technologies. Additional efforts are however, to be made in terms of competitiveness and marketing of Moroccan products internationally.



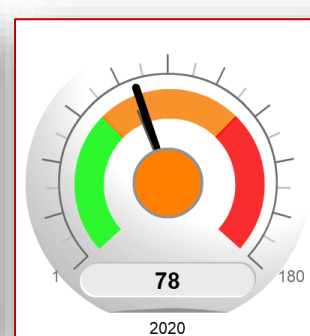
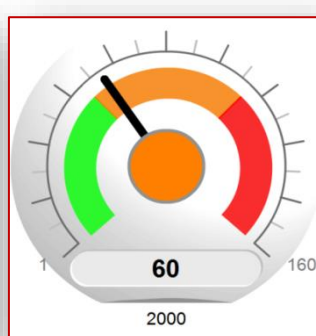
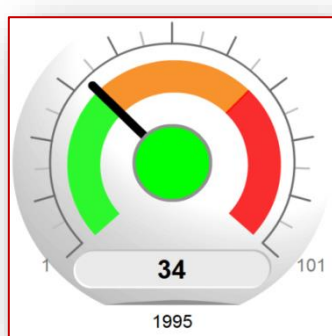
Ensuring globalization readiness

Competitiveness/ Attractiveness

Global Index of Economic Freedom

(Source: IRES Calculations _ The Heritage Foundation)

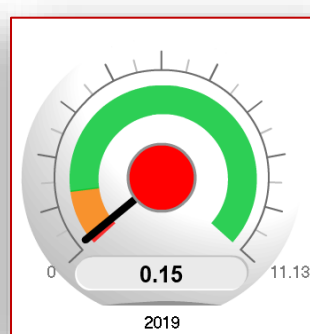
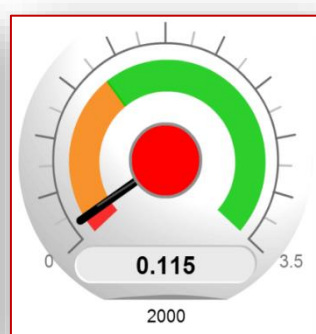
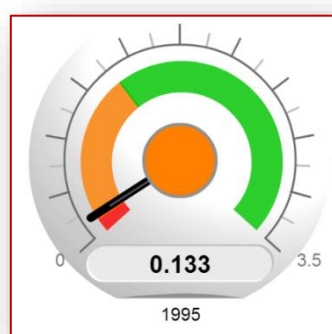
Morocco's regression on the Global Index of Economic Freedom ranking, is largely due to sluggish progress in the fight against corruption.



Global market share (%)

(Source: IRES Calculations _ WTO)

Morocco's share of global markets hardly exceeds 0.15%. This is incommensurate with the country's potential and ambitions. Signs of improvement have, however, been noted in recent years.



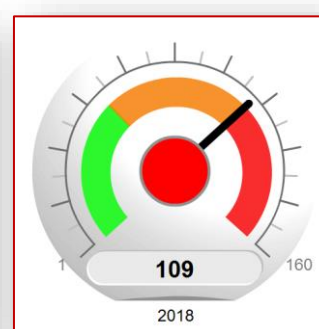
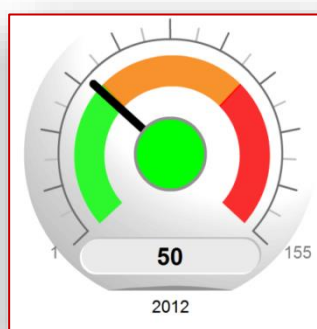
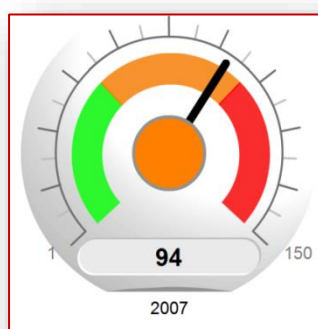
Ensuring globalization readiness

Competitiveness/ Attractiveness

Logistics Performance Index

(Source: IRES Calculations _ World Bank)

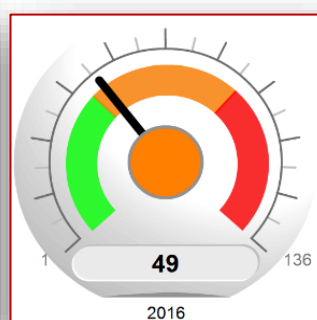
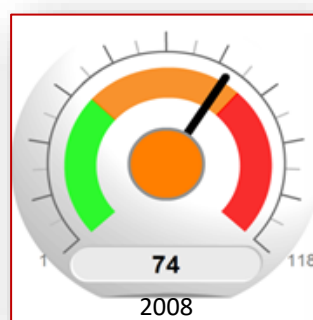
Morocco gained 44 spots in the global logistics performance ranking between 2007 and 2012, in the wake of a global logistics strategy aimed at modernizing and accelerating the development of transport and distribution infrastructure. Morocco's global ranking has, nevertheless, declined in recent years, due mainly to poor performance on speed of dispatch, tracking and tracing of logistics activities.



The Enabling Trade Index

(Source: IRES Calculations _ World Bank)

Morocco's global ranking on enabling trade improved significantly. The country gained 31 spots between 2008 and 2016, driven in particular by advances in the availability and quality of transport and communication infrastructure and accessibility to foreign markets.



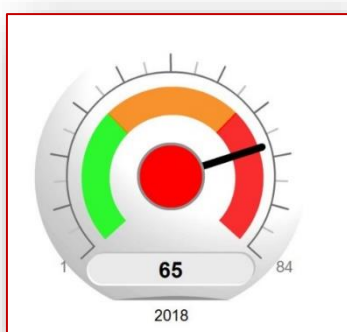
Ensuring globalization readiness

Competitiveness/ Attractiveness

Global illicit trade environment index

(Source: IRES Calculations _ Economist Intelligence Unit)

Morocco's global ranking on this index is inadequate, despite the Kingdom's commitment to the fight against smuggling and counterfeiting of excisable products.

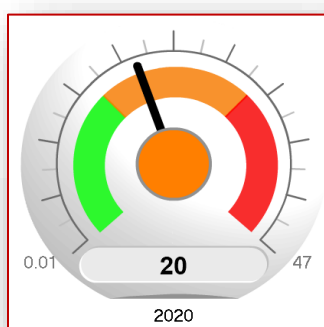


Global Manufacturing Risk Index

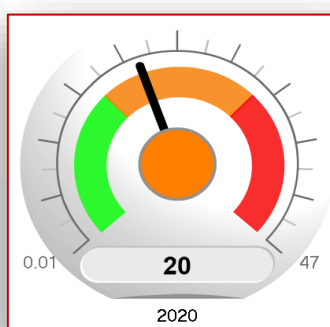
(Source: IRES Calculations _ Cushman & Wakefield)

The Kingdom is an attractive industrial outsourcing destination, as a result of major structural projects undertaken within sectoral strategies, as well as improved business climate, as evidenced by Morocco's favorable ranking on the "Doing Business" index. However, according to the "Bouncebackability" component of this index, a number of Moroccan industries, heavily affected by health crisis-related confinement measures, are to experience difficulty recovering.

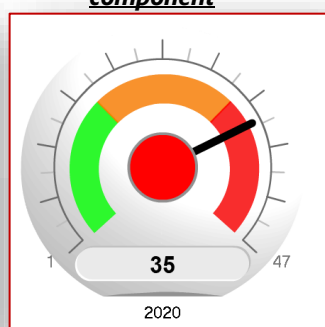
Risk component



Cost component



Post-COVID recovery component

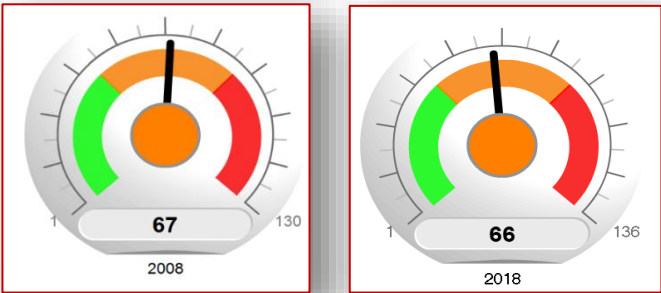


Ensuring globalization readiness
Competitiveness/ Attractiveness

Travel and Tourism Competitiveness Index

(Source: IRES Calculations _ World Economic Forum)

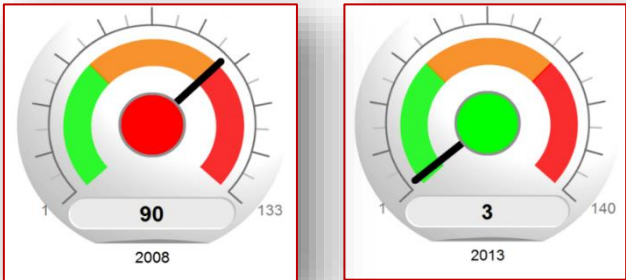
Morocco slightly improved its ranking on tourism competitiveness, gaining one spot between 2008 and 2018. This ranking is to be further improved should authorities, in a changing world, successfully develop a new vision of tourism that puts the sector's development within a framework of sustainability and preparing Morocco for the tourism of the future, leveraging the potential of virtual reality and artificial intelligence. It is essential in the immediate to preserve achievements and ensure a rapid recovery of tourism activity in 2021, as foreign exchange earnings could plummet by as much as 60% between 2019 and 2020.



Foreign tourist reception quality indicator

(Source: IRES Calculations _ World Economic Forum)

Morocco's exceptional ranking on the quality of the welcome reserved for foreign tourists, reflects the hospitality of Moroccans. Indeed, the six editions of IRES' study on Morocco's global reputation indicate that "Friendly and amicable population" is a strong point of the Kingdom's reputation, both domestic and foreign.



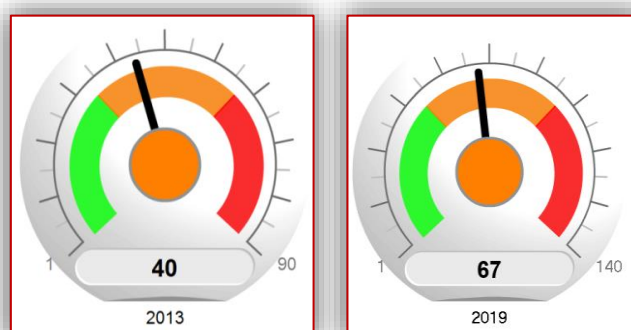
Ensuring globalization readiness

Competitiveness/ Attractiveness

Change Readiness Index

(Source: IRES Calculations _ KPMG and Oxford Economics Group)

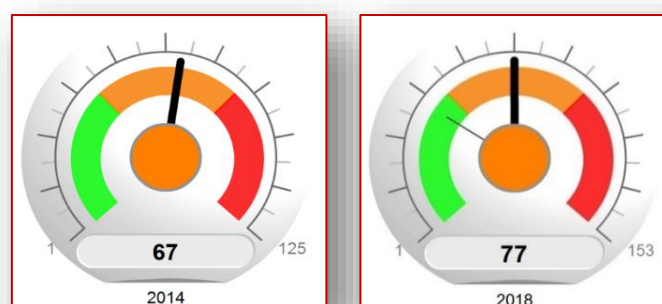
Morocco's ability to manage socio-economic and political change and seize ensuing opportunities, is confirmed by the Kingdom's 67th out of 140 countries ranking on the 2019 Change Readiness Index.



Good Country Index

(Source: IRES Calculations _ The good country)

Significant improvement in Morocco's global ranking on contribution to global governance. This confirms the credible partner status of Morocco on the international stage, through commitment to peace and security and sustainable development in the region and beyond.



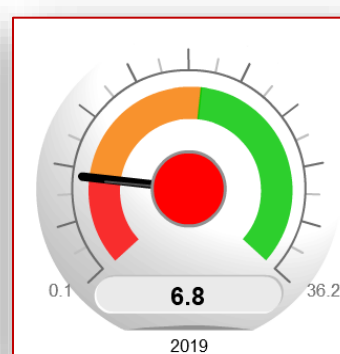
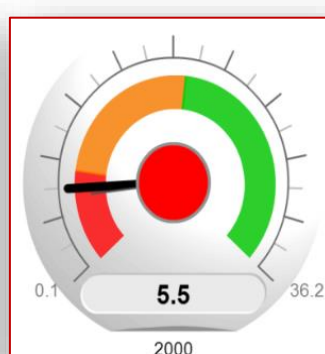
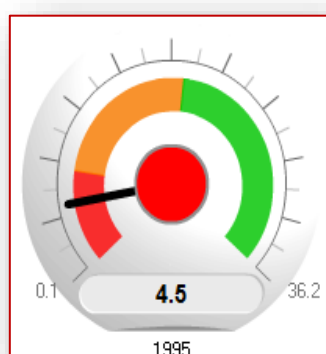
Ensuring globalization readiness

Competitiveness/ Attractiveness

Tourism revenues as % of GDP

(Source: IRES Calculations _ Foreign Exchange Office data; World Bank)

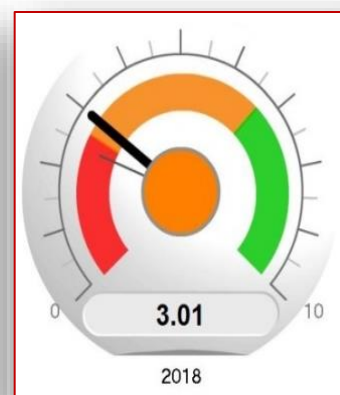
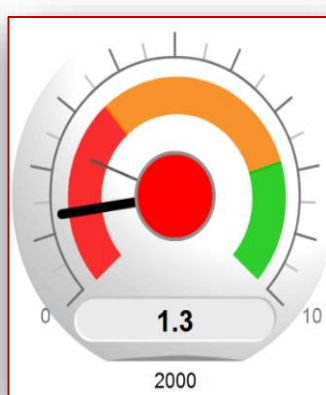
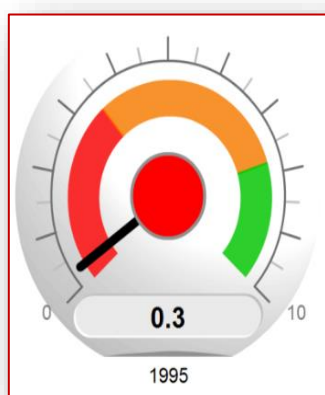
Increased share of tourism revenues to GDP, driven by Morocco's positive image and its political and social stability. Advances made still fail to elevate Morocco to the rank of countries with strong tourist attraction.



Foreign direct investment as a % of GDP

(Source: IRES Calculations _ Foreign Exchange Office data; World Bank)

Morocco's attractiveness to foreign investment surged, reflecting not only the country's political stability and security, but also reforms undertaken, notably a number of sectoral strategies and improved overall business climate.



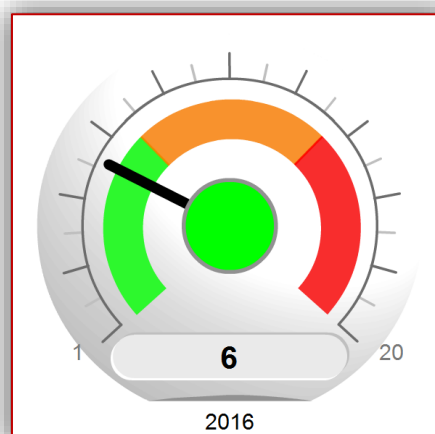
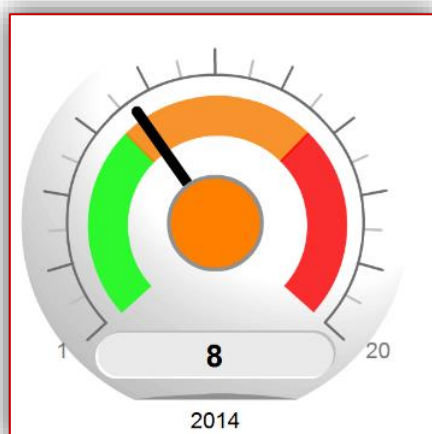
Ensuring globalization readiness

Competitiveness/ Attractiveness

Investment Attractiveness in the MENA Region

(Source: IRES Calculations _ Thomson Reuters; Deloitte)

*Morocco's ranking on investment attractiveness in the MENA region improved **substantially** as a result of the various actions carried out by the Kingdom in this area, as mentioned above.*



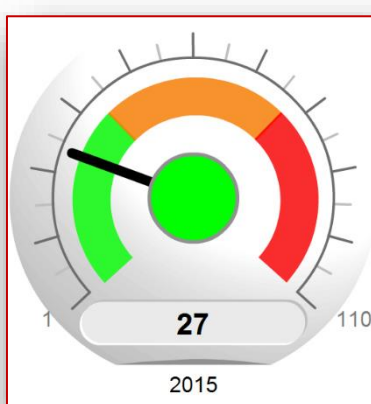
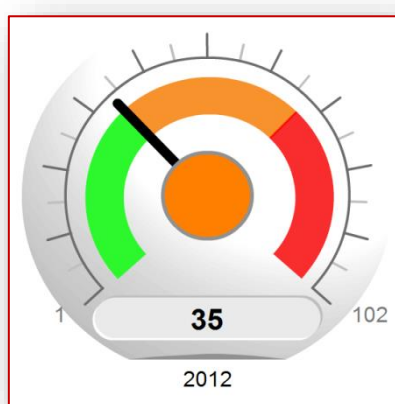
Ensuring globalization readiness

Competitiveness/ Attractiveness

Baseline Profitability Index

(Source: IRES Calculations _ Daniel Altman _ Foreign Policy)

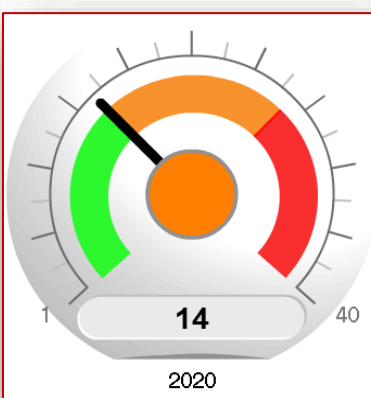
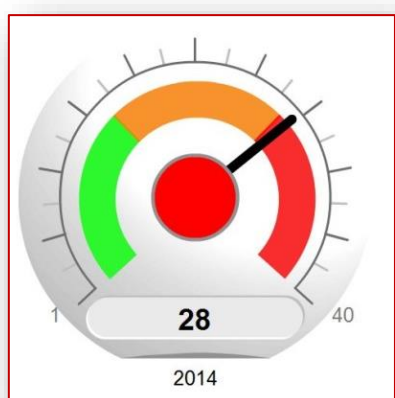
Morocco's strong ranking on foreign investment attractiveness is largely attributable to its financial stability.



Renewable Energy Country Attractiveness Index

(Source: IRES Calculations _ Cabinet Ernst & Young)

Morocco ranks among top countries for renewable energy investment. This confirms Morocco's ongoing commitment to energy transition.



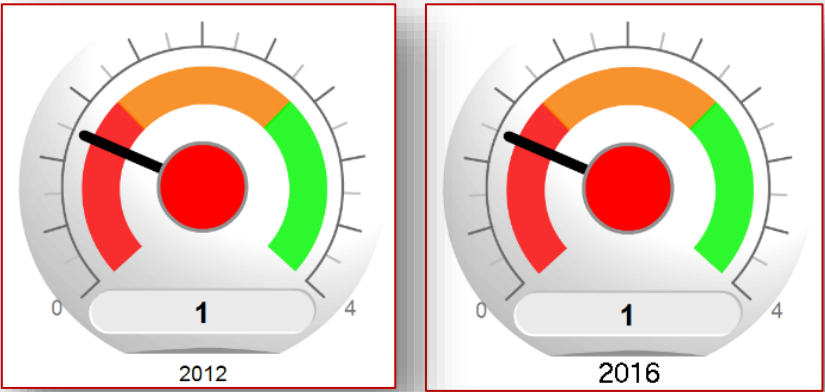
Ensuring globalization readiness

Competitiveness/ Attractiveness

Regulating competition

(0= very inefficient regulation; 4 = efficient regulation)(Source: IRES Calculations_ CEPII)

Morocco's ranking on this index reflects inadequate efforts to regulate competition at marketplace level. Competition Council operationalization and broadening of mandate should lead to better regulation of competition in Morocco.



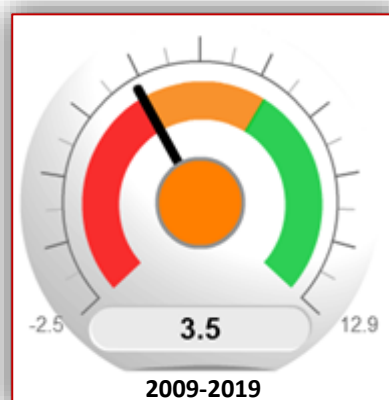
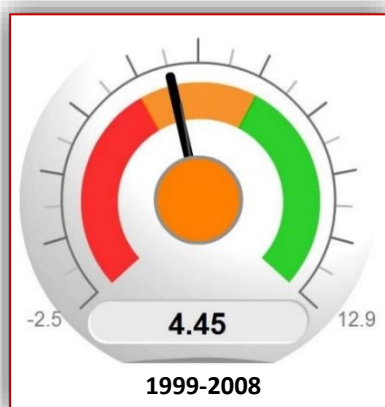
Ensuring globalization readiness

Macroeconomic stability

Economic growth rate (%)

(Source: IRES Calculations _ HCP data; World Bank)

Economic growth slowed from an annual average of 4.4% in 1999-2008 to 3.5% per year in 2009-2019. Driven mainly by household consumption and supported by substantial public investment, with little evidence of profitability, economic growth is not backed by productivity gains and still generates social inequality.



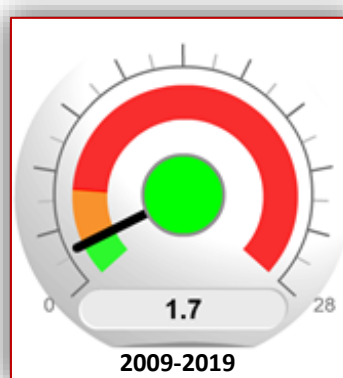
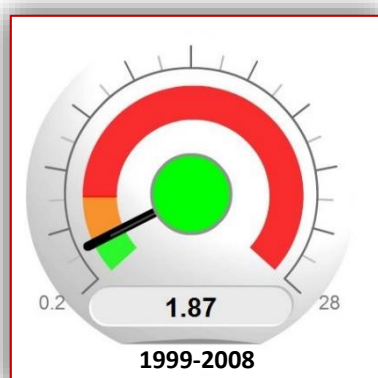
Ensuring globalization readiness

Macroeconomic stability

Inflation rate (%)

(Source: IRES Calculations _ HCP data; World Bank)

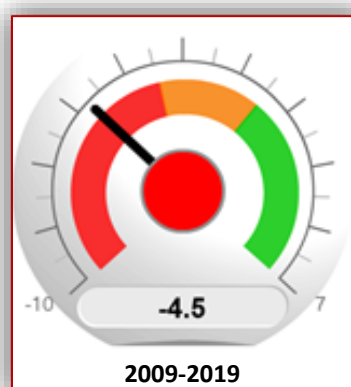
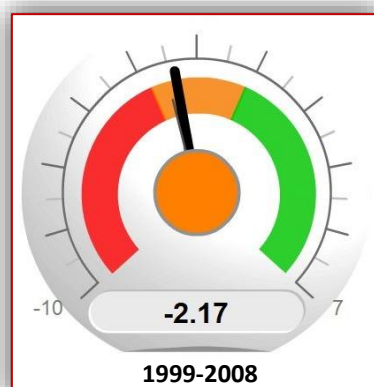
Inflation was kept under 1.7% on average over 2009-2019, with a monetary policy supporting price stability and a system of basic staple subsidies that limits imported inflation.



Fiscal balance as % of GDP

(Source: IRES Calculations _ Ministry of Economy and Finance data; IMF)

Moroccan fiscal balance deteriorated over the 1999-2008 to 2009-2019 period amid a rapidly shifting international economic environment. Morocco ought to pursue a fiscal policy of public expenditure rationalization to contain public spending pressures stemming notably from the health crisis and public deficit funding optimization through a better balance of internal and external financing sources.



Ensuring globalization readiness

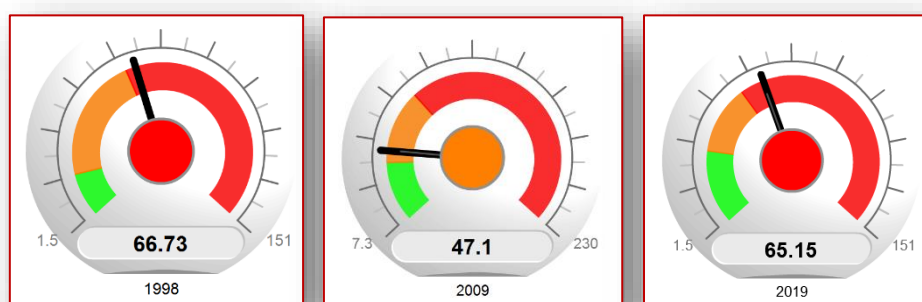
Macroeconomic stability

Public debt ratio: Direct treasury debt ratio

(Source: IRES Calculations _ Ministry of Economy and Finance data; IMF)

Public debt has surged. Having declined steadily since 1998, Treasury's direct debt ratio rose in 2010 and is expected to return to late 90s levels in 2019. Under the combined effect of the drought and the Covid-19 pandemic, this rate could reach 76% of GDP by year-end 2020.

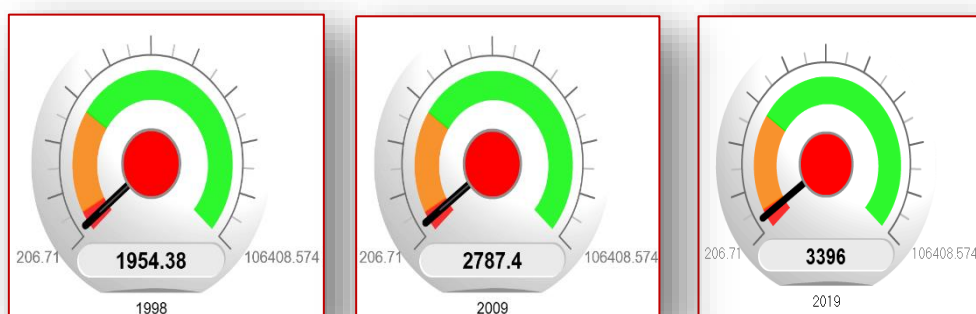
Accordingly, Morocco should, at all costs, avert a relapse into high public indebtedness, all the more so since recovery from the health crisis is likely to precede that of debt relief.



GDP per capita in constant 2010 dollars

(Source: IRES Calculations _ World Bank)

GDP per capita, in real terms, is improving steadily since the late 1990s. Average annual growth stands at 2.8% over the 1998-2019 period. **This is nonetheless insufficient in comparison with emerging countries or countries at comparable levels of development.**



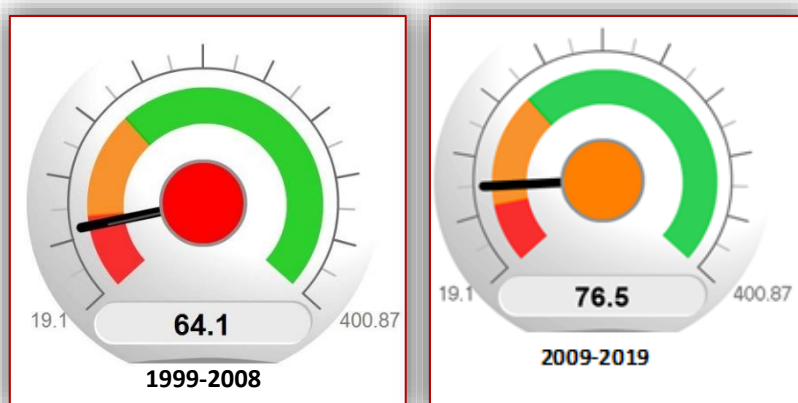
Ensuring globalization readiness

Macroeconomic stability

Economic Openness rate (goods and services) (%)

(Source: IRES calculations _ Foreign Exchange Office data; World Bank)

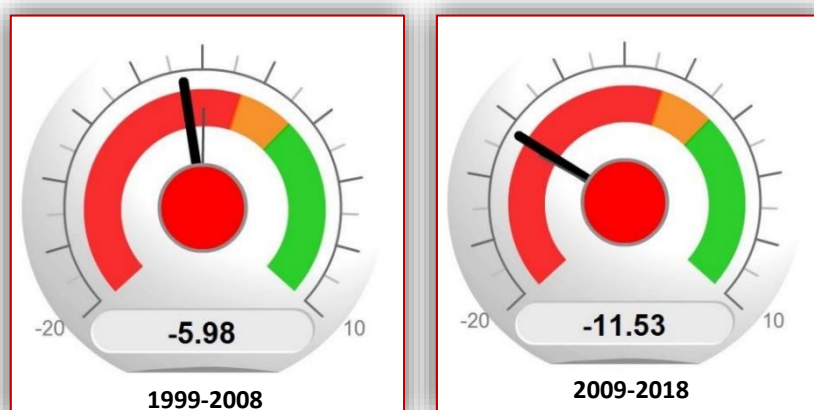
The Moroccan economy is increasingly open to the world, as a result of increased free trade agreements and active involvement in the multilateral trading system. This openness has, however, led to worsening trade balances due, especially, to domestic economy competitiveness weaknesses and to the insufficient tapping into trade agreement preference clauses by Moroccan firms.



Trade balance in goods and services as % of GDP

(Source: IRES calculations _ Foreign Exchange Office data; World Bank)

Widening trade deficits are attributable to insufficient competitiveness of exportable supply and higher import prices. Deficit are also attributable to trade liberalization under free trade agreements.



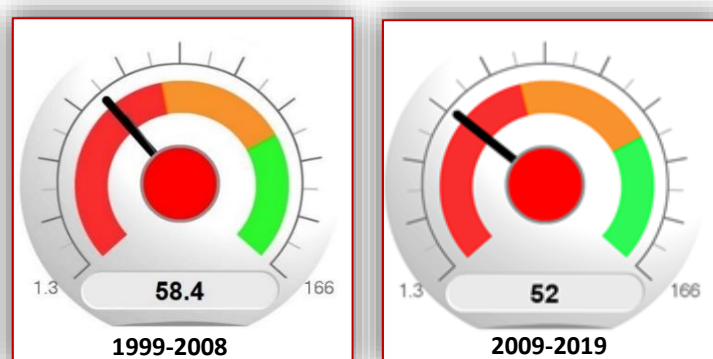
Ensuring globalization readiness

Macroeconomic stability

Export/ import coverage rate (in %)

(Source: IRES calculations _ Foreign Exchange Office data; World Bank)

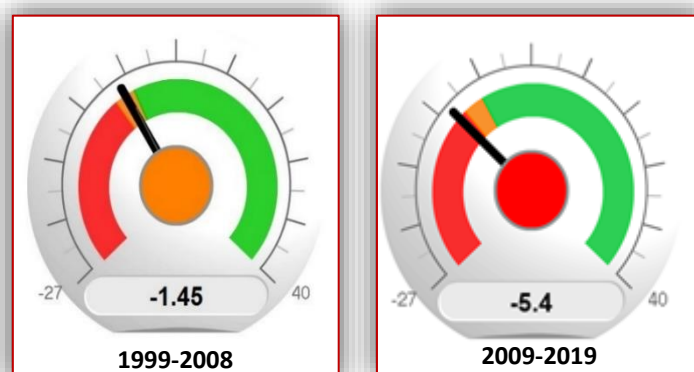
The 6 point drop between 1999-2008 and 2009-2019 in goods import to export coverage is due to previously mentioned issues of competitiveness.



Current account balance as % of GDP

(Source: IRES calculations _ Foreign Exchange Office data; IMF)

Widening current account deficits between 1999-2008 and 2009-2019 stemming mainly from the impact of the global economic crisis and the faster pace of growth of imports relative to exports.



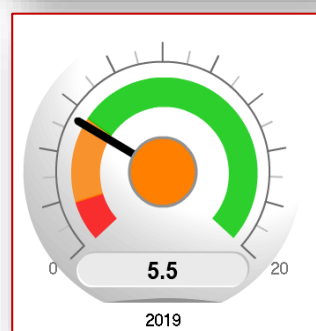
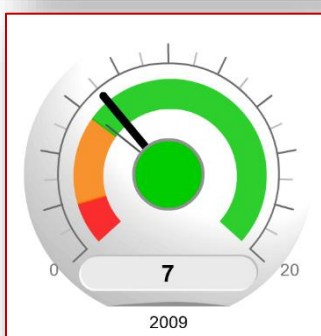
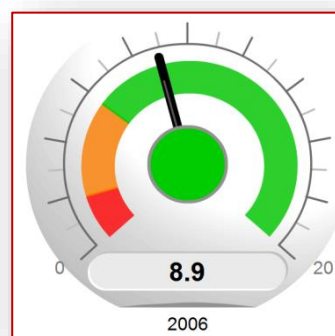
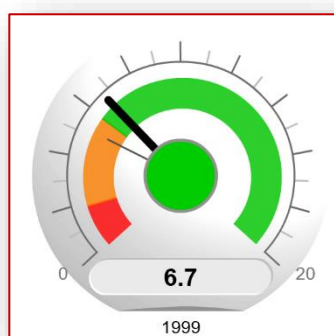
Ensuring globalization readiness

Macroeconomic stability

Foreign exchange reserves in months of imports

(Source: IRES calculations _ Foreign Exchange Office data; IMF)

While still fairly healthy at over 5 months of imports of goods and services, foreign exchange reserves continue to be under severe pressure.



Ensuring globalization readiness

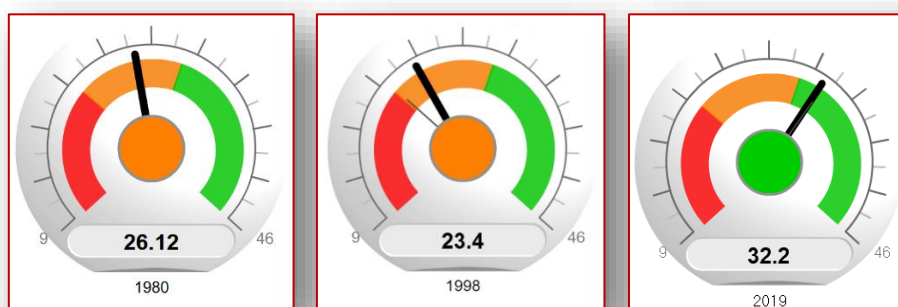
Macroeconomic stability

Financing the economy

Investment rate (GFCF/GDP) (in %)

(Source: IRES calculations _ HCP data; World Bank)

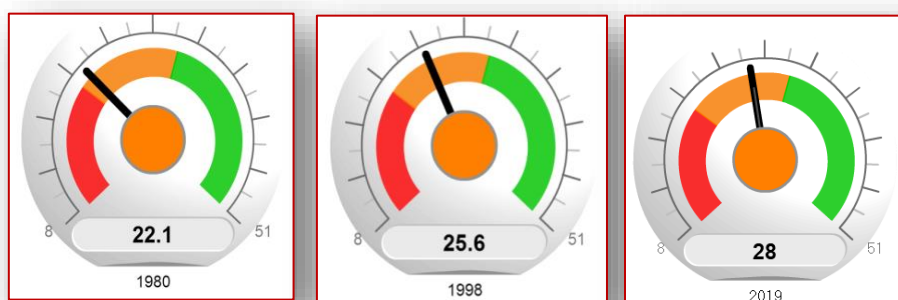
Investment rates in Morocco are high, similar to those of emerging Asian countries. This investment is, however, supported by strong contributions from the government and large public enterprises, generates insufficient returns and contributes to the worsening of trade balance deficits.



Gross national savings as a % of GDP

(Source: IRES calculations _ HCP data; World Bank)

Buoyant growth in national savings starting in the 1980s, when structural adjustment programs were introduced and financial sector reforms launched. National savings levels, posted in recent years and supported by remittances from Moroccans residing abroad, however, remain short of the economy's financing needs.



Ensuring globalization readiness

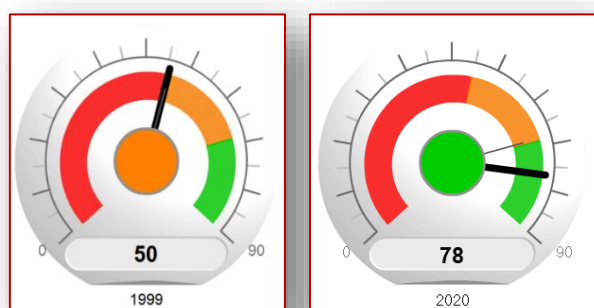
Financial System

Financial System Freedom Index (index score)

(Source: IRES calculations _ The Heritage Foundation)

Morocco's financial system is relatively developed in comparison to countries in Africa and the southern Mediterranean. Financial system governance has improved significantly as a result of multiple reforms since the early 1990s. This has fostered the internationalization of Moroccan banks, particularly in Africa.

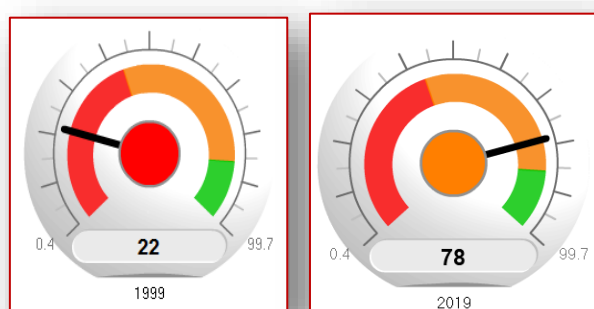
Continued improvement in the overall rating reflects a healthier financial system.



Banking rate

(Source: IRES calculations _ Bank Al Maghreb; World Bank)

Bank account penetration rates have more than tripled between 1999 and 2019, as a result of banking sector reforms and bank network expansion, including that of Barid Al Maghreb. The advent of participatory finance should, in the future, contribute to the strengthening of this trend.



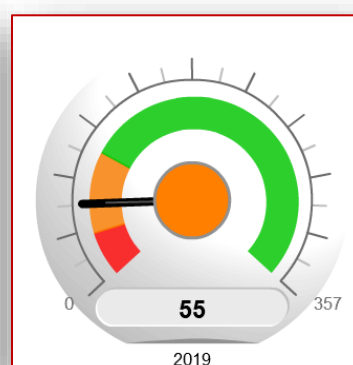
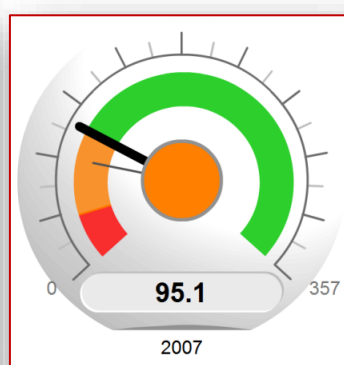
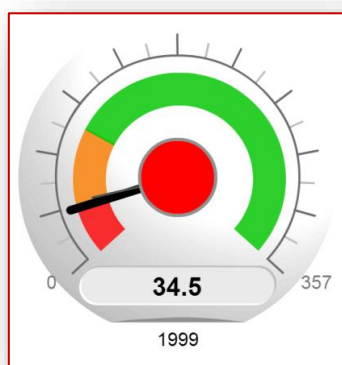
Ensuring globalization readiness

Financial System

Market capitalization as % of GDP

(Source: IRES Calculations _ Casablanca Stock Exchange; World Bank)

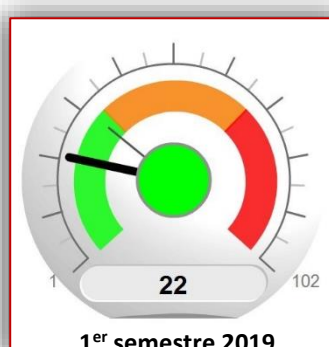
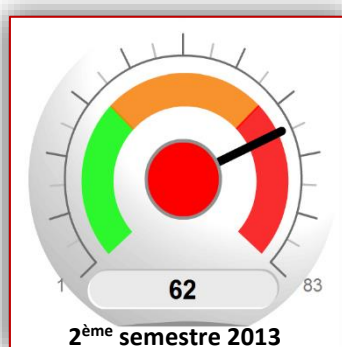
Following a sharp increase during the 1999-2007 period, market capitalization subsequently declined, mainly due to the delisting of a number of companies from the Casablanca Stock Exchange, while the number of IPOs fell sharply from 10 in 2007 to two in 2019.



Global Financial Centers Index

(Source: IRES calculations _ Z/Yen Group)

Morocco is a regional financial and economic hub. Since joining the ranks of the world's most competitive financial centers in 2013, **Casablanca has gained 54 spots between 2013 and 2019**, making it **Africa's leading financial center**, surpassing Johannesburg.

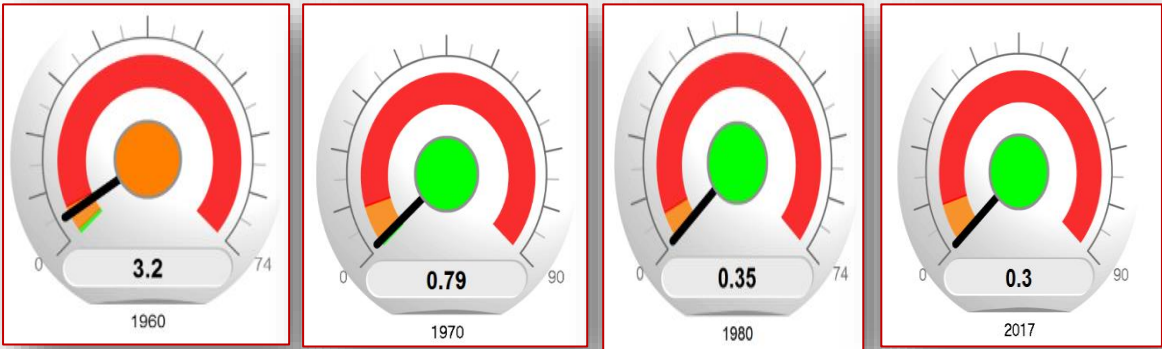


Immigration in Morocco

International migrants as % of population

(Source: IRES calculations _ HCP; World Bank)

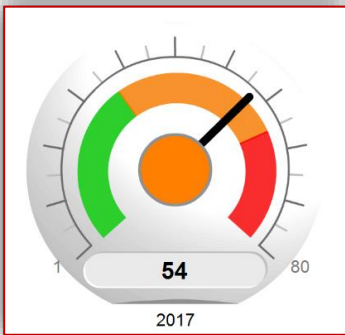
Substantial declines in the number of international migrants as a percentage of population between 1960 and 1970, reflect the departure of French and Spanish nationals upon Morocco's independence. This ratio leveled off starting in 1980. The transition from a transit to a residence country will, however, contribute to future increases in the number of international migrants in Morocco.



Best countries for immigrants Index

(Source: IRES calculations _ US News and World Report)

Morocco ranks somewhere in the middle on the best countries for immigrants. Specifically, the Kingdom is perceived as the top country in North Africa and the second-best in Africa for welcoming immigrants, as the result of the 2013 adoption of an immigration policy aimed at improving migrant and asylum seeker living conditions, and the two 2014 and 2016 campaigns to legalize irregular, primarily sub-Saharan African immigrants.

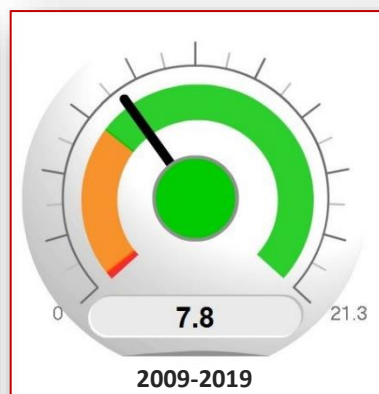
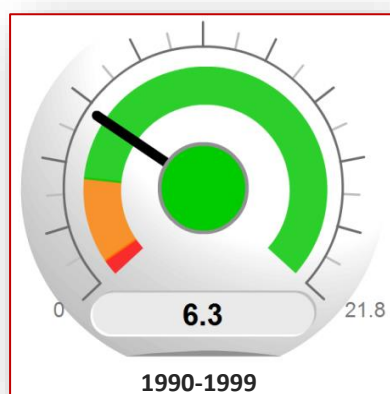


Economic role of Moroccan diaspora

Diaspora remittances as % of GDP

(Source: IRES calculations _ Foreign Exchange Office data; World Bank)

Sustained growth in diaspora remittances despite the impact of the international economic and financial crisis. At nearly 8% of GDP over the 2009-2019 period, remittances are an important source of financing for the Moroccan economy.

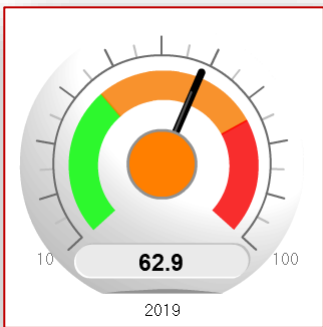
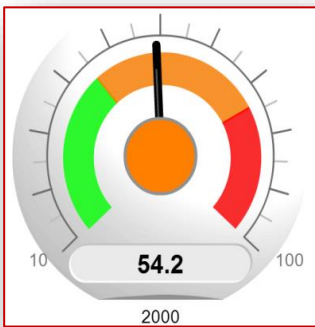
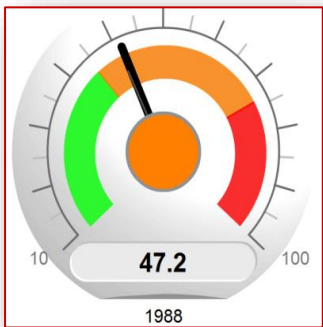


Urban Planning/ Environment

Urbanization rate (%)

(Source: IRES calculations _ HCP; UNDP)

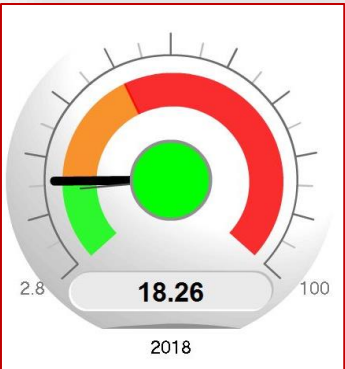
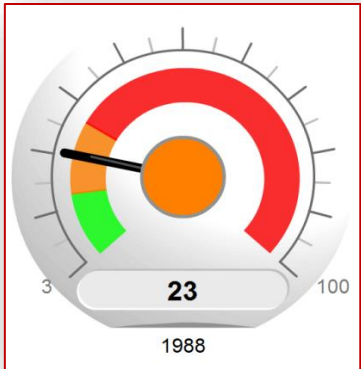
Morocco is increasingly urbanized, with urban population surpassing rural population since the early 1990s. This trend is likely to gather pace with national economic diversification and climate change effects.



Most populated city population as % of total urban population

(Source: IRES calculations _ HCP; World Bank)

Accounting for over 18% of total urban population in Morocco, Casablanca ranks 22nd in the "2014 Emerging Cities Outlook" covering 34 countries. The city comes second in Africa on cities with strong inclusive growth development potential, according to the 2015 African Cities Growth Index.

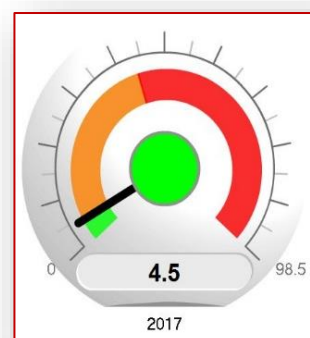
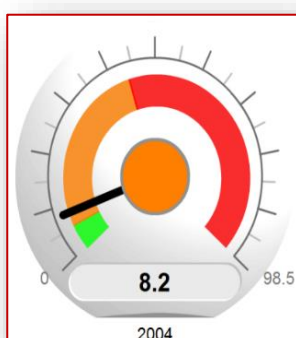
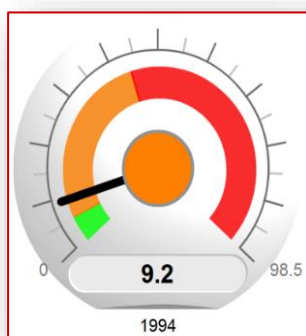


Urban Planning/ Environment

Urban population living in slums as % of total urban population

(Source: IRES calculations _ Ministry of National Planning, Urbanism, Housing and Urban Policy; UN-Habitat)

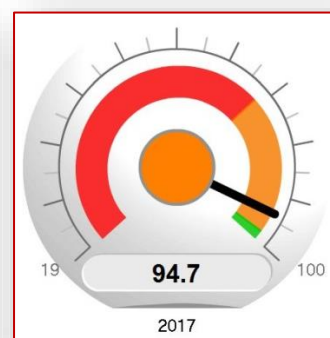
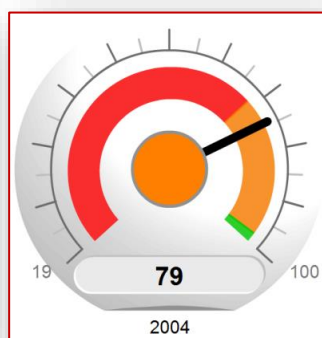
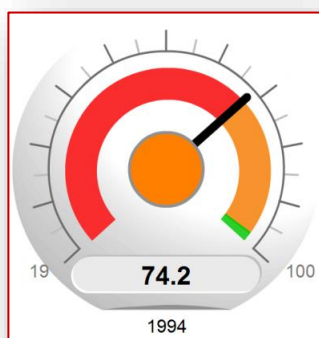
Substantial reduction in the number of shantytowns as a result of the fight against insalubrious housing. Implementation of the "Cities Without Slums" program led to the official declaration, today, of 59 out of 85 initially targeted cities as "Cities Without Slums".



Public liquid sewerage network connection rate in urban areas (%)

(Source: IRES calculations _ HCP; ONDH; World Bank)

Morocco had a significant lag in terms of wastewater sanitation until 2004, when the National Program for Liquid Sanitation and Wastewater Purification was adopted. Improvements were made over the years 2004-2017, but challenges remain to be overcome in the area of wastewater sanitation.

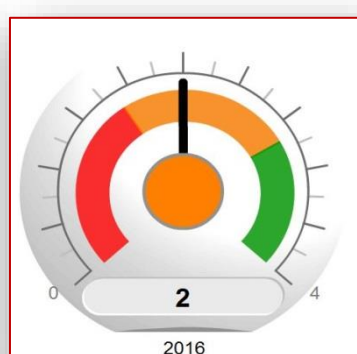
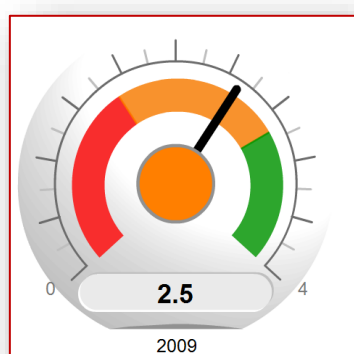


Urban Planning/ Environment

Urban Governance Effectiveness

(0 = no planning device; 4 = effective planning device) (Source: IRES calculations_ CEPII)

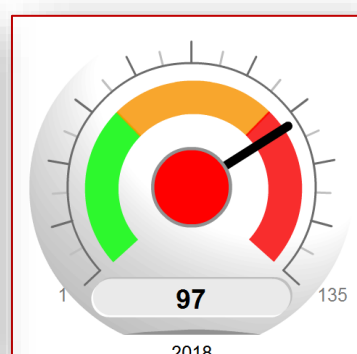
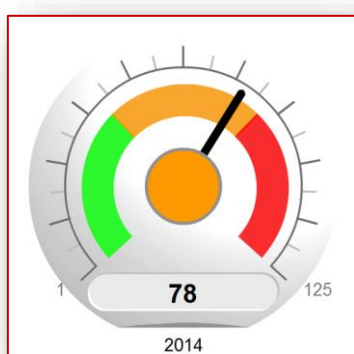
Morocco dropped in ranking on urban governance effectiveness between 2009 and 2016. Morocco currently ranks somewhere in the middle on this indicator; this is to be improved going forward with the effective implementation of urban development plans.



Global cities index

(Source: IRES calculations _ Institute for Management Development; Singapore University for Technology and Design (SUTD))

Morocco dropped 12 spots in its global ranking on this index between 2014 and 2018, which fails to reflect significant achievements by some cities in the Kingdom.

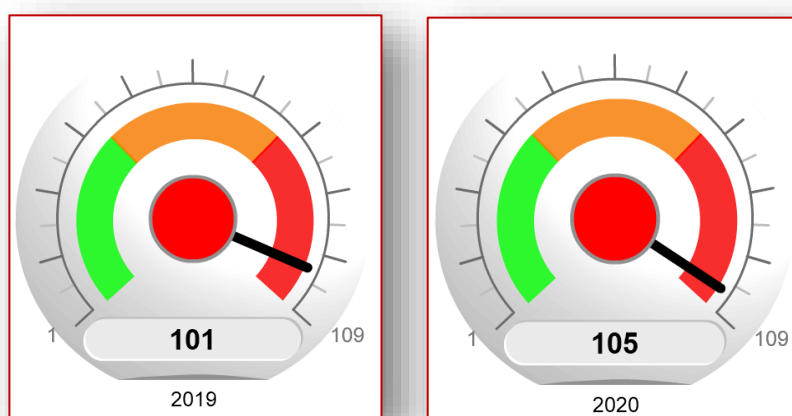


Urban Planning/ Environment

Global Smart City Index

(Source: IRES Calculations _ International Institute for Management Development)

Morocco ranks poorly on this index despite aspiring to become a "Smart City" benchmark in Africa and the city of **Rabat being ranked among global Smart Cities**.

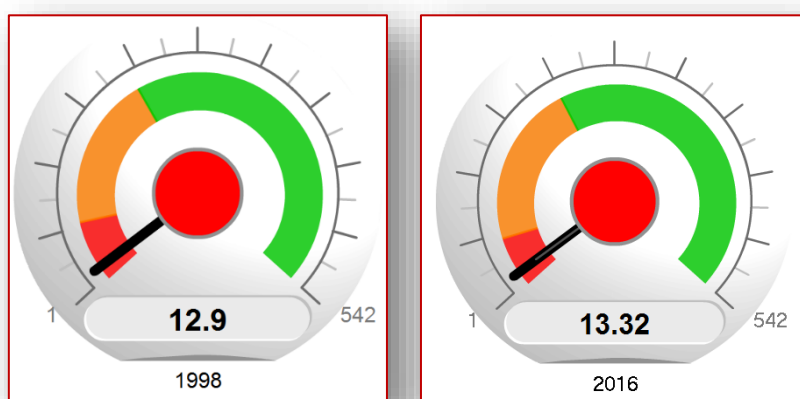


Territorial infrastructure

Road density in number of km/100km²

(Source: IRES Calculations _ World Bank)

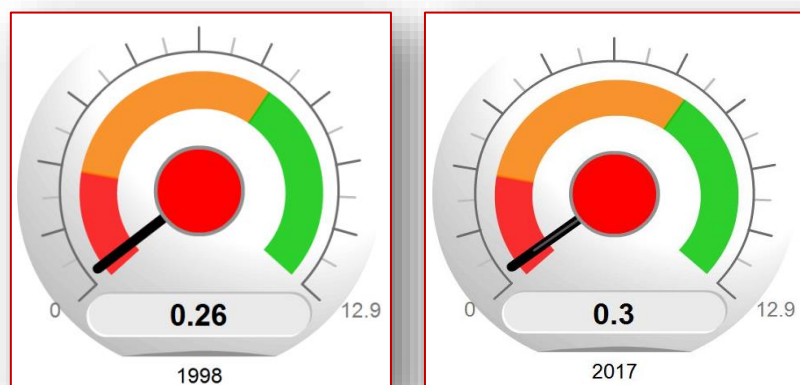
Road density remains inadequate, compared to global average, despite efforts to develop the road network and highways in particular. In the space of 18 years, Morocco has built a little over 1590 km of highways.



Rail density in number of km/100km²

(Source: IRES calculations _ Ministry of Equipment, Transport, Logistics and Water; World Bank)

Railway density is extremely limited and fails to cover all regions of Morocco. Recognizing this reality, Morocco has in recent years initiated rail network modernization and began operating a high-speed line between Casablanca and Tangier in November 2018.

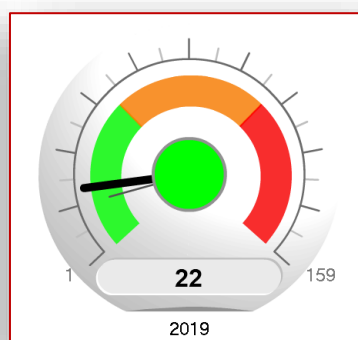
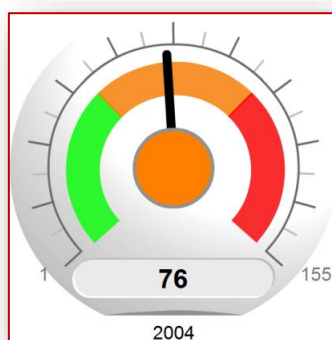


Territorial infrastructure

Liner Shipping Connectivity Index

(Source: IRES Calculations _ World Bank; UNCTAD)

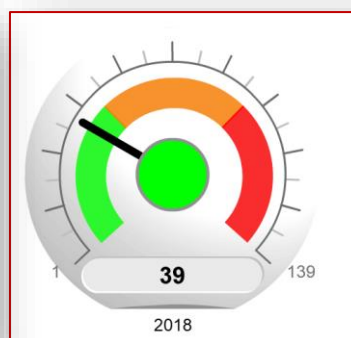
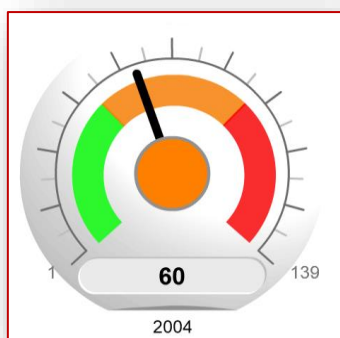
Morocco's maritime connectivity and its ranking as a logistics hub in the Mediterranean have significantly improved, with completion of the Tanger Med port and capacity development in other ports. Morocco, the champion of maritime connectivity in Africa, gained 55 spots between 2004 and 2019 in its global ranking on this index.



Container port traffic (TEU: 20-foot equivalent units)

(Source: IRES Calculations _ Containerisation International)

Global rankings on this indicator improved by 21 spots between 2004 and 2018, reflecting the Kingdom's performance in maritime connectivity.

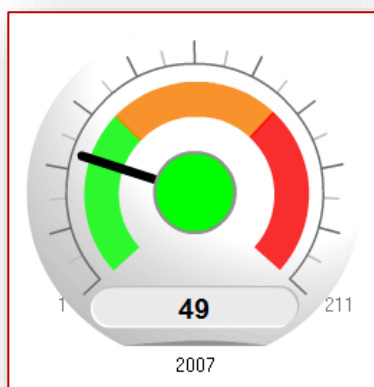


Territorial infrastructure

Air Connectivity Index

(Source: IRES Calculations _ World Bank)

Strong international air connectivity for Morocco as early as 2007 with "Open Sky" policy implementation and low-cost air travel development. Connectivity was further strengthened with the expansion of airport infrastructure across the Kingdom.

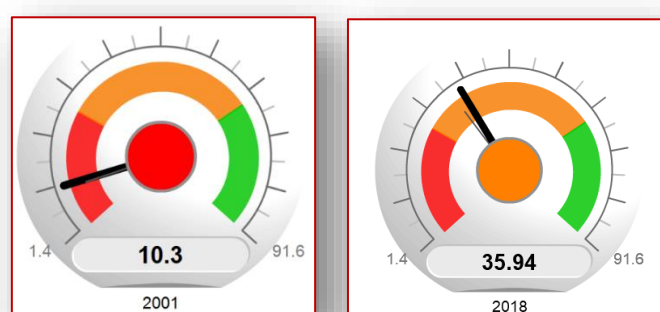


Higher education

Enrollment rate in higher education (% of the 19-23 age group)

(Source: IRES Calculations _ UNESCO)

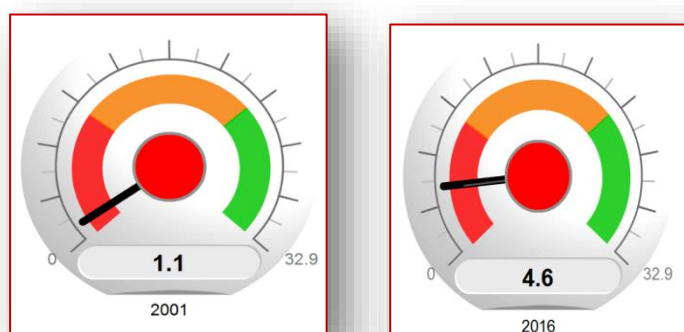
Higher education enrollment rates in Morocco improved significantly. This rate nevertheless remains well below those of emerging countries. In light of this poor ranking, authorities launched higher education sector reform in 2018.



Engineering/processing and manufacturing graduates per 10,000 inhabitants

(Source: IRES Calculations _ UNESCO)

Substantial quantitative backlog in training in engineering professions, is likely to adversely impact the implementation of Morocco's structural development projects. It is worth noting, however, that the "grandes écoles" system, as adopted by Morocco, allows for the training of top-level engineers.

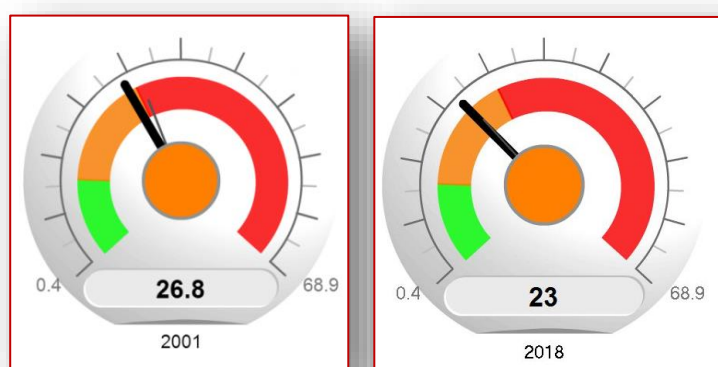


Higher education

Unemployment rate for higher education graduates

(Source: IRES Calculations _ HCP; ILO)

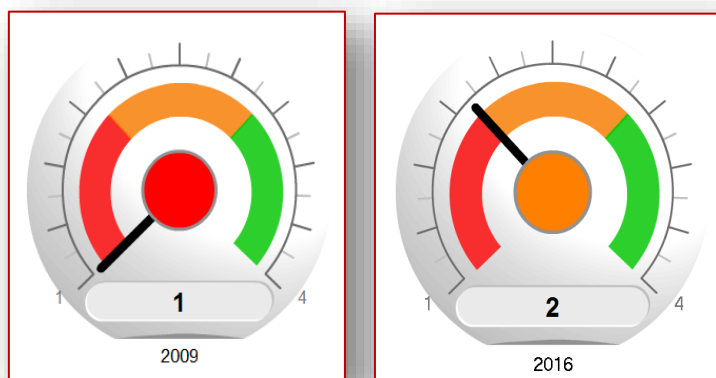
Unemployment rates remain very high among higher education graduates. This reflects the gap between education and labor market requirements and should be alleviated by recent public programs to improve human capital employability.



Strength of ties between companies and universities/ research centers

(1: weak ties; 4: strong ties) (Source: IRES Calculations _ CEPII)

While improving, ties between corporations, universities, and research centers remain underdeveloped, undermining Morocco's capacity to develop scientific research and innovation.

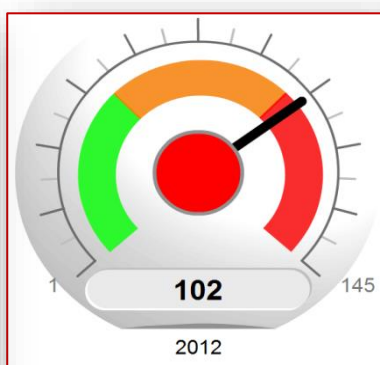
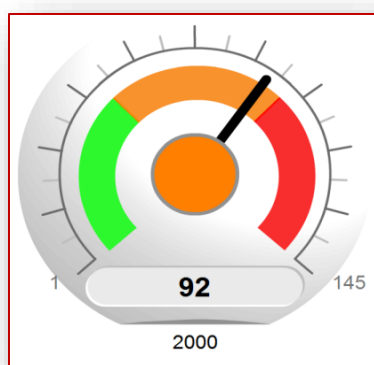


Knowledge Economy & Innovation

Knowledge Economy Index (KEI)

(Source: IRES Calculations _ World Bank)

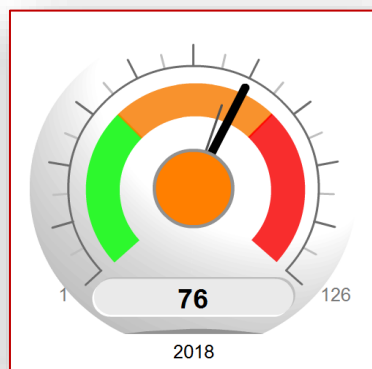
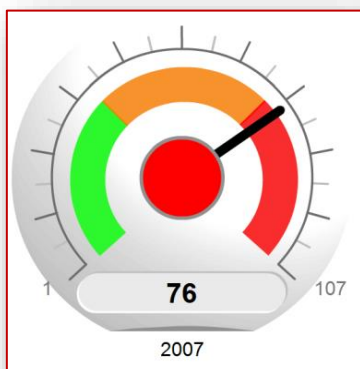
Morocco's rank on the knowledge economy index dropped by 10 spots between 2000 and 2012 as a result of poor performance in higher education in science and technology.



Global Innovation Index (GII)

(Source: IRES Calculations _ INSEAD)

Morocco gained 11 spots in global innovation index rankings between 2007 and 2018, due in part to the launch of the "Maroc Innovation" initiative.

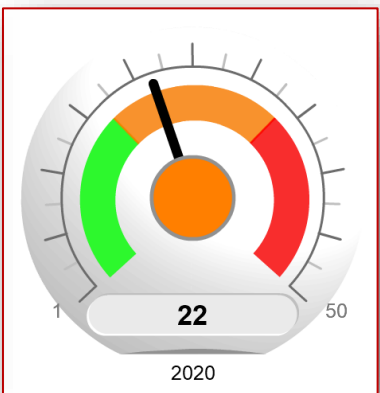
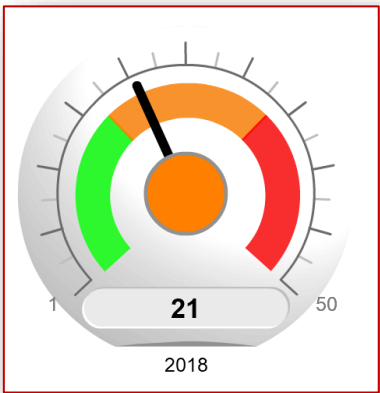


Knowledge Economy & Innovation

International Intellectual Property Index

(Source: IRES Calculations _ INSEAD)

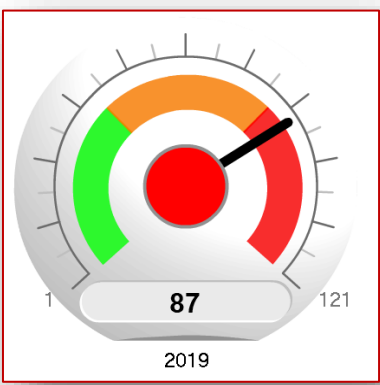
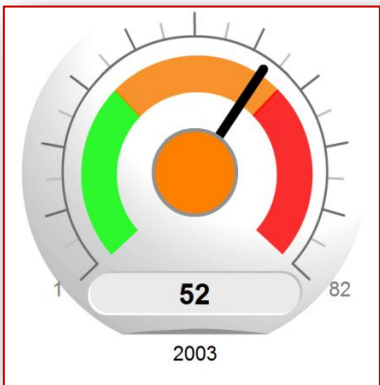
Strong protection of patents and related rights make Morocco the most efficient middle-income economy in the field of intellectual property. Software piracy and physical counterfeiting rates, however, remain very high.



Network Readiness Index (NRI)

(Source: IRES Calculations _ World Economic Forum)

The Kingdom's decline in ranking on this index is due to the absence of a long-term, global and cross-disciplinary digital vision. Morocco should invest more in digital technology, making it a lever for global competitiveness.

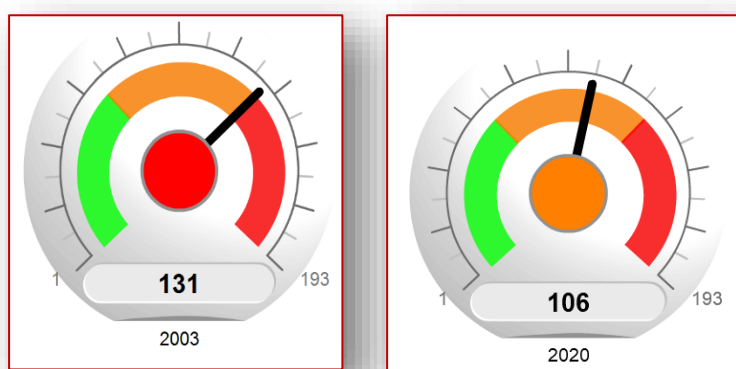


Knowledge Economy & Innovation

E-Government development index

(Source: IRES Calculations _ UNDESA _ UN E-Government Development Database)

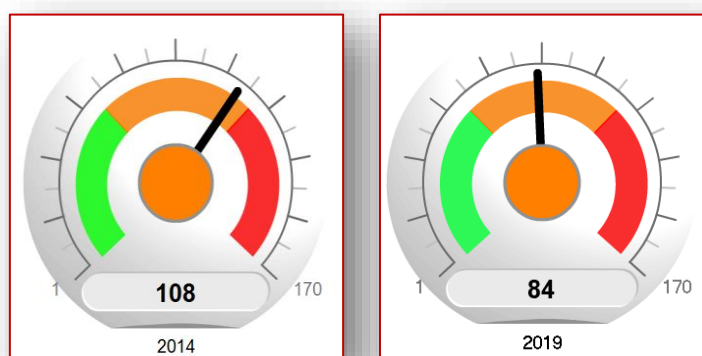
Morocco's ranking on the e-government development index improved significantly. Gaining 25 spots between 2003 and 2020, driven by good online service results, in the wake of efforts deployed under the E-Government program, a Maroc-Numeric strategy priority.



Mobile Connectivity Index

(Source: IRES Calculations _ World Association of Mobile Operators (GSMA))

Morocco improved its ranking on this index largely driven by mobile telecommunications infrastructure development and 4G network rollout in 2015.

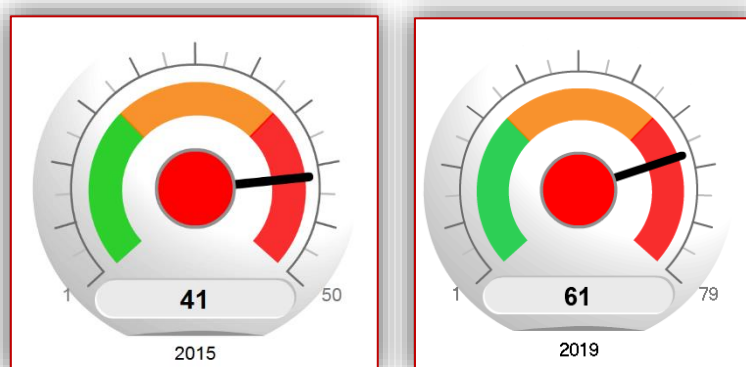


Knowledge Economy & Innovation

Global connectivity index

(Source: IRES Calculations _ Huawei)

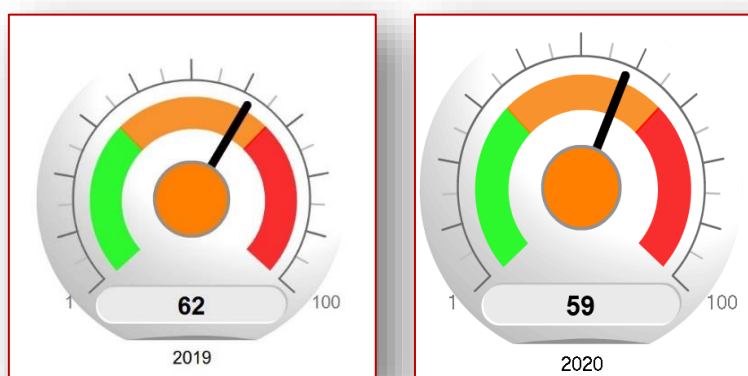
Morocco ranks poorly on this index; this ranking is to be improved if Morocco were to successfully complete its digital transformation.



Inclusive Internet index

(Source: IRES Calculations _ Economist Intelligence Unit)

Morocco ranks somewhere in the middle on this index, though this ranking could be improved going forward were Morocco to implement a strategy to bridge the digital divide and develop high-speed Internet access.

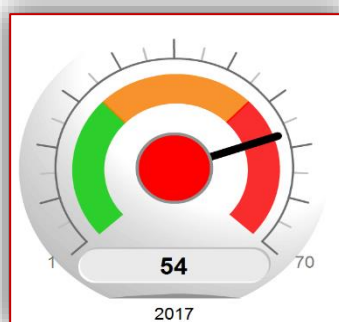


Knowledge Economy & Innovation

Robotic density (number of industrial robots per 10,000 employees)

(Source: IRES Calculations _ United Nations Conference on Trade and Development (UNCTAD))

Morocco ranks poorly on industrial robotics density, reflecting the failure to truly incorporate digitalization in Morocco's industrial development acceleration plan.

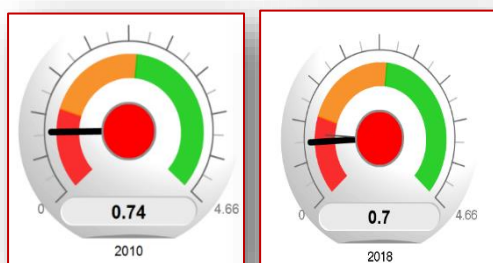


Research & Development

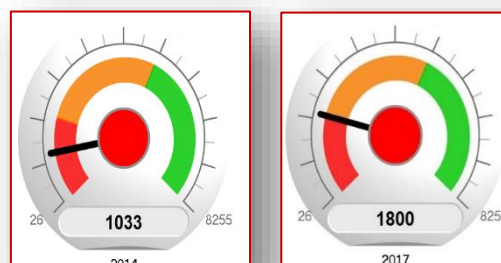
(Source: IRES Calculations _ UNESCO)

Insufficient human and financial resources allocated to Research & Development (R&D) compared to countries at similar levels of development. R&D expenditure is borne by the public sector, and limited researcher headcount is not conducive to building a skills pool essential for innovation development.

R&D expenditure (% of GDP)



R&D staff (per 1 million population)

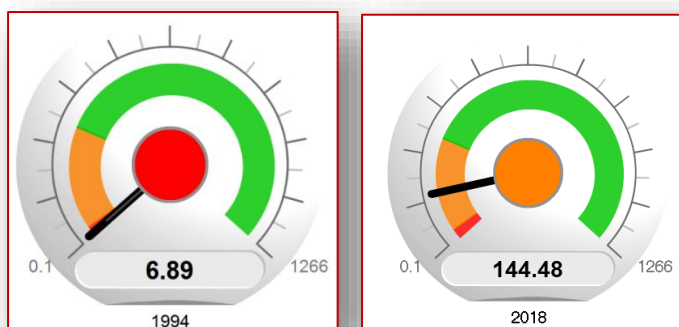


Knowledge Economy & Innovation

Scientific and technical journal published articles (per 1 million inhabitants)

(Source: IRES Calculations _ World Bank)

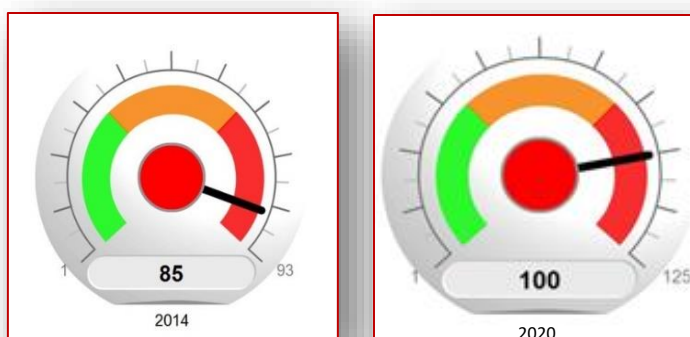
Morocco's scientific output grew between 1994 and 2018, but remains far short of performances attained by a number of MENA countries.



Global Talent Competitiveness Index

(Source: IRES Calculations _ INSEAD, The Business School for the World, The ADECCO Group, TATA Communications)

Morocco ranks slightly better on this index. Further efforts need nevertheless be deployed, particularly in terms of investment in quality education, development of artificial intelligence and digitalization skills, and establishment of a regulatory and incentive framework conducive to attracting foreign talent and mobilizing the Moroccan scientific diaspora.

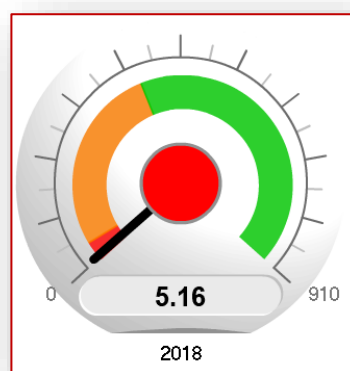
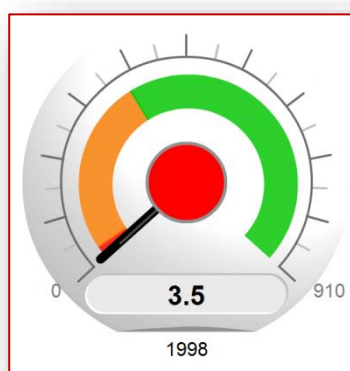


Knowledge Economy & Innovation

Number of patents per 1 million inhabitants

(Source: IRES Calculations _ WIPO Data; WIPO)

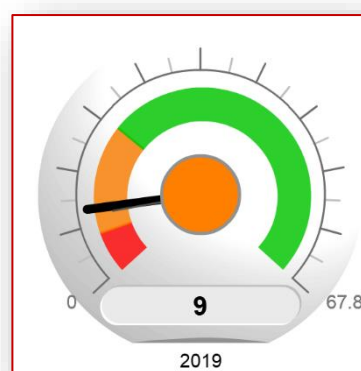
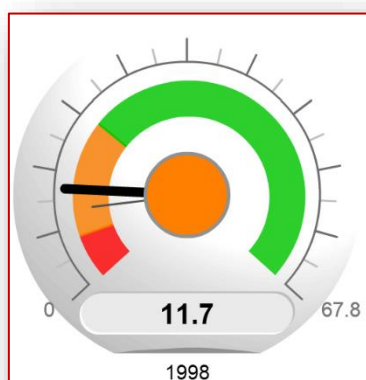
The rising number of Moroccan patents, still falls short of the performance posted by emerging countries.



Exports of high-tech goods as % of manufactured goods exports

(Source: IRES Calculations _ World Bank)

Fluctuating between 8% and 13% between 1998 and 2019, the share of high-tech goods as a proportion of manufactured exports remains relatively low compared to emerging countries.



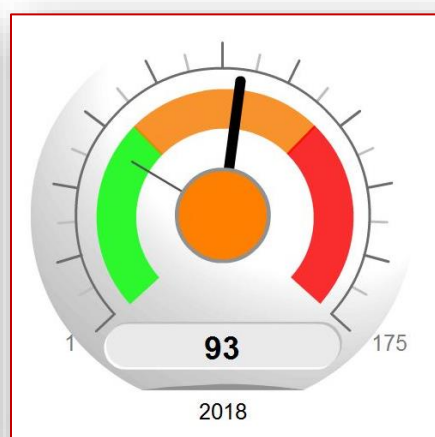
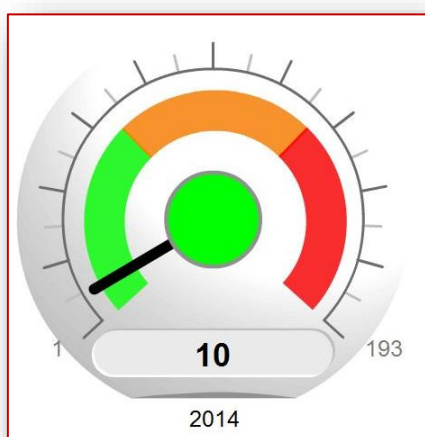
Knowledge Economy & Innovation

Global Cyber Security Index

(Source: IRES Calculations _International Telecommunication Union, ABI Research _Global CyberSecurity Index)

Despite the Kingdom's strong commitment to cybersecurity, Morocco's global ranking on this index dropped between 2014 and 2018, particularly on account of digital regulation, technology watch and cooperation between relevant national bodies.

It should nonetheless be noted that Morocco, recognizing rising cyberthreats, has over the past ten years been committed to strengthening national information systems security capacities and adopted a national cyber security strategy in 2012.

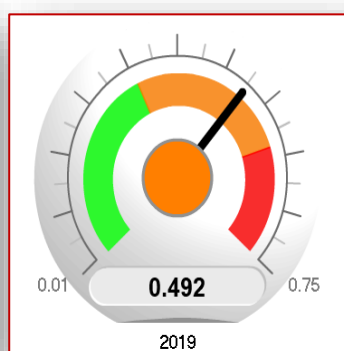
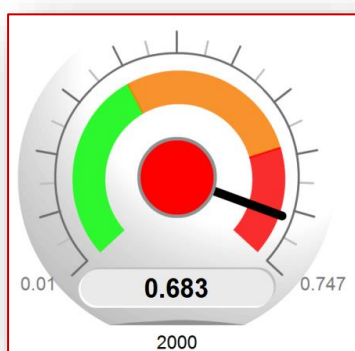


Individual level

Gender Inequality Index

(Source: IRES Calculations _ UNDP)

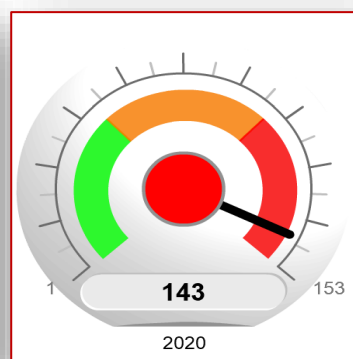
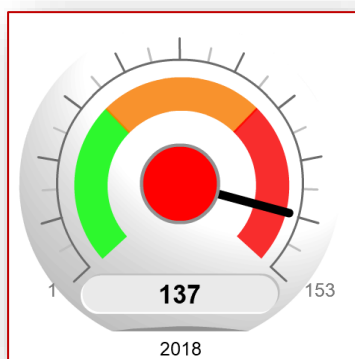
Gender inequality has decreased significantly over the last two decades, as a result of human development policies and policies promoting the role of women. Gender discrimination nevertheless persists.



Global Gender Gap Index

(Source: IRES Calculations_ World Economic Forum)

Despite a downward trend in gender inequality, Morocco still is among countries most impacted by this phenomenon. Inequalities particularly pertain to female labor market participation and political emancipation.

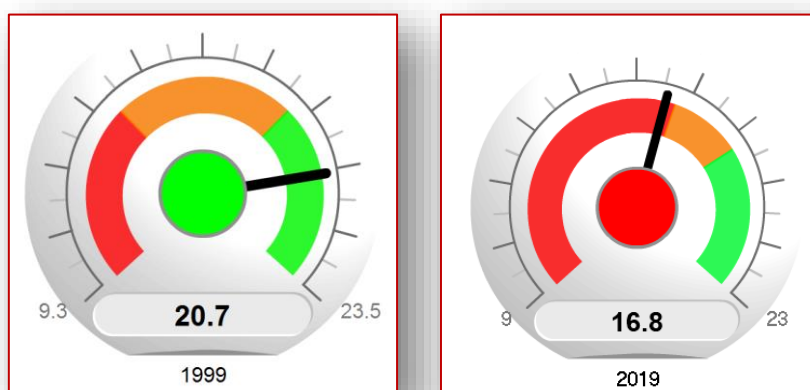


Individual level

Youth as a percentage of the population (%)

(Source: IRES Calculations _ UN Population Division)

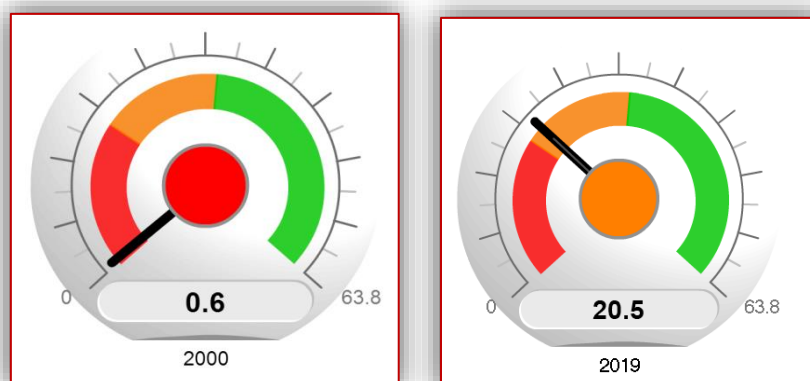
A significant decline in the share of ages 15 to 24 as a proportion of Moroccan population, reflecting increased use of contraception and women's labor.



Proportion of Parliament seats held by women (%)

(Source: IRES Calculations _ UNDP; World Bank)

Affirmative action in legislative elections led to improved female representation in Parliament. Current levels of representation, however, remain below thresholds set by Morocco's 2011 constitution.

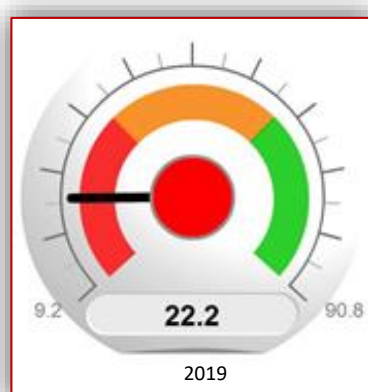
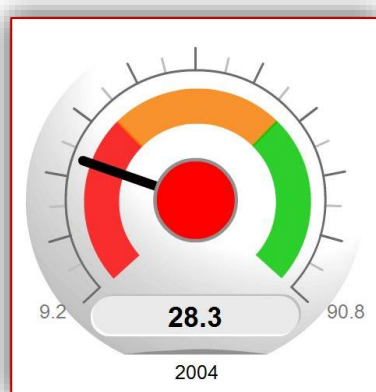


Individual level

Female labor force participation rate (% of women over 15 years of age)

(Source: IRES Calculations; World Bank)

Participation of Moroccan women in the workforce has declined over the past 15 years. Like a number of other Arab countries, Morocco today exhibits relatively low levels of women's economic participation, despite significant reforms.

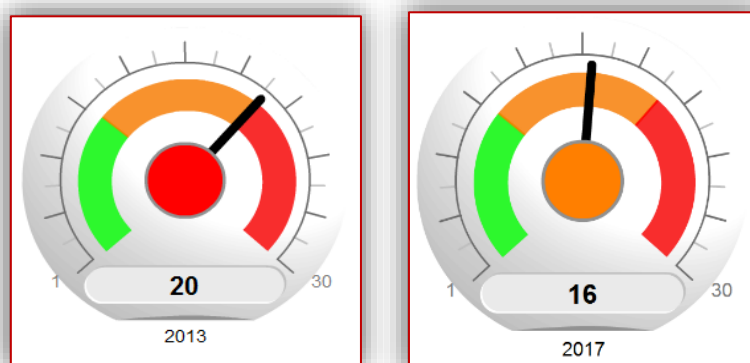


Group level

Global Youth wellbeing index

(Source: IRES calculations _ CSIS, IYF, Hilton worldwide)

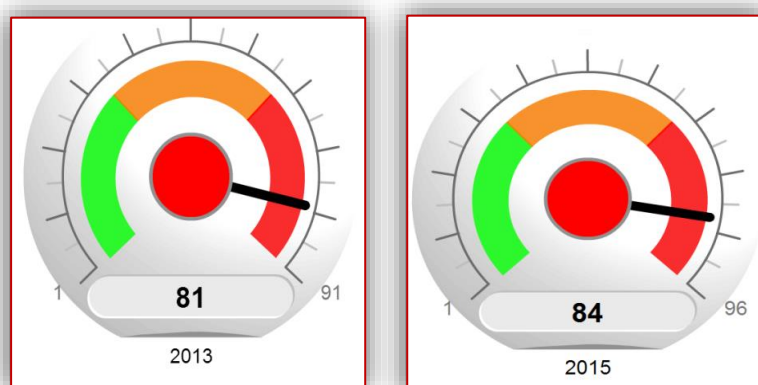
Morocco improved its ranking on this index between 2013 and 2017. The well-being of youth under 25 is, however, far from complete.



Global AgeWatch Index: Well-being index for people aged 60 and over

(Source: IRES Calculations _ HelpAge International)

Morocco ranks poorly (at 84 out of 96 countries) on the well-being index for people aged 60 and over. It is worth noting, however, that intergenerational solidarity remains strong in Morocco amidst a context of weak institutional social security coverage.

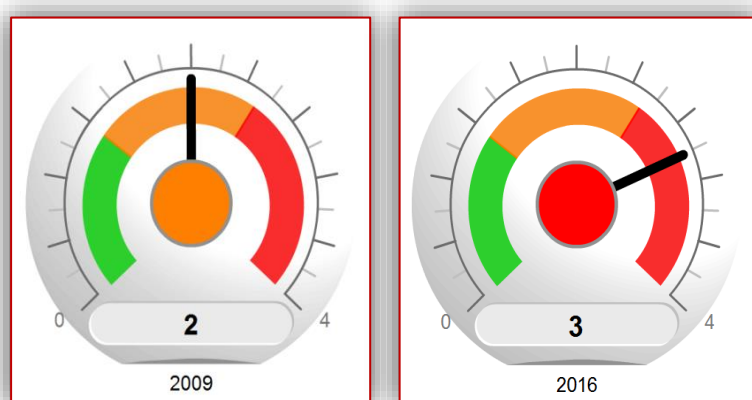


Group level

Youth future prospects

(0: very much oriented within country; 4: very much oriented outside country) (Source: IRES Calculations _ CEPPI)

Young Moroccans feel excluded from potential future benefits and do not see a better future on the horizon, hence the disenchantment fuelling an urge to leave Morocco to pursue hypothetical opportunities elsewhere.

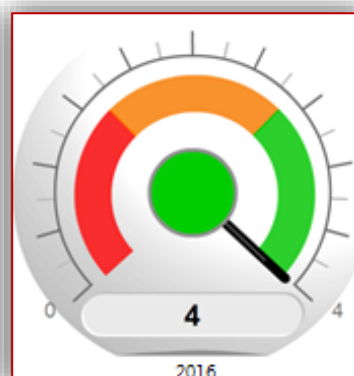
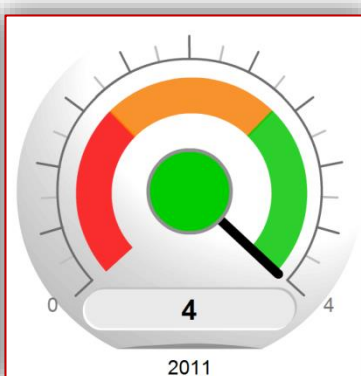
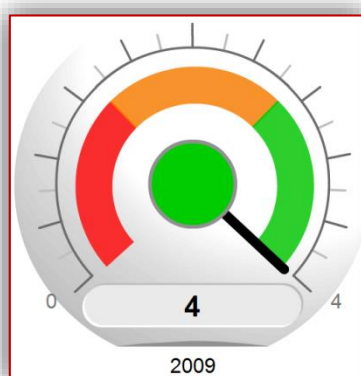


Community level

Extent of national attachment

(0: Weak; 4: Strong) (Source: IRES Calculation; CEPII)

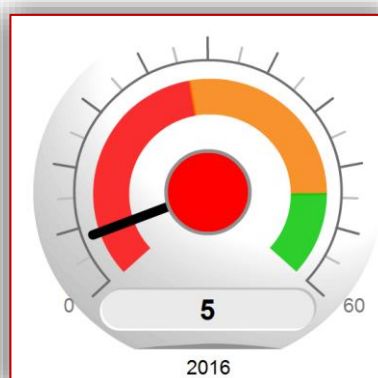
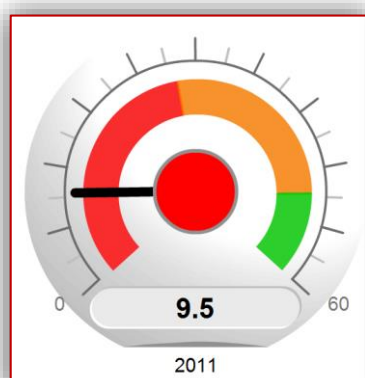
Attachment to the nation, together with attachment to moderate Islam and the Monarchy, constitute the main foundations of community life in Morocco, as confirmed in both editions of the IRES national survey on the Social Bond carried out in 2011 and 2016.



Interpersonal trust (% trusting most people)

(Source: IRES Calculation; UNDP)

Interpersonal trust is very low and has continued to deteriorate: Moroccans increasingly prefer, by an overwhelming majority, to be cautious with others instead of trusting fellow citizens.



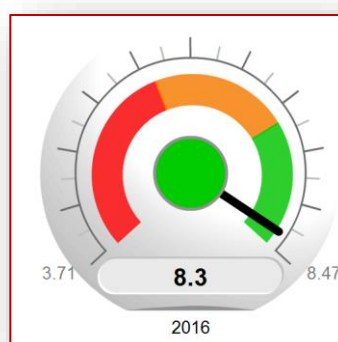
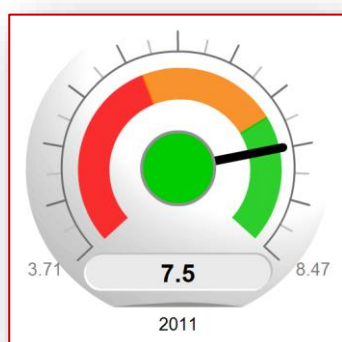
Community level

Level of confidence in state institutions

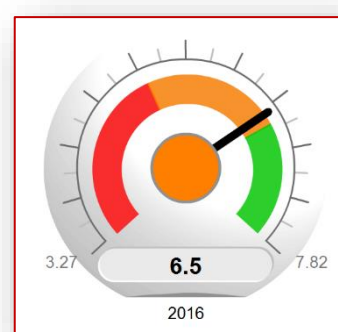
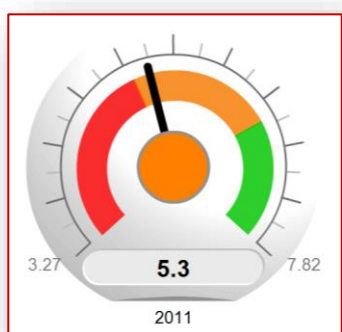
(0: Weak; 10: Strong) (Source: IRES Calculations; World Value Survey)

Insufficient confidence in state institutions, with the exception of the army, due to high levels of perceived corruption. IRES data shows an inversely proportional cause-and-effect relationship between the perception of corruption and the level of trust in institutions.

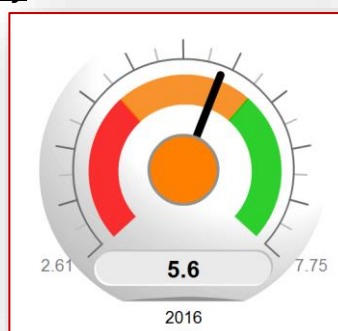
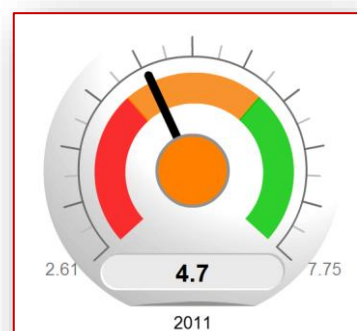
Military



Police



Judiciary



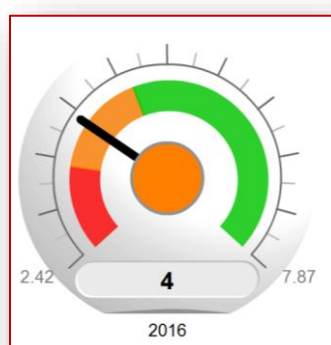
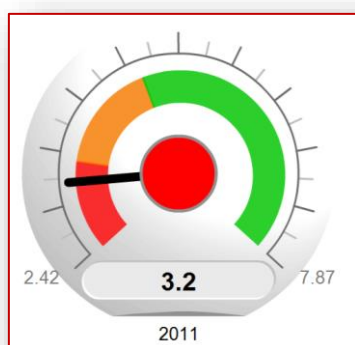
Community level

Level of confidence in representative institutions

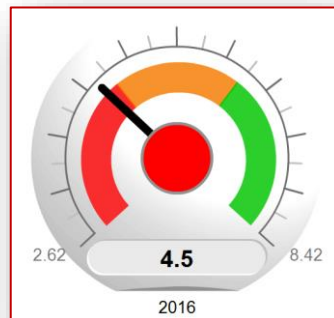
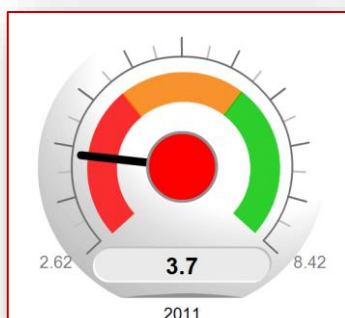
(0: Weak; 10: Strong) (Source: IRES Calculations; World Value Survey)

Low level of trust in representative institutions.

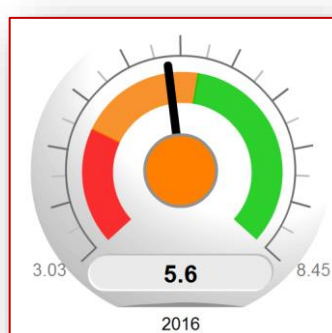
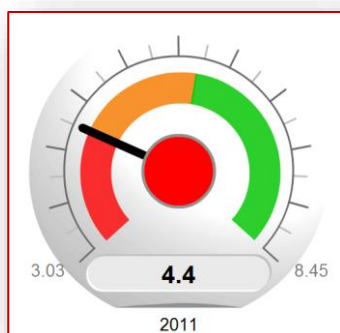
Political parties



Parliament



Government

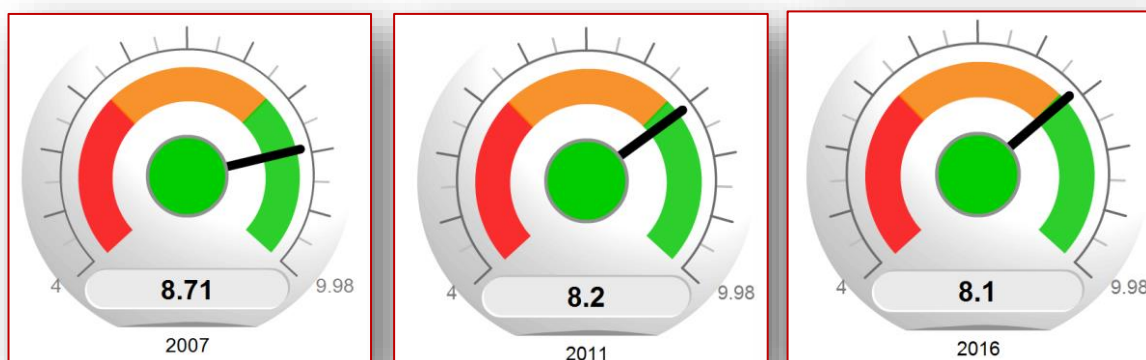


Community level

Level of trust in the family

(0: Weak; 10: Strong) (Source: IRES Calculations; World Value Survey)

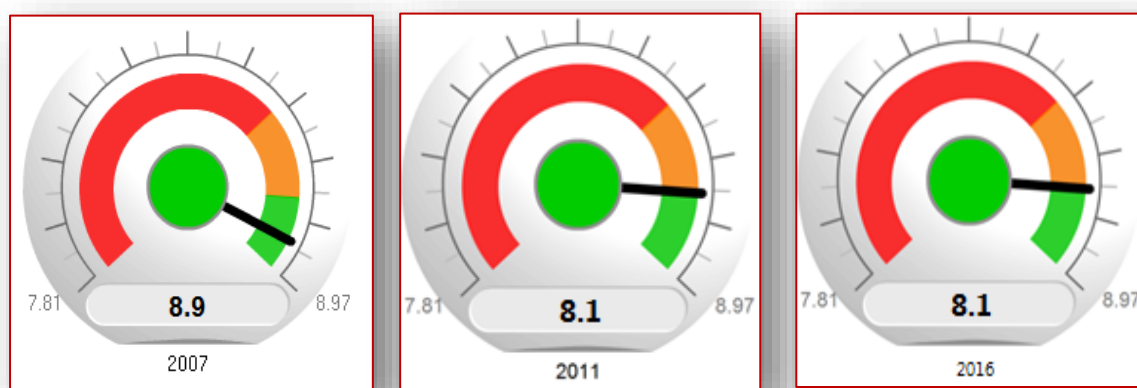
Contrary to other social institutions, **family in Morocco is credited with a very high degree of trust.**



Importance of family in personal life

(0: Weak; 10: Strong) (Source: IRES Calculations; World Value Survey)

Very strong family ties overshadow other social ties in Morocco.

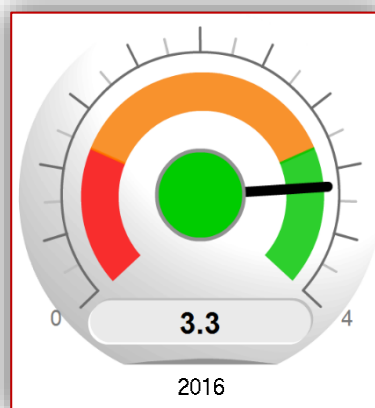
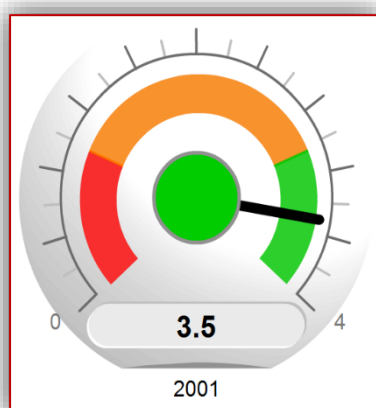


Community level

Traditional solidarity

(0: Weak; 4: Very Strong) (Source: IRES Calculations _ CEPII)

Traditional solidarities, notably provided by family, remain important in Morocco, albeit in slight decline between 2001 and 2016.

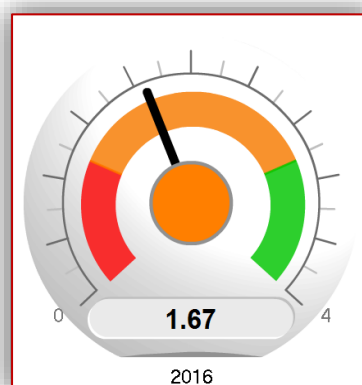
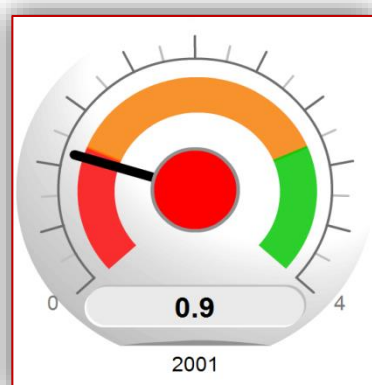


Institutional solidarity

(0: No coverage by public or private institutions for illness, unemployment, retirement; 1=low share of the population covered; 4=very high share of the population covered)

(Source: IRES Calculations _ CEPII)

Institutional solidarity is gradually improving, but lacks a comprehensive and integrated approach to the governance of social safety net systems.

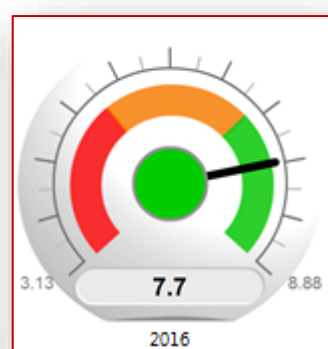
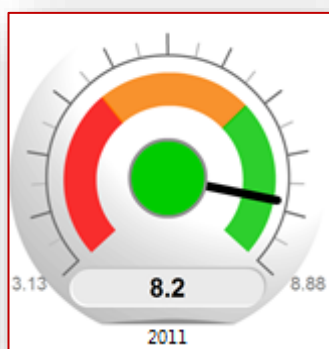
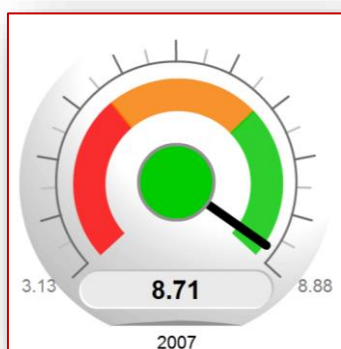


Community level

Importance of Religion in Personal Life

(0: Weak; 10: Strong) (Source: IRES calculations; World Value Survey)

Religion has a very important place in the life of Moroccans.

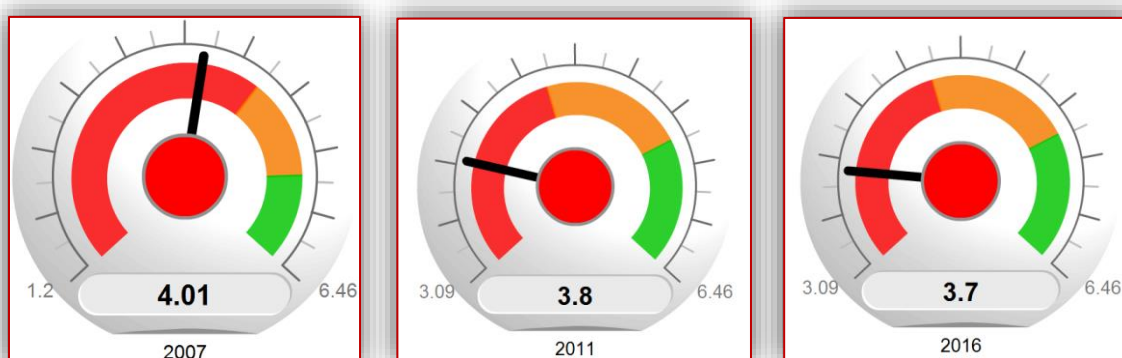


Community level

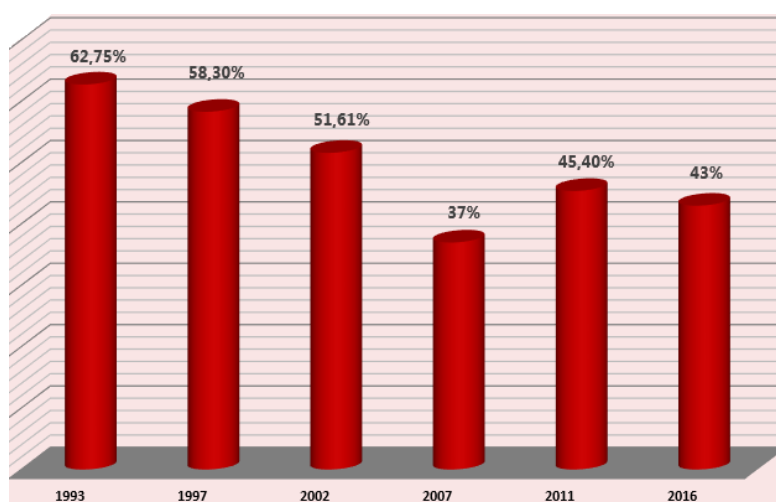
Importance of politics in personal life

(0: Weak; 10: Strong) (Source: IRES calculations; World Value Survey)

The political bond is weak, as confirmed by IRES two national surveys on the social bond. IRES found that in 2016, 58% of Moroccans considered the political bond to be weak and 40.1% considered voting "useless".



This perception is supported by the continued decline in legislative election voter turnout.



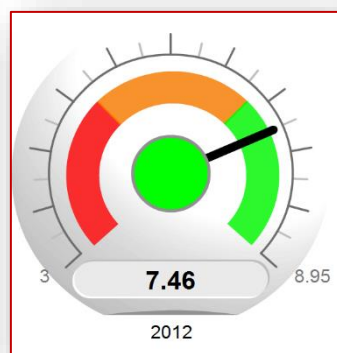
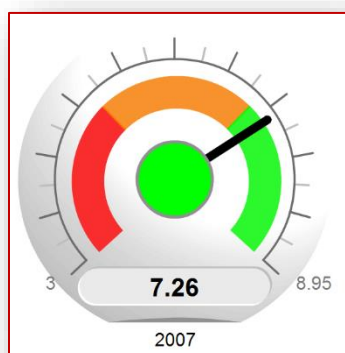
Source : Calculs IRES _ Ministère de l'intérieur

Community level

Level of satisfaction in life

(0: Weak; 10: Strong) (Source: IRES Calculations _ World Value Survey)

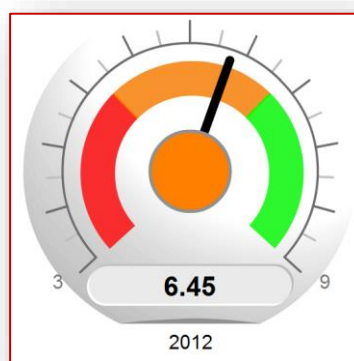
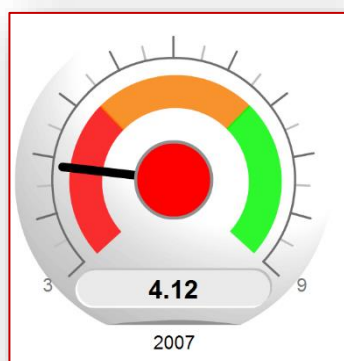
The significant degree of satisfaction in the lives of Moroccans both in 2007 and 2012, reflects strong family ties and gradual improvement in living conditions.



Civic Involvement

(0: Weak; 10: Strong) (Source: IRES Calculations _ World Value Survey)

Morocco ranks significantly better on this index, owing to public policies implemented and the important role of civil society.



This Annex outlines the definitions, as established by national and international organizations, all indicators composing the strategic dashboard.

Overall wealth and intangible capital

Global wealth per capita in constant 2005 dollars

The World Bank defines a country’s global wealth as the Net Present Value (NPV) of future cash flows. The calculation of this wealth is made using the following mathematical formula:

$$W_t = \int_t^{\infty} C(s) \cdot e^{-r(s-t)} ds$$

- With:
- w_t*: Current overall net value of wealth at t time.
 - C (s)*: Sustainable consumption at time s.
 - s – t*: Time-lapse between the current moment and the temporal origin.
 - r*: Discount rate (1.5%) based on the work of Pearce and Ulph 1999.

Instead of calculating this global value to infinity, the authors of the World Bank method have agreed to limit it to 25 years.

Global wealth per capita is the ratio of the overall wealth of a country to the total population.

Intangible capital per capita in constant 2005 dollars

A country's intangible capital is made up of a set of assets, including human capital, social capital, and institutional capital. The calculation of this capital is carried out using the following formula:

Intangible Capital of a country = Overall wealth of the country - (Natural Capital + Product Capital) - Net Foreign Assets

Intangible capital per capita is the ratio between the intangible capital of a country and the total population.

GDP per capita in constant 2011 PPP dollars

GDP per capita is the gross domestic product divided by the mid-year population. This indicator is converted using the Purchasing Power Parity (PPP) rate and measured at constant prices to correct for the effects of inflation.

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Food resources

World Hunger Index

The calculation of this indicator comes from a weighted aggregation of 4 indicators: the share of the population that are undernourished, the prevalence of underweight in children up to 5 years old, the prevalence of stunting in children up to 5 years and the under-5 mortality rate.

Cereal import dependency rate (%)

The cereal import dependency ratio is the percentage of cereals that has been imported from other countries. In theory, this indicator can vary from 0 to 100%. A country with a degree of 0% dependence achieves self-sufficiency in terms of cereals and therefore does not receive cereals from other countries. A country with 100% dependency receives all grain from other countries, with no domestic production. This indicator is calculated using the following mathematical formula:

$$\text{Cereal imports} / (\text{Production} + \text{Imports-Exports})$$

Vegetable oil import dependency rate (%)

The import dependency rate for vegetable oils is the percentage of oils that has been imported from other countries. In theory, this indicator can vary from 0 to 100%. A country with a degree of dependency of 0% achieves self-sufficiency in terms of oils and therefore does not import oil from other countries. A country whose degree of dependence is 100% imports oils without any domestic oils production. This indicator is calculated using the following mathematical formula:

$$\text{Oil imports} / (\text{Production} + \text{Imports-Exports})$$

Sugar import dependency rate (%)

Import dependency ratio of sugar is the percentage of sugar from other countries. In theory, this indicator can vary from 0 to 100%. A country with 0% dependency is self-sufficient in terms of sugar and therefore does not import sugar from other countries. A country with a 100% degree of dependence imports the sugar from other countries, without any domestic sugar production. This indicator is calculated using the following mathematical formula:

$$\text{Sugar imports} / (\text{Production} + \text{Imports} - \text{Exports})$$

Food sustainability index

The Food Sustainability Index (FSI), developed by *The Economist Intelligence Unit* in partnership with the *Barilla Center for Food & Nutrition (BCFN)*, measures the sustainability of food systems in 34 countries around three key dimensions: food loss and waste, sustainable agriculture and nutrition. The index looks at policies and outcomes for sustainable food systems and diets through a series of performance indicators that consider environmental, social and economic sustainability.

Energy resources

Energy dependency rate (%)

The energy dependency ratio indicates the share of energy that an economy must import. In theory, this indicator can vary from 0 to 100%. A rate equal to 0% reflects a country's energy independence. This indicator is calculated using the following mathematical formula:

$$\text{Net energy imports} / \text{gross inland energy consumption}$$

Share of renewable energy balances (%)

This indicator is the percentage of renewables in total energy use. Renewable energies are energy sources whose natural renewal is fast enough that they can be considered inexhaustible on the human time scale. Renewable energies include hydropower, wind and solar energy, biomass, geothermal energy and marine energies.

Energy transition index

Calculated annually by the World Economic Forum, this indicator compares countries according to two essential elements: the performance of energy systems in terms of

security and environmental sustainability and the degree of readiness for the energy transition.

To evaluate the performance of an energy system, the World Economic Forum assesses:

- security and access to energy,
- environmental sustainability,
- growth and economic development.

Regarding the readiness for the future energy transition, the following indicators are assessed:

- The structure of the energy system;
- capital and investment in new energy infrastructure;
- Regulation and political commitment;
- Institutions and governance;
- Infrastructures and the business-innovation environment;
- The public participation and human resources.

Natural capital

Environmental degradation costs as% of GDP

The costs of environmental degradation can be viewed as a welfare loss. This loss can take the following forms:

- The loss of a healthy living environment (by premature death, by serious health problems, by the lack of a clean environment, etc.);
- Economic losses (such as reduction in the productivity of agricultural land, loss of tourism income, etc.);
- Loss of environmental benefits (such as loss of recreational functions of a lake, beach or forest).

Environmental performance index (score from 0 to 100)

The Environmental Performance Index (EPI) is an index created to assess, compare and improve the effectiveness of environmental policies. The 2014 index is based on 20 indicators including access to drinking water, sanitation, indoor pollution, protection of wild areas, logging, energy efficiency, renewable energies and emissions of CO₂. These indicators are grouped into two categories, the first being the general state of the environment which assesses the environmental consequences for human health. The second category is the vitality of the ecosystem, which measures the state of health and the exploitation of natural resources.

The index score ranges from 0 to 100, where 100 means better environmental performance.

Biodiversity Benefits Index (Score from 0 to 100)

The Benefits Index is a measure of each country's potential to generate global environmental benefits in a particular area. Separate indices are determined for thematic areas such as biodiversity and climate change.

The Global Environment Fund (GEF) Benefits Index for Biodiversity aims to measure the potential overall benefits that can be achieved by biodiversity-related activities in a country. It reflects the uneven distribution of species and the threats to them across the world's ecosystems, both within a country and between countries.

The index ranges from 0 (no biodiversity potential) to 100 (maximum biodiversity potential).

Threatened species (% of total)

This indicator corresponds to the percentage of animal species (mammals, birds, reptiles, amphibians, fish and invertebrates) classified in the category of species in critical danger of extinction or vulnerable by the International Union for the Conservation of Nature.

" Resource Governance Index " index This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPIL, assesses the governance of a country's natural resources based on the following criteria:

- The transparency of public authorities in the management of revenues from the exploitation of natural resources;
- Orientation of income from the exploitation of natural resources towards long-term investments;
- The access of companies, local or foreign, to the exploitation rights of natural resources conditioned by the achievement of objectives serving the general interest;
- The share of public revenue derived from the exploitation of natural resources.
- The indicator ranges from 0: very weak governance to 4: very good governance.

Endemism

Endemism refers to a species that is restricted to a particular geographic region. Here, we are talking about the endemic heritage of the fauna and vascular plants.

Air

CO2 emissions (metric tons per capita)

Carbon dioxide emissions are resulting from fossil fuels combustion and the cement manufacture. They include carbon dioxide emissions produced during the consumption of solid, liquid and gaseous fuels.

Methane emissions (kt of CO2 equivalent)

Methane (CH₄) is mainly generated by agriculture. Part of the emissions come from the production and distribution of gas and oil, coal mining, combustion and landfills.

Methane emissions represent 13% of global greenhouse gas emissions.

The average time that a methane molecule spends in the atmosphere is 14 years, and its global warming power is 25 times that of CO₂.

Water resources

Renewable water resources in m³ per capita per year

The indicator represents the total annual volume of actual renewable water resources in m³ per capita.

Annual freshwater withdrawals for agriculture as% of total withdrawals

Annual freshwater withdrawals for agriculture are annual withdrawals of water for irrigation and animal production without taking into account evaporation losses from accumulation basins. The withdrawals include, however, water from desalination plants in countries where they are an important water source.

Soil

Arable land in hectares per capita

Arable land includes land defined by FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Ecological footprint in hectares per capita

The indicator represents the area of biologically productive land and sea that a country use to produce the resources it consumes and to absorb the waste it generates.

DVS N ° 2: PRESERVING TERRITORIAL INTEGRITY AND BUILDING RESILIENCE TO TRANSNATIONAL THREATS

Global security

Global Peace Index (Score from 1 to 5)

The Global Peace Index, published by the Institute for Economics and Peace, ranks the countries of the world according to their degree of pacifism. The score, varying from 1 (very peaceful country) to 5 (non-peaceful country), calculated as weighted average of two sub-indices measuring the absence of violence in the country: peace within the country (60%), peace outside the country (40%). The first sub-index is the weighted average of the following 14 quantitative and qualitative indicators:

1. level of perceived criminality in society;
2. Number of police and internal security officers per 100,000 people;
3. Number of homicides per 100,000 people;
4. Number of prison population per 100,000 people;
5. Ease of access to small arms;
6. Internal conflict Intensity;
7. Likelihood of violent demonstrations;
8. Violent crime;
9. Political instability;
10. Political Terror Scale;
11. Imports of conventional arms;
12. Impact of terrorism;
13. Number of deaths in internal conflicts;
14. Internal conflicts: number and duration of conflicts in which a country is involved, including civil, interstate, unilateral and non-state conflicts.

The second sub-index (peace outside the country) shall be calculated as weighted average of the following 9 quantitative and qualitative indicators:

1. Military expenditure (% of GDP);
2. Armed forces personnel per 100,000 capita;
3. Financial contribution to the UN (peacekeeping missions);
4. Nuclear capabilities and heavy weapons;
5. Exports of conventional weapons;
6. Number of refugees and displaced people (in% of the population);
7. Relations with neighboring countries;

8. External conflicts: number, duration and role played in conflicts taking place outside the country;
9. Battle-related deaths (number of people).

Fragile State index (country score from 0 to 120)

Fragile State Index is an index produced by the American think tank Fund for Peace and published by the magazine "Foreign Policy". This is an annual ranking of countries in the world according to their levels of stability and the pressures that they experience. The first ranking was established in 2005.

The index does not necessarily predict when states may be victims of violence or collapse. Rather, it measures vulnerability to collapse or conflict.

This index diagnoses the problems that push a State towards failure. It allows decision-makers to anticipate and monitor the evolution of these problems in order to avoid periods of crisis by making the right decisions and developing smart programs.

The index is based on 12 indicators belonging to three categories: social, economic and political.

1. Social indicators cover:

- Demographic pressures;
- The importance of refugee movements or internal displacement;
- Community grievances;
- Chronic and sustained migration.

2. Economic indicators include:

- Uneven economic development;
- Severe economic downturn.

3. Policy indicators relate to:

- Criminalization and / or de-legitimation of the State;
- The gradual deterioration of public services;
- The suspension or arbitrary of law and large-scale violations of human rights
- The security device;
- The growth of factions within the elite;
- The intervention of other states or external political actors.

A scale from 0 to 10 was used to score each indicator. The total score is the sum of the scores for these 12 indicators. It varies on a scale of 0 to 120. A low score indicates stability and a high score indicates a critical situation; and the higher a country ranks, better it is.

Global Terrorism Index

This index, a multidimensional "measure" of terrorism, aims to measure the direct and relative impact of terrorist attacks by countries of the international community. The index ranges from 0 (no incidence of terrorism) to 10 (high impact of terrorism). The score is an average of the last five years, weighted by four factors: total number of terrorist incidents in a year; total number of deaths caused by terrorism; total number of injuries caused by terrorism; the approximate level of material damage caused by terrorism.

Homeland security

Number of police officers per 100.000 population

"Police personnel" means the personnel, listed on December 31 of each year, belonging to public bodies whose main functions are the prevention, detection and investigation of crime and the arrest of alleged perpetrators. Data concerning support staff (secretaries, etc.) must be excluded.

Number of detainees per 100.000 population

The prison population includes all individuals, accused and convicted, detained in penitentiary establishments or correctional establishments. Those detained should exclude non-criminal prisoners held for administrative purposes, including those detained awaiting an investigation into their immigration status and foreign nationals who do not have the right to remain in the country.

Voluntary homicide rate per 100.000 population

Intentional homicide is defined as the unlawful death purposefully inflicted on a person by another person.

Aggression rate per 100.000 population

Assault refers to force or violence against an another, causing serious bodily Injury. Sexual assault, threats and assault causing death are excluded from this indicator.

Internal public security

This indicator corresponds to the average score of the responses to the question of the Institutional Profiles Database (IPD) of CEPII: "On a scale of 0 to 4, where (0) indicates a very low security, and (4) reflects a strong security, does the State provide the safety of goods and people throughout the national territory? ".

Defense

Military expenditure as% of GDP

SIPRI military expenditure data is derived from the NATO definition which cover all current and capital expenditure of the armed forces, including peacekeepers, ministries of defense and other participating government agencies to defense projects, paramilitary forces if they are deemed to be trained and equipped to carry out military operations and activities in military space.

Such expenditure cover those incurred for civilian and military personnel, including pensions for military personnel and social services for personnel, operations and maintenance, procurement, research and development and aid military (which is included in the military expenditure of the donor country).

Excluded from this expenditure are civil defense and expenses attributable to previous military activities, such as veterans' benefits, demobilization, conversion and destruction of weapons.

However, this definition cannot be applied to all countries as more details would need to be available about what is included in military budgets and what is included in off-budget military expenditure.

Arms Imports

Arms transfers refer to the supply of military weapons that take place through sale, aid, gifts, and manufacturing licenses. The data covers most conventional weapons such as airplanes, armored vehicles, artillery, radar systems, missiles and ships for military use. Excluded other military equipment such as small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers and other services.

Global Firepower Power Index

This index, published by the think tank "Global Firepower", is a tool to assess and rate countries according to their military powers.

The index is based on 8 dimensions namely:

- The workforce (availability, suitability for service, active military workforce, etc.);
- Land capacities (armored vehicles, self-propelled guns, towed artillery pieces, rocket launchers, etc.);
- Air power (military planes, helicopters, aircraft, etc.);
- Naval power (aircraft carriers, frigates, corvettes, destroyers, submarines, etc.);
- Natural resources (oil production / consumption and oil reserves);
- Logistics capacities (strength of the merchant navy, main ports and terminals, road coverage, rail coverage, etc.);
- Financial resources (annual defense budget, foreign debt, foreign exchange and gold reserves, etc.);
- And the geographical situation (area of the country, coastline, common borders, waterway coverage).

DVS N ° 3: BUILDING SOCIAL CAPITAL AND CONVERTING IT INTO A COMPETITIVE EDGE

Human Development

Human Development Index

Human Development Index (HDI) (score from 0 to 1) Composite index measures the average achievements in three essential dimensions of human development: a long and healthy life, access to knowledge and decent standard of living.

This index represents the geometric mean of the standardized index for each of the three dimensions.

- The health dimension, assessed in accordance with life expectancy at birth (a component of the HDI) is calculated using a minimum value of 20 years and a maximum value of 85 years.
- The access to knowledge component of the HDI is measured by the number of years of education received by adults aged 25 and the expected years of schooling of children of school age. The average year of schooling is estimated by the UNESCO Institute for Statistics based on data on the level of education from censuses and surveys available in its database. Estimates of expected year of schooling are based on enrollment by age at all levels of education. This indicator is produced by the UNESCO Institute for Statistics. The expected year of schooling is capped at 18 years. The indicators are normalized using a minimum value of zero and maximum value of 15 for mean years of schooling

and 18 for expected years of schooling. The two indices are combined into an education index using an arithmetic mean.

- The standard of living dimension is measured by gross national income (GNI) per capita. The range of variation for minimum income is \$ 100 (PPP) and for maximum income of \$ 75,000 (PPP). The minimum value of GNI per capita, set at \$ 100, is justified by the considerable amount of non-market subsistence production not measured in economies close to the minimum value which does not appear in official data. The HDI uses the logarithm of income to reflect the decreasing importance of income with increasing GNI.

Index of prosperity and well-being

The Prosperity Index is an annual ranking of 167 countries, developed by the Legatum Institute. It is a unique and robust assessment of global wealth and well-being, through several key factors that form the foundations of prosperity: economy, entrepreneurship and opportunity, governance, education, health , security, personal freedoms, and social capital. The factors making up the index are in turn composed of quantitative and qualitative sub-variables. The value assigned to each factor corresponds to the weighted average of the variables making up each factor.

The value of a country's prosperity index corresponds to the average of its performance over all the equally weighted factors.

Social Progress Index (SPI)

This index allows to measure the multiple dimensions of social progress and further catalyze human well-being. SPI measures the well-being of a society by observing social and environmental outcomes directly rather than economic factors.

The index is calculated based on three criteria, namely: basic human needs, foundations of well-being and opportunity.

- Basic human needs concern the the capacity of the country to meet the basic needs of its citizens, particularly in terms of nutrition and basic medical care, access to sanitation facilities and improved water resources, access to housing and electricity, personal safety and security.
- The foundations of well-being relate to the capacity of the country to provide its citizens with access to basic knowledge, information and to ensure the sustainability of ecosystems.
- Opportunities include personal rights, individual freedom, tolerance and inclusion, and access to advanced education.

Inclusive Growth Index (Inclusive Development index)

The Inclusive Growth Index, developed by the international organization "World Economic Forum", ranks countries in the world according to their capacity to allow citizens to contribute and benefit from economic growth. Thus, it illustrates the sustainable economic development strategy pursued by each country.

This indicator distinguishes between developed and developing countries and thus provides two different rankings.

Human capital index

The human capital index, developed by the international organization "World Economic Forum", ranks countries in the world on how well they are developing and deploying their human.

Human capital is not a one-dimensional concept and can have different meanings for different stakeholders. In the business world, human capital is the economic value of an employee's skill set. For policymaker, human capital is the capacity of the population to drive economic growth. For others, it may include tacit knowledge acquired informally through experience, non-cognitive skills, such as inter-personal skills, and the physical, emotional and mental health of individuals. As such, the human capital index aims to accommodate this conceptual diversity and takes a holistic approach, while keeping an overall focus on maximizing the human potential of a nation.

The Human Capital Index contains two horizontal themes—Learning and Employment—running across five vertical age group pillars of the Index (Under 15; 15–24; 25–54; 55–64; and 65 and Over) :

- Learning which contains several sub-themes related to education, namely, enrollment in education and quality of education, which impact the future labour force; the educational attainment of those already in the labour force; and workplace learning - the level of opportunity in a country to acquire new skills both through formal on the job training as well as through learning by doing, tacit knowledge and learning from colleagues.
- Employment captures several dimensions of activity in the workplace, namely, economic participation sub-theme measures the extent to which people, of all ages, are taking part in a country's labour market; the skills dimension assesses whether the people knowledge and education are well-matched to the economic profile of the country as well as the quality of the employment in

which people find themselves; and the vulnerability sub-dimension which measures the incidence of exploitative labour relations stifling the long-term potential of individuals.

Global Social Mobility Index

The Social Mobility Index measures changes in the social status of people over time as well as the differences between the social status of parents and that of their children.

This mobility is usually estimated with the intergenerational elasticity of income (IAR).

As data on ERI are only available after many years, the Global Social Mobility Index focuses, instead, on the factors that most influence relative social mobility. The calculation of this index is based on ten categories of factors:

1. Health: this factor assesses the capacity of countries to provide quality health care.
2. Access to education: this factor assesses the capacity of countries to provide access to education.
3. The quality and equity in education: seven indicators used for the calculation of this index, the rate of children aged 10 who do not have a minimum level of competence, the Student–teacher ratio at preschool levels, primary and secondary, learning outcomes, social diversity at school and the percentage of disadvantaged students in disadvantaged schools.
4. Lifelong education: This factor measures the extent to which countries can develop the skills of citizens throughout their lives. This assessment is based on five indicators: in-company training, active measures for the unemployed, the impact of information technologies on access to basic services, the percentage of firms offering formal training and digital skills in the labour force.
5. Access to technology: This factor relates to the access and adoption of technologies among the population. The assessment is calculated on the basis of six indicators: the rate of Internet use among adults, the rate of subscription to high-speed Internet, to mobile network and 3G mobile technology, the rate of the rural population with access to electricity and internet at school.
6. Employment Opportunities: This factor relates to the countries capacity to provide employment opportunities to their citizens, regardless of their level of education and socioeconomic background. This assessment is calculated on the basis of six indicators, namely the unemployment rates of populations

with low, medium and high levels of education living in rural regions, Ratio of female to male labor force participation rate and the proportion of women workers in precarious jobs.

7. Pay equity: This factor relates to the countries capacity to offer fair wages to their citizens, regardless of their level of education and socio-economic background. This assessment is calculated on the basis of five indicators: the ratio of jobs paid less than two-thirds of the median wage, the ratios of the top 10% and the lowest-paid 40%, the ratios of the top 50% income and the lowest paid 50%, the average income of the lowest paid 40% of the national average income, and the share of labour income over GDP.
8. Working conditions: this factor relates to the capacity of countries to guarantee good working conditions to their citizens, regardless of their level of education and their socio-economic background. This assessment is calculated on the basis of five indicators: indices of workers' rights, cooperation in relations between employers and workers, the link between wages and productivity, the proportion of employees working more than 48 hours per week and the union coverage rate.
9. Social protection: this factor is related to the capacity of countries to provide effective social protection to their populations. This assessment is calculated on the basis of four indicators: the ratio of social assistance benefits to median income, the percentage of the population covered by social programs, the share of GDP devoted to social programs and an index of the quality of social protection.
10. Inclusive institutions: this factor assesses the capacity of countries to provide inclusive institutions and effective public services to their populations. This assessment is calculated on the basis of four indicators: The Corruption Perceptions Index, efficiency of public and government services, inclusiveness of institutions and political stability and protection against violence.

Index of maternal well-being

This index measures the well-being of mothers around the world. This index is based on five indicators:

- Maternal mortality which is considered a strong measure of the strength of the health system;
- Child well-being as measured by the infant mortality rate, a key indicator of coverage of child survival interventions as well as care received by mothers before, during and after pregnancy;

- The level of education of women measured by the number of potential years of schooling. This indicator is considered to be a powerful determinant of quality of life;
- The economic situation of women measured by GNI per capita, considered the best indicator to measure a mother's access to economic resources;
- The political status of women measured by the number of seats in parliament. Such an indicator which is considered important for the study of the problems of mothers and their children as a national priority.

KidsRights Index

KidsRights Foundation and Erasmus University Rotterdam launched the KidsRights Index in November 2013. This is an annual world ranking of 182 countries measuring how children's rights are respected worldwide, according to UNICEF, UNDP and the United Nations Committee on the Rights of the Child data.

This index represents a means to encourage dialogue on the rights of the child. It based on 5 components, namely: the right to life, health, education, protection and the environment conducive to the kids rights.

World Happiness Index

"World Happiness", developed by the Global Initiative for the United Nations "Sustainable Development Solutions Network", rank the countries according to the subjective well-being of their populations, based on the average scores designed according to the Cantril scale, on which the interviewees from each country choose a score between 0 (the worst possible life) and 10 (the best possible life) to answer the following question: "how do you assess the quality of your current life? ".

It should be noted that, according to the organization, the following six criteria: Healthy life expectancy; GDP per capita ; Perception of corruption; Freedom to make choices in life; Social support; Generosity, explains nearly three quarters of the variations in the average national scores obtained on the Cantril scale.

The last four criteria, together with GDP and life expectancy, are derived from the Gallup Global Survey:

- The score of the "social support" criterion is the average score for the answers to the question: "If you are in difficulty, do you have relatives or friends who can help you?".

- The score for the criterion "freedom to make choices in life" is the average score for the answers to the question "Are you satisfied or dissatisfied with your freedom to choose what you do with your life?".
- The score of the criterion "Generosity" is the residue of the regression of the average score of the responses to the question "Have you given money to a charity in the last month?" on per capita GDP.
- The score of the criterion "perception of corruption" is the average score of the answers to the two questions: "corruption is very widespread throughout the government or not?" and "is corruption widespread within companies or not?".

Quality of Death Index

"Quality of Death Index" measures the quality of measures the of end-of- life care services in each country. The index is structured around 5 factors:

1. Palliative care (20% weight in the index): covers the general framework of the health system;
2. Human resources (20%): measures the availability and training of healthcare professionals and support staff;
3. Accessibility to healthcare (20%);
4. Quality of care (30%): assesses the existence of monitoring guidelines, the availability of opioids, and the partnership of health care providers and patients in health care;
5. Community involvement (10%): measures the availability of volunteers for palliative care.

The score of the index corresponds to the weighted average of the 5 factors that make it up. It ranges from 0 (poor quality of death) to 100 (good quality of death).

Suicide rate per 100.000 population

The suicide rate is the number of suicide deaths in a year per 100,000 population.

Education

Public expenditure on national education as % of GDP

Public expenditure on education is the current and fixed public expenditure on education. It covers public expenditure relating to educational establishments (public and private) and the administration of education as well as subsidies to private entities (students / households and other private entities).

Public expenditure on national education per pupil as % of GDP / capita

This indicator covers government expenditure on education per student, expressed as a percentage of GDP per capita, for a given financial year.

Morocco's global ranking on International "PIRLS and TIMSS" tests

The international PIRLS (Progress in International Reading Literacy Study) and TIMSS (Trends in International Mathematics and Science Study) tests, developed by the International Association for the Evaluation of Educational Achievement, assess basic students reading, mathematics and science skills.

Pupil-teacher ratio in primary education

The pupil-teacher ratio are calculated by dividing the number of pupils on a school's roll by the full-time equivalent number of qualified teachers teaching full-time.

This can lead to two types of analysis. The first assesses the extent to which the number of teachers is sufficient (or not) to supervise the students. If the observed value of the pupil-teacher ratio is less than or equal to this standard, then the number of teachers is sufficient. Conversely, if the calculated value of the pupil-teacher ratio exceeded that standard, then the system lacks teaching staff and overcrowded classrooms may arise.

The pupil-teacher ratio, secondly, further highlights the differences in the practices of allocating teaching resources to schools, while within a country it highlights the disparities in the capacity of the teacher education system to be equitable by offering its teaching staff the same workloads and its students the same learning conditions as those described above.

School enrollment

Net enrollment rate in primary education (%)

This indicator is the number of pupils of official primary school age who are enrolled in primary education as a percentage of the total children of the official school age population.

Net enrollment rate in secondary middle school (%)

This indicator is calculated by dividing the number of students of official school age enrolled in secondary education by the population of the age group which officially corresponds to secondary education, and multiplying by 100

Net enrollment rate in upper-secondary education (in%)

This indicator corresponds to the educated population, at the level of qualifying secondary education, aged 15 to 17 compared to the school-age population aged 15 to 17.

Vocational education

Percentage enrolled secondary vocational education (%)

This indicator corresponds to enrollments, for a given school year, in vocational secondary education, expressed as a percentage of enrollments in overall secondary education (general and vocational).

School dropout

The following two indicators assess the phenomenon of dropping out of school before getting the final diploma in an age group and its impact on the internal efficiency of education systems. In addition, these are key indicators for analyzing and forecasting the educational path of students during the education cycle.

Cumulative dropout rate in primary education (in%)

This indicator corresponds to the percentage of students in a group enrolled in the first year of primary education, for a given school year, having dropped out of school during their primary school.

Cumulative dropout rate in secondary education (in%)

This indicator corresponds to the percentage of students in a group enrolled in the first year of secondary education, for a given school year, who have dropped out of school during their secondary education.

Literacy

Adult literacy rate (% of population aged 15 and above)

This indicator corresponds to the percentage of people aged 15 and over who can both read and write with understanding a short simple statement on his/her everyday life, Generally, Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations.

Youth literacy rate (% of population)

This indicator corresponds to the percentage of people aged 15 to 24 years who can both read and write with understanding a short simple statement on their everyday life. Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations.

Health

Life expectancy at birth and fertility

Life expectancy at birth

Average number of years that a newborn can expect to live, if current death rates do not change. However, the actual age-specific death rate of any particular birth cohort cannot be known in advance.

Total fertility rate

The number of children who would be born per woman if she/they were to pass through the childbearing years bearing children according to a current schedule of age-specific fertility rates.

Vaccination: DTP1 coverage rate

The DTP1 vaccine is a compulsory vaccine against 3 diseases: diphtheria, tetanus and polio (infection of viral origin). It is combined with the pertussis vaccine for children but not necessarily for adults. The DTP1 vaccine coverage rate is often used to assess the immunization status of infants in a health system.

Maternal and infant mortality

Maternal mortality

number of maternal deaths during a given time period per 100,000 live births during the same time period. It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth. Maternal deaths.

Infant mortality

Infant mortality rate is the probability of a child born in a specific year or period dying before reaching the age of one, if subject to age-specific mortality rates of that period. Infant mortality rate is strictly speaking not a rate (i.e. the number of deaths divided by

the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as rate per 1000 live births.

Health expenditures

Total health expenditures

Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.

Household Expenditure as % of total health expenditure

Health expenditures of households are the expenditure incurred directly by households, including supplements and payments-in-kind, from healthcare providers and suppliers of pharmaceuticals, therapeutic devices and other goods and services, the main purpose of which is to contribute to the restoration or improvement of the health of populations. They are part of private expenditure on health

Medical supervision

Medical density (number of doctors per 10,000 inhabitants)

Medical density is the ratio of the number of doctors to the population of a given country. Medical density is expressed in term of number of doctors (for example) per 10,000 inhabitants.

Paramedical density (number of nurses per 10,000 inhabitants)

Paramedic density is the ratio of the number of nurses to the population of a given country.

Number of psychiatrists per 100,000 inhabitants

The number of psychiatrists per capita is the ratio of the number of psychiatrists to the population of a given country.

Hospital beds density

Bedding density is the ratio of the number of hospital beds to the population of a given country.

Road safety

Estimated number of road fatalities (per 100,000 inhabitants)

This indicator represents an estimate of the number of deaths caused by road traffic per 100,000 inhabitants.

Living conditions

Quality-of-life index

This indicator is a sub-index of the Country Reptrak Index (see definition DVS6). It makes it possible to assess the reputation of countries according to their quality of life.

The score of the indicator is the weighted average of the responses collected during the international survey on Morocco's reputation in the world, conducted by IRES in partnership with Reputation Institute, inherent in lifestyle, friendliness and the sympathy of the population, the quality of the environment and the means of entertainment. It varies from 0 to 100: very favorable reputation.

Water and electricity

Access rate to improved sources of drinking water sources

The rate of access to improved sources of drinking water is the percentage of the population with access to safe drinking water (network connections, booms, fountains and equipped water points) at home or within a radius of at most one kilometer from home.

Rate of access to public power systems

Electricity access refers to the percentage of people in a given area that have relatively simple, stable access to electricity.

Sanitation and access improvement

Rate of access to improved sanitation facilities

Access to improved sanitation facility is the the percentage of people in a given area that have at least sufficient access to excreta disposal facilities that can effectively prevent contact of humans, animals and insects with feces. Improved facilities vary from simple but protected pits with toilets to flushing toilets connected to a sewer. To be effective, facilities must be well constructed and properly maintained.

Rural population roads accessibility rate

This indicator corresponds to the proportion of the rural population served by the paved network and that well served by roads.

Inequality and poverty

GINI index (Coefficient from 0 to 1)

The Gini coefficient is a measure of inequality in the distribution of income in a given society, developed by the Italian statistician "Corrado Gini".

The Gini coefficient is calculated on the basis of the function (whose graphical representation is the Lorenz curve) which associates with each part of the population ordered by increasing income, the part that its income represents.

It is a number varying from 0 to 1, where 0 means perfect equality (everyone has the same income) and 1 means total inequality (one person has all the income, the others have no income).

Relative poverty rate (in%)

The relative poverty rate is the percentage of the population that lives below the national poverty line.

Multidimensional poverty rate (in%)

Multidimensional poverty is the deprivations that affect households in terms of health, education and standard of living. The index is based on 10 indicators of poverty, hence its multidimensional nature:

1. infant mortality (if a child died in the family);
2. nutrition (if a family member is malnourished);
3. years of schooling (if no member has completed five years at school);
4. Dropping out of school (if one of the children left school before 8 years old);
5. access to electricity (if the household has no electricity);
6. access to drinking water (if there is none within a 30-minute walk);
7. sanitary facilities (if there is none or shared with others);
8. The soil habitat;
9. fuel for cooking;
10. movable property (if there is not more than one item among: radio, television, telephone, bicycle or motorbike).

It should be noted that the statistics used to calculate this index have a different year, within a range from 2003 to 2007.

Employment and Unemployment

National unemployment rate (%)

The unemployment rate is the percentage of the total labor force that is unemployed aged 15 and over. This rate is obtained by the ratio of the number of unemployed to that of the active aged 15 and over.

Extent of informal work

This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPIL, to measure the weight of informal work in the country's economy.

The index score ranges from 0 = Not important to 4 = Very important.

DVS N ° 4: IMPROVING GOVERNANCE SYSTEMS TO INTERNATIONAL STANDARDS

Democracy

Democracy Index (score from 0 to 10)

The Democracy Index is created in 2006 by The Economist provides a snapshot of the state of world democracy for 165 independent states and two territories. The Democracy Index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Based on their scores on 60 indicators within these categories, each country is then itself classified as one of four types of regime: full democracy; flawed democracy; hybrid regime; and authoritarian regime.

Civil liberties

This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPIL, measures the strength of public freedoms which include freedom of association, freedom of assembly, of demonstration, equal treatment of citizens in their relations with the administrations (regardless of their religion, ethnicity, sex, nationality ...) as well as respect for the rights and freedoms of minorities (ethnic, religious, linguistic, immigrants ...).

The indicator ranges from 0: very few freedoms to 4: strong freedoms.

Freedom of information

This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPIL, measures the strength of freedom of information by taking into consideration the freedom of the press (freedom of access to information, protection of journalists ...), media pluralism, freedom of access, navigation and publication on the Internet, freedom of access to satellite as well as freedom of access to foreign newspapers (absence of seizures, censorship, etc.). The indicator ranges from 0: No freedom of information to 4: High freedom of information.

Public sector and governance

The following first 4 indices, relating to governance, are indicators developed by the World Bank. They are the result of opinion polls carried out among a large number of businesses, citizens and experts in industrialized and developing countries. They are based on 32 individual data sources produced by a variety of survey institutes,

think-thanks, non-governmental organizations, international organizations and private sector companies.

These indicators are measured in units ranging from -2.5 to 2.5. The higher values correspond to results representing better governance.

Rule of Law Index (score of -2.5 to 2.5)

Basically, a rule of law means that public authorities must exercise their functions according to the guidelines defined by a set of legal standards. Thus is founded administrative law which is essentially equivalent to "rule of law" or "primacy of law". The rule of law can also be summed up by: "No one is above the law".

More generally, this order brings together a set of legal rules that protect citizens against arbitrary forms of (executive) power. For a rule of law to exist, the obligations emanating from the state must be official, impersonal, imperative.

In other words, laws must 1) be known to the public, 2) no one can escape them, 3) they must actually apply, and 4) violation of the law must result in penalties.

Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

Government Effectiveness Index (score of -2.5 to 2.5)

Capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

Regulatory quality index (score from -2.5 to 2.5)

capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Expression and Accountability index (score from -2.5 to 2.5)

Capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

Corruption perception index (score from 0 to 100)

The Corruption Perception Index (CPI), published by Transparency International, ranks countries by their perceived levels of public sector corruption according to experts and businesspeople.

The CPI is a composite index, a combination of different international surveys and assessments of corruption uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.

Public service territorial coverage

This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPII, assesses the extent to which the territory is covered by the following public services: public school (primary and secondary), basic health services, the network drinking water and sanitation, the electricity network, transport infrastructure and maintenance and solid waste removal services. The indicator ranges from 0: low coverage to 4: territory fully covered.

Open Data Inventory Index (ODIN)

The Open Data Inventory (ODIN) assesses the coverage and openness of official statistics to identify gaps, promote open data policies, improve access, and encourage dialogue between national statistical offices (NSOs) and data users.

The components of this index are the availability of key indicators over time and by geographic subdivision, the ability to download data in readable formats with metadata and with open terms of use.

The statistics evaluated concern the social (population, health, education, gender, crime and poverty), economic (national accounts, labor, price indices, public finances, currency and banks, trade and balance of payments) and environmental (use of soil, resources and energy, pollution and the built environment) sectors.

Bertelsmann Stiftung's transformation Index

Bertelsmann Stiftung's Index (BTI) is an index, published every two years by "Bertelsmann Stiftung The Bertelsmann Stiftung's Transformation Index (BTI) analyzes and evaluates the quality of democracy, a market economy and political management in 137 developing and transition countries. It measures successes and setbacks on the path toward a democracy based on the rule of law and a socially responsible market economy. This index evaluate the transformations and persistent challenges and the

capacity of political decision-makers to implement targeted reforms to meet these challenges.

Guided by a standardized codebook, country experts assess the extent to which a total of 17 criteria have been met for each of the 137 countries.

The BTI aggregates the results relating to two main indices: "Status Index" and "Management Index".

"Status Index", with its two analytical dimensions: - the state of political transformation and the state of economic transformation - identifies where each of the 129 countries assessed stands on the right path to democracy under the rule of law and market economy following the principles of social justice.

The BTI aggregates the results of this comprehensive study of transformation processes and political management into two indices: The Status Index and the Governance Index. The Status Index, with its two analytic dimensions of political and economic transformation, identifies where each of the 137 countries stand on its path toward democracy under the rule of law and a social market economy.

The state of political transformation is measured in terms of five criteria, which in turn are derived from assessments made in response to 18 questions. The BTI's concept of democracy goes well beyond other definitions of democracy, which are limited primarily to basic civil rights and the conduct of free elections.

The criteria making up the "state of political transformation" index are as follows:

- Stateness, which is seen as a precondition to democracy, is included in the BTI's definition of political transformation and examined through questions specifically dealing with the state's monopoly on the use of force and basic administrative structures.
- Political participation;
- Rule of law;
- Stability of democratic institutions;
- Political and social integration

The state of economic transformation is measured in terms of seven criteria, which are based on a total of 14 indicators. The BTI's concept of a market economy includes not only aspects such as economic performance, regulatory or competition policy, and property rights; it also contains elements of social inclusion, such as social safety nets, equality of opportunity and sustainability. In BTI terms, comprehensive development

not only aims at economic growth, but also requires successful poverty alleviation and the freedom of action and choice for as many citizens as possible.

The Governance Index assesses the quality of political leadership with which transformation processes are steered.

The Governance Index is comprised of five criteria, which are based on a total of 20 indicators. It focuses on how effectively policymakers facilitate and steer development and transformation processes. By examining and evaluating decision-makers' reform policies, the BTI sheds light on those factors determining success and failure on the way to democracy and a market economy. Successful governance implies that governments are consistent in pursuing their goals and use their resources wisely and effectively. It further implies that decision-makers cultivate the broadest possible consensus for their transformation goals and work reliably with external supporters and neighboring states.

The 5 criteria making up the index are as follows:

- Difficulty level ;
- Steering capacity;
- Resource efficiency;
- Consensus building;
- International cooperation.

Freedom of the press index

The press freedom index, published by the international organization "Freedom House", ranks countries and regions according to the level of freedom available to journalists. This index measures the degree of freedom of printing and dissemination of information as well as the degree of freedom of the electronic press. It is based on the legal environment for the media, the political pressures reporting and the economic factors that affect access to information. The index ranking is based on the annual media independence survey answered by experts from participating countries.

The countries of the world are classified into three categories according to their degree of media freedom: "free", "partially free" or "not free".

Index of political stability and absence of violence and terrorism

This indicator measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

Political institutions operations

This indicator, taken from the Institutional Profiles Database (IPD) survey by CEPIL, measures the functioning of political institutions. It varies from 0 (Very many irregularities) to 4 (Perfectly regular).

Economic policy transparency

This indicator is the average score of the responses to the question in the Institutional Profiles Database (IPD) of CEPIL: "On a scale of 0 to 4, where (0) indicates very low transparency, and (4) reflects high transparency, is economic policy (budgetary, fiscal, etc.) the object of public debates? ".

Sectoral reform capacities

This indicator, resulting from the Institutional Profiles Database (IPD) survey of CEPIL, measures the capacity of the authorities to decide and actually implement social economic reforms (labor market, social rights, health, education, etc.), societal reforms (family, religion, etc.) as well as reforms to protect the environment.

Long-term sectoral strategies

This indicator, taken from the Institutional Profiles Database (IPD) survey of CEPIL, reflects the degree of strength of the strategic long-term vision of public authorities in terms of human capital development (training, health, etc.), land use planning, environmental protection and international or regional integration. The indicator ranges from 0: Very weak strategic vision to 4: Strong strategic vision.

Support for vibrant emerging sectors

This indicator, taken from the Institutional Profiles Database (IPD) survey by CEPIL, measures support for dynamic emerging sectors as well as the dynamism of economic zones benefiting from exemption measures (tax, regulatory, etc.).

DVS N ° 5: CLIMATE CHANGE AND NATURAL DISASTERS PREPAREDNESS

Climate change

Climate change performance index

The Climate Change Performance Index is an instrument designed to enhance transparency in international climate politics. Its aim is to put political and social pressure on those countries which have, up until now, failed to take ambitious action on climate protection, as well as to highlight countries with best practices in climate policies.

Based on standardized criteria, the index evaluates and compares the climate protection performance of 58 57 countries and the EU, which are together responsible for more than 90 percent of global greenhouse gas (GHG) emissions. 80% of the assessment of countries' performance is based on quantitative data from internationally recognized institutions, and 20% of the assessment is based on the unique climate policy section.

Average rainfall (in mm/year)

Average rainfall is the long-term average in depth (over space and time) of annual precipitation in the country. Precipitation is defined as any kind of water that falls from clouds as a liquid or a solid.

Exposure to risks associated with climate change

Water stress

Indicator that measures the total annual water withdrawals (municipal, industrial and agricultural), expressed as a percentage of the total annual water available. The score ranges from 0 to 5 as follows:

- [0-1]: low risk (<10%);
- [1-2]: low to medium risk (10-20%);
- [2-3]: medium to high risk (20-40%);
- [3-4]: high risk (40-80%);
- [4-5]: extremely high risk (> 80%).

Interannual variability of water

Indicator that measures the variation in water supply between years. The score ranges from 0 to 5 as follows:

- [0-1 [: low risk (<0.25);
- [1-2 [: low to medium risk (0.25-0.5);
- [2-3 [: medium to high risk (0.5-0.75);
- [3-4 [: high risk (0.75-1.0);
- [4-5]: extremely high risk (> 1.0).

Seasonal variability of water

Indicator that measures the change in water supply between months of the year. The score ranges from 0 to 5 as follows:

- [0-1 [: low risk (<0.33);
- [1-2 [: low to medium risk (0.33-0.66);
- [2-3 [: medium to high risk (0.66-1.0);
- [3-4 [: high risk (1.0-1.33);
- [4-5]: extremely high risk (> 1.33).

Drought severity

Indicator that measures the average duration, expressed in number of months, of droughts recorded during the period 1901-2008. The score ranges from 0 to 5 as follows:

- [0-1 [: low risk (<20);
- [1-2 [: low to medium risk (20-30);
- [2-3 [: medium to high risk (30-40);
- [3-4 [: high risk (40-50);
- [4-5]: extremely high risk (> 50).

Natural disasters

Global Climate Risk Index (IRC)

The Global Climate Risk Index 2020 analyses to what extent countries and regions have been affected by impacts of weather-related loss events (storms, floods, heatwaves etc.). It should be noted that the higher the rank of a country is, the less it is exposed to climate risks.

Natural disaster risk reduction progress score

Disaster risk reduction progress score is an average of self-assessment scores, ranging from 1 to 5, submitted by countries under Priority 1 of the Hyogo Framework National Progress Reports. The Hyogo Framework is a global blueprint for disaster risk reduction efforts that was adopted by 168 countries in 2005. Assessments of "Priority 1" include four indicators that reflect the degree to which countries have prioritized disaster risk reduction and the strengthening of relevant institutions.

Risk of marine submersion (Population living on land with an altitude under 5 meters as a% of the total population)

This indicator represents the share of the population living at an altitude of less than 5 meters in the total population.

DVS N ° 6: SUCCESSFUL INTEGRATION INTO EMERGING GLOBAL GEO-ECONOMIC AND GEOPOLITICAL ORDER

Ensuring globalization readiness

Competitiveness / Attractiveness

Global competitiveness index

The Global Competitiveness Index evaluates the competitiveness of institutional (property rights), economic (macroeconomic stability, labor market), and social (health and education) sectors.

The index is established on the basis of a combination of 113 criteria in different fields (infrastructure, macroeconomic environment, health, education, etc.), of which 34 criteria are taken from the statistical databases of international organizations and 79 criteria are taken from responses to perception surveys among executives and business leaders in different countries.

Doing Business index

Provides objective measures of business regulations for local firms in 190 economies and in selected cities at sub-national and regional level. It allows to analyze the small and medium-sized enterprises and to measure the regulations to be applied.

This index covers 10 areas: (1) Starting a business, (2) Obtaining building permits, (3) Connection to electricity, (4) Transfer of ownership, (5) Obtaining loans, (6) Protection minority investors, (7) Payment of taxes, (8) Cross-border trade, (9) Enforcement of contracts and (10) Settlement of insolvency.

Best Countries for Business index

Best Countries for Business is an index, developed by "Forbes", to evaluate the countries's performance in business expertise through several key factors: property rights, innovation, taxes, technology, corruption, freedom (personal, business and monetary), bureaucracy, investor protection and stock market performance. Such data is based on various international sources:

- Taxes, investor protection and bureaucracy: World Bank's "Doing Business" database.
- Commercial and Monetary Freedom: Heritage Foundation's Economic Freedom Database.
- Personal Freedom: Freedom House database.

- Technology and innovation: World Economic Forum's Global Competitiveness Index database.
- Corruption: Transparency International Corruption Perceptions Index.
- The property rights: "International Property Rights Index" data.
- Stock market performance: Bloomberg data.

The ranking of "Best Countries for Business" is obtained by measuring for each country, the average of all of these equally weighted variables.

Brand Finance Nation Brands

"Brand Finance Nation Brands" is developed by "Brand Finance", a firm that specializes in rating country and corporate brands. This index ranks countries according to the strength of their brands. The ranking is obtained on the basis of two main components, namely, the country's brand strength "Brand Strength Index" and the Forecast revenue of the country's brands.

The score of the "Brand Strength Index", which varies between 0 and 100 corresponding to scores varying from D to AAA +, is calculated by combining around one hundred data relating to the 3 pillars constituting the foundations of the attractiveness of the image of a country, namely: investment, social and institutional capital and goods and services.

- Investment consists of the following dimensions: regulation, taxation, infrastructure, investor protection, use of technology, research & development, doing business, market development, education, retention and use of talents.
- Social and institutional capital includes the following attributes: corruption, judicial system, security, image, quality of life, business ethics.
- Goods & services include the following dimensions: trade rules, public policy under governance, market size, competitiveness and market development, attractiveness of tourism, tourism infrastructure, opening up of the tourism sector.

A royalty rate is then calculated for each country on the basis of the score obtained by the country under the "Brand Strength Index". The higher a country's score is, the higher its royalty rate.

The forecast revenues correspond to the five-year revenue forecasts for all brands in each country, replacing its forecast GDP values. An additional annuity is calculated, during the last year, on the contribution of the brand to take into account its value in perpetuity.

Reptrak Country Reputation Index

Reputation Institute publishes an annual study of countries' reputations to measure the reputation of the world's 100 most highly-regarded and familiar global companies in G8 nations. based the reputation indicator "Pulse", this mathematical model calculates the reputation of the company according to seven dimensions:

- Offer of products and services.
- Work environment.
- Integrity (ethics and transparency).
- Leadership (quality of management).
- Citizenship (social action and environment).
- Innovation.
- Financial results.

The "Pulse" indicator, dealing with country reputations is called "Country RepTrak® Pulse" and measures the admiration, respect, good impression and trust of one country over another.

The attributes used to measure the reputation of the 73 countries in the sample are 17: natural environment, lifestyle, friendly and friendly population, economic environment, institutional / political environment, social well-being, international respect, security, efficient use of resources, ethics and transparency, quality of products and services, recognized brands and companies, culture, technology / innovation, educated and trusted population and education system.

Factorial analysis of these 17 attributes allowed them to be grouped into three factors that the Reputation Institute called the dimensions of a country's reputation: quality of life, level of development and institutional quality.

The Country Rep Trak Index score ranges from 0 to 100 (excellent reputation).

Bloom consulting country brand Ranking

The "Bloom Consulting Country Brand Ranking" index is developed by "Bloom Consulting", a country and corporate branding consultancy. The index is obtained through the application of a specific algorithm developed by the firm and which combines four main variables relating to the tourism sector:

- The economic performance of the tourism sector, measured through the average amount of tourism receipts and the average rate of growth of these receipts, recorded by each country over the period 2008-2012.

- Digital demand, measured using a tool which calculate the total volume of online research carried out by tourists for tourist activities and attractions in each country.
- Assessment of the brand strategy set up by the competent tourism authority to highlight the country's tourism offers.
- The evaluation of the digital content of each country as well as its communicative performances on social networks. This variable measures the digital presence of the brand in each country and is measured, among other things, through the total number of visits and the average time spent by each visitor on the country's official website.

Global Entrepreneurship Index

The Global Institute for Entrepreneurship has identified 14 components to assess entrepreneurial ecosystems, namely: perception of opportunities, start-up competence, acceptance of risks, networking, cultural support, perception of opportunity , technology, human capital, competition, product innovation, the innovation process, internationalization, strong growth and availability of capital.

This composite index provides policy makers with a tool to understand the entrepreneurial strengths and weaknesses of their countries, thus enabling them to implementing policies that promote entrepreneurship. It is designed to help governments harness the power of entrepreneurship for sustainable economic development.

It measures the health of the entrepreneurship ecosystems in each of 137 countries. It then ranks the performance of these against each other. This provides a picture of how each country performs in both the domestic and international context.

The entrepreneurship is defined as the dynamic interaction between attitudes, capacities and entrepreneurial aspirations of individuals and which leads to the allocation of resources through creation and development new businesses.

Global index of economic freedom

Economic freedom is the fundamental right of every human being to control his own work and to acquire property. In an economically free society, individuals are free to work, produce, consume and invest in any way they please, with this freedom both protected by the state and without constraint. In economically free societies, governments allow capital and goods to flow freely and refrain from coercion or

constraint of freedom beyond the extent necessary to protect and maintain freedom itself.

The Index of Economic Freedom scores countries is based on twelve quantitative and qualitative factors, grouped into four broad categories, or pillars, of economic freedom:

- Rule of Law (property rights, government integrity, judicial effectiveness)
- Government Size (government spending, tax burden, fiscal health)
- Regulatory Efficiency (business freedom, labor freedom, monetary freedom)
- Open Markets (trade freedom, investment freedom, financial freedom)

Each of the twelve economic freedoms within these categories is graded on a scale of 0 to 100. A country's overall score is derived by averaging these twelve economic freedoms, with equal weight being given to each.

Global market share (%)

Global market share is the measure by which one can assess the presence of a firm in a worldwide industry. Market share is defined as "the percentage of a market (in terms of either units or revenue) accounted for by a specific entity". Global market share is a key indicator for a company's competitiveness as it is largely independent of macroeconomic fluctuations and directly comparable across companies.

Logistics performance index

The index represents perceptions, relating to a country's logistics, based on the efficiency of customs clearance processes, the quality of commercial and transport - related infrastructure, ease of arranging competitively priced international shipments, quality of infrastructure services, ability to track consignments and frequency with which shipments reach the consignee within the scheduled time.

Data are from the Logistics Performance Index surveys conducted by the World Bank in partnership with academic and international institutions and private companies and individuals engaged in international logistics. The index ranges from 1 to 5, with the highest score representing better performance.

Enabling Trade Index

The Enabling Trade Index evaluates 136 economies based on their capacity to facilitate the flow of goods over borders and to their destination. It analyzes which countries around the world enable trade from country to destination by measuring market access, border administration, transport and communications infrastructure, and the business environment in that country.

Global illicit trade environment index

The Global Illicit Trade Environment Index is a measure of the extent to which economies enable (or inhibit) illicit trade through their policies and initiatives to combat illicit trade. The index is built around four main categories, each of which comprise a few indicators. The four categories are government policy, supply and demand, transparency and trade, and the customs environment.

Global Manufacturing Risk Index

The aim of this index is to identify the countries most conducive to industrial relocation. The index takes into account three factors: risks (economic, natural disasters, etc.), costs (labor, electricity, construction costs, etc.) and conditions (exploitation of labor, logistics, business environment, sustainability ...). For this, 20 variables are taken into account to obtain the 3 final scores.

This index allows investors to assess the attractiveness of a country to relocate their industries.

Travel & Tourism Competitiveness Index (TTCI)

The travel and tourism competitiveness index, published for the first time in 2007 at the World Economic Forum, intends to examine various regulatory and commercial issues identified as levers intended to improve the competitiveness of travel and tourism in the world.

Published biennially, Travel & Tourism Competitiveness Index benchmarks the T&T competitiveness of 140 economies and measures the set of factors and policies that enable the sustainable development of the Travel & Tourism (T&T) sector, which in turn, contributes to the development and competitiveness of a country. It is comprised of four subindexes, 14 pillars and 90 individual indicators, distributed among the following pillars:

1. Business Environment;
2. Safety and Security;
3. Health and Hygiene;
4. Human Resources and the Labor Market;
5. Information and Communication Technologies Readiness;
6. Prioritization of Travel & Tourism;
7. International Openness;
8. Price Competitiveness;

9. Environmental Sustainability;
10. Air transport Infrastructure;
11. Ground and Port Infrastructure;
12. Tourism Service Infrastructure;
13. Natural Resources;
14. Cultural resources and Business Travel .

Foreign tourist reception quality indicator

The indicator " Foreign tourist reception quality indicator" appeared, in 2013, as a sub-component of the Global Travel & Tourism Competitiveness Index. Its aim to evaluate the attitude of the population of a country towards foreign tourists. The score for this indicator represents the average score of the experts' answers to the question: "How are foreign tourists received in your country? (1 = poor reception; 7 = very good reception)".

Change Readiness Index

"Change Readiness Index" is an index, developed jointly by the firm KPMG and the organization Oxford Economics Group, which measures the capacity of a country - its government, private and public enterprises, civil society - to anticipate, prepare for, manage and respond to wide range of change drivers by proactively taking advantage of the opportunities that arise and mitigating potential negative impacts.

The index is structured around three pillars: (1) Enterprise capability, (2) Government capability and (3) People & civil society capability. Each pillar contains subindices illustrating the country's capacity to manage change.

- The indicators relating to pillar 1 " enterprises capability" are as follows:
 - Labor market ;
 - Economic diversification;
 - Economic openness;
 - Innovation, Research & Development;
 - business environment;
 - The financial sector;
 - The infrastructure;
 - The Financial sector;
 - Transport and utilities infrastructure;
 - Enterprise sustainability;
 - Informal sector;

- Technology infrastructure
- The indicators relating to pillar 2 "government capability " are as follows:
 - macroeconomic framework;
 - Public administration and state business relations;
 - regulation ;
 - Fiscal and budgeting;;
 - Rule of law;
 - Government strategic planning and horizon scanning;
 - Environment and sustainability;
 - Food and energy security;
 - Security ;
 - Land rights.
- The indicators relating to pillar 3 "civil society capability" are as follows:
 - Human capital;
 - Entrepreneurship ;
 - Civil society;
 - Safety nets;
 - Technology use;
 - Gender ;
 - Inclusiveness of growth;
 - Demographics ;
 - Health ;
 - Access to information.

Such data is based on the one hand on the primary 22 survey questions carried out among 1,270 experts throughout the world, and on the other hand on the secondary data which used more than 120 variables (which are grouped into 73 indicators) to calculate the Change Readiness Index.

The secondary variables are derived, in particular, from data of the World Economic Forum, the World Bank, the Legatum Institute, the International Monetary Fund and the United Nations. The combination of primary and secondary data highlights a comprehensive picture of change readiness in the 127 countries.

The index is structured around the three pillars. It varies from 0 (weak capacity to manage change) to 1 (strong capacity to manage change).

Good Country Index

The "Good Country Index", developed for the first time in 2014 by the researcher "Simon ANHOLT". it examines and measures how countries contribute to the common good of humanity, outside their own borders, and what they take away: it's their balance-sheet towards humanity and the planet.

"Good Country Index" is a composite statistic of 35 data points which are mostly generated by the United Nations. These data points are combined into a common measure which gives an overall ranking and a ranking in seven categories, Science and Technology, Culture, International Peace and Security, World Order, Planet and Climate, Prosperity and Equality, Health and Well-being:

1. Science, knowledge and technology:

- Number of foreign students in the country (relative to GDP);
- Exports of scientific journals and newspapers (relative to GDP);
- Number of articles published in international journals (relative to GDP);
- Number of Nobel Prize winners (relative to GDP);
- Number of patent applications (relative to GDP).

2. Culture:

- Exports of creative products (relative to GDP);
- Exports of creative services (relative to GDP);
- Outstanding contributions from UNESCO;
- Number of countries and territories without visas for citizens of the country;
- Freedom of the press.

3. International peace and security:

- Number of peacekeeping military troops sent overseas (relative to GDP);
- Dues in arrears to financial contributions to UN peacekeeping missions;
- Attributed number of casualties of international organised violence (relative to GDP);
- Arms exports (relative to GDP);
- Cybersecurity score.

4. World order:

- Number of treaties signed as proxy for diplomatic action and peaceful conflict resolution;
- Number of refugees hosted (relative to GDP);
- Number of refugees overseas;
- Percentage of population that gives to charity as proxy for cosmopolitan attitude.

5. Climate:

- Ecological footprint;
- Exports of hazardous waste (relative to GDP);
- Organic water pollutant (relative to GDP);
- CO2 emissions (relative to GDP);
- Emissions of other greenhouse gases (relative to GDP).

6. Prosperity and equality:

- Trading across borders;
- Number of volunteers sent abroad (relative to GDP);
- Fairtrade market size (relative to GDP);
- Foreign direct investment, net outflows (% of GDP);
- Development assistance (% of GDP).

7. Health and well-being:

- Food aid (relative to GDP);
- Exports of pharmaceutical products as a% of GDP;
- Voluntary excess contributions to the World Health Organization in relation to GDP;
- Humanitarian aid contributions (relative to GDP);
- Seizure of drugs (relative to GDP).

The final ranking is calculated using the average rank of each country at the level of the seven categories of "Good Country Index". It should be noted that the rank of each category corresponds to the average rank of the five sub-indicators of this category. The rank of the sub-indicators being a fractional rank (0 = highest rank; 1 = lowest rank) is calculated compared to all the countries for which the data are available.

Tourism revenues as % of GDP

Tourism receipts are the international tourists travel expenses. The indicator "Share of tourism receipts in GDP" represents the weight of the receipts generated by tourism in the gross domestic product of a country.

Foreign direct investments as % of GDP

Foreign direct investment (FDI) is the category of international investment made by a resident entity (direct investor) to acquire a lasting interest in an entity operating in an economy other than that of the investor (direct investment enterprise). The lasting interest is deemed to exist if the investor acquires at least 10% of the equity capital of

the enterprise. FDI stocks are the value of FDI assets (for outward FDI stocks) and of FDI liabilities (for inward FDI stocks) at the end of the reference period. Data are expressed as percentage of GDP to remove the effect of differences in the size of the economies of the reporting countries.

Investment attractiveness in the MENA region

Calculated from the value of private equity firm in each country in the MENA region.

Baseline profitability Index

This index, published by Foreign Policy Magazine and compiled by Professor Daniel Altman of the Business School of New York University, ranks countries by their overall attractiveness as targets for a generic foreign investment.

It is an index composed of 8 factors allowing the prediction of the return on investment before taxes, which investors in countries around the world can expect, namely: economic growth, financial stability, physical security, corruption, government expropriation, exploitation by local partners, capital and exchange rate controls. In addition, three other factors "which will affect the ultimate success of a foreign investment", according to Daniel Altman, are taken into account. These are: growing the value of an asset, retaining that value while the asset is held, and the ease of repatriating the proceeds from the sale of the asset.

Renewable Energy Country Attractiveness Index

Developed annually by the Ernst & Young firm, the Renewable Energy Country Attractiveness (RECAI), this index is calculated based on ratings of factors such as the investment climate, political and economic stability, access to the energy market, infrastructure, renewable energy programs, subsidies allocated to these energies, technological potential, natural resources, technology maturity, current projects and forecasts. ranks the top 40 countries in the world on the attractiveness of their renewable energy investment and deployment opportunities.

Regulation of competition

This indicator, taken from the Institutional Profiles Database (IPD) survey by CEPII, measures the effectiveness of the regulation of competition in the market sector

(excluding the financial sector). The indicator ranges from 0: Very inefficient to 4: Effective.

Macroeconomic stability

Economic growth rate (%)

An economic growth rate is the percentage change in the value of all of the goods and services produced in a nation during a specific period of time, as compared to an earlier period. In most cases, the economic growth rate measures the change in a nation's gross domestic product (GDP).

Inflation rate (%)

The inflation rate is determined by calculating the percentage change in the consumer price index. The inflation rate tells us the percentage by which the price level is changing from period to period. It is generally calculated on a year-over-year basis.

Fiscal balance as% of GDP

The Fiscal balance is the difference between the level of resources and the level of charges of a country's budget. When this balance is positive, it is a surplus. Otherwise, we are talking about a deficit.

Public debt ratio: Direct treasury debt ratio

Public debt ratio is the sum of the stock of external debt and that of the treasury's internal debt expressed as a percentage of the country's gross domestic product.

GDP per capita in constant 2010 dollars

GDP per capita is the gross domestic product divided by the mid-year population. This indicator is measured at constant prices to correct for the effects of inflation.

Economic Openness rate (goods and services) (%)

The openness rate of an economy measures the degree to which nondomestic transactions (imports and exports) take place and affect the size and growth of a

national economy. The degree of openness is measured by the actual size of registered imports and exports within a national economy. This indicator is calculated using the following mathematical formula:

$$\text{Imports} + \text{Exports (Goods and services)} / \text{GDP}$$

Trade balance in goods and services as % of GDP

The trade balance in goods and services tracks the difference between exports of goods and services and imports of goods and services, as a percentage of GDP. A country that imports more goods and services than it exports in terms of value has a trade deficit. Conversely, a country that exports more goods and services than it imports has a trade surplus.

Export/import coverage rate

The coverage ratio of imports by exports is an economic ratio Measures the relationship between the value of imports and the value of exports. It is therefore an indicator measuring a country economic freedom.

The coverage rate is calculated by the following mathematical formula:

$$\text{Exports (goods)} / \text{Imports (goods)}$$

Current account balance as% of GDP

The current account balance corresponds to the balance of a country's monetary flows resulting from international trade in goods and services (trade balance), current income and transfers.

Foreign exchange reserves in months of imports

Foreign exchange reserves comprise holdings of foreign currency and monetary gold reserves of a central bank. The "foreign exchange reserves in months of imports" indicator reflects the number of months of imports that a country can buy with its foreign currency reserves.

Financing the economy

Investment rate

The investment rate represents the relative share of gross fixed capital formation (GFCF) in GDP.

Gross fixed capital formation (GFCF) consists of resident producers' investments, deducting disposals, in fixed assets during at least one year. It also includes certain additions to the value of non-produced assets realized by producers or institutional units. It includes in particular. - The acquisition of movable property; - The acquisition of real estate (building and public works); -the plant development; - The variation, among producers, of the herd of breeding or draught animals (cattle).

Gross national savings

Gross national saving is derived by deducting final consumption expenditure from Gross national disposable income.

Financial system

Financial freedom index (score from 0 to 100)

Financial freedom is a measure of banking efficiency, independence from government control and interference in the financial sector.

In an ideal banking and financing environment where a minimum level of government interference exists, independent central bank supervision and regulation of financial institutions are limited to enforcing contractual obligations and preventing fraud. Credit is allocated on market terms, and the government does not own financial institutions. Financial institutions provide various types of financial services to individuals and companies. Banks are free to extend credit, accept deposits, and conduct operations in foreign currencies. Foreign financial institutions operate freely and are treated the same as domestic institutions.

The Financial Freedom Index is based on:

- The extent of government regulation of financial services,
- The degree of state intervention in banks and other financial firms through direct and indirect ownership,

- Measuring the development of the financial and capital market,
- The influence of the government on the allocation of credit,
- Opening up to foreign competition.

The index score ranges from 0 to 100 where 100 represents maximum freedom.

Banking rate

This indicator represents the percentage of population with a bank account.

Market capitalization as% of GDP

Market capitalization (Commonly referred to as market value) is calculated by multiplying the current market price of one share the total number of a company's outstanding shares.

This indicator corresponds to the share of the market capitalization of listed companies according to the GDP of a country. Listed companies are those who are listed on a country's stock exchange at the end of the year.

Global Financial Centers Index

The Global Financial Centers Index (GFCI), published by Z / Yen Group, is a ranking of the competitiveness of financial centres .

The methodology for calculating the index is based on two separate data sources. The first source includes 103 competitiveness indicators divided into 5 dimensions, namely: the business climate, development of the financial sector, infrastructure, human capital and reputation factors. These indicators are taken from the databases of the World Bank, the UN, the World Economic Forum, and the Economist Intelligence Unit. The second source is the result of valuation surveys by financial experts from international financial centers.

It should be noted that the GFCI ranking is used by multinational firms to find financial centers that can serve their regional operations.

DVS N ° 7: INTERNATIONAL MIGRATION WATCH AND MOROCCO'S READINESS IN THE FACE OF ISSUES AND CHALLENGES

Immigration in Morocco

International migrants as% of population

The number of international migrants represents the number of people born in a country other than the one in which they live.

Best countries for immigrants index

This index, developed by "US News" and "World Report", evaluates countries according to the environment they offer to immigrants, on the basis of a survey of 21,000 people from 80 country. Four criteria were taken into account during the evaluation, namely "economic stability", "access to the labor market", "income equality" and "standard of living".

In addition, these countries were also assessed according to the percentage of migrants in the total population, remittances to the country of origin and the integration measures planned for migrants, including language training and policies national integration.

Economic role of Moroccan diaspora

Remittances from Moroccans Residing Abroad (% of GDP)

This indicator represents the impact of transfers funds of Moroccans residing abroad on Morocco's gross domestic product.

DVS N ° 8: SUCCESSFUL TERRITORIAL DEVELOPMENT

Urban planning / environment

Urbanization rate

The urbanization rate is the ratio of the urban population to the total population.

Most populated city (as % of urban population)

This indicator refers to the percentage of a country's urban population living in that country's largest metropolitan area.

Urban population living in slums (% of urban population)

Population living in slums is the proportion of the urban population living in slum households.

Public liquid sewerage network connection rate in urban areas

This indicator refers to the percentage of urban households using improved sanitation facilities to eliminate sewage and solid waste discharge.

Urban governance effectiveness

This indicator, resulting from the Institutional Profiles Database (IPD) survey of CEPIL, permit to measure the quality of your city's urban governance on the basis of how accountable, effective, equitable and participatory, based on the efficiency of planning and urban development tools (master plan, strategic planning, town planning scheme) for large agglomerations (0 = no tools. If tools, 1 = ineffective device to 4 = effective device), and on the rating of the clarity and the implementation of a national vision for development of medium-sized towns (0 = no vision to 4 = clear vision and effectively implemented).

Global cities index

The A.T.Kearney Global Cities report examines the improved competitiveness of global cities and the factors which has led to this progress. This analysis reveals cities with the potential for urban transformation.

Created in 2008, this report was one of the first to rank cities based on their global reputation and remains highly regarded for its comprehensive assessment of the city's capabilities and potential.

The Global Cities Index examines the performance of cities. It is a unique tool for assessing the most influential and attractive cities. This information is particularly useful for business leaders who aim to invest in new cities and are planning to expand internationally.

This index, whose score varies between 0 and 100, is the average of 27 indicators grouped into 5 categories, namely:

- The business world (30%): capital flows, market dynamics and current large companies;
- Human capital (30%): level of education;
- Information exchange (15%): access to information via the internet and the media;
- Cultural experience (15%): access to sporting events, museums,...;
- Political commitment (10%): political events, think tanks and embassies.

Global Smart City Index

According to this index, a "smart city" is an urban area that uses technology to enhance the advantages of digitization and alleviate the shortcomings of urbanization for its citizen. The ranking is developed by interviewing a citizens from different cities around the world. The survey questions focus on the technological arrangements and infrastructure of each city in five key areas: health, safety, mobility, activities and governance.

Territorial infrastructure

Road density (number of km / 100 km²)

Road density is the ratio of the length of the country's total road network to the country's land area.

This indicator enables to characterize the level of development of the country's road infrastructure and above all reflects how road networks maintenance influence the country's road management.

Railway density (number of km / 100 km²)

Railway density is the ratio of the length of a country's total railway network to the country's land area.

This indicator permit to characterize the level of development of the country's railway infrastructure and above all reflects how railway networks maintenance influence the country's railway management.

Liner Shipping Connectivity Index (Maximum Value In 2004 = 100)

The Liner Shipping Connectivity Index captures how well countries are connected to global shipping networks. It is computed by the United Nations Conference on Trade and Development (UNCTAD) based on five components of the maritime transport sector: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country's ports. For each component a country's value is divided by the maximum value of each component in 2004, the five components are averaged for each country, and the average is divided by the maximum average for 2004 and multiplied by 100. The index generates a value of 100 for the country with the highest average index in 2004. The underlying data come from Containerisation International Online.

Container Port Traffic (TEU: 20 Foot Equivalent Units)

Port container traffic measures the flow of containers from land to sea transport modes, and vice versa, in twenty-foot equivalent units (TEUs), a standard-size container. Data refer to coastal shipping as well as international journeys. Transshipment traffic is counted as two lifts at the intermediate port (once to off-load and again as an outbound lift) and includes empty units.

Air connectivity index

This is a global measure, defined by the World Bank, of air connectivity, in the sense that it captures all the interactions among all the nodes, even when there is no direct flight connection between them.

The measurement of air connectivity is closely correlated with certain economic variables, such as the degree of liberalization of air transport markets and the extent of participation in international production networks.

DVS N ° 9: INTEGRATING MOROCCO INTO THE GLOBAL KNOWLEDGE ECONOMY

Higher Education

Enrollment rate in higher education (in% of the 19-23 age group)

This indicator corresponds to the population enrolled in higher education, aged 19 to 23, compared to the officially enrolled population at the same level.

Engineering/processing and manufacturing graduates per 10,000 inhabitants

Number of graduates in engineering, processing and production industries, expressed per 10,000 inhabitants.

Unemployment rate for higher education graduates

Index which expresses the share of the unemployed with a higher level of education in the workforce aged 15 and over.

Strength of ties between companies and universities / research centers

Indicator, taken from the Institutional Profiles Database (IPD) survey by CEPII, which measures the strength of the ties between companies, universities and research centers. It varies from 1 (weak links) to 4 (strong links).

Knowledge economy & Innovation

Knowledge Economy Index (KEI) (score from 1 to 7)

The Knowledge Economy Index (KEI) is an aggregate index that represents the overall level of development of a country or a region towards the Knowledge Economy. It takes into account whether the environment is conducive for knowledge to be used effectively for economic development. The KEI is calculated based on the average of the normalized performance scores of a country or a region on all 4 pillars related to the knowledge economy — economic incentive and institutional regime, education and human resources, the innovation system and ICT.

Global Innovation Index (GII) (score from 0 to 100)

Index that measures innovation in the broad sense, including commercial and social innovations, as well as the scientific ones. This index focus on the innovation process and new trends in different countries of the world. It ranks each country's level of innovation on a scale of 0 to 100, where 100 represents the most innovative economy.

The GII relies on two sub-indices—the Innovation Input Sub-Index and the Innovation Output Sub-Index—each built around pillars. Three measures are calculated:

- Innovation Input Sub-Index: Five input pillars capture elements of the national economy that enable innovative activities :
 1. Institutions;
 2. Human capital and research;
 3. The infrastructure;
 4. Market sophistication;
 5. Business sophistication.

- Innovation Output Sub-Index: Innovation outputs are the result of innovative activities within the economy. Although the Output Sub-Index includes only two pillars, it has the same weight in calculating the overall GII scores as the Input Sub-Index.
 1. Knowledge and technology results;
 2. Creative results.

- The overall GII score is the average of the Input and Output Sub-Indices.

International Intellectual Property Index

The United States Chamber International IP Index benchmarks, every year since 2012, the IP framework in 53 global markets, representing over 90% of global GDP. The IP Index evaluates the ecosystem in each economy across 50 unique indicators which industry believes represent economies with the most effective IP systems. The IP Index serves as a roadmap for policymakers who seek to support innovation, creativity, and economic growth through more robust IP policy.

Network Readiness Index (NRI) (score from 1 to 7)

The index measures the propensity for countries to exploit the opportunities offered by information and communications technology (ICT). The NRI seeks to better understand the impact of ICTs on the competitiveness of nations. The NRI is a composite of three components: the environment for ICT offered by a given country or community (market, political, regulatory, and infrastructure environment), the readiness of the country's key stakeholders (individuals, businesses, and governments) to use ICT and the usage of ICT among these stakeholders.

E-Government Development index (score from 0 to 1)

The E-government Development Index is a composite index calculated on the basis of the average of the following 3 sub-indices: online services, human capital and information technology infrastructure.

E-government is defined as the use of ICTs to more effectively and efficiently deliver government services to citizens and businesses. It is the application of ICT in government operations, achieving public ends by digital means

The objective of e-Government is therefore To ensure that government information is managed effectively, better delivery of services to citizens and empowerment of populations through access to information and through participation in decision making in public policy.

Mobile connectivity index

This index is an analytical tool that measures the performance of countries against the four key enablers of mobile internet adoption, namely: mobile infrastructure, affordability, consumer satisfaction and services available online.

Global connectivity index

This index aims to analyze a number of indicators relating to smart infrastructure and digital transformation in order to develop a comprehensive map of the global digital economy.

This index, which was launched in 2014, compares 50 countries according to 40 indicators related to the impact of information and communication technologies on the country's economy, digital competitiveness and future growth.

It represents a unique quantitative assessment that comprehensively and objectively assesses countries' digital industrial connectivity.

Inclusive Internet index

This index assesses internet inclusion at the national level according to four scores of the Availability, Affordability, Relevance and Readiness categories. The aim is to focus on the factors that stimulate a sustainable inclusion of this network and to make a comparison in terms of an enabling environment for the adoption and productive use of the Internet.

Robotic density (number of industrial robots per 10,000 employees)

This indicator, developed by UNCTAD (United Nations Conference on Trade and Development) in its report on trade and development, measures the number of industrial robots expressed per 10,000 employees.

Research and development (R&D)

R&D expenditure (% of GDP)

This ratio provides an indication of the level of financial resources devoted to R&D in terms of the share of the GDP.

R&D staff (per 1 million inhabitants)

This indicator is measured in per 1 000 people employed and in number of researchers.

Scientific and technical journal published articles

Scientific and technical journal articles refer to the number of scientific and engineering articles published in the following fields: physics, biology, chemistry, mathematics, medicine, biomedical research, engineering and technology, and earth and earth and space sciences.

Global Talent Competitiveness Index GTCI

This index is a comprehensive benchmarking analysis, assessing how countries develop, attract and retain talent with the aim of building a picture of the competitiveness of talent that will enable leaders to implement strategies aimed at promoting competitiveness.

This index was calculated on the basis of 68 variables and a simple and robust input-output model.

Number of patents for 1 million inhabitants

Such applications are filed worldwide under the Patent Cooperation Treaty procedure or with national patent offices to obtain exclusive rights granted for an invention which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. A patent protects the owner of the invention for a limited period, usually 20 years.

Exports of high-tech goods as % of manufactured goods exports

High- technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.

Global cybersecurity index

The Global Cybersecurity Index (GCI) is a trusted reference that measures the commitment of countries to cybersecurity at a global level – to raise awareness of the importance and different dimensions of the issue. As cybersecurity has a broad field of application, cutting across many industries and various sectors, each country's level of development or engagement is assessed along five pillars – (i) Legal Measures, (ii) Technical Measures, (iii) Organizational Measures, (iv) Capacity Building, and (v) Cooperation – and then aggregated into an overall score.

1. Legal Measures

Legislation is a crucial measure which aims to outline a harmonized framework for providing different entities with a common regulatory basis for prohibiting specified criminal conduct or minimum regulatory obligations. Criteria for measuring the legal measures may be the existence and number of institutions and legal frameworks relating to cybersecurity and cybercrime. The sub-group of performance indicators in this category is as follows: Criminal legislation; Regulation and compliance.

2. Technical measures

Technology is the first line of defense against cyber threats and malicious agents online. The criteria for evaluating technical measures may be the existence and number of institutions and technical frameworks approved or created by the State in relation to cybersecurity. The sub-group of performance indicators in this category is as follows: IT incident monitoring, alert and response center; Standards; Certification.

3. Organizational measures

The implementation of any national initiative requires organizational and procedural measures. The subgroup of performance indicators in this category is as follows: Policy; Governance roadmap; Responsible organization; National comparative evaluations.

4. Capacity building activities

Capacity building is intrinsic to the first three categories of measure (legal, technical and organizational). The sub-group of performance indicators in this category is as follows: Standardization; Development of human resources skills; Professional certification; Certification of organizations.

5. Cooperation measures

Cybersecurity, which requires information from all sectors and disciplines, needs a multi-stakeholder approach. Because it strengthens dialogue and coordination, cooperation broadens the scope of cybersecurity.

The criteria for measuring national and international cooperation may be the existence and number of partnerships, cooperative frameworks and information sharing networks. The sub-group of performance indicators in this category is as follows: Cooperation between States; Cooperation between organizations; Public-Private Partnerships; International cooperation.

The statistical model used to calculate the index is based on a multi-criteria analysis. This analysis establishes preferences between different options with respect to an explicit set of identified goals, for which there are established measurable criteria to assess the degree of achievement of the goals. A simple linear additive valuation model is applied.

The multi-criteria analysis performance matrix describes the options and each column describes the performance of the options against each criterion. The individual performance assessment is digital. The comparative scoring will be based on the indicators below, to which the same weighting is applied (note that the weighting of some sub-categories is carried out at a higher level since some indicators contain more sub-groups). 0 points are allocated when there is no activity; 1 point is allocated for a partial action and 2 points are allocated for a more exhaustive action. The total number of points for each category is as follows:

1. Legal Measures
 - a. Penal law
 - b. Regulations and Compliance
2. Technical measures
 - a. CSIRC Computer Security Incident Response Team, CSRC Computer Security Response Center and CERT Computer Emergency Response Team, CIRT Computer Incident response
 - b. Standards
 - c. Certification
3. Organizational measures
 - a. Policy;
 - b. Governance roadmap;
 - c. Responsible organization;
 - d. National comparative evaluations.
4. Capacity building activities
 - a. Standardization;

- b. Development of human resources skills;
 - c. Professional certification;
 - d. Certification of organizations
- 5. Cooperation measures
 - a. Cooperation between States;
 - b. Cooperation between organizations;
 - c. Public-Private Partnerships;
 - d. International cooperation

DVS N ° 10: MONITORING NATIONAL AND INTERNATIONAL SOCIETAL DEVELOPMENTS

Individual level

Gender inequality index (score from 0 to 1)

Composite index measuring the progress gap resulting from gender inequalities in three aspects of human development, namely reproductive health, empowerment and the labour market.

Global Gender Gap Index

Introduced in 2006 by the World Economic Forum, the Global Gender Inequality Index measures the extent of gender disparities and benchmarks countries on their progress towards gender parity in four dimensions.

1. Economic Participation and Opportunity: share of women in the labour market, equal pay, estimated revenues, legislators, senior officials and managers, executives and technicians. The gap between the advancement of women and men is captured through two hard data statistics (the ratio of women to men among legislators, senior officials and managers, and the ratio of women to men among technical and professional workers) ;
2. Educational Attainment: literacy rate, enrollment rate in primary, secondary and tertiary-level education;
3. Health and Survival: the differences between women's and men's health through the use of two indicators. The first is the sex ratio at birth, the second use the gap between women's and men's healthy life expectancy.
4. Political Empowerment: ratio of women to men in parliamentary positions and the ratio of women to men minister-level positions

Youth as a percentage of the population (%)

This indicator is the percentage of young people in the total population of a country.

Proportion of Parliament seats held by women (%)

The proportion of seats held by women in parliament is the percentage of parliamentary seats held by women.

Female labor force participation rate

This indicator represents the percentage of women ages 15+ active in the labour market.

Group level

Global Youth wellbeing index

Index published by the "Center for Strategic and International Studies", the "International Youth Foundation" and the "Hilton Worldwide" relating to the wellbeing of young people up to age 25.

This index is based on the evaluation of 40 indicators relating to 6 areas inherent in the life of young people which, together, provide a clear vision of their quality of life. These areas are: citizen participation, economic opportunities, education, health, information and communication technologies and safety and security.

Global AgeWatch Index (score from 0 to 100)

The index, developed and constructed by the organization "HelpAge International", brings together a unique set of internationally comparable data based on older people's income status, health status, capability (education and employment), and enabling environment. These domains have been selected because they were identified by older people and policy makers alike as key enablers of older people's wellbeing.

The indicators assessed at the level of the different domains are as follows:

1. Income security

The income security domain assesses people's access to a sufficient amount of income, and the capacity to use it independently, in order to meet basic needs in older age.

2. Health status

The three indicators used for the health domain provide information about physical and psychological wellbeing.

3. Capability

The employment and education indicators in this domain look at different aspects of the empowerment of older people.

4. Enabling environment

This domain uses data from Gallup World View to assess older people's perception of social connectedness, safety, civic freedom and access to public transport - issues older people have singled out as particularly important.

This index is part of a "data revolution" in which age-specific data is used to ensure policies are robust and responsive to aging. National data exist, but the constitution of comparable international data sets on elderly populations is still limited. The dearth of data on older people can lead to their systematic exclusion from financing development plans and public policies.

The objective of the index is both to capture the multidimensional nature of the quality of life and wellbeing of older people and to provide a tool for measuring performance and promoting improvements in this regard. This index varies between 0 and 100, 100 being the ideal value.

Youth future prospects

This indicator, taken from the Institutional Profiles Database (IPD) survey by CEPIL, measures the future prospects of young people. It varies from 0 (clearly facing the interior of the country) to 4 (clearly facing the exterior of the country).

Community level

Extent of national attachment

This indicator corresponds to the average score of the responses to the question of the national survey on social bonds (IRES) / Institutional Profiles Database (IPD) survey of CEPIL: "On a scale of 0 to 4, where (0) indicates that you are not at all attached, and (4) you are very attached, tell us how attached you are to your nation? "

Interpersonal trust

Percentage of respondents answering "yes" to the question of the national survey on social bonds (IRES): "In general, would you say that you can trust most people or that you should be wary of them?".

Level of confidence in state institutions

This indicator is the average score of responses to the question of the National Survey on Social bonds (IRES) / World Value Survey: "On a scale of 0 to 10, where (0) indicates a low level of confidence, and (10) a very strong degree, tell us how much confidence do you have in public institutions?".

Importance of family in personal life

This indicator is the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low degree of importance, and (10) a very high degree, tell us what is the importance of family in your life?? "

Traditional solidarity

This indicator, taken from the Institutional Profiles Database (IPD) survey by CEPIL, measures the strength of traditional solidarity at country level. The indicator score ranges from 0 (low traditional solidarity) to 4 (very high traditional solidarity).

Institutional solidarity

This indicator, resulting from the Institutional Profiles Database (IPD) survey of CEPIL, measures the strength of institutional solidarity within the country based on the state of support by public / private institutions of sickness, unemployment and retirement. The score of the indicator varies from 0 (if no public or private health care, unemployment or retirement benefits are covered by public or private institutions); 1 (low share of the population covered) to 4 (very high share of the population covered).

Importance of religion in personal life

This indicator is the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low degree of importance, and (10) a very high degree, tell us what is the importance of religion in your life? "

Importance of politics in personal life

This indicator is the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low degree of importance, and (10) a very high degree, tell us what is the level of importance of politics in your life personal? ".

Level of satisfaction in life

This indicator shows the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low level of satisfaction, and (10) a very high degree, tell us how satisfied are you with your life? ".