Jordan Prosperity Index August 2021











منتدى الاستراتيجيات الأردني JORDAN STRATEGY FORUM

The Jordan Strategy Forum (JSF) is a not-for-profit organization, which represents a group of Jordanian private sector companies that are active in corporate and social responsibility (CSR) and in promoting Jordan's economic growth. JSF's members are active private sector institutions, who demonstrate a genuine will to be part of a dialogue on economic and social issues that concern Jordanian citizens. The Jordan Strategy Forum promotes a strong Jordanian private sector that is profitable, employs Jordanians, pays taxes and supports comprehensive economic growth in Jordan.

The JSF also offers a rare opportunity and space for the private sector to have evidence-based debate with the public sector and decision-makers with the aim to increase awareness, strengthening the future of the Jordanian economy and applying best practices.

For more information about the Jordan Strategy Forum, please visit our website at www.jsf.org or contact us via email at info@jsf.org. Please visit our Facebook page at Facebook.com/JordanStrategyForumJSF or our Twitter account @JSFJordan for continuous updates aboutJordan Strategy Forum.

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1. Background:

Back in 1937, Simon Kuznets, a Russian-American economist, presented the original formulation of Gross Domestic Product (GDP) in his report (National Income, 1929-1935) to the U.S. Congress. The idea was to capture the economic performance of any nation in a single figure.

At the 1944 Bretton Woods Conference, both the World Bank (WB) and the International Monetary Fund (IMF) were established. Since then, GDP has become the standard tool for measuring the size of economies. The IMF defines GDP as the "monetary value of final goods and services - that are bought by the final user - produced in a country in a given period of time".

The concept of GDP is probably the best-recognized measure of economic performance. It provides policy-makers with a convenient benchmark. Indeed, because of the implicit link between economic growth and some elements of well-being such as employment, level of income, and level of consumption, GDP is used as a proxy measure / indicator of human development and well-being. However, the relationship between economic growth (measured by GDP) and other dimensions of human development and well-being is not straightforward. Indeed, Kuznets himself was aware of this.

"The welfare of a nation can scarcely be inferred from a measure of national income. If the GDP is up, why is America down? Distinctions must be kept in mind between quantity and quality of growth, between costs and returns, and between the short and long run. Goals for more growth should specify more growth of what and for what" (Kuznets, 1934).

To measure progress, wealth and well-being effectively, one needs clear and appealing indices like GDP. However, they should be more inclusive than GDP. Within this context, it is useful to note that at the World Economic Forum Annual Meeting at Davos (20 - 23 January 2016), Laggard (Former Managing Director of the IMF), Joseph Stiglitz (Nobel Laureate in Economics), and Brynjolfsson (Professor of Economics at MIT) stressed "GDP is a poor way of assessing the health of our economies and we urgently need to find a new measure".

The implications of GDP being not a good measure of well-being have far reaching consequences. Indeed, "what we measure informs what we do. And if we're measuring the wrong thing, we're going to do the wrong thing" (Joseph Stiglitz). Below, we outline a number of observations:

- **1. GDP Treats all Production Equally:** GDP makes no distinction between producing, for example, nuclear bombs and hospital beds.
- 2. GDP Deals in Aggregates: In an age of inequality, GDP has nothing to say about income distribution.
- **3. GDP Ignores Changes in Standards of Living:** The calculation of GDP relies on price only. Improvements in infrastructure such as transport provides a public good well beyond





market prices, as this service facilitates improvements in production capabilities in other areas, and in the quality of life in general.

- **4. GDP Doesn't Include Negative Impact on Nature:** GDP does not take into account the value of matters like clean air and environment, and sustainable means of production.
- **5. GDP does not Include Household Production:** GDP does not take into account household production. The production of housewives is out of the calculation.
- **6. GDP Ignores Leisure Time**: Two economies have equal GDP size. However, if in one economy the workday averages 12 hours and in the other 10 hours, who is to say that they are equal?

Coming-up with a measure of GDP was an ingenious idea. Indeed, GDP is a useful concept and a valuable policy tool. However, policy-makers, as well as other stakeholders, need other measures to have a more complete picture. Indices that complement GDP and incorporate social and environmental costs or benefits will always be welcome. Within this context, it is heartening to realize that for so long, many international organizations, think tanks, non-profit organizations, as well as academia, have worked on developing indices that measure the wellbeing of societies. Below, we outline some of them.

- **A.** The Human Development Index (HDI): Conceived by the United Nations Development Programmed (UNDP), the HDI is a summary measure of average achievement in three dimensions of human development: Health, Education, and Standard of Living.
- **B.** The Human Capital Index (HCI): Conceived by the World Bank, the HCI measures the productivity as a future worker of a child born using three measures:
 - 1. Whether children survive from birth to school age (age 5).
 - 2. A measure of expected years of quality-adjusted school.
 - 3. Two broad measures of health stunting rates (impaired growth and development that children suffer from poor nutrition, infection, and inadequate psychosocial stimulation) and adult survival rates.
- C. The Social Progress Index (SPI): Conceived by the Social Progress Imperative (a not for profit organization), the SPI measures the well-being of a society by observing social and environmental outcomes directly and not economic factors. The factors include wellness (including health, shelter and sanitation), equality, inclusion, sustainability and personal freedom and safety.
- D. The Legatum Prosperity Index (LPI): Conceived by the Legatum Institute (a division of the private investment firm Legatum), the LPI consists of three domains (inclusive societies, growth and investment, and empowered people), twelve prosperity pillars (safety and security, personal freedom, governance, social capital, investment environment, enterprise conditions, market access and infrastructure, economic quality, living conditions, health, education, and natural environment). The twelve pillar involve 294 indicators.





- E. The Better Life Index (BLI): Conceived by the OECD, the BLI ranks and compares the well-being across countries, based on 12 issues seen to be essential, in the areas of material living conditions and quality of life. These issues are income and wealth, work and job quality, health, knowledge and skills, subjective wellbeing, safety, work-life balance, social connections, civic engagement, natural capital, social capital, and human capital.
- **F.** The Oxford Poverty and Human Development Initiative (OPHI): Conceived by the University of Oxford, the OPHI measures acute multidimensional poverty across countries by capturing the acute deprivations in health, education, and living standards that a person faces simultaneously.

The Sustainable Economic Development Assessment (SEDA): Conceived by The Boston Consulting Group SEDA ranks and compares well-being across countries in the areas income, economic stability, employment, health, education, infrastructure, equality, civil society, governance, and the environment.

No one should underestimate the importance of having indices that measure the wellbeing of societies. Such indices, over time, measure whether a nation is fulfilling the potential of its citizens, in terms of, not only their productive capacity, but also their collective wellbeing. In addition, it is critically important to understand whether prosperity is improving or weakening over time. Even more important, it is useful to understand why prosperity is improving or weakening over time.

The Jordan Strategy Form (JSF), in this effort, has developed a Prosperity Index unique for Jordan. The overall objective is to use local and relevant data that measures "prosperity". However, this does not mean that other indices, such as the Legatum Prosperity Index, are not useful. Indeed they are. This is why, we also report where Jordan lies on this index.

Relevant stakeholders can use the Index as a tool in identifying what specific actions can contribute to greater levels of prosperity. The government can use it in the shaping of its policy agenda priorities. The private sector can use it to identify and convey to the government what they need in terms of rules and regulation to improve the business climate and accelerate their investments. Journalists can also use it in holding the government to account. Finally, researchers can use the Index as a complementary source of data in their research effort.





2. Jordan Prosperity Index: The Methodology

The measurement of national prosperity is never easy. Indeed, a look at the available international indices reveals that one can include a wide array of indicators. Within this context, and based on all the available international indices, especially The Legatum Prosperity Index, we, at the JSF, developed a framework that consists of three blocks: Domains, Pillars, and Elements.

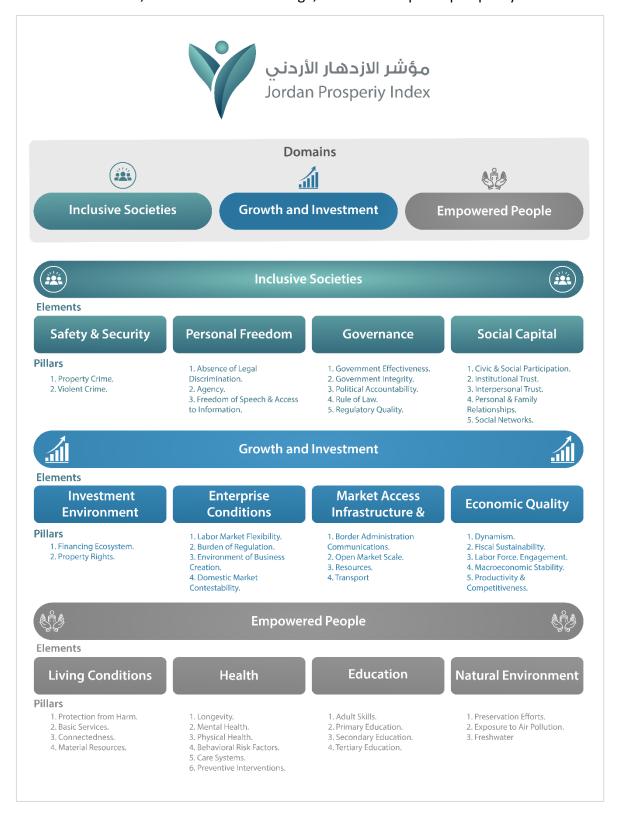
This framework was discussed internally, and then with a number of the JSF's content committee members and board members. This exercise has enabled us determine the twelve pillars and their respective elements, and the indicators of each element which are relevant policy areas that could be measured, and the significance / weight of each indicator to each pillar. The twelve pillars, it is useful to note are equally weighted.

- 1. The Domains: To assess the economic and social well-being of Jordanians, three domains are included in the index and these are "inclusive society", "growth and investment" and "empowered people".
 - A. Inclusive society captures various socio-political institutions.
 - B. Growth and investment captures the main aspects / characteristics of the economy.
 - C. Empowered people captures the social wellbeing of people.
- 2. The Pillars: To organize the three domains, we include three pillars of prosperity:
- **A.** Inclusive Society: To capture the socio-political institutions, this domain contains four pillars:
 - 1. Safety and Security.
 - 2. Personal Freedom
 - 3. Governance.
 - 4. Social Capital.
- **B.** Growth and Investment: To capture the main characteristics / aspects of the economy, this domain contains four pillars:
 - 1. Investment Environment.
 - 2. Enterprise Conditions.
 - 3. Market Access and Infrastructure.
 - 4. Economic Quality.
- **C. Empowered People:** To capture the social well-being of Jordanians, this domain contains **four pillars:**
 - 1. Living Conditions and income.
 - 2. Health.
 - 3. Education.
 - 4. Natural environment.





3. The Elements: To operationalize the three pillars, we constructed a list of elements for each of the 12 pillars. Within this context, it is critically important to note that for each element a list of indicators are determined. Each indicator reflects a policy area that policymakers, as well as others, can influence and change, and hence improve prosperity.







Relative to the above-mentioned elements (and their indicators), it is important to make a distinction between what people feel, and what is actually being implemented on the ground.

If the government imposes laws for diversity in the workplace, it does not necessarily mean that citizens feel included among their peers.

If the government diligently works on removing barriers for investments, and the results are translated on international indices such as the World Bank's Ease of Doing Business Index, this does not directly mean that investors' appetite for risk-taking is automatically affected.

If the government fully subsidizes all mental health services, this does not directly translate to a decrease in the number of depressive disorders in the country.

To remedy such issues, the Jordan Prosperity Index classifies prosperity under two schools of thought and explores their features and status discretely:

Utilitarian Well-Being: The state in which an individual attempts to maximize pleasure and minimize pain. For the purposes of the index, this category addresses intangible factors in the determined elements such as sentiment, interpersonal relations, political liberties, convenience, bureaucratic procedures, and others that contribute to prosperity.

Evaluative Well-Being: The state in which an individual has access to measurable factors such as income, employment, infrastructure, governance, and others that contribute to prosperity.

For each pillar, a "Utilitarian Well-Being Index" and an "Evaluative Well-Being Index" are constructed. Following this exercise, the "Jordan Prosperity Index", is constructed as a composite index of both the Utilitarian and Evaluative Well-Being Indices (for the technical reader, the methodology is explained in the Appendix).

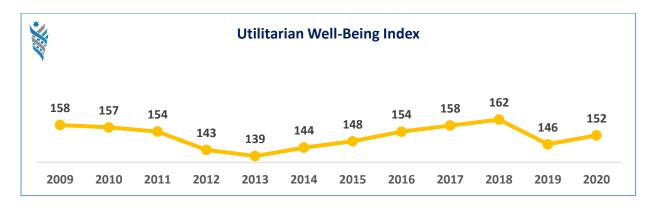




3. Jordan Prosperity Index: The Results

The Jordan Prosperity Index is composite index developed by JSF that is updated on an annual basis, taking 2009 as a base year. The index ranges between 100 and 200, where the former/latter represents the lowest/highest level of prosperity in the 2009-2020 period. Based on our findings, we highlight the following observations.

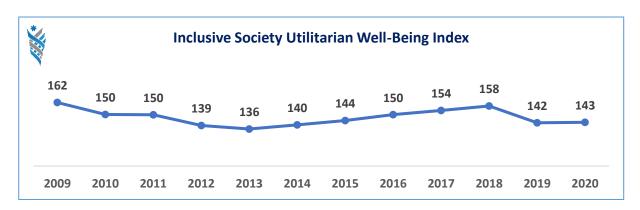
First, during the period 2009-2020, the Utilitarian Well-Being fluctuated between a minimum score of 139 (2013) and a maximum score of 162 (2018). However, following the sudden decrease from 162 points in 2018 to 146 points in 2019, the utilitarian well-being index recovered to 152 points in 2020.



The Utilitarian Well-Being Index is comprised of three sub-indices: The "Inclusive Society" Utilitarian Well-Being Index, the "Growth and Investment" Utilitarian Well-Being Index, and the "Empowered People" Utilitarian Well-Being Index.

A. Inclusive Society Utilitarian Well-Being Index

This index fluctuated between a maximum of 162 in 2009 and a minimum of 136 in 2013. However, we can state that the score of this index has deteriorated during the past few years (2018-2020). This decline is mainly attributed to the decline in the Transparency of Government Policy, Complaint Mechanisms, Freedom of Movement, Voter Turnout, Enforcement of Regulation, and Help from Family and Friends.

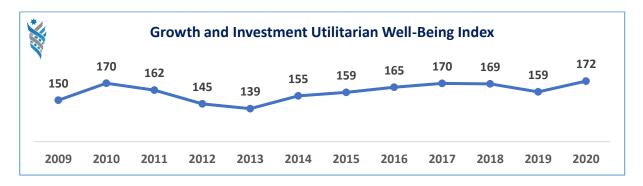






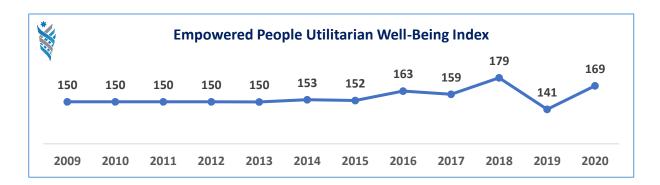
B. Growth and Investment Utilitarian Well-Being Index

This index has improved over time. The year 2020 has seen a sudden increase from 159 to 172. This improvement is largely due to the Jordan's amelioration in Labor Skill as a Business Constraint, the Extent of Market Dominance, and the Protection of Intellectual Property and Property Rights.

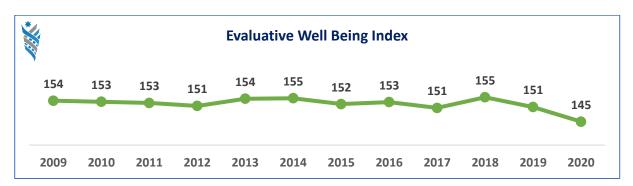


C. Empowered People Utilitarian Well-Being Index

This index has witnessed a sudden increase from 141 in 2019 to 169 in 2020. This is largely due to the significant jump the digital skills among population variable, in addition to the quasi-recovery of the quality of vocational training and the skill sets of university graduates following the dip that took place in 2019.



Second, during the period 2009-2019, the Evaluative Well-being fluctuated between a minimum score of 145 (2020) and a maximum score of 155 (2014 and 2018). While this index remained relatively constant over time (2009-2018), it has decreased in 2019 and in 2020.

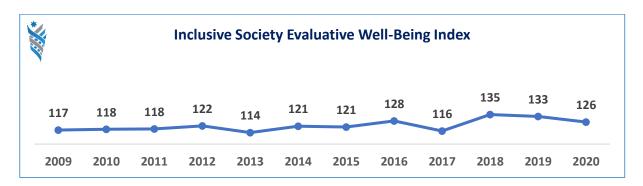






A. Inclusive Society Evaluative Well-Being Index

On average, this index has improved over time. Indeed, the year 2020 has seen a decrease from 133 to 126. The decline is mainly attributed to the slight deterioration in Business Costs of Crime and Violence, as well as Helping Strangers.



B. Growth and Investment Evaluative Well-Being Index

This index has deteriorated over time. This drop is attributed to Jordan's deterioration in some indicators (New Business Density, High-Tech Manufactured Exports, Patent Applications, Unemployment, Gross Savings, GDP per capita Growth, etc.) or the lack of improvement in measures like Road Density, Government Debt, Government Budget Balance, Labor and Female Labor Participation, and Youth Unemployment. On the bright side, depth of credit information, venture capital availability, and number of tax payments required by business have significantly improved.



C. Empowered People Evaluative Well-Being Index

This index has witnessed a gradual decrease between 2018 and 2020. The decline is mainly due to the deterioration in depressive disorders, non-communicable diseases, and obesity in which Jordan is the third worst country, following the United States and Saudi Arabia.







It is also worth noting that Jordan is among the lowest ranks in "Health Impact of Pollution". As it pertains to the water sector, Jordan's rank is poor among 75 countries in access to basic sanitation services, basic water services, and piped water. However, Jordan ranks among the poorest countries in freshwater withdrawal, calling for urgent action from the key stakeholders of the sector.

For the education sector, while Jordan has outperformed several countries in adult literacy, tertiary enrollment and completion, there are major warning signs for the future of Jordan's human capital when considering Jordan's primary completion, where Jordan has ranked 128th in 2020.

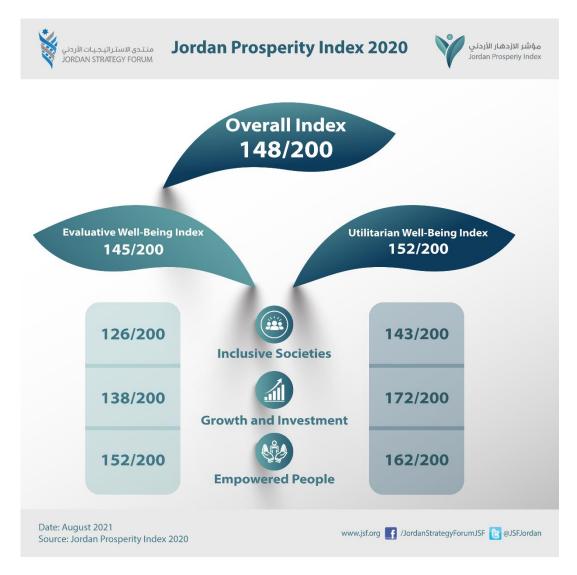
Third, the behavior of the Utilitarian Well-Being (Weight: 47%) and Evaluative Well-Being (Weight: 53%) indices are reflected in the Prosperity Index. Again, during the period 2009-2019, the prosperity index fluctuated between a minimum score of 148 (2013 and 2020) and a maximum score of 172 (2009). However, following the gradual increase from 142 points in 2013 up to 158 points in 2018, the Jordan Prosperity Index began to drop significantly to reach 148. On average, and during the whole period (2009 – 2019), we can state that "prosperity" in Jordan has not improved. On the contrary, it has deteriorated.



Fourth, naturally, if the weakest utilitarian well-being and evaluative well-being indicators are determined, one can go a long way towards understanding Jordan's Prosperity Index reflects some significant deterioration during the past few years.







Following an examination of the data that enter in the calculation of the Index, the following indicators are the weakest and needs improving:

Weakest Indicators (Utilitarian Well-Being Index):

- 1. Inclusive Societies: Generalized Interpersonal Trust, Opportunity to Make Friends, Voter Turnout, Complaint Mechanisms, Equal Treatment and Absence of Discrimination, Press freedom from government censorship, and Family Giving Positive Energy.
- 2. Growth and Investment: Burden of Government Regulation, Market-Based Competition, Efficiency of Customs Clearance Process, Access to Finance.
- 3. Empowered People: Quality of Vocational Training, Skillsets of University Graduates.





Weakest Indicators (Evaluative Well-Being Index):

- 1. Inclusive Societies: Business costs of crime and violence, Helping Strangers.
- 2. Growth and Investment: New Business Density, Patent Applications, Government Debt, High-Tech Manufactured Exports, Domestic and International Market Access for Goods/Services, Labor Force Participation, Labor Productivity.
- 3. Empowered People: Renewable Water Sources, Freshwater Withdrawal, Health Impact of Pollution, Obesity, Non-Communicable Diseases, Depressive Disorders, Primary Completion, and Education Inequality.

Strongest Indicators (Utilitarian Well-Being Index):

- 1. Inclusive Societies: Efficiency of Dispute Settlement, Delay in Administrative Proceedings, Efficiency of Dispute Settlement, Judicial Independence, Right to Information.
- 2. Growth and Investment: Cooperation in labor-employer relations, Quality of Banking System and Capital Markets, Soundness of Banks, Flexibility of Hiring Practices, Intellectual Property Protection, Labor Skill as a Business Constraint.
- 3. Empowered People: Digital Skills Among Population.

Strongest Indicators (Evaluative Well-Being Index):

- 1. Inclusive Societies: Helping other Households.
- 2. Growth and Investment: Depth of Credit Information, Domestic and International Market Access for Goods/Services, Internet Usage, Airport Connectivity, Liner Shipping Connectivity, Venture Capital Availability.
- 3. Empowered People: Access to a Cell Phone, Adult Literacy, and Education Equality, Women's Average Years in School, Maternal Mortality, Births Attended by Skilled Health Staff, Use of Digital Payments.

Relative to the above-mentioned observations in general, and the recent deterioration in Jordan's prosperity index, it would be interesting to take note of where Jordan stands on the Legatum Prosperity Index. Before we present where Jordan stands on this index, it is useful to outline the methodology of the Legatum Prosperity Index.

The Framework of the Legatum Prosperity Index captures prosperity through 12 pillars. These pillars are grouped under three domains:

1. Inclusive Societies: This domain "captures the relationship structures that exist within a society, between individuals and between individuals and broader institutions, and the degree they either enable or obstruct societal cohesion and collective development".

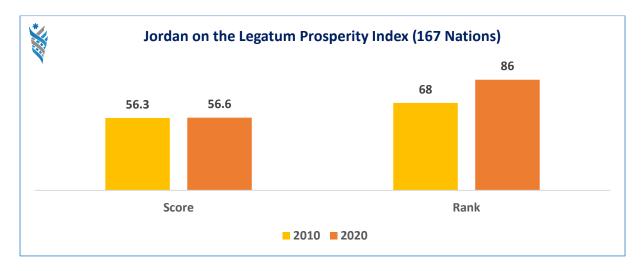




- 2. Open Economy: This domain "captures the extent to which an economy is open to competition, encourages innovation and investment, promotes business and trade, and facilitates inclusive growth".
- **3.** Empowered People: This domain "captures the quality of people's lived experience and the associated aspects that enable individuals to reach their full potential through autonomy and self-determination".

Based on the 2020 Legatum Prosperity Index's results, we outline few observations.

1. It is unfortunate to note that during the period 2010 – 2020, Jordan's score in the Legatum Prosperity Index has improved only marginally (from 56.3 to 56.6).



- 2. It is useful to note that while Jordan's scores in the domains of "Inclusive Societies" and "Open Economy" improved marginally, in the "Empowered People" domain, Jordan score has fallen from 64.3 in 2010 to 63.5 in 2020.
- 3. In the "Open Economy" domain, the "Economic Quality" pillar has witnessed the largest decrease in its score (from 47.7 in 2010 to 39.6 in 2020). Indeed, in this pillar, Jordan's rank (128th out of 167 countries) deteriorated by 40 countries).
- 4. These trends has caused Jordan's rank to fall by 18 countries (from 68^{th} / 167 countries to 86^{th} / 167 countries). These findings are similar to our index.





4. Jordan Strategy Forum Recommendations

- 1) The government should look into setting a regulatory framework that empowers and diversifies political parties in Jordan. Moving along this direction would address all three of the weakest indicators of the Inclusive Societies Utilitarian Well-Being Index.
- 2) The government should look into the burden of regulation. The government should work reduce the cost of doing business, enhance competitiveness in the economy, and improve the efficiency of customs clearance.
- 3) The government should publicize more data (raw data of the Household Income and Expenditure Survey) to provide researchers and advocacy groups with proper tools to provide evidence-based recommendations.
- 4) To address growth and investment, the government should look into introducing tax incentives for venture capitalists and start-up companies which can compete in the fourth industrial revolution, and provide the informal sector with incentives to formalize their activities.
- 5) The government should collaborate with psychologists and sociologists to develop a national strategy for mainstreaming consultations for mental disorders. Again, such a move would address depressive disorders and non-communicable diseases.
- 6) Universities and educational institutions must incorporate "career skills" literacy for their students before entering the labor market. Education institutions must also reformulate their curricula across all majors to improve math and English skills. If successful, this would address skillsets of university graduates and the average quality of higher education institutions.
- 7) As part of their social responsibility, commercial banks should consider opening branches in the most vulnerable and least accessible areas, incentivize loans for investment purposes, and provide entrepreneurial mentorship for the unemployed youth. This would benefit access to bank account ownership, and adult literacy rates.
- 8) The government should handle distortions in its water pricing strategy with great urgency, while promoting the usage of water-saving devices, and seeking funds for public private partnerships for building water treatment plants that distribute water among farms across the country. This would address freshwater withdrawal.
- 9) To ensure students complete their primary education, the government should minimize the extent of child labor, especially in the refugee camps. This can be done by coordinating its effort with the relevant schools to ensure the completion of their education like the rest of the students in the country.





- 10) Based on the 2020 Legatum Prosperity Index, relevant stakeholders should look into the underlying reasons behind Jordan's deteriorating score (and rank) in the "Economic Quality" pillar. This pillar includes several measures.
- **A.** Ability of the government to sustain its current spending, tax, and other policies in the medium-to-long-term.
- **B.** Macroeconomic stability / GDP per capita, growth rate, and volatility of the inflation rate.
- **C.** Productivity and competitiveness / efficiency with which inputs can be converted into outputs.
- **D.** Dynamism / number of new start-ups entering the market, and failed firms in the economy.
- **E.** Labor force engagement / rates of unemployment and gender ratios.







Appendix (A): Quantitative Methodology

The methodology of this index follows the same mathematical basis of JSF's "Jordan Investor Confidence Index" (JICI). The score of the JPI ranges from 100 to 200. A score of 100 represents the worst performance in a certain category from 2009 to 2020, and a score of 200 represents the best performance in a category in the same period. The original data set is compiled by the Legatum Institute whose variables originate from multiple international indices and indicators that are reported by donor agencies (World Bank, UN Agencies, IMF, etc.), International Institutions and think tanks (Gallup Institute, QS Ranking, etc.), and departments of statistics of many countries.

Variables of the original dataset were modified by JSF based on relevance to the Jordanian context, in addition to the change in performance over time. For the latter, variables with a standard deviation of zero were automatically dropped since they do not possess any mathematical significance, given that the best performance from 2009 to 2020 equals the worst performance. For variables with incomplete datasets, Multiple Imputations by Chained Equations (MICE) were used to resolve inconsistencies, which inherently gives these variables the least weight possible.

The following steps were followed to calculate the Jordan Prosperity Index:

1) Z-Scores: For each variable *X* , the Z-Score is calculated using the following equation:

$$Z_{score} = \frac{x - \mu}{\sigma}$$

Where

x: Value in variable X in the desired year

 μ : Arithmetic mean of all values in X

 σ : Standard Deviation of all values X

2) <u>Feature Scaling:</u> In order to restrict scores between 100 and 200 (i.e., min-max normalization), each of the Z-Scores calculated in the previous step are subjected to the following equation:

Scaled Score =
$$\left[\left(\frac{Z_{score} - \min}{max - min} \right) * 100 \right] + 100$$

- 3) <u>Weights:</u> The initial weights are provided by the Legatum institute based on reliability, theoretical, and empirical significance to the pillar. For the purposes of mathematical consistency (*tested by Cronbach's Alpha and other numerical methods*), weights are given a value of 0.5, 1 or 1.5, such that the sum of all weights is equal to the number of variables. The weight of each sub-index also takes the number of variables under it into account.
- **Weighted Average:** Given the weights calculated in step 3, in addition to the scores calculated in step 2, the weighted average is calculated per sub-index.
- 5) Aggregation of the JPI: A Utilitarian Well-Being Index and an Evaluative Well-Being Index are calculated by a weighted average of all utilitarian and evaluative sub-indices, respectively. Finally, the JPI is calculated by taking the simple average of the Utilitarian Well-Being Index and the Evaluative Well-Being Index.



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