

Startup Ecosystem Report Iraq

V.1.0 – May 2019

enpact
data lab

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Print: FLYERALARM GmbH

Publisher:

enpact e.V.

Albrechtstr. 10

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ISBN: 978-3-96604-004-4

Copies: 200

Registration Court: Amtsgericht Charlottenburg (Berlin)

Registration Number: VR 32765 B

Cover photo: Sarchia Khursheed

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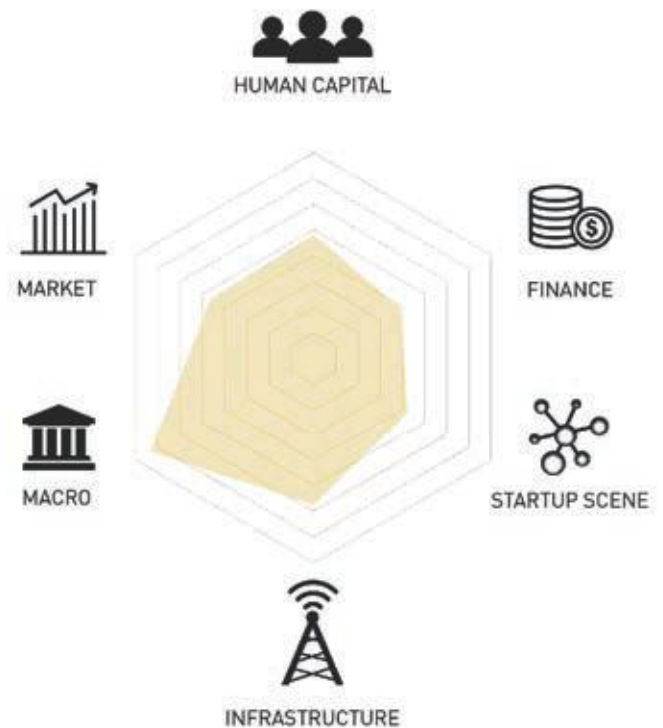
The Startup Friendliness Index (SFI)

In the field of entrepreneurship, startup ecosystems play an important role. A startup ecosystem is formed by entrepreneurs, startups in their various stages, and numerous other entities such as universities, investors, accelerators, co-working spaces, legal and financial service providers, and government agencies. Through the complex interaction of these players, a startup ecosystem has the capacity to empower entrepreneurs to develop new ideas and bring innovation to the market.

The composition and maturity level of startup ecosystems are essential components of the success rate for entrepreneurs and new enterprises. A good understanding of ecosystem states, strengths, and weaknesses enables specifically-targeted policies, enhances investment decisions, and improves the impact of development cooperation.

The Startup Friendliness Index (SFI) analyses the potential for cities to advance entrepreneurship by measuring six key features (domains) of the startup ecosystem: Human Capital, access to Finance, the liveliness of the Startup Scene, Infrastructure, Macro framework, and Market conditions. Together, these six domains interact to form an urban environment that can champion or hinder entrepreneurship.

Startup Ecosystem Approach



Research Design

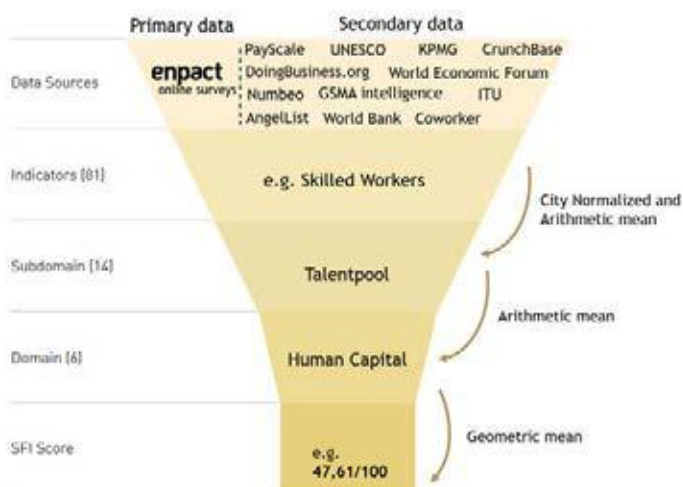
The SFI analyses data on 81 key indicators within the six domains representing core elements of a startup ecosystem. The SFI utilises a novel methodology that reflects the importance of interconnectedness between domains.

The SFI relies on data procured from a combination of primary data, collected through surveys and interviews, and secondary data from established sources such as the World Bank and World Economic Forum.

In terms of primary data-gathering, 16 indicators are collected through surveys from entrepreneurs and experts living in the measured cities. In Iraq, 55 survey respondents commented on the following topics: graduates' salaries, startup events, financing sources, and internet speed. Because of data limitations in the Transport subdomain, data were also gathered through 30 surveys on transportation infrastructure quality.

The total number of responses were 13 in Baghdad, 16 in Sulaymaniyah, 15 in Erbil, and 11 in Basra.

Additionally, eight interviews with relevant stakeholders in Iraqi startup ecosystems were conducted to complement the information from the surveys and secondary data.



Once gathered, the data are normalised so that the index values can be used to compare the cities in the SFI. The normalised indicator values range from 0 (for a city that has the lowest performance relative to the others) to 100 (for the city that has the best relative performance). Where relevant, normalised scores are adjusted to the population of the city.

Scores are generated simultaneously and reflect essentially the same point in time for all cities. All data in this report are from the city analyses in 2017 and 2018.

As a final step, the data are aggregated. Drawing from best practices in composite indicator-building^[1], we utilise a combination of the familiar arithmetic mean as well as the geometric mean, resulting in an index which accurately reflects the importance of balance (having relatively even levels of maturity across all domains) within an ecosystem.

The logic behind this method is simple; imbalances in an ecosystem have a negative impact, because deficiency in even one area may slow or impede entrepreneurship completely. For example, excellent infrastructure is of limited use if there are no funding opportunities available to initiate a new venture. In other words, there are no substitution effects between domains.^[2]

The final SFI scores can be used both as a tool to compare cities on common indicators, and also offer a structured lens to evaluate areas of strengths and weaknesses within individual cities.

For further methodology details, see:
www.startup-meter.org/methodology/

Iraq

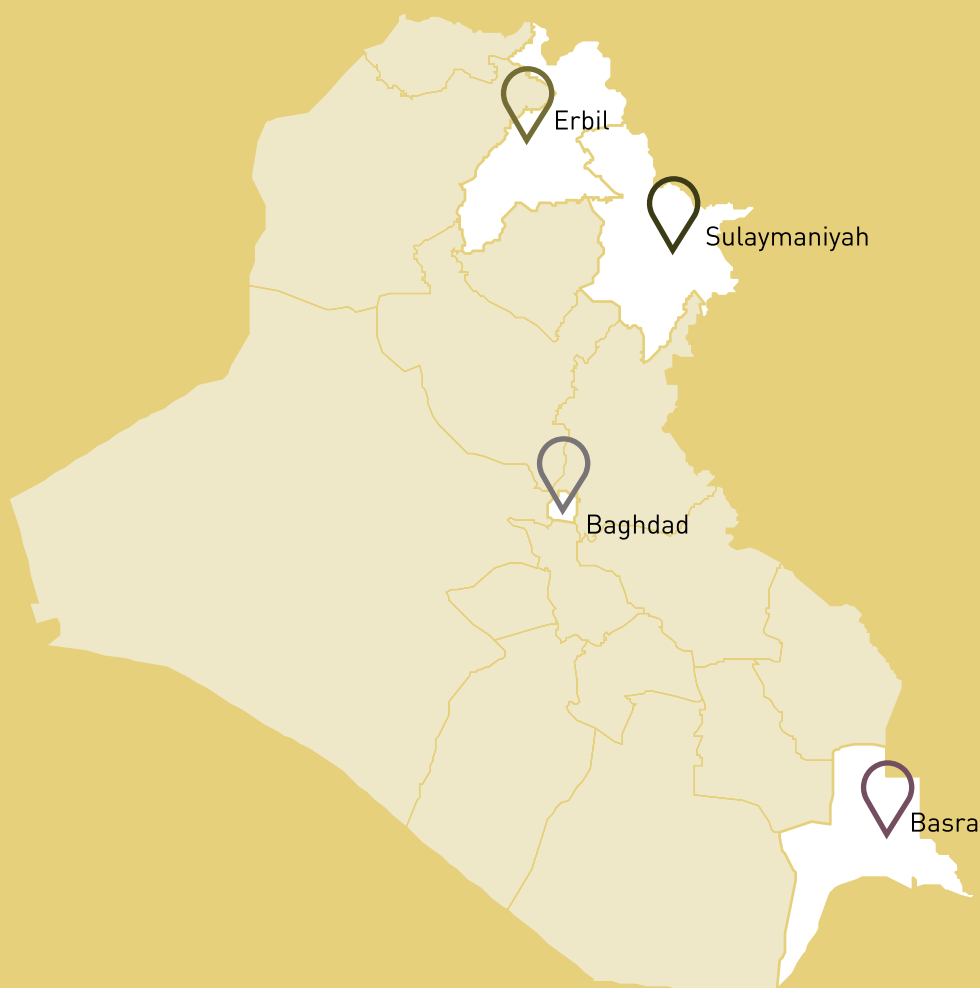


Iraq is home to an ethnically and religiously diverse population of 37 million people. Located in Western Asia and bordered by Turkey, Iran, Kuwait, Saudi Arabia, Jordan, and Syria, Iraq has been home to successive civilisations since the sixth millennium B.C. The economy of the country is largely dominated by the oil sector, and current challenges for the country include high unemployment and security concerns due to significant conflict in the region for many years.

Startup ecosystems in the country are in the early stages, and are less developed than others in the region at this time. However, significant opportunity exists for the country.

Erbil is the capital city of Iraqi Kurdistan, located approximately in the centre of the Iraqi Kurdistan region in the north of Iraq. With a population of about 930.000 people, it is the most populated city in the Kurdish inhabited areas. The origins of the city date back to as early as the fifth millennium B.C., making Erbil one of the oldest continuously inhabited areas in the world. The city is religiously and ethnically diverse, and the local economy is dominated by the oil industry, agriculture and tourism.

Sulaymaniyah, founded in 1784, is also located in Iraqi Kurdistan. There are approximately 720.000 residents in the city, and the economy relies on tourism, agriculture, and small factories. Since its founding, Sulaymaniyah has been known as a centre of art and thought for poets and scholars. Sulaymaniyah is known as the capital of enlightenment among the Kurds, or as the "Paris of Iraq."



Baghdad, the capital city of Iraq, is home to nearly eight million people, making it the largest city in the country, and the second largest in the Arab world (after Cairo, Egypt). Located along the Tigris River, the city was founded in the eighth century, quickly evolving into a significant cultural, commercial, and intellectual centre for the Islamic world. Much of Iraq's manufacturing, finance, and commerce is concentrated in and around Baghdad, with the government acting as the city's principal employer.

The Iraqi city of Basra is home to approximately 2,6 million people, and is located on the Shatt al-Arab between Kuwait and Iran. Built in 636, the city has a strong historical heritage and played an important role in early Islamic history. Basra is Iraq's main port, and recognized as Iraq's economic capital. The economy in Basra is largely focused on the oil, petrochemical, and agriculture industries.

Executive Summary

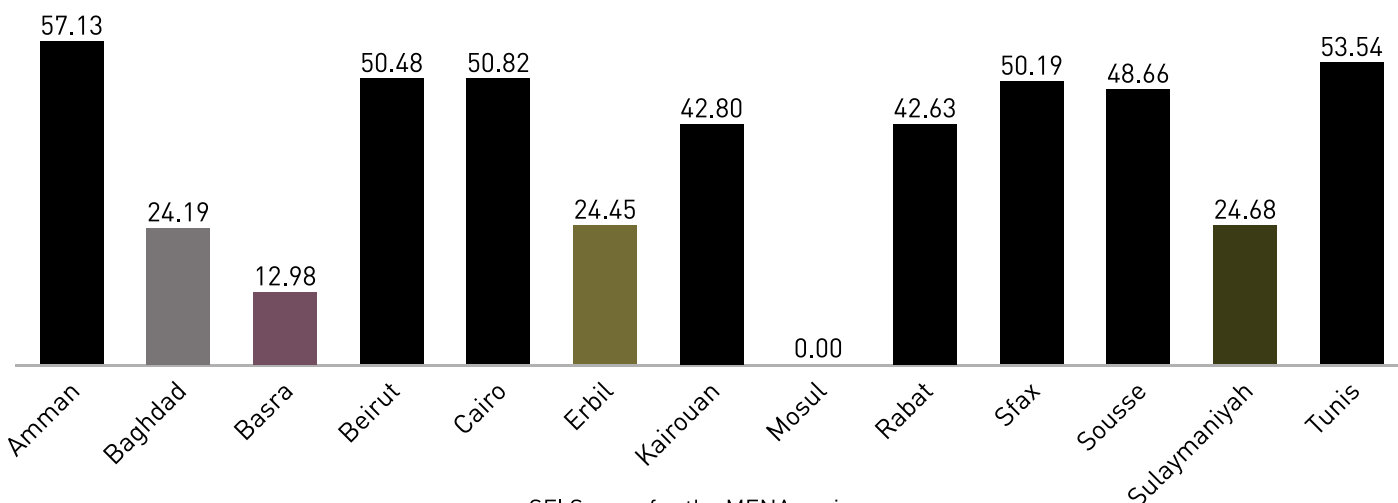
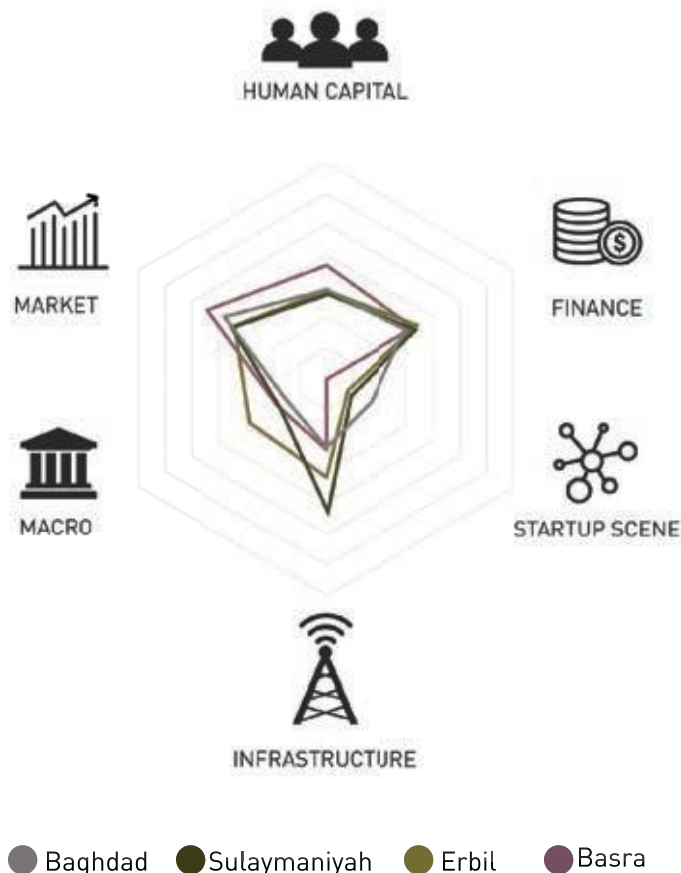
Iraq

This report analyses four Iraqi cities - Baghdad, Sulaymaniyah, Erbil, and Basra - in comparison to nine other cities in the Middle East and North Africa in the MENA regional SFI, and 10 additional cities in Asia, Latin America, and Sub-Saharan Africa in the global SFI. Within Iraq, data on Mosul was also gathered, though this city is not analysed in our report.

Startup Friendliness Index scores are determined by examining 81 indicators in six domains: Human Capital, access to Finance, the liveliness of the Startup Scene, Infrastructure quality, Macro framework (describing the political and legal system), and Market conditions (such as trade balance and capacity utilisation). Cities with relatively even scores across domains receive a higher overall score than a city with strong performance in one area, and weak performance in another.

Scores range from 0 to 100, with a score of 0 for the city with the weakest performance, and a score of 100 for the strongest. Throughout the report, the referenced SFI scores are from the MENA regional SFI, and the cities are ranked both in comparison to the MENA and global SFI.

Iraq's Startup Ecosystems



SFI Scores for the MENA region

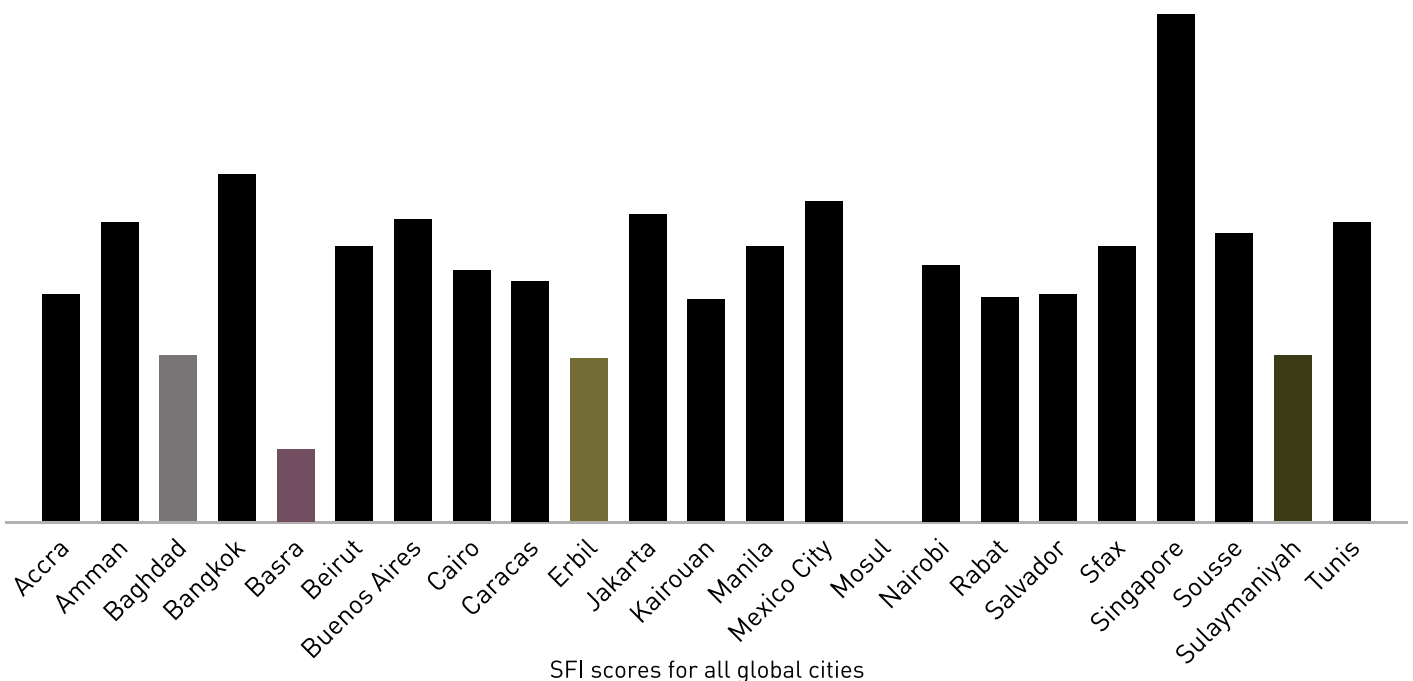
The four cities rank last in both the global and MENA regional SFIs on their total SFI score.

Baghdad, Sulaymaniyah, and Erbil perform similarly in the global SFI, followed by Basra which has a lower score overall. Within the MENA SFI, Sulaymaniyah is in the most favourable position in the country with a score of 24,58, ranking 9th of 13 cities in the MENA region. Erbil has a similar score of 24,45 and ranks 10th. Baghdad is also close, with a score of 24,19, ranking 11th, and lastly, Basra scores 12,98, ranking second-to-last in the region, above only Mosul.*

*Numbers are written according to English rules: numbers under 10 are spelled out, unless they are in the same paragraph or sentence as a number over 10, are quoted from other sources, or include decimals.

For Sulaymaniyah, Finance and Startup Scene are the strongest domains, while Human Capital and Market conditions are challenging. In contrast, Basra seems to be doing better regarding the Human Capital domain, though it still needs to improve skills to boost the private sector. Erbil's strengths are in the Infrastructure and Macro domains, whereas Market conditions are particularly challenging. Baghdad performs well compared to other cities in the Finance and Human Capital domains, but the Infrastructure and the Macro domains are weak points.

Based on findings from the Startup Friendliness Index, this report concludes with a series of policy recommendations to support the development of these startup ecosystems. Recommendations are focused on national-level foundational needs, and specific suggestions for the entrepreneurial sector.

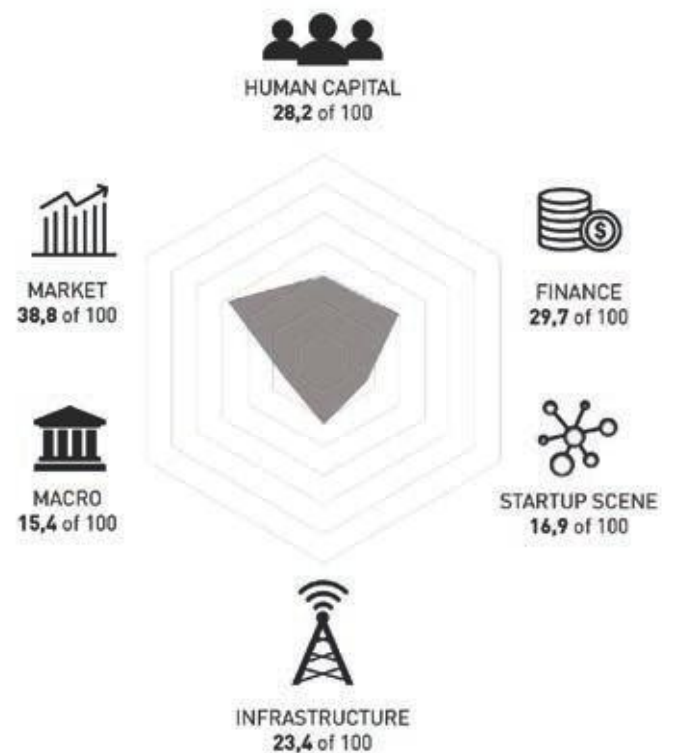


Executive Summary

Baghdad

The city of Baghdad scores 24,19 in the MENA Startup Friendliness Index, and ranks in position 19 of 24 cities in the global SFI. There are considerable imbalances in the city, with better scores on the Market and Finance domains, and challenges in terms of Human Capital, deteriorated Infrastructure, and a young Startup Scene.

On the Human Capital domain, Baghdad shines in terms of the number of skilled workers in the city, though the city is under-resourced in terms of university capacity and a modern curriculum. In terms of access to Finance, there are few opportunities for accessing resources such as VCs, but overall funding constraint is less of a problem in Baghdad than in other Iraqi cities. The Startup Scene is in early stages with one high-equity success case, Miswag. On the Infrastructure domain, there are difficulties overall Iraq, with transportation and ICT in development. The Macro domain shows that the city faces challenges across the board on measures of political and legal stability, and security. The final domain, Market, shows high GDP PPP per capita in Iraq and a favourable trade balance due to oil exports, but poor logistic performance.

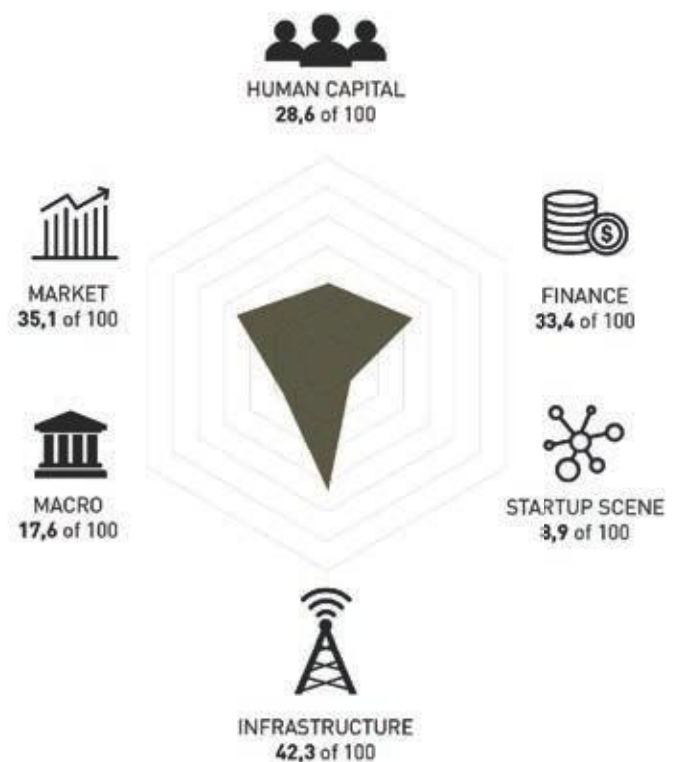


Executive Summary

Sulaymaniyah

The city of Sulaymaniyah scores 24,68 in the MENA SFI and ranks in position 20 of 24 in the global SFI. There are considerable imbalances in the city, with higher scores on the Finance and Infrastructure domains, a decent score on Startup Scene relative to other Iraqi cities, and lower scores on Human Capital, Macro conditions, and Market features.

The Human Capital domain in Sulaymaniyah is characterised by challenges finding a properly educated workforce for current labour market needs, and relatively high female participation in the economy relative to other cities in the country. The Finance domain shows funding is available through accelerators and incubators, but major difficulties exist regarding any other types of financing, with high collateral requirements. The Startup Scene in Sulaymaniyah is in the early stages, but already has important resources such as incubators and co-working spaces that will continue to support its development. The Infrastructure domain performs well, as it is generally more affordable to access key utilities such as internet and mobile services, and the city has better internet speed than the rest of the country. The Macro domain has difficulties due to high crime and informality, as well as a general lack of political stability in the country. The Market domain is an area of low scores for Iraq generally, though opportunities exist given a favourable trade balance and the potential for growth in the religious tourism sector in the coming years, once security concerns are more stable in the country.

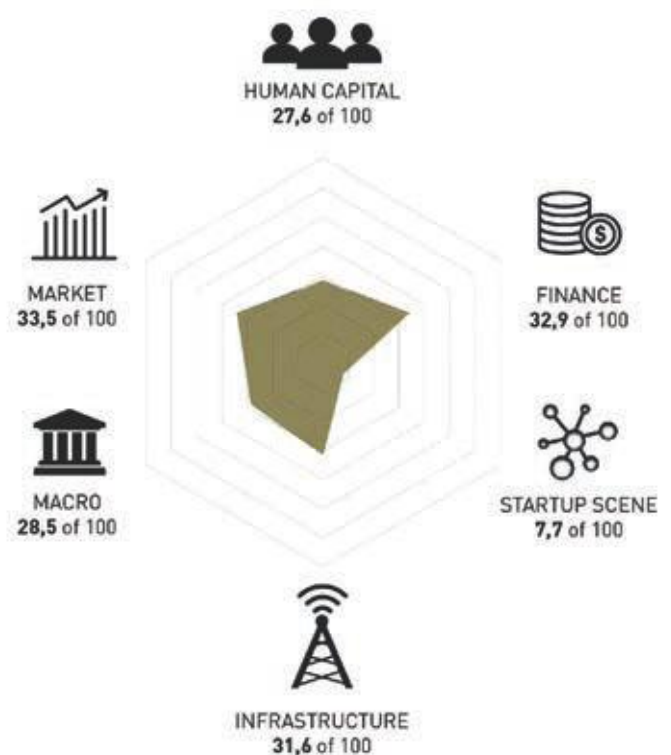


Executive Summary

Erbil

The city of Erbil scores 24,45 in the MENA SFI, and ranks at position 22 of 24 in the global SFI. There are considerable imbalances in the city, with better scores on the Infrastructure and Macro domains, an average ranking relative to other cities in Iraq in terms of Finance and Startup Scene, and low scores in terms of Human Capital and Market conditions.

Erbil ranks towards the bottom of both the MENA and global SFIs on the Human Capital domain due to strict labour regulations and few firms owned by women. However, the city scores well in terms of skilled workers. Access to finance in the city is limited, with few able to access bank loans or VC funds, though financing through accelerators is relatively available for entrepreneurs in the city. The Startup Scene is in the early stages, but the city does already have important institutional resources such as incubators. Infrastructure is about average for the country, though the costs associated are higher than in other Iraqi cities. In the Macro domain, Erbil stands out due to low crime in the city. The city is the lowest performer in the Market domain given low capacity utilisation and lack of sister cities, indicating limited external connectedness.

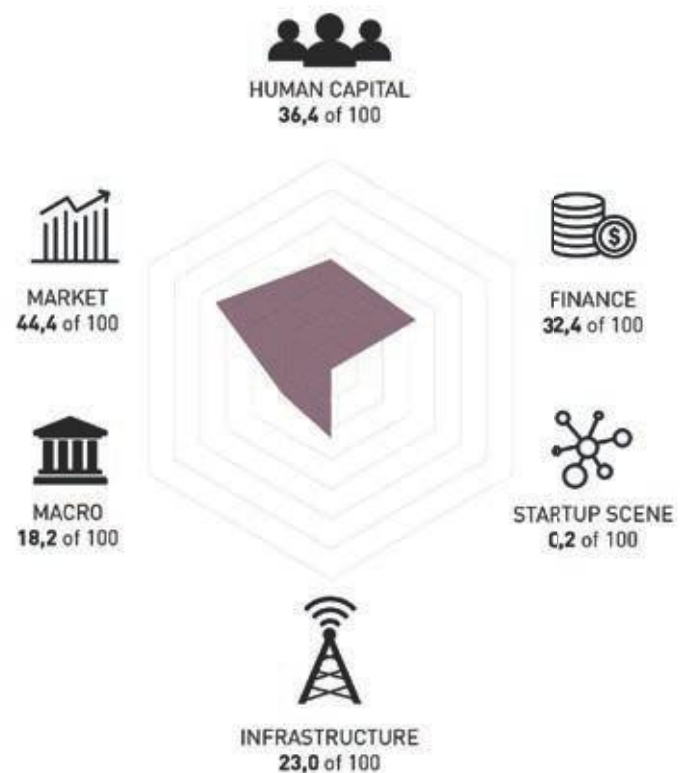


Executive Summary

Basra

The city of Basra scores 12,98 in the MENA Startup Friendliness Index, and ranks in position 23 of 24 in the global SFI. There are considerable imbalances in the city, with better scores on Human Capital and Market conditions, but with difficulty accessing Finance, deteriorated Infrastructure, challenging Macro conditions, and a young Startup Scene.

Basra is the strongest performing city in Iraq in terms of the Human Capital domain, driven by the high availability of skilled labour and limited labour regulation challenges. The city performs approximately average among Iraqi cities on the Finance domain. Entrepreneurs in Basra have challenges accessing financing, though a point of optimism for the city is the high number of startups able to access funding through Business Angels. The Startup Scene is very much in the early stages, with Basra having the lowest score on almost every indicator in this domain. Infrastructure is also problematic, with the city scoring the lowest in the MENA region. Macro conditions are a challenge on a similar level to other cities in Iraq, given the lack of political and legal stability, and ongoing security issues. In contrast, Basra performs the best in Iraq on the Market domain by a considerable margin, driven by high scores on Capacity Utilisation and Sister Cities.



Startup Friendliness Index Iraq

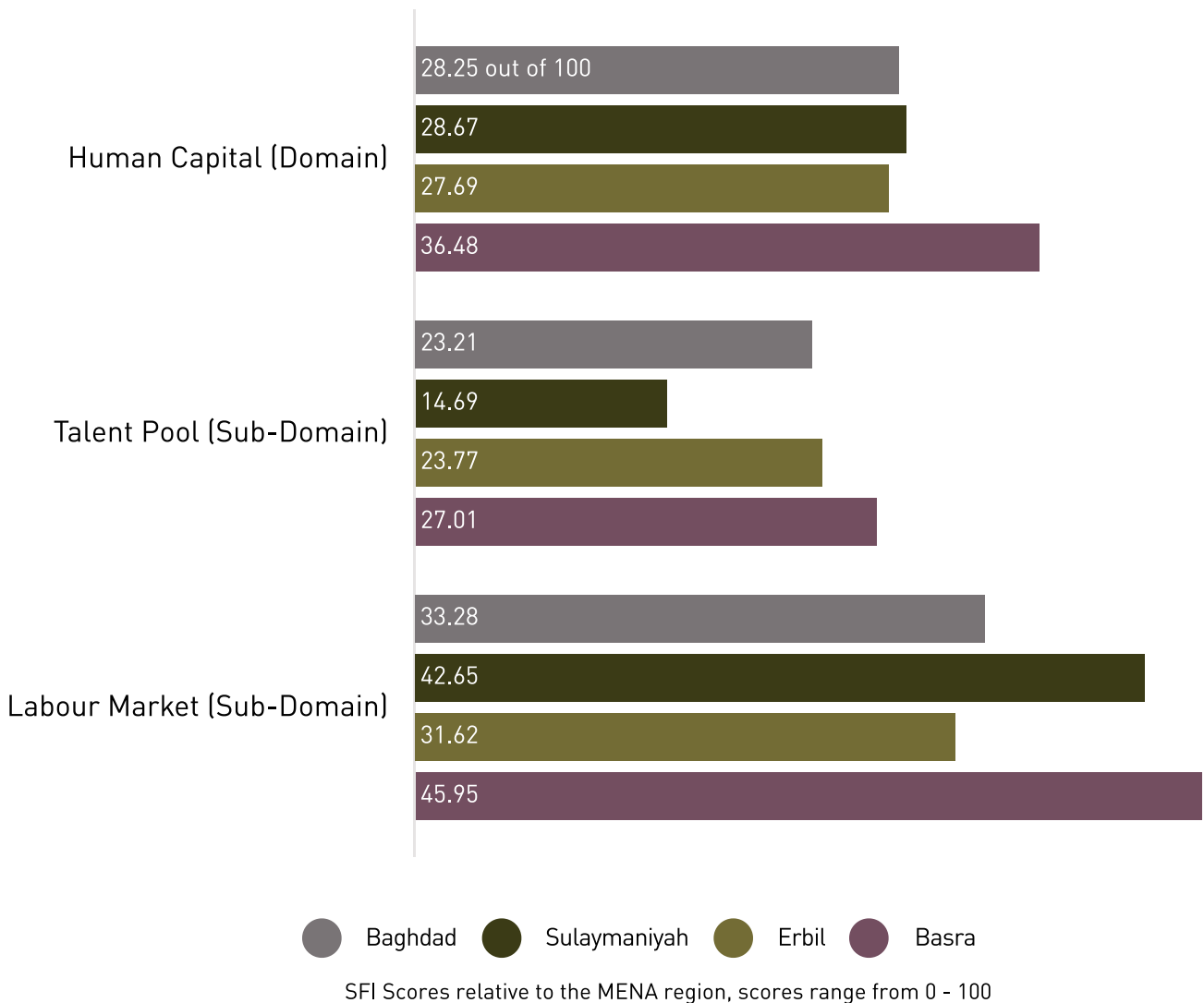
DOMAINS AND INDICATORS

1. Human Capital

The Human Capital domain seeks to measure the availability of talent with the right skills to help a fledgling venture succeed. For cities in Iraq, this domain is a challenge.

The highest scoring city is Basra (with a score of 36,48), ranking at position 19 of 24 global SFI cities. Other cities in Iraq follow, ranking in the bottom positions of both the MENA regional SFI and the global SFI (along with Salvador in Brazil).

The Human Capital domain is comprised of two subdomains, Talentpool and Labour Market, both featuring national and city-level indicators. While neither domain is especially strong for Iraqi cities, the findings in the Labour Market subdomain are more optimistic, particularly for Basra and Sulaymaniyah.



National Overview

Human Capital Domain

According to the World Bank's Human Capital Index, a child born in Iraq today will only utilise 40% of their productive capacity as an adult, compared to what they could achieve with full access to education and health care. Decades of conflict have adversely impacted a range of services in the country, particularly education. Iraqi children can expect to complete 6,9 years of pre-primary, primary and secondary school by age 18. However, once quality of learning is taken into account, these 6,9 years are equivalent to only four years, with a 2,9 year learning gap.^[3] An illustration of the problem can be found in adult literacy rates, which are below the average for the MENA region, and well below the average for upper-middle-income countries.^[4]

Young people in particular are facing difficult circumstances accessing education and employment opportunities in Iraq. For example, nearly half of the population of internally displaced children (about 335.000), are currently out of school. The most prevalent level of education today is primary school or less, with education outcomes equal for those 18 and younger as for those 30 and over, in contrast to many other countries with improving education outcomes for newer generations. This is particularly pressing given the large youth population, as about 50% of Iraq's population is under 19 years of age, and youth unemployment is significant (nearly 35%).^[4]

When asked about youth perspectives on the future, Rasha Al-Bani of The Station co-working space in Baghdad says, "I would say they are cautiously optimistic. They are very aware of the challenges facing them, especially in regard to the lack of jobs available. Not only is employment hard to find, but the quality of education throughout the country is still quite poor. Young men and women come across positions that require candidates to hold certain skills.

However, it is sadly often the case that young graduates are not properly prepared for the limited jobs that are available. It is certainly not a fault of their own; they are only able to take advantage of the resources at their disposal. The education system has failed them. Iraq is in need of intensive programs for graduates and non-graduates alike to help fill this missing skills gap."^[5]

Fadhel Bahaa, who is also a part of The Station as a Programme Coordinator, feels that the most pressing need is to upskill people, providing practical knowledge and access to marketable skills. He adds that training and mentoring could be very helpful in overcoming these challenges.

Unfortunately, internships and similar opportunities to gain practical skills are rare in Iraq. Salin Zain, co-founder of Fikra Space in Baghdad highlights this problem: "Since we have no internships [in Iraq], students and graduates see themselves in an infinite loop – they have the knowledge [to be valuable], but work experience is required to find a job."^[6]

Marwan Ahmed, Operations Manager of Karin Tech Company agrees that improving education is important for the development of Iraqi startup scenes, stating that, "human talent is obstacle number one." Marwan emphasizes that the labour market is underdeveloped, and that there is a skills gap between education and the needs of the market. In particular, he highlights the need for skilled developers. While they do exist, they are largely self-taught, and those that are particularly talented tend to favour working for large companies, NGOs, and diplomatic missions rather than take a risk on a start up venture.

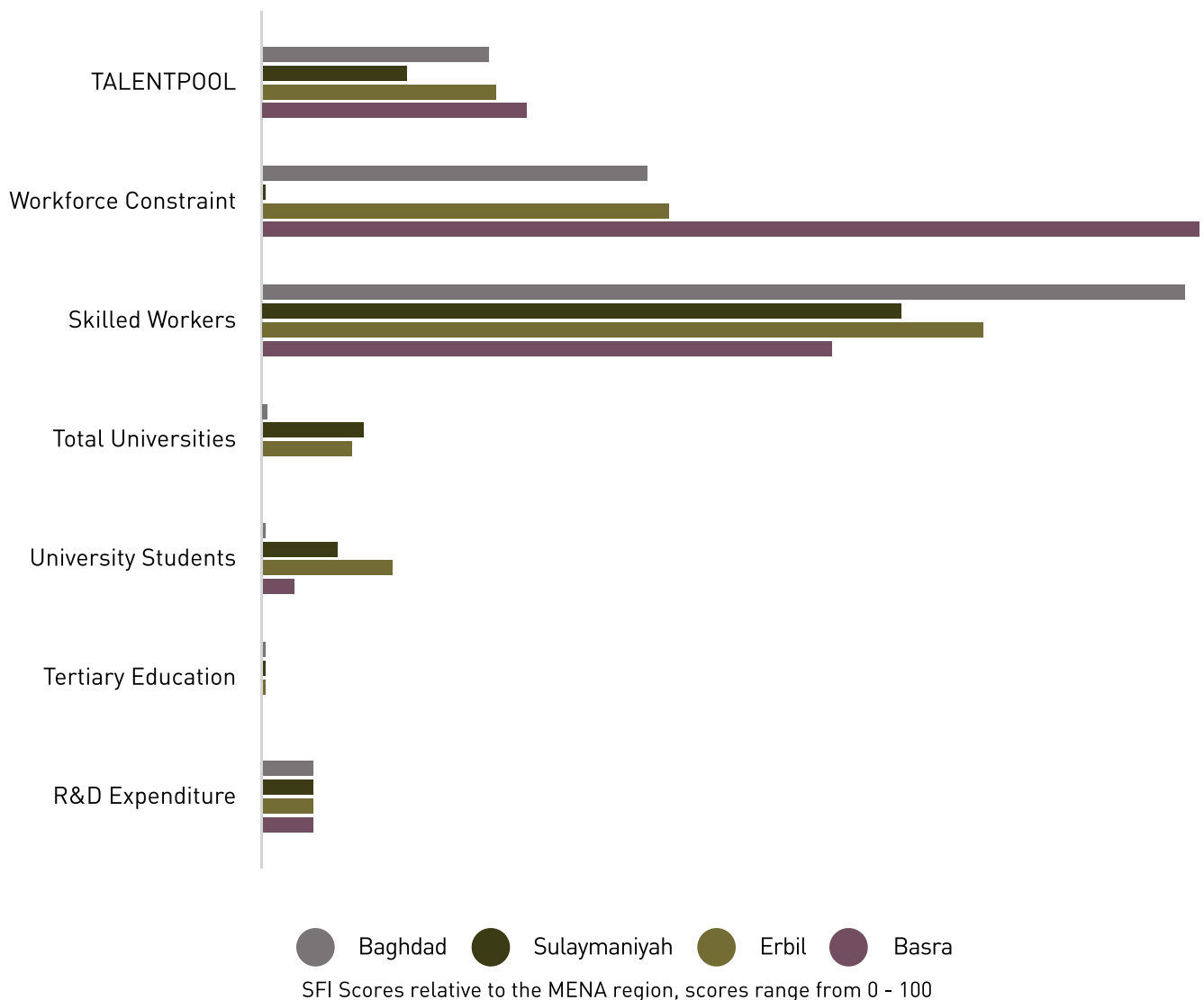
Talentpool

Subdomain of Human Capital

The Talentpool subdomain discusses the availability of educational resources, and whether those in the workforce have the necessary skills to meaningfully contribute to modern startup ventures.

Despite generally low scores on this subdomain for Iraqi cities, which all rank at the bottom of both the MENA regional and global SFIs, the high scores on the indicators for Workforce Constraint and Skilled Workers are a point of optimism.

Two indicators in the Talentpool subdomain, Tertiary Education and R&D Expenditure, are measured on a national level. The remaining indicators are all discussed on a city-by-city basis.



National

Talentpool Subdomain

On a national level, research has shown that the overall quality of education in Iraq is poor, and the country has also struggled with the quality of teaching.

^[4] Beyond quality, challenges exist in accessing educational services. In absolute numbers, only 16% of Iraqis have enrolled in Tertiary Education. This is much lower than the MENA regional average of 28%, and less than half the global SFI average of 36%. For this reason, Iraqi cities rank at the bottom of the MENA regional SFI, and above only Nairobi, Kenya in the global SFI.

16%

Enrollment in tertiary education in Iraq

28%

Average enrollment in tertiary education in the MENA region

The Iraqi government has acknowledged concerns in this area in their recent National Development Plan 2018-2022, which includes goals for increasing enrolment, modernising curriculum, and enhancing public-private partnerships for universities.^[7]

Education goals feature heavily in the National Development Plan

The other national-level indicator, R&D expenditure, measures annual R&D spending as a percentage of total GDP. In Iraq, this totals only 0,33% of GDP. On this indicator Iraqi cities share a score of 5,07, and rank above only Caracas, Venezuela, and Beirut, Lebanon in the global SFI.



Only 0,33%

of GDP spent annually on R&D

Baghdad

Talentpool Subdomain

Baghdad scores 23,21 in the Talentpool subdomain, ranking at position 11 of 13 in the MENA regional SFI, and 20 of 24 in the global SFI. Baghdad scores highly on the Skilled Workers indicator and fairly well in terms of Workforce Constraint, but struggles with regard to Total Universities and University Students.



11
Universities



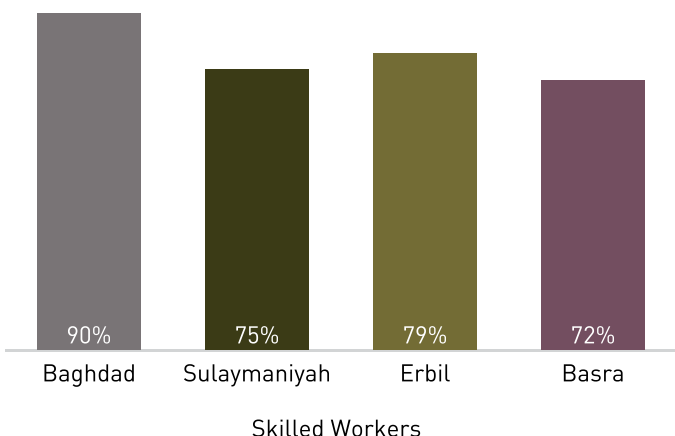
87.000
University Students

The indicator Workforce Constraint measures the percentage of firms that identify an inadequately educated workforce as a major constraint to doing business. In Baghdad, this totals 33%, higher than the global SFI and MENA regional averages of 25%, as well as the average of 30% in Iraq. The city ranks approximately in the middle of the other measured Iraqi cities, and in position 16 of 24 in the global SFI.

An asset for Baghdad is a strong score on the number of Skilled Workers in the city. Ninety percent of the total workforce in the city are considered skilled workers, according to World Bank metrics. This is higher than the Iraqi average (79%), MENA average (74%), and global SFI average (74%).

Baghdad’s scores on the Total Universities and University Students are not as favourable, largely due to the higher population in the city. Baghdad has approximately 11 universities*, by far the highest in Iraq, though ranks at the bottom of the MENA regional SFI, and position 21 of 24 global SFI cities. Similarly, with nearly 87.000 university students, there are almost twice as many students in Baghdad as the next largest Iraqi city (Basra).

However, given the much larger population in Baghdad, the city also ranks at the bottom of both the global and MENA SFI on this indicator. The reason for this is that the indicators measure the number of universities and total enrolled students as a proportion of the population, under the assumption that a higher proportion relative to population indicates that these resources are more readily available to residents. With a population of over 7 million, 11 universities is in fact highly under-resourced.

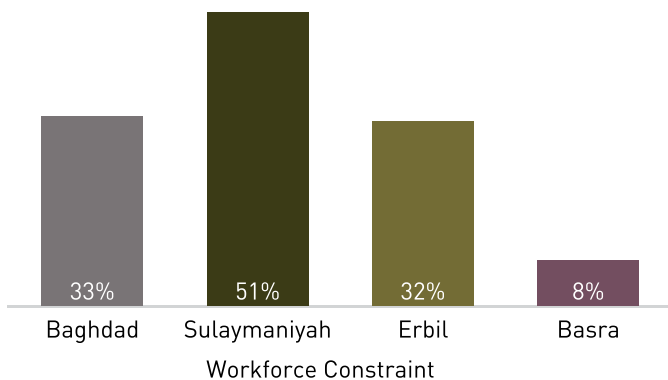


*Data sources give various totals for this indicator.

Sulaymaniyah

Talentpool Subdomain

The Talentpool subdomain is difficult for Sulaymaniyah. With a score of just 14,69, the city ranks at the very bottom of both the global and MENA regional SFIs. Decent scores on the indicators of Skilled Workers, Total Universities, and University Students are unable to overcome an extremely low score on the Workforce Constraint indicator, as well as the poor country-level indicators in this subdomain.



In Sulaymaniyah, 51% of firms identify an inadequately educated workforce as a major constraint to doing business. This is twice as high as the global and MENA regional averages, and much higher than the next highest score in Iraq (33% in Baghdad). In terms of skilled workers, at 75% this is relatively in line with the global and MENA regional average of 74%, though below the Iraqi average of 79%. An important factor to consider in evaluating the interplay between the Workforce Constraint and Skilled Workers indicators is that even those who may be considered traditionally 'skilled' may lack the modern capabilities sought-after by employers, illustrating a disconnect in the labour market.

Sulaymaniyah scores fairly well on the indicators of Total Universities (ranking 8th of 24 global SFI cities) and University Students (ranking 12th of 24). There are 6 universities and approximately 18,000 university students in the city, relative to a population of about 720,000 (less than 10% of the population of Baghdad).

Erbil

Talentpool Subdomain

With a score of 23,77, Erbil ranks at position 18 of 24 global SFI cities on the Talentpool subdomain. This is a favourable result relative to other Iraqi cities, though illustrates the difficulty in this subdomain for the country overall. Erbil ranks approximately in the middle of MENA region cities on most indicators in the subdomain, though has a particularly promising score on the Skilled Workers indicator.

In Erbil, 79% of the workforce in the city are considered Skilled Workers, exactly in line with the Iraq-wide average, and a bit above the global and MENA region SFI averages of 74%. This ranks Erbil in position 8 of 24 global SFI cities, and 4 of 13 MENA region cities.

On the indicator of Workforce Constraint, Erbil scores 41,44 and ranks a bit below the middle of global SFI cities. The percentage of firms identifying an inadequately educated workforce as a major issue for their business is 32%, slightly above the Iraq-wide average of 30% as well as the regional average of 25%.

There are seven universities in Erbil, and about 33,000 university students. The population of the city is small in relative terms, less than one million people, which results in Erbil ranking just above the middle for MENA regional cities (position nine of the global SFI) and below only Sulaymaniyah in Iraq on the indicator of Total Universities. Erbil performs slightly better on the University Students indicator, ranking at position number eight in the global SFI, and above all other cities in Iraq on this indicator.

Basra

Talentpool Subdomain

Basra is the highest scoring city in Iraq on the Talentpool subdomain, coming in at position 9 of 13 MENA region cities with a score of 27,01. This is due to an extremely strong score on the Workforce Constraint indicator, despite less positive outlooks on several other indicators in this subdomain, particularly those on Total Universities and University Students.

Basra's economy is largely based on the oil and petrochemical industries, exports, and agriculture. It may be inferred from these results that the skills needed to participate in the city's economy are being properly ensured, despite lacking a surplus of those with specific technical skills.

Only 8%
of firms identify an
inadequately educated
workforce as a major
constraint in Basra

Indeed, the scores on the indicators of University Students and Total Universities are very low for a city that is an economic hub for the country. There are only 3 universities and 45,000 university students, which relative to a population of 2.6 million, is incredibly low. For this reason, Basra scores at the bottom or within the bottom three of both the global and MENA regional SFIs on these indicators.

With only 8% of firms identifying an inadequately educated workforce as a major constraint to doing business, Basra performs second from the top in the MENA region, and in the top four of the global SFI on this indicator. In contrast, the result of the Skilled Workers indicator is not as favourable, with 72% of the working population considered to be in the "skilled" category, slightly below the MENA regional average of 74%, and below the Iraq-wide average of 79%.



45.000

University Students



Only 3

Universities

While it is positive for the city that firms have not highlighted struggling to find adequately prepared talent for their teams, there may still be concerns about whether the city has the resources to support the education of those that are likely to work in more modern and technical positions in the future.

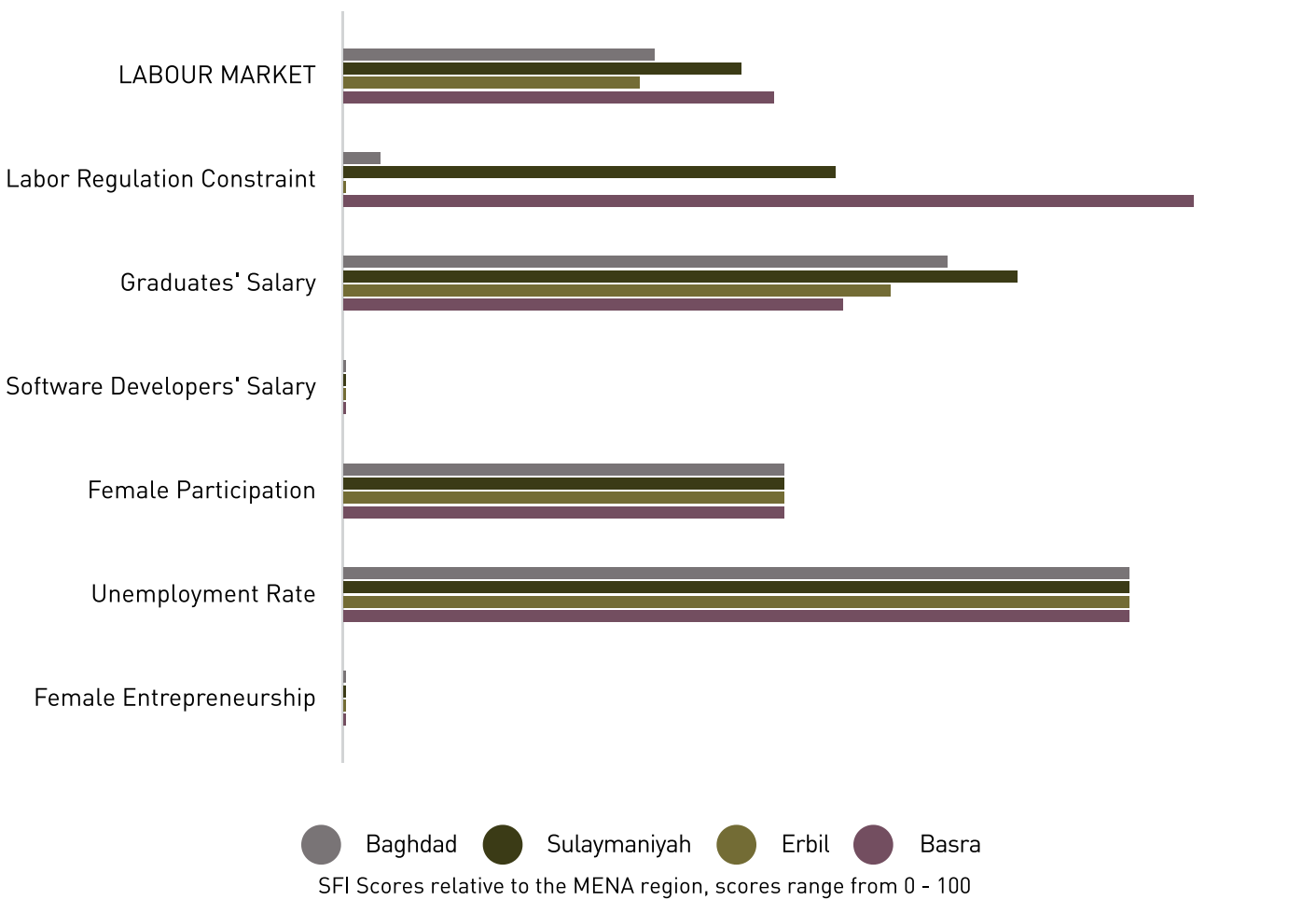
Labour Market

Subdomain of Human Capital

The Labour Market subdomain measures the systemic factors that impact entrepreneurs in their ability to find and retain the best employees.

In line with the overall trends for the Human Capital domain, the Labour Market subdomain is not particularly strong for Iraqi cities. Of the Iraqi cities discussed in this report, Sulaymaniyah is the most successful in this subdomain, ranking at position 14 of 24 global SFI cities. Baghdad follows at position 17, and finally Erbil and Basra in positions 19 and 20 of the global SFI.

The Labour Market subdomain consists of three national-level indicators: Unemployment Rate, Software Developers' Salary, and Female Participation. The indicator for Female Entrepreneurship is measured on a city level, though the scores are identical across cities; as such, this indicator will also be discussed from a national perspective. Given that four of the six indicators in this subdomain are identical between cities, the overall subdomain scores are similar, and the differences are explained by the city-based indicators of Labour Regulation Constraint and Graduates' salary.



National

Labour Market Subdomain

On a national level, unemployment in Iraq is fairly low relative to the MENA region: 8.2% in 2018 according to World Bank data, compared to the MENA regional average of approximately 11%. Iraqi cities rank only below Beirut, Lebanon on this indicator in the MENA region SFI, and right in the middle of the global SFI (which has an average unemployment rate of 9%).

However, youth unemployment is a problem across the country, with over a third of youth considered to be unemployed. The 2014 drop in oil prices brought a fiscal crisis and austerity programmes, freezing public hiring. In a country where the public sector plays a major role in providing employment opportunities, and where inefficient bureaucracy limits options in the private sector, this left recent graduates with few options. The crisis has led many young people to pursue startup ventures in an attempt to find a solution. Given that fast population growth is expected to lead job demand to more than double by 2030, programmes and resources to support these efforts will likely play an even greater role in the future.^[8]

Another challenge currently facing the country is low rates of female participation in the economy. Iraqi cities rank second-to-last on this indicator in both the global and regional SFIs, above only Amman, Jordan. At just 19%, women make up a much smaller proportion of the workforce than the global SFI average (35%), and is also a bit below the MENA regional average of 21%. Not only does this limit opportunities for women, but also adversely impacts the economy as a whole, given the significant empirical benefits of higher rates of female participation in the labour force.

The story is similar on the indicator of Female Entrepreneurship. While this indicator is based on city-level data, all the measured Iraqi cities scored the same: 0,00 out of 100, ranking at the bottom of both the MENA regional and global SFI. The Female Entrepreneurship indicator reflects the percentage of firms with majority female ownership, based on World Bank Enterprise Surveys. No city in Iraq has yet reached even 1%. This is not a particularly surprising result, given that the MENA regional average is just 2%, though it is far below the global SFI average of 11%.

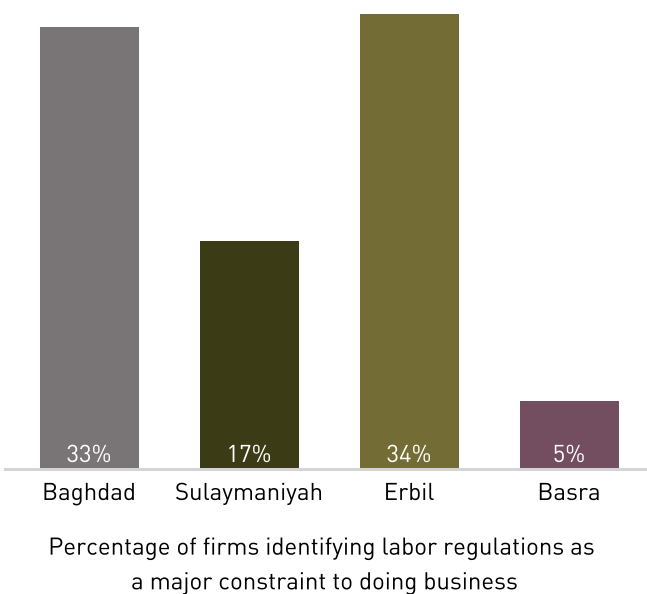
There are several factors impacting these low rates. For example, access to education in Iraq is largely explained by gender, with the out-of-school rate for primary school-aged girls twice that of boys. Gaps persist throughout secondary and higher education. Additionally, social pressure for early marriage discourages girls from continuing their education, particularly in rural areas. Women with low levels of education are often self-employed or working informally, in low-paying jobs with little access to resources and labour protections.^[4]

The last national indicator, Software Developers' Salary, gives the average monthly salary for a software developer in the country. At \$1.800 per month as of 2017, this figure is high compared to the MENA regional average (\$1.526/month) and the global SFI average (\$1.393/month). The salary indicators are weighted from the perspective of an employer who may be seeking to start a new venture and struggling to afford high wages. As such, this very high monthly salary results in Iraqi cities ranking at the bottom of the MENA regional SFI, and above only Accra, Ghana and Singapore in the global SFI.

Baghdad

Labour Market Subdomain

On a city-level, Baghdad scores 33,28 in the Labour Market subdomain, better only than Erbil in both the global and MENA regional SFIs. The primary reason is a very low score on the Labour Regulation Constraint indicator. This indicator measures the percentage of firms that identify labour regulations as a major constraint to doing business; in Baghdad, this totals 33%. This finding is significant in comparison to the average in Iraq (24%), MENA region (13%), and global SFI average (17%). For this reason, Baghdad ranks near the bottom of the global SFI on this indicator: position 21 of 24.



The Graduates' Salary indicator is more favourable, with Baghdad ranking 17th in the global SFI, and 10th in the MENA region. The average salary for a recent graduate in the city is about \$605 per month, approximately average for Iraq, and just above the global SFI and MENA regional averages. This implies that affording labour may be more feasible in Baghdad than in other major capital cities.

Sulaymaniyah

Labour Market Subdomain

Sulaymaniyah scores 42,65 in the Labour Market subdomain, ranking second in Iraq (after Basra) and 16th of 24 in the global SFI. The city scores just below average in both the Labour Regulation Constraint and Graduates' Salary indicators.

In terms of the extent to which labour regulations are problematic for business owners, at 17% Sulaymaniyah fares decently, exactly in line with the global SFI average and below the Iraq average. The city ranks 16th in the global SFI, and 10th in the MENA regional comparison.

The average salary for a recent graduate in the city is \$516 per month. This is the lowest average within in Iraq (with the exception of Mosul at \$511), and quite a bit lower than the MENA regional average of \$574 monthly.



**Recent graduates' salaries
are the lowest in
Sulaymaniyah**

Erbil

Labour Market Subdomain

With a score of 31,62, Erbil is the lowest scorer on the Labour Market subdomain in both the MENA regional and global SFIs. This is driven by a difficult score on the Labour Regulation Constraint indicator, and relatively high graduate salaries.

In Erbil, a total of 34% of firms identify labour regulations as a major constraint to their business success. This is the highest proportion in the MENA region, and below only Salvador, Brazil and Buenos Aires, Argentina in the global SFI.

Monthly salaries for recent graduates are also high, totalling an average of \$678 per month, over 10% higher than the capital of Baghdad, and about \$100 a month more than the global and MENA regional averages. Erbil ranks at position 11 of 13 MENA region cities and 19 of 24 global SFI cities on this indicator.

City	Average Salary for a Recent Graduate
Baghdad	\$605,50
Sulaymaniyah	\$516,00
Erbil	\$676,92
Basra	\$737,50

Basra

Labour Market Subdomain

Basra is the most successful Iraqi city on the Labour Market subdomain indicators, scoring 45,95 and ranking at position 14 of 24 global SFI cities.

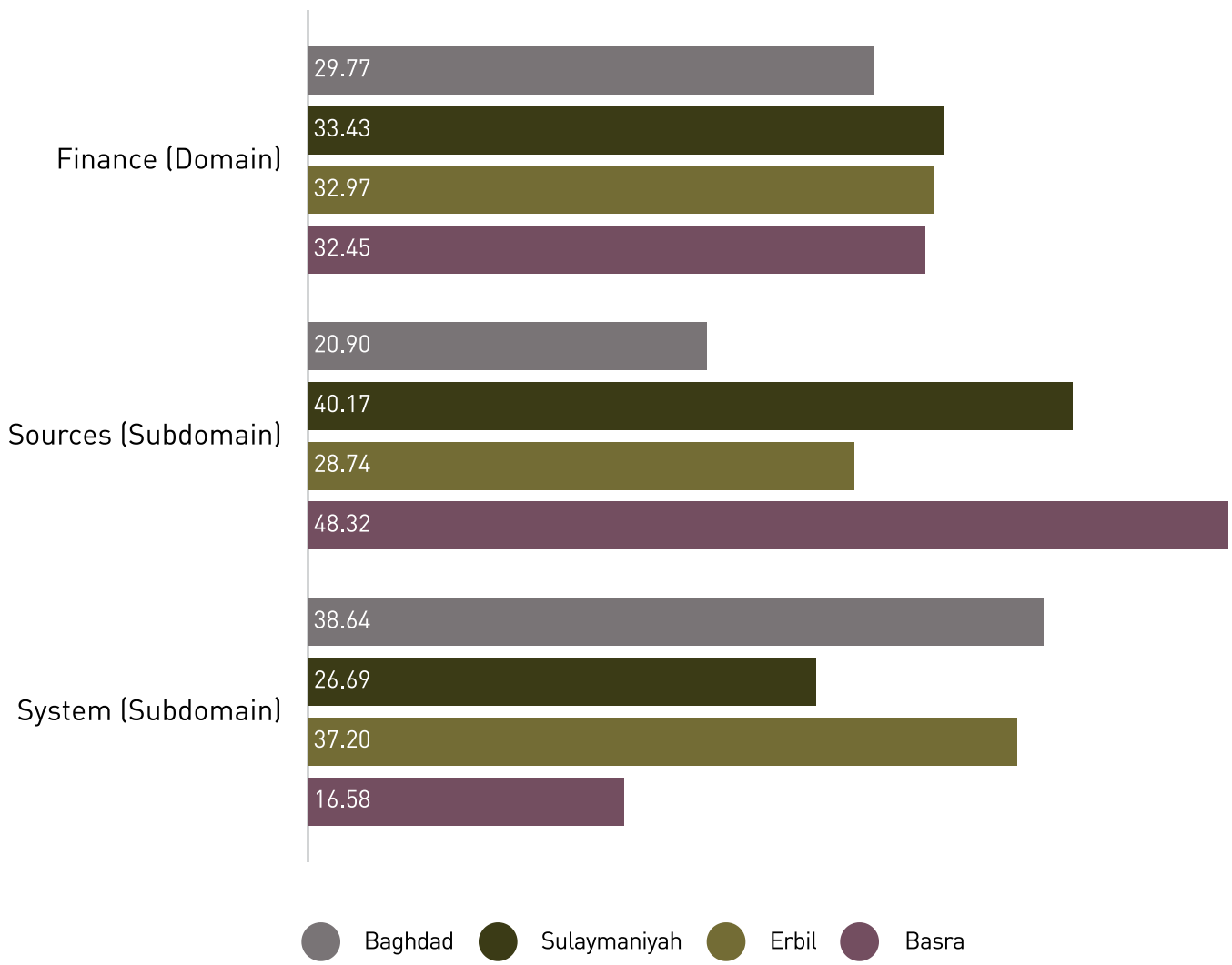
This strong performance is thanks to a very positive score on the Labour Regulation Constraint indicator. At only 5%, Basra has by far the lowest percentage of firms in Iraq identifying that labour regulations as a major problem for their businesses. Not only is this result low compared to Iraq, but is also less than half of the MENA average, and less than one-third of the global SFI average, indicating that business owners in Basra are not burdened by regulation to nearly the same degree as their counterparts in other cities.

The Graduates' Salary isn't quite as positive, with an average monthly salary of \$738, the highest in Iraq by a significant margin, and about \$165 more than the global and MENA regional SFI averages. However, Basra is a major city with substantial industry, so higher than average wages may be logical. The city ranks 20th out of 24 global SFI cities, and 12th of 13 MENA region cities - above only Rabat, Morocco.

2. Finance

Accessing adequate financial resources is one of the most important and often most challenging tasks for starting and scaling a new venture. The Finance domain seeks to examine the financing options that entrepreneurs have by looking at the sources of funding relied on by existing startups, and the systemic factors such as loan requirements that impact the wider funding environment.

While accessing finance is challenging for many entrepreneurs around the world, this is particularly pronounced for entrepreneurs in Iraqi cities. Scores are relatively consistent on aggregate for this domain across the cities, though the highest scoring city in the domain, Sulaymaniyah, ranks only at position 19 of 24 in the global SFI. As a whole, the Sources subdomain is more favourable than the System subdomain.



SFI Scores relative to the MENA region, scores range from 0 - 100

National Overview

Finance Domain

In Iraq, capital is hard to come by. Private banks rarely lend to startups, and foreign investors fear injecting capital into a country that provides few safeguards. Additionally, microfinance services in Iraq are still nascent and far from meeting their full potential.^[8] In 2015, the government launched a lending programme for small businesses, but amid stringent procedures banks had only dispersed a small portion of available funds as of mid 2018.^[9]

Zahra Shah from Re:Coded in Erbil mentions the fund, and the difficulty in actually accessing the support it offers, “nationally the Iraqi government did launch a venture/angel fund. It was a lot of money, but [applicants] need to meet very specific criteria that are very difficult to meet. Only 6% or so of the fund has been allocated because it is so unattainable. For example, startups need to be registered, and [it takes] a lot of money to register in the first place.”

”

Only 6% or so of the fund has been allocated because it is so unattainable.

Zahra Shah, Erbil, on the Tamwil Fund

Marwan Ahmed, Operations Manager of Karin Tech Company in Baghdad says that overall these government loans are premature and inefficient. Since they are tied to conditions that are very difficult to achieve and have many layers of bureaucracy, they are essentially impossible to secure.

According to Zahra, “strings-free government grants (even [for] \$5.000) would go a long way towards launching a startup...” As it is now, “most [entrepreneurs] rely on friends and family, and their own savings....[this leads to a] lack of risk-taking, because there is pressure on men to provide, and if they spend all their money on a startup that failed it would look really bad for them in their community and their family.”

The lack of risk-taking is also notable in investors. Ali Ismail, co-founder of the maker’s space Fikraspace in Baghdad, says that he “hope[s] the mindsets of some investors in Iraq will change. Many of them are mostly investing in established business models like restaurants, malls, or entertainment. They are not taking the risk to invest in innovation. I want this to change, to have more money invested in young people.”^[10]

The Iraq National Development Plan 2018-2022 acknowledges the problem of attracting outside investors as well. A range of factors including deteriorating political, economic, legislative, legal and organisational institutions has impacted reticence on the part of foreign investors to come to the Iraq market. A general index of investment attractiveness showed that Iraq was one of the weakest performing states, scoring just 27.3 out of 100 on this indicator in 2016.^[7]

Iraq is one of the poorest performing countries in terms of investment environment attractiveness

The problem of accessing funding isn't limited to new ventures, either. Ammar Ameen is the co-founder and manager of Miswag, Iraq's first successful online retail platform which formed in 2013. He talks about the struggle of securing financing, saying, "we needed capital, which is really hard to get. I can say for the five years we've been struggling on our own, [with] no funds."^[9]

Randi Barznji, the founder of ShopYoBrand in Sulaymaniyah, highlighted similar concerns. She says the biggest challenge to her startup ecosystem is assessing funding through investment or loans. She wants to expand her e-commerce platform, but doesn't have the personal budget to make it happen. Loans take a long time to materialize, and often homes are required for collateral. For Randi, it's not worth it at the moment due to lack of legal protections. In her view, improving access to loans, even for small amounts, would make a big difference for entrepreneurs in her area.

**Access to small loans
would make a big
difference for Iraqi
entrepreneurs**

Mamoon Ahmed of Reach Services talks about the difficulty with loans, stating,

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Whenever a startup wants to open, he gets funding through family/relatives, because we don't have a banking system...we don't have institutions for loans for startups in Iraq.

Mamoon Ahmed, Basra

Therefore, loans are much more difficult - if not impossible - to access in many cases.

For those that can access loans, they are faced with higher than normal interest rates, since the loans are not created with startups in mind, says Fadhel Bahaa, Programme Coordinator at the Station in Baghdad.

Overall, the banking sector is in need of modernisation, and reform to overcome the burden of a high quantity of insecure debts.^[7]

All of this creates an environment with lots of challenges for the budding startup ecosystem in the country.

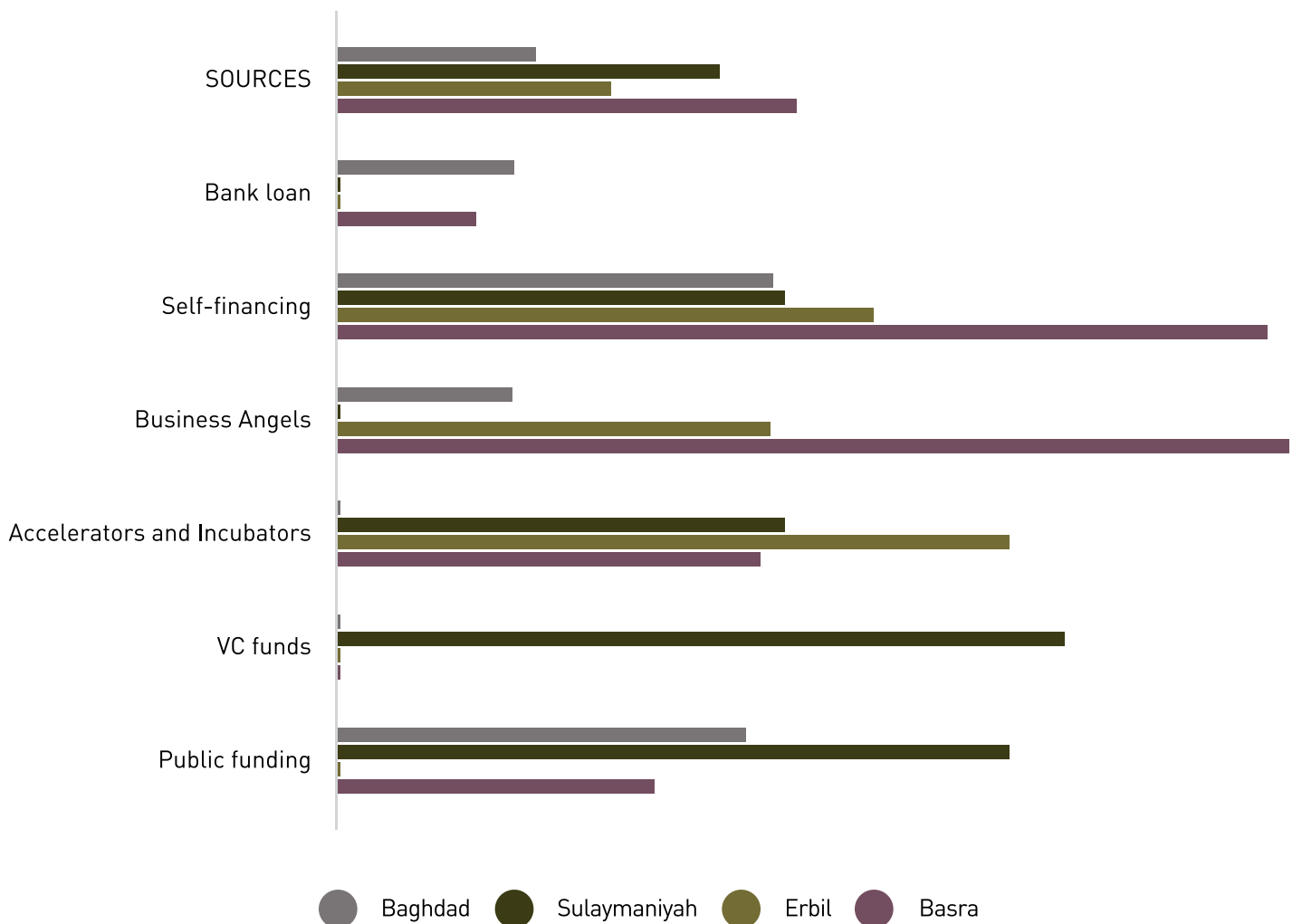
Sources

Subdomain of Finance

The Sources domain captures how entrepreneurs finance their ventures. This domain is informed by survey data, where startup founders are asked to reflect on which source, or combination of sources, they have used for their business.

There is quite a bit of diversity among Iraqi cities in this subdomain. The highest scoring city is Basra, with a score of 48,32, ranking fourth in the global SFI. Sulaymaniyah is next at position 10, followed by Erbil at position 14. Baghdad has the least favourable score, 20,90, and ranks at position 19 in the global SFI.

Since Sources is comprised of only city-level indicators, no discussion of a national perspective for this subdomain follows.



Entrepreneurs may report using more than one, and may access funding outside of their city

SFI Scores relative to the MENA region, scores range from 0 - 100

Baghdad

Sources Subdomain

Baghdad scores 20,90 on the Sources subdomain, ranking 12th of 13 cities in the MENA region, and 19th of 24 global SFI cities. Funding through Accelerators/Incubators and VCs is particularly difficult to access, while Bank Loans and Public Funding are more favourable.

On the Bank Loan indicator, Baghdad ranks seventh in the global SFI. Based on enpact's survey data, just under 15% of entrepreneurs rely on Bank Loans, about twice the global SFI average. In contrast, 71% of entrepreneurs self-finance, higher than the global SFI average of 64% and the MENA regional average of 60%. Thus, Baghdad ranks fairly well in terms of Bank Loans, since higher scores are preferable, and poorly in terms of Self-Financing, as lower values are preferred.

In Baghdad, about 7% of entrepreneurs rely on funding from Business Angels, and essentially no VC funds are utilised. This result is below the MENA regional average on both, which is 12% for Business Angels, and 3% for VC funding.

No Baghdad-based entrepreneurs in the enpact survey reported accessing funding through Accelerators or Incubators. Baghdad is at the bottom of both the global and MENA regional SFI on this indicator.

Seven percent of entrepreneurs in Baghdad were able to secure public funding for their ventures, approximately in line with the MENA average of 8%, and higher than the global SFI average of 6%, ranking Baghdad in position 9 of 24 global SFI cities on this indicator.

Sulaymaniyah

Sources Subdomain

Sulaymaniyah performs decently on the indicators of the Sources subdomain, ranking 10th in the global SFI, and 6th in the MENA regional SFI. The city does well in terms of funding through Accelerators and Incubators, as well as Public Funding, but ranks at the bottom on the Bank Loan and Business Angel indicators.

In Sulaymaniyah, 71% of entrepreneurs report relying on personal funds. This is high relative to the Iraq-wide average of 62%, MENA average of 60%, and global SFI average of 64%. Thus, the city ranks fairly low on this indicator, at position 10 in the MENA SFI and 16 in the global SFI.

No entrepreneurs in the city reported utilising funding from Bank Loans or Business Angels, resulting in poor scores as these are important resources for those that lack personal funds.

In contrast, scores on the Accelerators and Incubators indicator are very promising for the city; Sulaymaniyah ranks fourth in the global SFI, with 12% of entrepreneurs accessing funding from this source (compared to the MENA average of 7%, and global SFI average of 6%). This is likely due to Five One Labs, an established incubator in the city.

An equivalent number of startups (12%) are able to access Public Funding. This is the highest figure in Iraq, and may be due to local efforts such as microfinancing offered by the Kurdistan Economic Development Organization.^[11]

A final 6% are funded by VCs, a significant amount compared to the Iraq-wide average of less than 1%, and higher than the global SFI average of 3%.

Erbil

Sources Subdomain

Erbil ranks below average in the Sources subdomain: 10th in the MENA regional SFI, and 14th in the global SFI. The city has low scores on the indicators of Bank Loans, VC Funds, and Public Funding, but does well in terms of Business Angels and particularly Accelerators/Incubators.

Erbil's strongest indicator in this domain, Accelerators and Incubators, is a highlight for the city, ranking second in both the MENA and global SFI, behind only Beirut, Lebanon. Eighteen percent of surveyed entrepreneurs report being able to access funding through this source, much higher than the Iraq-wide average of 10% and the MENA regional average of only 6%. This is likely due to the influence of myeDream and Five One Labs in the region.

The next most successful indicator, Business Angels, shows that 18% of entrepreneurs in Erbil are funded in this manner. The city ranks behind Basra, but above all other Iraqi cities in terms of access to these funds.

A further 65% of entrepreneurs self-financed their ventures, approximately in line with the global SFI average, and only slightly above the MENA regional average (60%) and Iraq-wide average (62%).

No entrepreneurs in Erbil reported financing through Bank Loans, VCs, or Public Funding, ranking Erbil at the bottom of the SFI on these indicators.

Basra

Sources Subdomain

Ranking fourth in the global SFI, the Sources subdomain is a strong point for Basra. This is due to a low number of people relying on self-financing, and strong showings on Business Angels and Accelerators/Incubators. VC Funds, however, are the low for the city.

In Basra, a significant proportion of surveyed entrepreneurs, 39%, reported at least partially relying on funding through Business Angels. This ranks Basra at the top position in the global SFI, with the highest amount of any studied city.

An equal number of startups (39%) relied on Self-Financing, a very low proportion compared to the global SFI average of 64%. This results in a favourable ranking of third in the global SFI on this indicator.

A further 11% were able to access funding through Accelerators and Incubators, a respectable result.

Only 6% of respondents utilised Bank Loans or Public Funding for their ventures, resulting in ranking 12th and 10th in the global SFI, respectively.

The most challenging indicator on this subdomain for Basra is VC Funds, as no respondents indicated being able to access this funding source.

City	Bank loan	Self-financing	Business Angel (BA)	Accelerators and Incubators	VC funds	Public funding
Baghdad	7.14%	71.43%	7.14%	0.00%	0.00%	7.14%
Sulaymaniyah	0.00%	70.59%	0.00%	11.76%	5.88%	11.76%
Erbil	0.00%	64.71%	17.65%	17.65%	0.00%	0.00%
Basra	5.56%	38.89%	38.89%	11.11%	0.00%	5.56%

Entrepreneurs may rely on multiple sources, both within and outside of their cities.

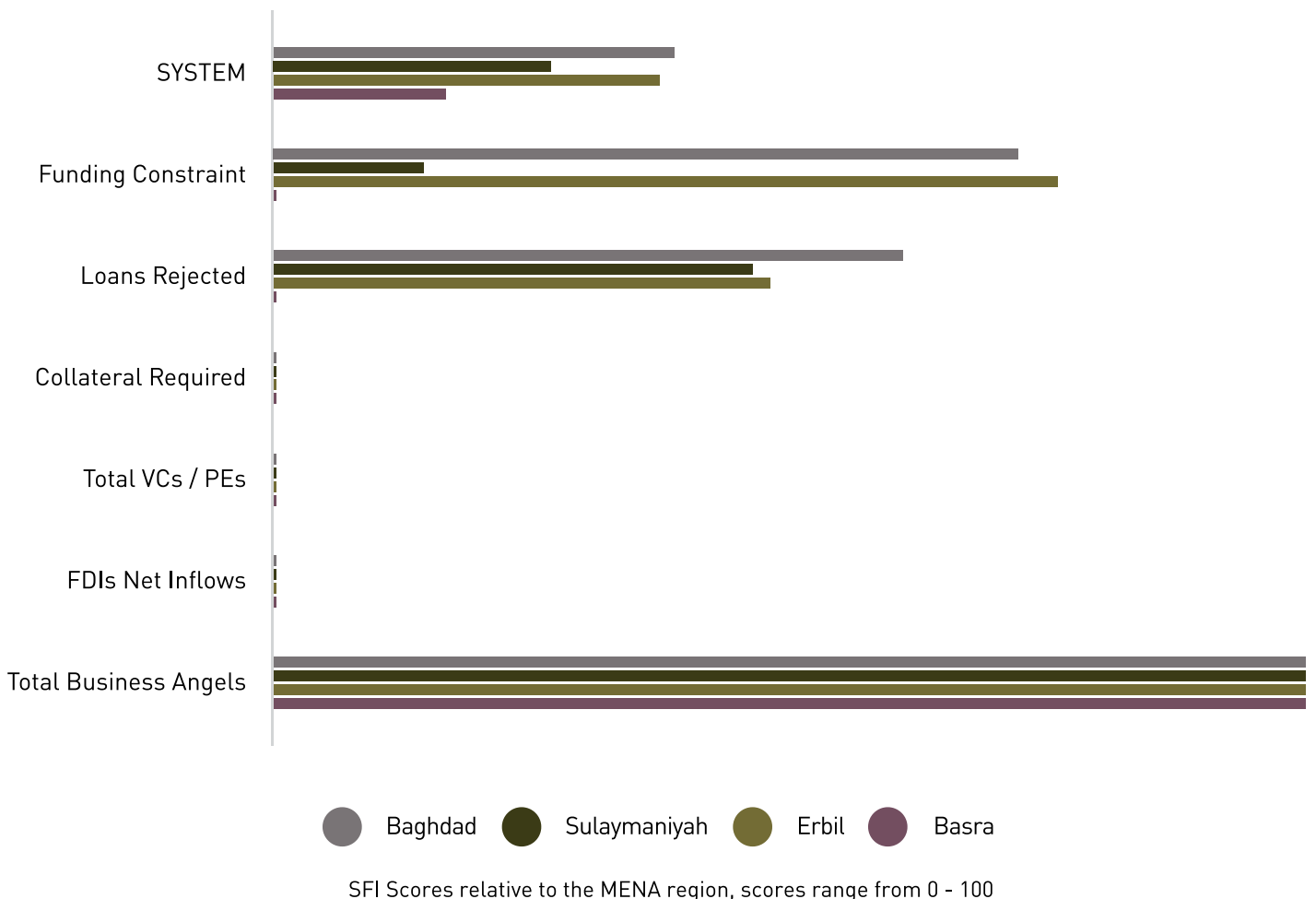
System

Subdomain of Finance

The System subdomain discusses the overarching factors that affect the funding environment. For Iraqi cities, this subdomain is challenging given the high collateral requirements, the low total number of VCs, and negative net FDI inflow. The strongest indicator in this domain is Business Angels, due to high interest in Iraqi cities from foreign investors.

All the cities in Iraq rank in the bottom half of both the global and MENA regional SFI in the System subdomain. The highest scoring city, Baghdad, scores 38,64 in the MENA SFI, and ranks at position 13 in the global SFI. Erbil has the next most favourable rank (16 in the global SFI), and Sulaymaniyah and Basra occupy the bottom 2 positions of the global and MENA SFIs.

In this subdomain, FDI Net Inflow and Total Business Angels are national-level indicators. The number of total VCs is consistent country-wide, and so is also included in the national discussion. Funding Constraint, Collateral Required, and Loans Rejected are discussed on a city-by-city basis.



National

System Subdomain

Iraq is in a unique position in the global SFI as the only country with negative FDI net inflow, given that the country spends more externally in FDI than it receives according to World Bank data. Because of this, Iraqi cities rank at the very bottom of the global and MENA SFI on this indicator.

The indicator on the total number of Business Angels tells the opposite story, with very favourable outcomes for Iraqi cities. Based on data from AngelList, there are over 5.000 foreign investors that have registered interest in investing in Iraq. This is quite significant compared to the global SFI average of about 3.200, and the MENA regional average of 3.400. As an emerging market with high potential this makes sense, and will hopefully play an increasingly important role in developing Iraqi startup scenes.

According to Zahra Shah, Country Manager from Re:Coded Iraq in Erbil,

”

“In general when it comes to access to capital, Iraq does not have a proper fund in any capacity, so entrepreneurs are definitely struggling with this, and they are relying on private investment. A lot of private investors that are used to investing in frontier markets like Palestine, they’re not scared to come to Iraq, but everyone else is...”

Zahra Shah, Erbil

This suggests that as security and economic concerns improve over time, the number of interested investors will likely continue to grow.

Similarly, it would be beneficial for the number of VCs based in the country to increase. Currently, there are no VCs legally based in any studied city in Iraq, ranking the country at the bottom of the global SFI on this indicator.

**There are currently
no VCs legally
based in Iraq**

Baghdad

System Subdomain

Baghdad has the strongest performance on the System subdomain of the Iraqi cities, ranking 13th of 24 in the global SFI.

In Baghdad, 34% of firms identify access to capital as a major constraint to doing business. This is stronger than the Iraq-wide average of 56% and the MENA regional average of 39%, though less favourable than the global SFI average of 31%. The city ranks 15th in the global SFI on this indicator.

The System subdomain has two indicators regarding loans: Loans Rejected, and Collateral Required. In Baghdad, about 32% of loan applications are rejected, based on the World Bank Enterprise Survey. This is favourable relative to the Iraq-wide average of 52%, but twice as high as the global SFI average of 16%.

Additionally, 100% of loans require collateral, a consistent figure throughout Iraq but higher than the global SFI average of 80%. Thus, Baghdad ranks at the bottom of the global SFI along with the other Iraqi cities on both of these indicators.

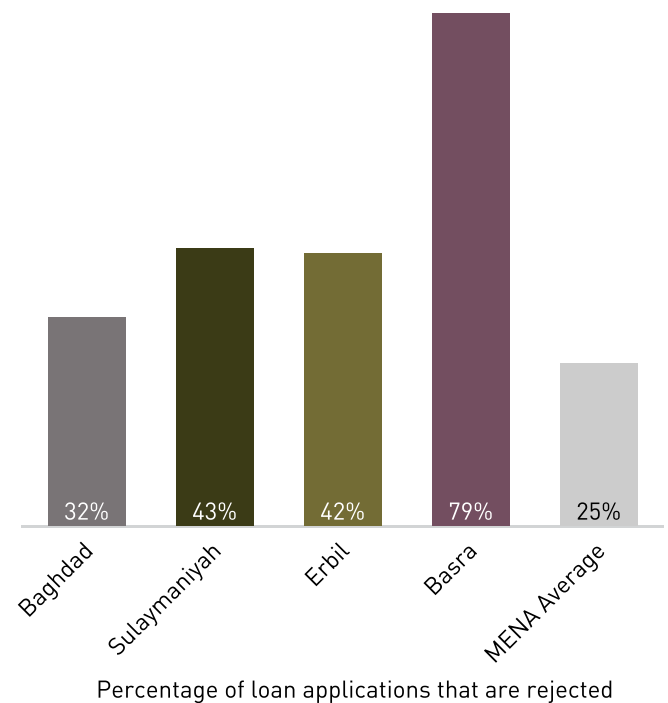
Baghdad is the strongest performer on the System Subdomain due to low funding constraint and fewer loan applications rejected.

Sulaymaniyah

System Subdomain

On the System subdomain, Sulaymaniyah ranks second from the bottom on both the global and MENA regional SFIs, above only Basra.

This is because of a very high proportion of firms identifying access to funding as a major constraint for their businesses: 80%. This is significantly higher than the average for Iraq, the MENA region, and the global SFI.



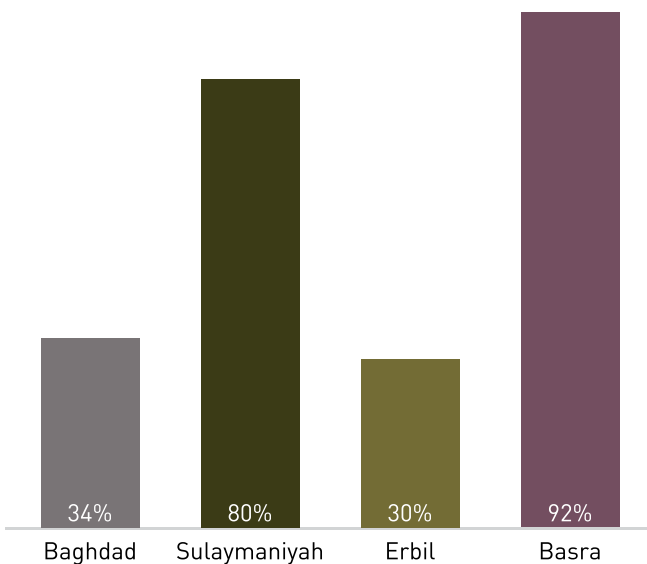
Additionally, 43% of loan applications are rejected, ranking the city near the bottom of the global SFI, at position 21 of 24. Sulaymaniyah also fares poorly on the Collateral Required indicator, with 100% of loans necessitating collateral.

Erbil

System Subdomain

Erbil is the second strongest performer on the System subdomain in Iraq, ranking at position 16 in the global SFI, and 10 in the MENA regional SFI.

The city has the strongest performance on the Funding Constraint indicator, with 30% of firms stating that access to funding is one of their primary constraints, less than the global SFI and MENA regional SFI averages. This ranks Erbil at position 12 of 24 global SFI cities on this indicator.



Percentage of firms identifying access to funding as a major constraint

In terms of Loans Rejected, the city ranks just behind Baghdad at the bottom of the global SFI, with 42% of applications failing to get approval.

Additionally, all loans require collateral, making it impossible for many entrepreneurs to qualify for them in the first place.

Basra

System Subdomain

Basra occupies the very last position on the System subdomain in both the global and MENA regional SFIs. Indeed, the city has the lowest score on every indicator in this subdomain.

A massive 92% of entrepreneurs in Basra report access to funding as a major constraint to doing business, far higher than the next most challenging score of 80% in Sulaymaniyah.

Additionally, 79% of loan applications are rejected, almost five times the global SFI average. Add to that the fact that 100% of loans require collateral, and a difficult picture is painted for entrepreneurs seeking funding in the city.

79%

Of loan applications in Basra are rejected

100%

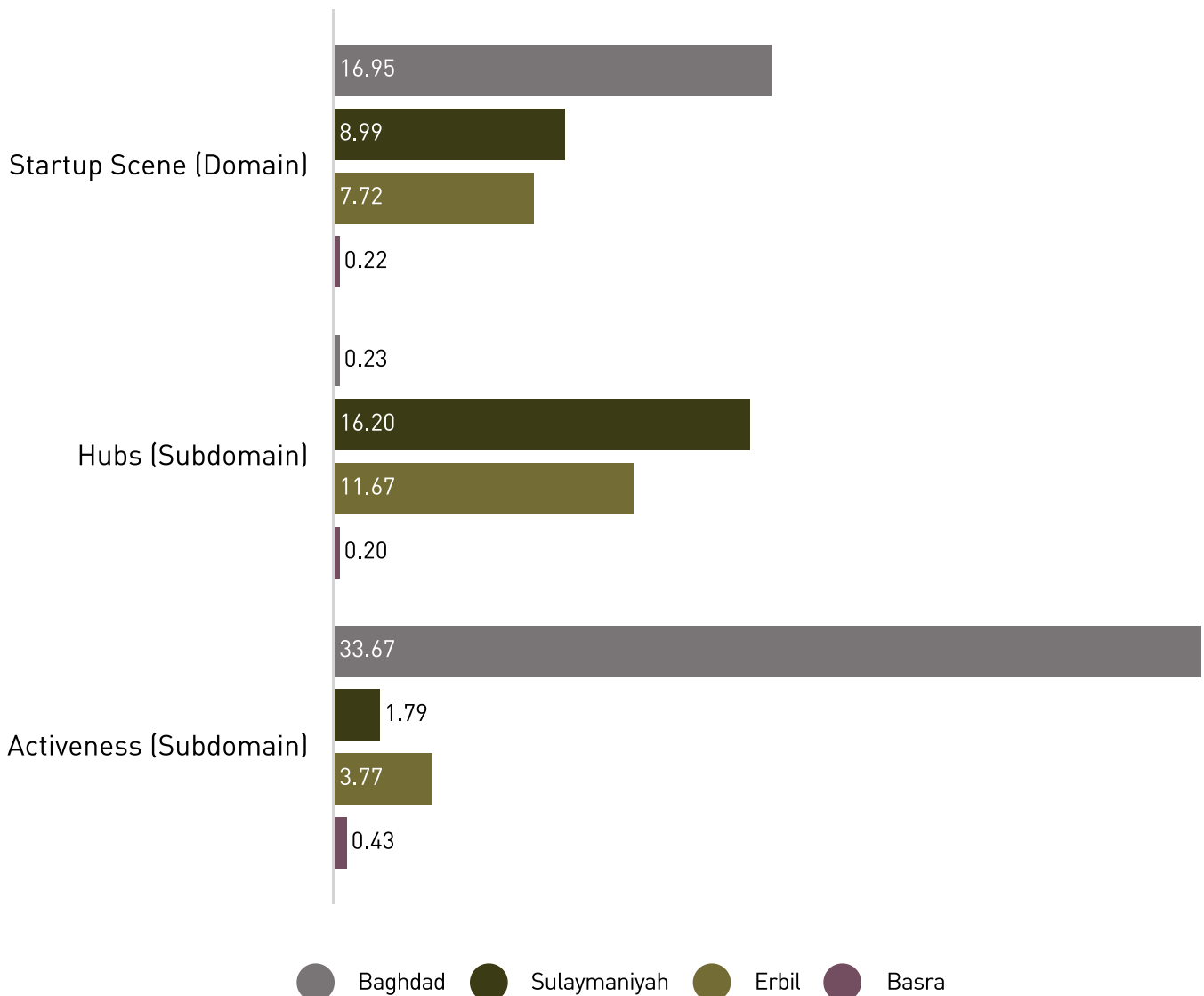
Of loans in Basra require collateral

An important note when comparing Basra across the Sources and System subdomains is that Basra scores very well on the first, and very poorly on the latter. This implies that it is incredibly difficult to access funding, but that those who do manage are able to secure it from favourable sources.

3. Startup Scene

The Startup Scene domain seeks to measure the maturity and liveliness of a city’s startup culture. Cities with a more vibrant startup scene foster continued growth for startups by facilitating networking and learning, providing resources, and encouraging an entrepreneurial spirit.

In Iraq, startup culture and ecosystem development are in the early stages. Baghdad is the highest scoring city with 16,95 on the domain overall, ranking at position 16 of 24 global SFI cities. Sulaymaniyah and Erbil follow, ranking 18th and 19th, and Basra takes the last position, ranking 23rd in the global SFI and scoring just 0,22 on the domain. In the Hubs subdomain, Sulaymaniyah and Erbil shine, while Baghdad has by far the highest score on the Activeness subdomain.



SFI Scores relative to the MENA region, scores range from 0 - 100

National Overview

Startup Scene Domain

Traditionally, many Iraqis have favoured pursuing careers in the public sector. These positions are alluring because they offer benefits such as continuing education and retirement compensation for selected workers.^[6] Interest in startups really began in Iraq around 2012, but much remains to be done to truly foster a pro-entrepreneurship culture in the country.

Hala Taleb Al-Mayahi of the Science Camp Maker's Space in Basra talks about the issue, saying, "The mindset of society itself [is a challenge]. The Iraqi mindset of jobs is usually for the public sector...the fresh graduates have more potential, energy and ideas to start their own businesses and be entrepreneurial, [but] they want to go to the public sector, [because] maybe they are a bit afraid [...] to start their own businesses. We need to spread the culture of entrepreneurship and encourage people to think outside of the box, and not wait for a job. Young people have lots of potential, but they are not encouraged by society or their families."

”

We need to spread the culture of entrepreneurship and encourage people to think outside of the box, and not wait for a job.

Hala Taleb Al-Mayahi, Basra

This notion was supported by a field survey of 300 young men and women conducted by the Kurdistan Economic Development Organization in Sulaymaniyah and Erbil, which found a general reluctance on the part of young people to pursue entrepreneurship because of a fear of failure, lack of encouragement and experience, and little support.^[11]

Zahra Shah from Re:Coded in Erbil describes the situation, "The word entrepreneurship is still quite new. So when you tell people, 'Oh, just start your own business' they'll say 'It's not that easy because I need 20.000.' They think of it in a very conventional way, like 'I'll need an office and that will cost money' and we tell them 'No, you just need your laptop and internet, you can work from home.' So breaking that barrier of tradition and convention [is key]."

Ali Ismail, co-founder of the maker's space Fikraspace in Baghdad thinks that the spirit of entrepreneurship is there, but just needs a push towards modernisation. "I think Iraqis are very entrepreneurial. In the '90s, Iraq was under many UN sanctions. If you worked for the government, you couldn't make much money, so most Iraqis started their own businesses. The culture is there, but it's not the entrepreneurial ecosystem that's [...] in Silicon Valley. It's not as industrialized...and most of the businesses are different. Most are not in tech."^[10]

Even though modern interpretations of entrepreneurship may be new for Iraq, there is significant growth and development of the startup ecosystem, with many new resources such as accelerators, incubators, and co-working spaces being built around the country.

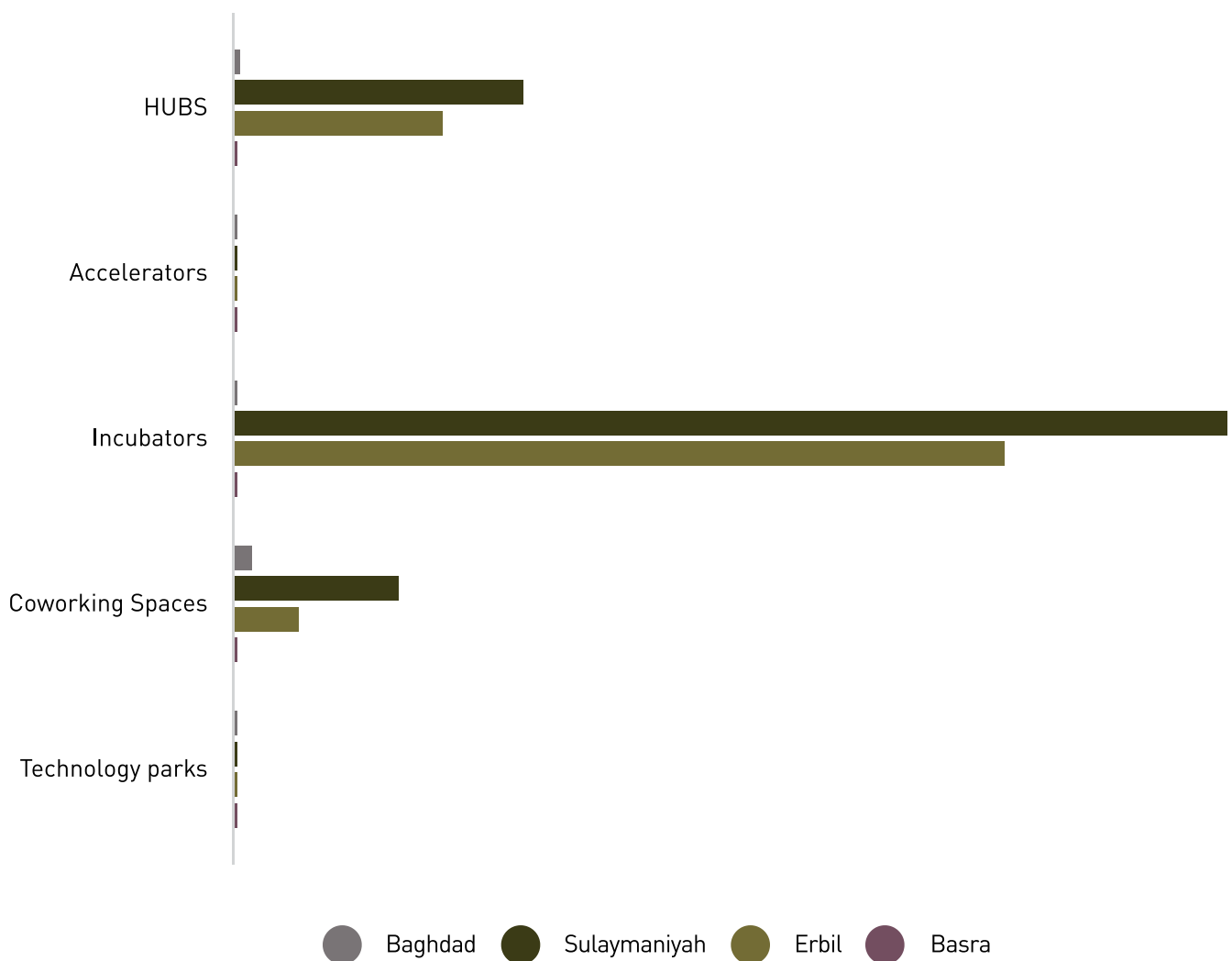
Hubs

Subdomain of Startup Scene

The Hubs subdomain measures the availability of institutional capacities such as accelerators and co-working spaces. The divergence in availability of such institutionalised resources can have a significant impact on the future development of a startup ecosystem. Beyond offering services for entrepreneurs, incubators, accelerators, and co-working spaces also serve as a meeting place for networking and learning between peers.

Sulaymaniyah and Erbil perform fairly well on these indicators, ranking in positions 11 and 14 of the global SFI, respectively. Basra and Baghdad struggle, however, ranking second and third from the bottom in this subdomain.

Given that these resources are city-specific, there is no national discussion for this subdomain.



SFI Scores relative to the MENA region, scores range from 0 - 100

Baghdad

Hubs Subdomain

Baghdad ranks close to the bottom of the global SFI on the Hubs subdomain. While high-quality resources for entrepreneurs in Baghdad exist, they are few relative to the large population in the city.

Currently there are no Accelerators, Incubators, or Technology Parks based in Baghdad. There are, however, two impactful co-working spaces: The Station, and FikraSpace.

FikraSpace began in 2012, creating a maker's space and organising large events such as Startup Weekends.^[10]

The Station is Iraq's first co-working space, also offering a maker's space, training, initiatives for women, and creating a platform for the exchange of ideas between Iraqi youth. The goal of the Station is to facilitate the cultural change towards the private sector, encourage youth, teach them the necessary skills for success in a modern economy, and facilitate networking.^[5]

In 2019, Re:Coded House will be expanding to Baghdad, bringing an additional space for local entrepreneurs and technology training programmes.

Sulaymaniyah

Hubs Subdomain

Sulaymaniyah is the highest scoring city in Iraq on the Hubs subdomain, ranking 11th of 24 global SFI cities. Though the city lacks Accelerators or Technology Parks based in the region, it scores well on the indicators of Incubators and Co-working Spaces.

While there is only one incubator and two co-working spaces, Sulaymaniyah's population is relatively small compared to other Iraqi cities. This implies that these resources are available to a larger proportion of the population, and thus why the city scores more favourably than other cities in Iraq with a similar number of resources.

FiveOne Labs in particular is a critical asset for the city. The incubator offers a co-working space, trainings, and programmes for founders. One local entrepreneur, Randi Barznji, the founder of Shop Yo Brand, is a part of their Female Founders programme. She's grateful to have this opportunity, saying,

”

I'm very lucky to be part of this programme now, because you don't have anything that will support a startup here.

Randi Barznji, Sulaymaniyah

Overall, despite having some important resources, the city's development in this subdomain is still very much in the early stages.

Erbil

Hubs Subdomain

Erbil is the second highest scorer on the Hubs subdomain in Iraq with a score of 11,67, ranking at position 14 in the global SFI.

The story for Erbil is similar to that of Sulaymaniyah; there are no Accelerators or Technology Parks currently based there, but there is one Incubator and one Co-working space. Erbil has a population of less than one million, so is relatively small compared to the other Iraqi cities (though larger than Sulaymaniyah). Because of this, the city ranks at the bottom of the SFI for Accelerators and Technology Parks, but well in terms of Incubators (ranking seventh in the global SFI).

Zahra Shah, Country Manager of Re:Coded Iraq talks about the situation in Erbil, stating, “There’s been a lot of growth in the last year and a half alone. There are more entrepreneurship/co-working spaces opening...but we don’t have a lot of events or trainings.” She says that before Re:Coded House recently opened, the existing co-working spaces (such as Response Innovation Lab) lacked the capacity to be real culture-builders for the city.

She also talks about frustration with a lack of consistency in the development of the startup ecosystem in the city: “Erbil was earlier than Baghdad to start entrepreneurship trainings, [but] Baghdad had more of an entrepreneurship culture. In Erbil, you’ll find that there were entrepreneurship trainings, but they’ve slowed down....There’s a lack of consistency, and nothing mainly focused on Erbil.”

It is hoped that this will improve with the new Re:Coded House, as well as the continued efforts of FiveOne Labs in the area.

Basra

Hubs Subdomain

Basra is currently the least developed city in Iraq on the Hubs subdomain indicators, and ranks at the very bottom of both the global and MENA regional SFI.

At this time, there are no Accelerators, Incubators, Co-working spaces, or Technology Parks in Basra.

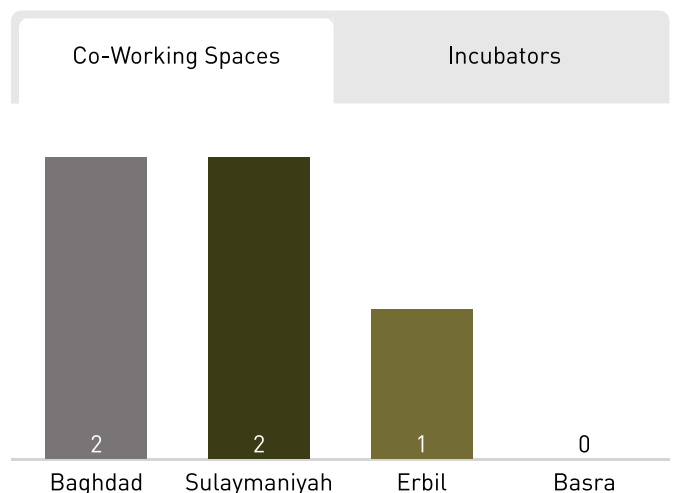
According to local entrepreneur Mamoon Ahmed of Reach Services, unlike Baghdad, Sulaymaniyah, or Erbil,

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The only city that is missing support and help is Basra.

Mamoon Ahmed, Basra

However, this will improve in the near future. Re:Coded is planning to expand to Basra in 2019, and the Science Camp Maker’s Space is planning to open a co-working space in the future, along with more events for entrepreneurs.



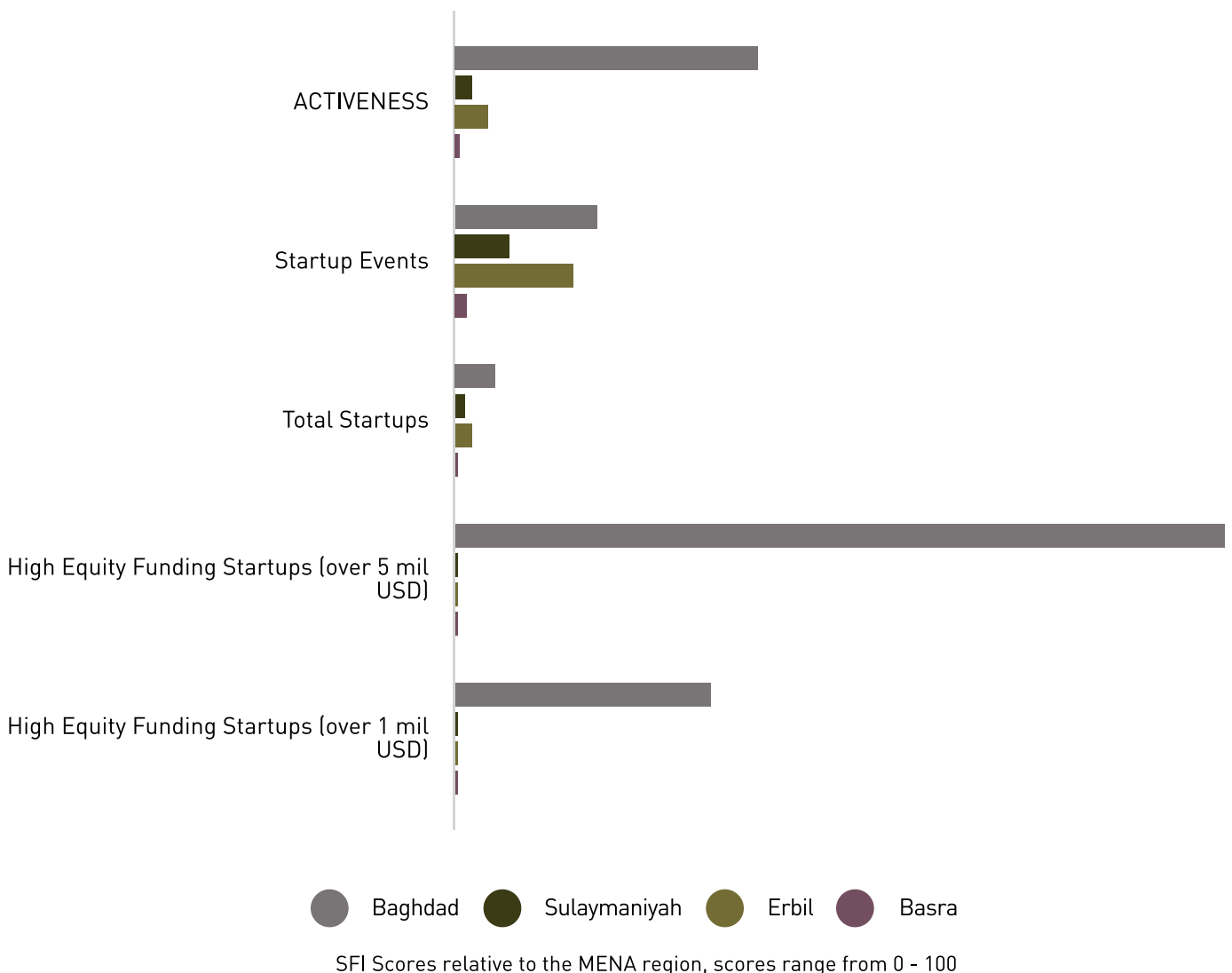
Activeness

Subdomain of Startup Scene

The Activeness subdomain covers indicators related to events, number of startups, and high-equity cases. A higher total number of startups and startup-related events in a city have a significant impact on the growth of the ecosystem, as they increase visibility and encourage others to become involved. Success cases are relevant for the future strength of the ecosystem, as success stories can provide a blueprint for future startup founders, bring knowledge into the ecosystem, and importantly bring attention to the city as a potential location for investment.

Baghdad has the most active Startup Scene in Iraq with a score of 33,67, ranking 9th of 24 global SFI cities, and 5th in the MENA region. The other three cities occupy the bottom of both the global and MENA regional SFI.

As all of the indicators in this subdomain are city-specific, there is no national discussion.



Baghdad

Activeness Subdomain

Baghdad is the highest scoring city in Iraq on the Activeness subdomain by a considerable margin, ranking 9th of 24 global SFI cities.

This is largely due to the fact that there is a high-equity success case in the city: Miswag. High-equity success stories play a significant role in the future development of a startup ecosystem, as they bring attention to the startup scene for investors, future entrepreneurs, and provide invaluable experience to their employees, who often go on to start their own ventures.



High-Equity Success Case:

Miswag

As the capital of Iraq, it is unsurprising that the city has the highest total number of startups and startup events, becoming a hub for important events such as pitch competitions for the country. However, in comparison to the average number of events in the global SFI, Baghdad still has opportunity to develop. The average number of events in the city is around 5 per month, much lower than the global SFI average of 18 events per month.

Sulaymaniyah

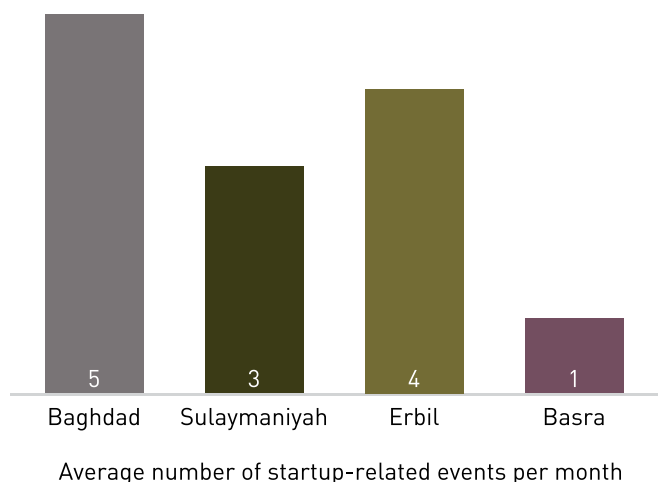
Activeness Subdomain

Sulaymaniyah ranks 20th out of 24 global SFI cities on the Activeness subdomain.

There are currently no high-equity cases, and few total startups.

Additionally, there average less than three startup-related events per month. These events are typically put on by FiveOne Labs and the American University. Techstars Startup has been active in Sulaymaniyah in the past, though there are currently no projects planned at the moment. Lastly, there are occasionally trainings and workshops through the Kurdistan Economic Development Organization available for entrepreneurs in the city.^[11]

However, there are some advantages to being in a city with a brand-new startup ecosystem. Local entrepreneur Randi Barznji of ShopYoBrand talks about how the small city allows her to make connections with other founders, and get media attention. There are gaps in the market, and it's a small environment where marketing can be swiftly effective. She also highlights the collaborative nature of the budding startup scene in her community.



Erbil

Activeness Subdomain

Erbil has the second most Active startup scene in Iraq, after Baghdad. Though there are also not yet high-equity success cases, there is a higher total number of startups and startup events in the city (averaging about four events per month). Some programmes do exist, such as the Tech Entrepreneurship Academy from Re:Coded.^[12]

Similar to Sulaymaniyah, local entrepreneurs have taken advantage of the newness of the startup scene and gaps in the market. For example, young entrepreneur Valley Edwar talks about how in Erbil, "All you need to start your own business here is an idea. You don't need much more than that. When I started, all I had was \$200 in my pocket." As a student he managed to secure a contract from the Spanish Embassy to organise meeting logistics, which has since blossomed into a successful venture,^[13] made possible by the lack of existing competition.

”

All you need to start your own business here is an idea.

Valley Edwar, Erbil

Basra

Activeness Subdomain

Basra is the lowest scoring city in Iraq in the Activeness subdomain.

The city lacks high-equity success cases, and has few total startups. In terms of events, there are only an average of 1,5 per month.

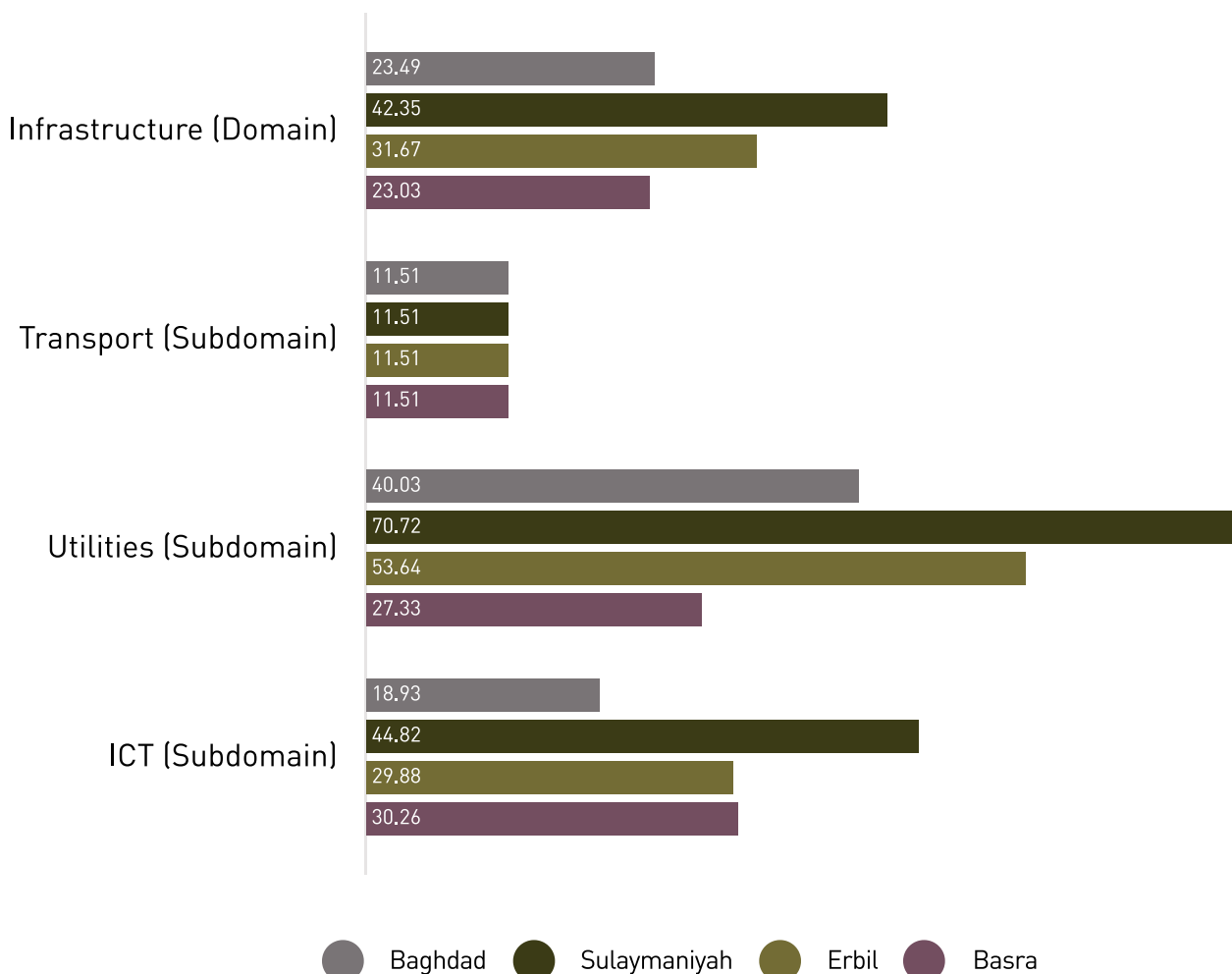
Hala Taleb Al-Mayahi is part of the Science Camp Maker's Space in Basra, and describes the startup ecosystem in her city. In her words, "In Basra we can see that we have a startup ecosystem, which we are trying to make stronger. We need to focus more on entrepreneurship for the young people especially. This needs more effort to be done, because of the mindset of the people in society itself. It's getting a little bit better, because people are directing their careers towards private business and the private sector in general. We have lots of work to do in this regard, but we are trying our best. Hopefully we can spread the culture of entrepreneurship."

Mamoon Ahmed of Reach Services echoes this sentiment, stating, "the biggest challenge we face currently in Basra starts with the culture. If you [look at] the history of Basra from 2003 to 2013-14, Basra was a closed Islamic territory, and not provided with enough support from the government or the private sector, [so there were] not a lot of businesses. From 2014 until today, startups are developing. A lot of companies have started to open, a lot of people have started to come, foreigners can more easily come to Basra...The challenge to me, depending on which sector, [is that] we have a culture issue." For example, local businesses are struggling to adapt to startup technologies such as e-payment, and transportation options like Uber. Additionally, many young graduates in the city have not yet looked outside of the public sector for employment.

4. Infrastructure

High quality infrastructure, from necessities such as roads and consistent access to electricity, to ICT and internet penetration, is an important foundation from which startups can build. The Infrastructure domain is assessed by analysing a city's quality of transportation, utilities, and IT factors such as internet availability and smartphone penetration. In particular, this domain measures the costs associated with infrastructure, and whether there are structural or cost barriers to doing business.

Infrastructure is a challenging area for Iraqi cities, which all rank in the second half of the MENA SFI. Sulaymaniyah is the highest performer in this domain, scoring 42,35 out of 100 and ranking in position 16 of 24 in the global SFI. Erbil follows with a score of 31,67 in position 18, and Baghdad scores lower at 23,49 and position 22. Basra has the lowest score (23,03), and ranks at position 23 in the global SFI, second from the bottom. Across the country, the Utilities subdomain is the strongest, while the Transport subdomain is the most challenging.



SFI Scores relative to the MENA region, scores range from 0 - 100

National Overview

Infrastructure Domain

Conflicts such as the Gulf War and the fight against the Islamic State in recent years have caused significant destruction to the infrastructure in Iraq. A recent study on Iraq's economy revealed "the overall damages to be \$45.7 billion USD, and reconstruction and recovery needs to total \$88.2 billion USD."^[14] The World Bank estimates \$17.4 billion USD will be necessary to repair 60,000 km of road, and about \$2.6 billion USD to rebuild 1,300 bridges.^[15]

In addition to these high costs, corruption has hindered the reconstruction process. For instance, Baghdad received gravely needed funds that "disappeared," according to Transparency International, positioning the country as the 12th most corrupt in their 2018 report.^[16] Prime Minister Haider Al-Abadi admitted that corruption is one of the main causes of infrastructure project delays and stoppage, which he has requested to be investigated by Iraq's Integrity Commission.^[17]

National efforts are beginning to be put in place to reconstruct and develop Iraq, with the help of donors such as UNDAF Trust Fund and international organisations. Recently, with UN-Habitat, the Ministry of Planning, and the Council of Ministers Secretariat launched the National Platform for Reconstruction and Development, which provides the public with up-to-date information on the projects using a web-based Geographic Information (GIS) data system.

In words of Dr. Mahdi Al-Allaq, Secretary-General of the Council of Ministers, "the Platform will advance delivery of the commitments made at the Kuwait International Conference for Reconstruction of Iraq."

^[18] It will also help to tackle corruption:

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Through the Platform [for Reconstruction and Development], projects will be managed in a transparent manner and monitored by the international community.

Dr. Noori Al-Dulaimi - Minister of Planning.

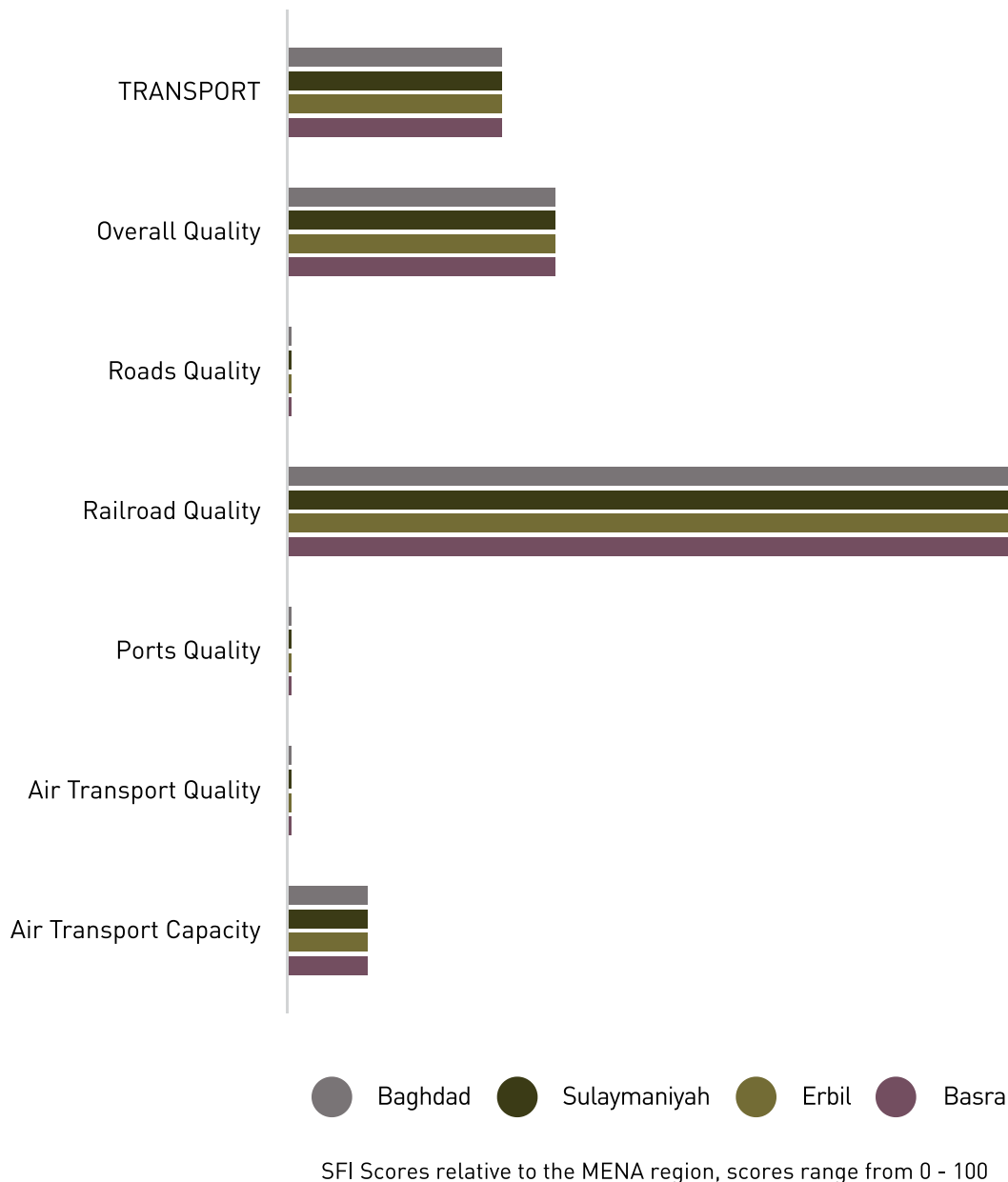
Additionally, the National Development Plan 2018-2022 indicates several strategic objectives relating to infrastructure, such as laying the foundations for decentralized spatial development and aligning the general development framework with the urban structures based on the foundations of urban planning and spatial comparative advantages.^[7] The Sectoral Development Objectives of the Plan also emphasize the development of several main sectors evaluated by the SFI in terms of infrastructure, including the Energy and Transformation Industries Sector, the Electricity sector, and the Transportation, Communications and Storage Sector.

Transport

Subdomain of Infrastructure

The Transport subdomain considers the quality of transportation including roads, railroads, ports, and air transport. Given the national nature of much transit infrastructure and data limitations, this subdomain is entirely measured from a country-level perspective.

Iraqi cities score low in this subdomain, only 11,51 out of 100, positioning them near the bottom of both the MENA and global SFIs (above only Caracas, Venezuela). In general, the cities assessed struggle with transport infrastructure, and this is an area for improvement.



National

Transport Subdomain

On the indicator of Overall Quality, transportation is deemed poor in the country, resulting in an SFI score of 11,51. This ranks the cities towards the very bottom of both the global and MENA SFIs.

Almost all of the indicators on quality are difficult for Iraqi cities.

Roads Quality, Ports Quality, and Air Transport Quality all have the lowest possible score in the SFI.

Railroad Quality fares better with a score of 50,45, ranking the cities between the 16th and 20th positions in the global SFI.

Each of the cities are located in the vicinity of an international airport. In 2017, the airports from Erbil and Sulaymaniyah were banned from having international flights after the independence referendum in the Kurdistan region. Last year the ban was lifted and both airports once again have domestic and international flights.^[19]

The governorate of Basra hosts Iraq's ports: Abu Flous Port, Al Basra Oil Terminal, Al-Faw Port, Khor Al Amaya Oil Terminal, Port of Basra, and the most important, Umm Qasr Port (the only shipping hub). Although these are not located in the city of Basra, this is the only city close to this type of transportation. In 2018, the Umm Qasr Port was momentarily closed after unrest intensified in Basra as a consequence of electricity shortages and water pollution.^[20]

The Iraqi Republic Railways Company (IRR) is the national railway operator, with an international exchange with Chemins de Fer Syriens at Rabiya running from Baghdad to Basra. This includes a branch line from Shouaiba Junction (near Basra) to the ports of Khor Az Zubair and Umm Qasr. Baghdad Central Station and Al Maqal Railway Station in Basra run through the Baghdad-Basra high-speed rail line, in operation since 2014.

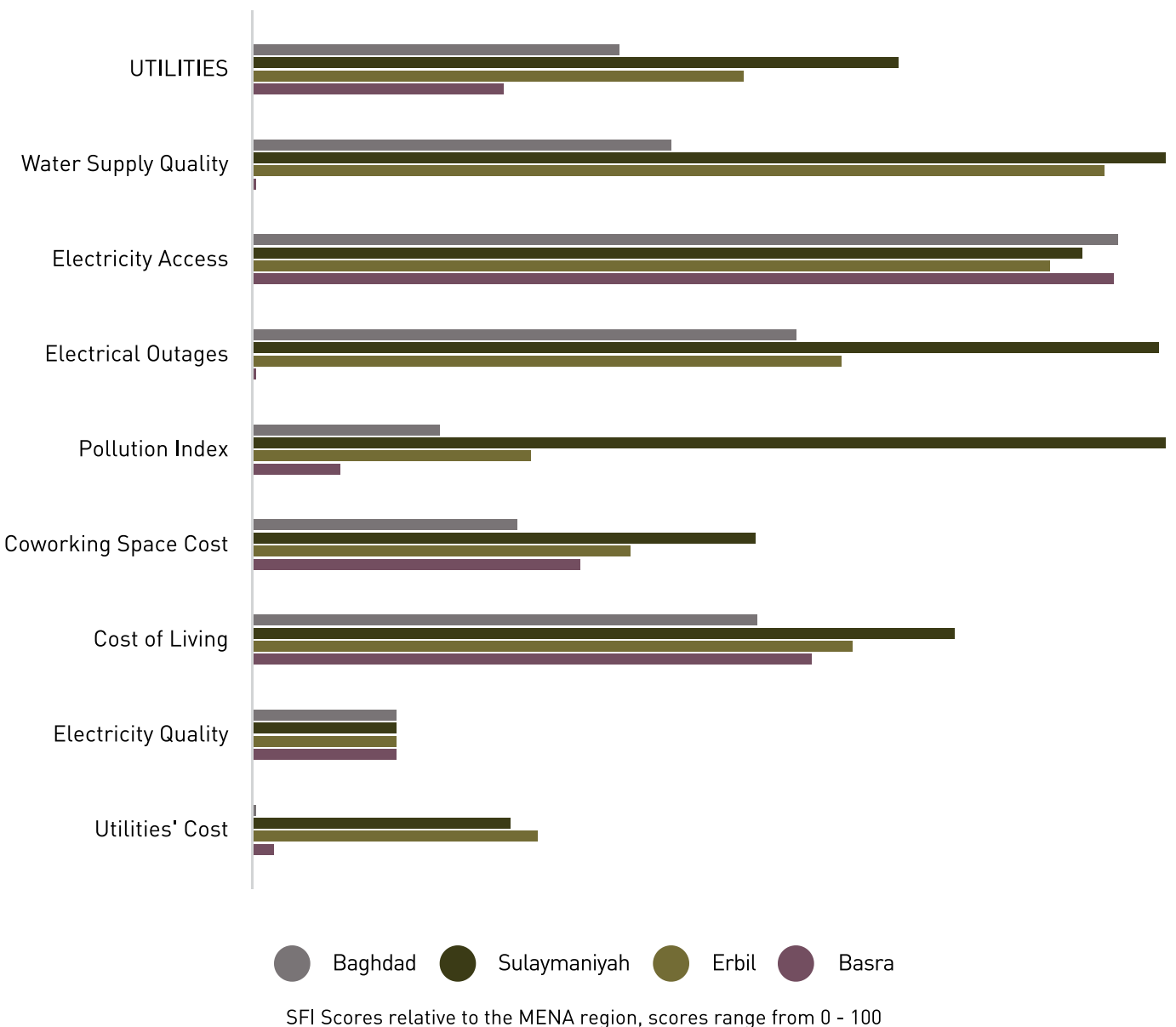
Finally, the indicator of Air Transport Capacity measures the availability of airline seats in millions of km per week. Iraq has a low average score of 4,0 out of 100, which only outranks the Tunisian cities in the MENA region, and additionally Accra, Ghana, and Caracas, Venezuela in the global SFI.

Utilities

Subdomain of Infrastructure

The Utilities subdomain considers quality indicators for electricity and water supply, access to electricity and how common outages are, air pollution levels, and costs associated with co-working spaces, general living expenses, and utilities. The Electricity Quality indicator is the only one measured from a country-level, and the rest are assessed from a city-level.

Among these indicators Sulaymaniyah stands out, followed by Erbil, Baghdad, and lastly Basra. This subdomain is generally fairly strong for Iraqi cities, though considerable variation on the indicators exists between cities.



National

Utilities Subdomain

The country scores only 15,78 out of 100 on Electricity Quality, positioning Iraqi cities in the bottom of the MENA region, and near the bottom of the global SFI along with Accra, Ghana, Caracas, Venezuela, and Beirut, Lebanon.

On the other hand, Electricity Access seems to be a strength of the city with a score of 94,74, positioning it 4th of 13 in the MENA region and 6th of 24 in the global SFI. However, obtaining an electrical connection takes around 13 days, and the city reports 35 electric outages in a typical month, much higher than the regional average of 15 per month.

The costs indicators in this domain show that Baghdad has the highest costs in the country, and is among the top three most expensive cities in the region. In terms of the cost for a co-working space, the score is 28,90 (position 17 of 24 in the global SFI). The average monthly cost is close to \$150 USD for a co-working space, compared to the MENA region average of around \$82 USD per month, and \$120 USD within Iraq.

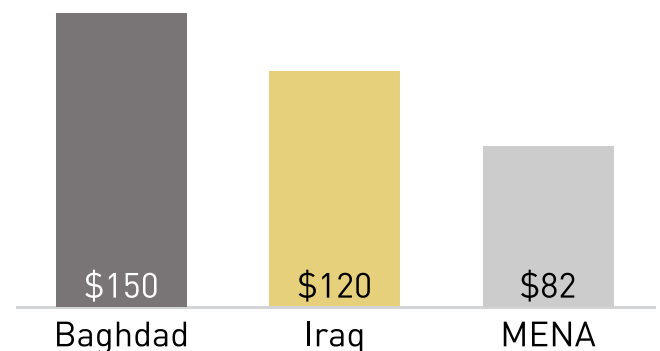
Baghdad

Utilities Subdomain

Baghdad scores 40,03 in the Utilities subdomain, ranking at position 12 of 13 cities in the MENA SFI, and 22 of 24 in the global SFI. Electricity Access is a visible strength of the ecosystem, though the costs associated with all the indicators are higher than in the rest of the country and other MENA cities, leading to the lower rank for this subdomain overall.

For the Quality of Water Supply indicator, Baghdad faces challenges with a score of 45,76 in the MENA SFI. Although this is not such a low score, on average the city has around three water shortages in a typical month.

Baghdad also has a low score for the Pollution Index indicator: 20,34 out of 100 (ranking in the bottom three of the MENA region). The pollution index is 92,22, meaning that air quality in Baghdad is worse than the regional average of around 88,7.



Average cost of co-working spaces, in \$USD per month in Baghdad, Iraq, and MENA region cities

The cost of living is also higher in Baghdad than is typical for the region, with an average of \$1.065 USD per month. Iraq's average is approximately \$853 US, and the average is even less for the MENA region (\$680 USD). Similarly, the utility costs are the highest compared to other MENA cities, with Baghdad having an average cost of \$144 USD per month - almost triple the monthly regional average of \$52 USD.

Sulaymaniyah

Utilities Subdomain

With a score of 70,72 out of 100, Sulaymaniyah scores the highest in the Utilities subdomain of all the Iraqi cities. Sulaymaniyah ranks 6th of 13 in the MENA SFI, and 9th of 24 in the global SFI on this subdomain.

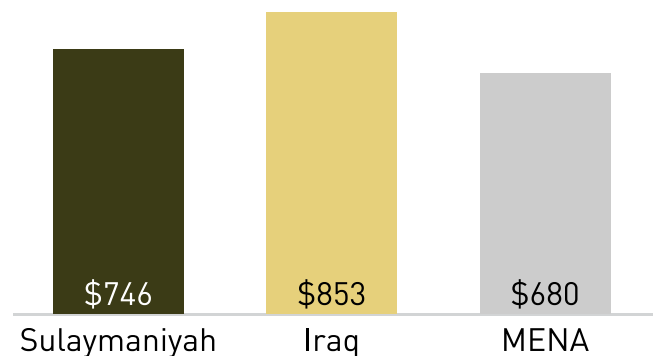
The high quality water supply and a low pollution index are strengths for Sulaymaniyah.

On the Water Supply Quality indicator Sulaymaniyah scores 100, ranking at the top of both the MENA SFI and the global SFI. According to the World Bank, the city does not suffer from water shortages in a typical month, hence this indicator does not represent a problem for the city. This may be due to water supply upgrades from the United Nations Development Programme in recent years.^[28]

The Electricity Access indicator has also a good score of 90,69, though Baghdad and Basra perform better. In Sulaymaniyah it takes around 19 days to obtain an electrical connection upon application. The city has the best score in the country for the Electrical Outages indicator with a score of 99,19, however, as there is less than one electrical outage in a typical month.

In terms of air quality, the Pollution Index indicator is another strength of this ecosystem, ranking first in the MENA SFI and second in the global SFI (after Singapore). This indicates that air pollution is not a major problem for Sulaymaniyah.

In terms of the monthly costs related to utilities, Sulaymaniyah is again doing well. For the Cost of Co-working Spaces indicator the score is 54,90, ranking 7th of 13 in the MENA SFI and 10th of 24 in the global SFI. The corresponding cost for a Co-working Space is close to \$105 USD per month, which is below the national average of \$120 USD but more expensive than the regional average (of \$82 USD/month).



Average cost of living (including rent) in \$USD per month in Sulaymaniyah, Iraq, and MENA region cities

The Cost of Living indicator is about in the middle of the measured cities. On average, the monthly cost of living in Sulaymaniyah equals \$746 USD, which is less expensive than the Iraq-wide average of \$853 USD, but more expensive than the regional average of \$680 USD. The monthly cost for utilities is also high for the city at around \$109 USD, double the MENA regional average.

Erbil

Utilities Subdomain

The Utilities subdomain is a challenge for Erbil. The city scores 53,64 out of 100, ranking 10th of 13 in the MENA SFI and 20th of 24 in the global SFI. Erbil's costs for utilities are a bit less favourable than in the rest of the country, and the city faces challenges with access to electricity.

The Water Supply Quality indicator scores well though, ranking in the middle of both SFIs. The indicator measures the number of water shortages the city has in a typical month, which in Erbil's case equals to less than one (0,4), similar to Sulaymaniyah.

Erbil's high costs for living and co-working spaces are a bit less favourable than in the rest of the country, and the city faces challenges with access to electricity.

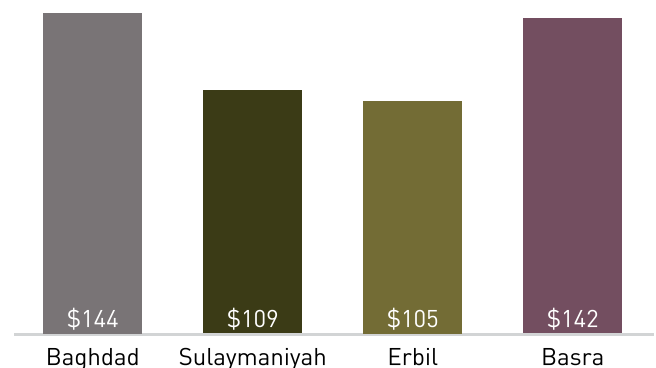
The Electricity Access indicator has a lower score compared to the other three cities, ranking 7th of 13 in the region and 11th of 24 globally. It takes around 24 days to have an electrical connection setup from the time of submitting an application. The Electrical Outages indicator scores 64,54 - second in the country - with a monthly average of 31 electrical outages. This is about twice the regional average.

In terms of air pollution, the Pollution Index indicator ranks 4th out of 13 cities in MENA SFI and 13th of 24 cities in global SFI. The pollution index is 86,99, meaning that the air quality in Erbil is similar to the MENA average of 88,7.

The cost of utilities in Erbil is similar to the country's average. On the Cost of Co-working Spaces indicator, the scores is 41,26, ranking 8th n the MENA regional SFI and 12th in the global SFI. The monthly cost for a co-working space is around \$129 USD, slightly over the Iraqi average of \$120 USD, and much higher than the regional average of \$82 USD.

The Cost of Living indicator scores 65,58, ranking 9th of 13 in the MENA SFI and 14th of 23 in the global SFI. Erbil's monthly costs are higher on average, equalling \$914 USD compared to the country average of \$853 USD and the regional average of \$680 USD.

The city ranks similarly on the Utilities' Cost indicator, with monthly costs totalling around \$105 USD, close to Sulaymaniyah and the lowest among the four cities measured in Iraq (which average \$109 USD per month).



Average Cost of basic utilities (electricity, heating, water, garbage) in \$USD per month

Basra

Utilities Subdomain

The Utilities subdomain presents difficulties for Basra, especially due to water shortages and pollution, as well as the cost of utilities.

The Utilities subdomain presents difficulties for Basra, especially due to water shortages and pollution, as well as the cost of utilities.

The Water Supply Quality indicator scores poorly (0 of 100), ranking in the last position of both the MENA regional and the global SFIs. Basra has almost six water shortages in a typical month, while the rest of the country has less than three.

Water pollution is also an issue facing Basra. A report from Bloomberg on water pollution established that according to the Head of the Agricultural Engineers Syndicate, the water in some areas of Basra contains “an estimated 40,000 milligrams of total dissolved solids, a measure of salinity, compared to an acceptable level of 2,400 to 2,600.”^[21]

Scores on Electricity Access are more favourable, ranking the city 5th of 13 in the MENA regional SFI and 7th of 24 in the global SFI. The time it takes to have an electrical connection set up after submitting an application is around 14 days. However, the Electrical Outages indicator positions the city at the bottom of the regional and global SFIs; on average, the city has 86 electrical outages per month, twice the country-wide average of 38.

Pollution is a problem for the city, with a score of just 9,39 out of 100, ranking in the bottom two of the MENA regional SFI and bottom three of the global SFI. With a pollution index of 97,93, the air quality in Basra is worse than the MENA average of 88,7, and is one of the most polluted cities in the SFI.

Basra is also more expensive than other cities in Iraq. For the Cost of Co-working Spaces indicator, Basra ranks 9th of 13 in the MENA regional SFI and 14th of 24 in the global SFI. The monthly cost for a co-working space is around \$138 USD, above the country average of \$120 USD, and quite a bit higher than the regional average of \$82 USD. month).

The Cost of Living indicator scores 61,07, ranking 10th of 13 in the MENA SFI and 17th of 23 in the global SFI. The average cost of living in Basra is \$980 USD a month, whereas the Iraq-wide average is \$853 USD and the regional average stands at \$680 USD.

In the Utilities' Cost indicator, the score is just 2,0 out of 100, ranking Basra in the bottom of the MENA and global SFI just above Baghdad. This indicates a high cost for the utilities (around \$142 USD per month), above of the country average of \$108 USD.

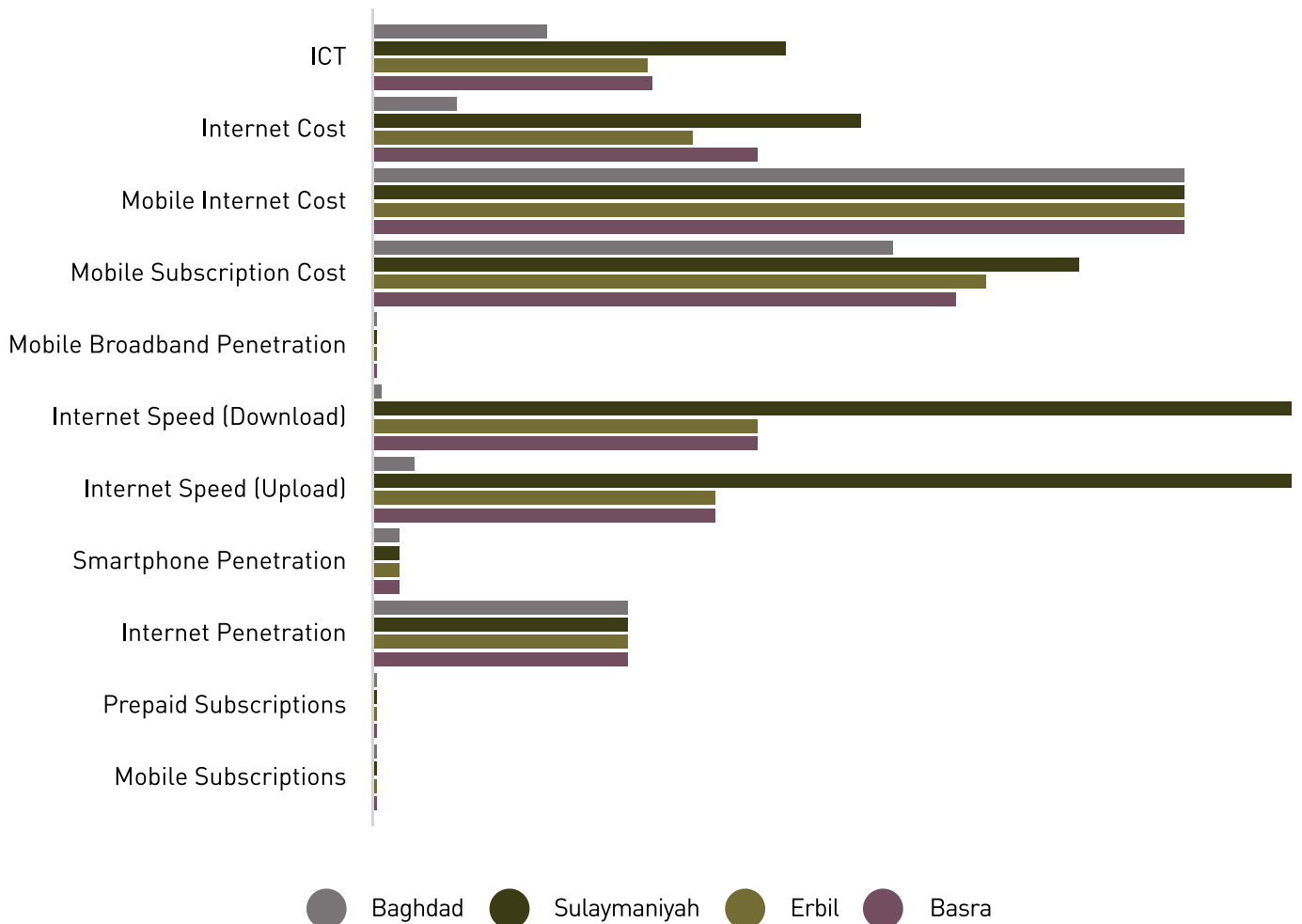
ICT

Subdomain of Infrastructure

The ICT subdomain measures the availability and affordability of internet and mobile connections. Overall, the country struggles with ICT infrastructure, but improvements are evident. The Iraq Energy Institute points out that only 10 years ago internet penetration in Iraq was around 1-2%, and now stands at 23%. Wireless internet penetration is higher among young people in areas such as Baghdad, where it approaches 90%.^[22]

For the ICT subdomain, there is variation in performance among Iraqi cities. Sulaymaniyah has the best score in the country with 53,08 out of 100 (position 10 of 24 in the global SFI), Basra follows with a score of 30,26 (position 17), Erbil is close with a score of 29,88 (position 18), and Baghdad is at the bottom with the lowest score in the region: 18,93 (position 22).

It is important to note that because many indicators in this subdomain are measured nationally, scores between Iraqi cities are largely determined by internet speed and cost, and mobile subscription costs.



SFI Scores relative to the MENA region, scores range from 0 - 100

National

ICT Subdomain

Five indicators in the ICT subdomain are measured on a country-wide basis: Mobile Internet Cost, Mobile Broadband Penetration, Smartphone Penetration, Internet Penetration, and Prepaid Subscriptions. This is largely due to data availability constraints, as there is likely variations between the cities.

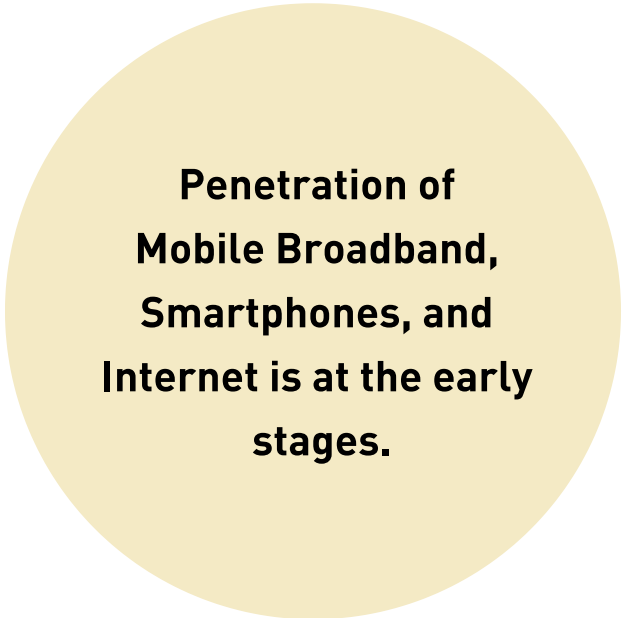
The costs for mobile internet is low in Iraq, which is reflected by the high score the Iraqi cities receive on the SFI for the MENA region. The Mobile Internet Cost indicator has a high score of 88,12 out of 100. Our research shows that the monthly country average is \$2,52 USD per 1 GB for mobile internet, close to the regional average of \$2,24 USD and the global average of \$2,85 USD per month.

In contrast, the Mobile Broadband Penetration indicator seems to be a challenging area for Iraq, with the second lowest score in the region and the global SFI. Mobile broadband penetration is only at 30% in the country, below the MENA regional average of 52%.

In line with this is poor performance on the indicator of Smartphone Penetration, scoring only 2,0 out of 100. Smartphone Penetration in the country is currently only 24%, compared to an average of 38% in the MENA region. Iraqi cities rank towards the bottom of both SFIs on this indicator.

The Internet Penetration indicator repeats the trend with a low score of 27,51, ranking Iraqi cities at the bottom of the MENA SFI along with Cairo, Egypt. In Iraq, internet reaches a limited number of individuals - only 23% of the total population - less than half of the regional average of 51%. This is potentially related to the poor infrastructure of the country that is still recovering, and also the diminished economic means of the population.

The Prepaid Subscriptions indicator again ranks the cities in the bottom of the MENA SFI with the lowest score. This indicator measures the percentage of total mobile subscriptions to prepaid connections: 96% in the case of Iraq.



**Penetration of
Mobile Broadband,
Smartphones, and
Internet is at the early
stages.**

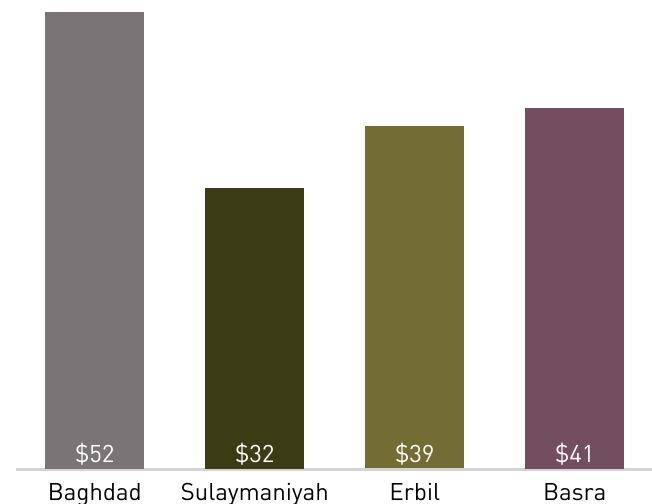
Baghdad

ICT Subdomain

The ICT infrastructure in the city scores the lowest of the Iraqi cities measured, and comparatively low relative to the MENA cities. Baghdad ranks in the last position of the MENA SFI and 22nd of 24 in the global SFI above Caracas, Venezuela, and Beirut, Lebanon.

Internet Cost is higher than in most MENA cities, around \$52 USD a month, more than 20% above the country average (of \$40 USD/month). In terms of Internet Speed (upload and download), Baghdad scores low compared to MENA cities given slow speeds of 3,30 Mbps download and 3,48 Mbps upload.

The Mobile Subscription Cost indicator scores 56,67, positioning Baghdad 11th of 13 in the MENA SFI. The subscription cost equals \$0,12 per one minute of Prepaid Mobile Tariff Local, which is almost the same as the rest of the country, but more expensive than other MENA cities (\$0,08).



Average internet cost, in \$USD per month

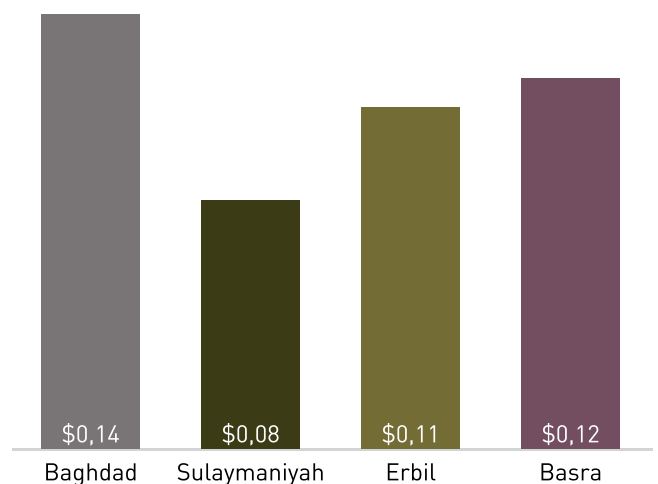
Sulaymaniyah

ICT Subdomain

Sulaymaniyah's ICT subdomain fares very well compared to the other Iraqi cities. Although it ranks in the middle of the MENA SFI, the city seems to be more affordable in terms of internet and mobile costs, and has better internet speed than the rest of the country.

The monthly cost for Internet in the city stands at \$32 USD per month, less expensive than the rest of the measured Iraqi cities. Sulaymaniyah has roughly the same cost for Mobile Subscriptions as other MENA cities: \$0,08 per minute.

Sulaymaniyah also has the fastest internet both in terms of download and upload speed of all the cities measured by the SFI globally. On the Internet Speed indicators, the city stands out with 33,32 Mbps download and 33,39 upload on average.



Average Mobile Subscription cost, in \$USD per one minute of Prepaid Mobile Tariff Local

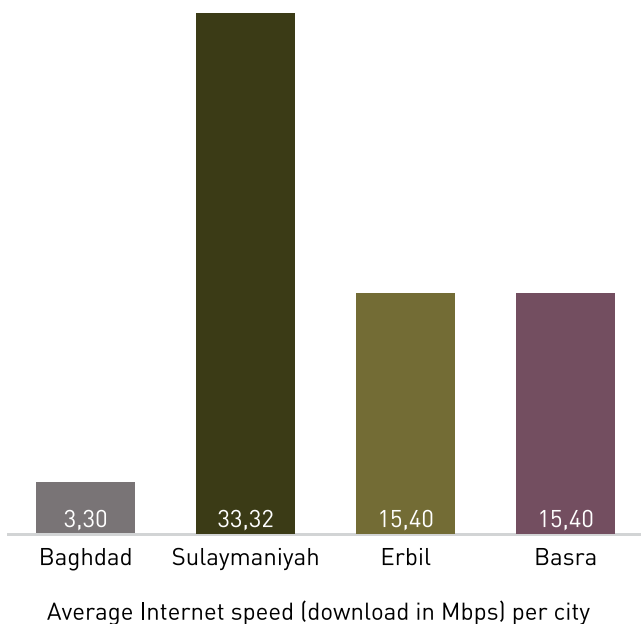
Erbil

ICT Subdomain

ICT infrastructure is not favourable for the performance of Erbil in the SFI. Erbil ranks 11th of 13 in the MENA SFI and 18th of 24 in the global SFI on this subdomain. The costs are less affordable than many MENA cities and Iraq, and the Internet speed is better than in Baghdad, similar to Basra, and inferior to the high speeds available in Sulaymaniyah.

Erbil scores 34,67 on the Internet Cost indicator, ranking 10th of 13 in the MENA region. Monthly internet costs are around \$41 USD, in line with the average in the country, and the Internet speed is slightly better than the region (15,40 Mbps download and 13,26 upload).

The Mobile Subscription Cost is \$0,11 per one minute of Prepaid Mobile Tariff Local, the same as Baghdad. On this indicator the city scores ranks slightly below average for the MENA region.



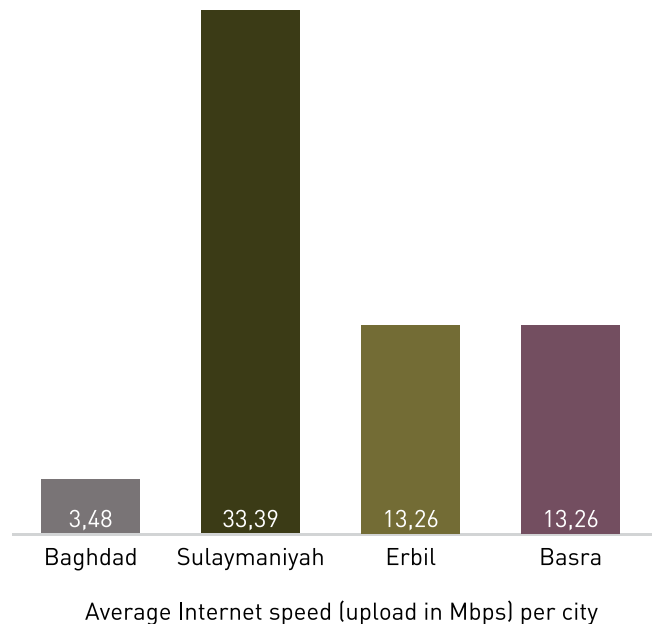
Basra

ICT Subdomain

On the ICT subdomain, Basra's score is low at 30,26. This ranks the city at position 10 of 13 in the MENA region, and 17 of 24 in the global SFI. While costs in Basra are slightly lower and internet speeds are marginally better than the regional average, the low scores on the national indicators bring down Basra's performance in this subdomain overall.

The Internet Cost is \$37 USD a month, similar to the regional cost and less expensive than other areas of the country. This ranks Basra slightly below average for the region.

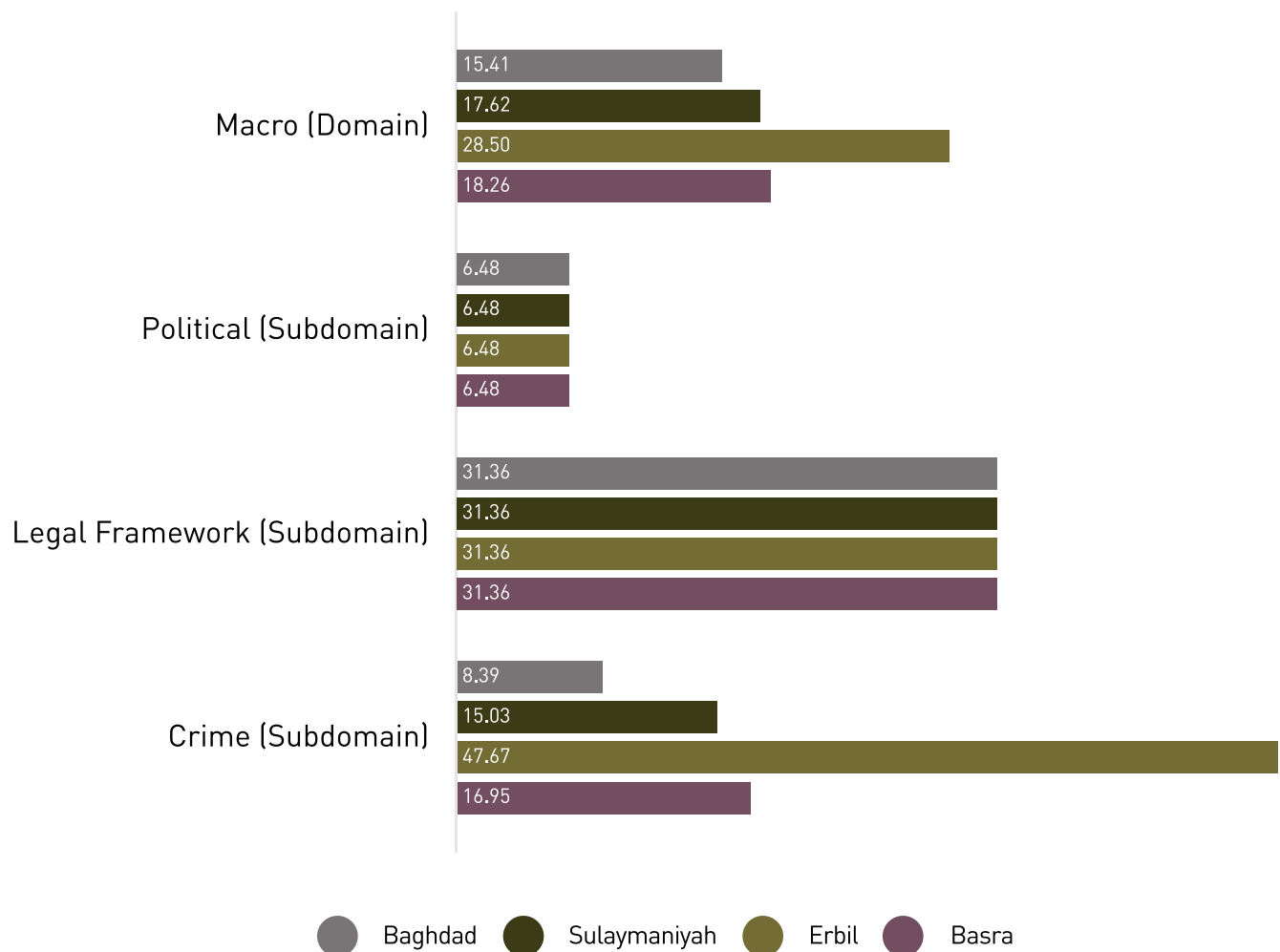
The Mobile Subscription Cost is \$0,12 USD/month, just one cent more than Erbil and Baghdad. Likewise, the Internet Speed is identical to Erbil (15,40 Mbps download and 13,26 upload).



5. Macro

Fair and reliable legal systems, political stability, and low crime are important fundamentals for creating an environment where individuals can start new ventures. The Macro domain measures these factors through three subdomains: Political stability, Legal Framework, and Crime. Given the national nature of political and legal systems, the Political and Legal Framework domains are an aggregation of country-level indicators. The Crime subdomain, in contrast, is city-specific.

The overall socio-political context remains challenging for Iraq. In the MENA SFI, the four Iraqi cities rank at the least favourable positions. Globally they also occupy the lowest positions along with Caracas, Venezuela. Erbil scores the highest within the country, 28,50, ranking at position 9 of 13 in the region. Basra comes next with a score of 18,26, ranking 11th of 13 in the MENA SFI. Sulaymaniyah is third scoring 17,62 at position 12. Baghdad scores the lowest with 15,41, positioning itself last.



SFI Scores relative to the MENA region, scores range from 0 - 100

National Overview

Macro Domain

Iraq is in the process of reconstructing its institutions and political system after conflict in the region. Corruption, weak bureaucracy, and financial instability after the drop in oil prices in 2014 all play a role in the challenging circumstances in this domain. Internal political disputes are also an element to consider, peaking with the Kurdistan Regional Government having an independence referendum that was deemed "illegitimate" by the Federal government which last year regained control of the disputed territories.^[14]

Political instability, a weak legal framework, and corruption are main limitations for the proliferation of startups in Iraq.

Additionally, in recent decades Iraq suffered great instability after the conflict with Iran from 1980 to 1988, the first Gulf War between 1990 and 1991, and the second from 2003 to 2011. Then in 2014, ISIS took control of a third of Iraqi territory, and it was not until 2017 when the government announced their victory over the jihadist organization. Although Iraq won the war, there remain challenges regarding the internal disputes for power and politics that hinder the stability of the country.^[29]

Additionally, the legal framework in the country is in need of modernisation to adapt to the new forms of businesses. For example, by improving the registration process for new businesses. As it currently stands, outdated bureaucracy imposes high costs in terms of both finances and time, which limits growth. Mustafa Jabbar, an Iraqi entrepreneur, stated in an interview that "It took me nine months to register the company."^[9] Hala Taleb Al-Mayahi of the Science Camp in Basra says that at this point there isn't even a definition on the books that can accommodate modern startups when registering their businesses.

Another problem related to the job market. According to the World Bank, over a third of Iraq's youth are unemployed - even if they have a degree. This is linked to the lack of positions within the government staff, the prime recruiter of the country, and also to the power concentrated by political parties that control the institutions, and often also access to the labour market. This shows the far-reaching consequences that a poorly-functioning political and legal system can have on a country.

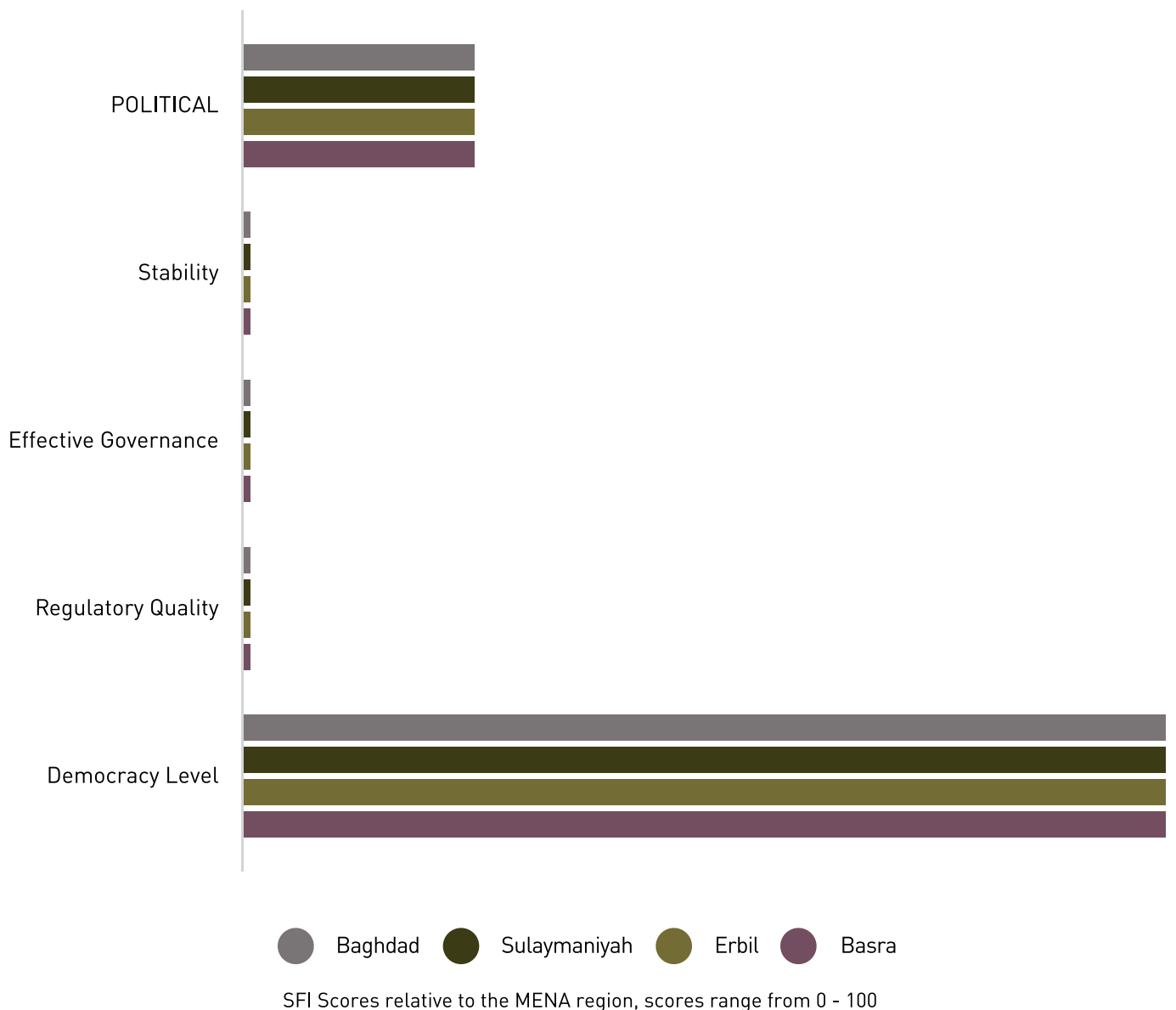
Political

Subdomain of Macro

The Political subdomain includes indicators that measure Political Stability, Government Effectiveness, Regulatory Quality, and Democracy Level.

On a national level, Iraq performs poorly on this subdomain, with Iraqi cities scoring just 6,48 and ranking in the last positions of the MENA regional SFI, as well as the global SFI.

Since the political system is national in nature, this subdomain is discussed on a country-level.



National

Political Subdomain

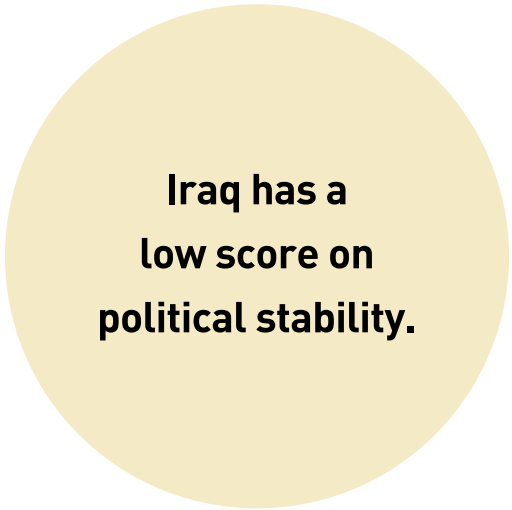
Iraq's best score on the Political subdomain is on the indicator for Democracy level. The country scores 4,06 (out of a possible range of 1 to 10) in The Economist Intelligence Unit's Democracy Index^[23], based on five categories: electoral process and pluralism, civil liberties, the functioning of government, political participation, and political culture. This ranks the cities in Iraq at position 7 in the MENA regional SFI, and 16 in the global SFI.

The other indicators in this subdomain are less favourable, all ranking at the very bottom of the global and MENA regional SFIs.

The Stability indicator is based on a World Bank metric that measures political stability and absence of violence or terrorism on a scale between -2,5 and 2,5, with a higher score indicating more political stability. This indicator specifically measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Iraq scores -2,33 which indicates low political stability.

The Effective Governance indicator captures 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. This is measured on the same scale, -2,5 to 2,5. Iraq's score is -1,27 signalling perceived challenges on the effectiveness of the government.

Lastly Regulatory Quality captures perceptions about the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. With the same range as above, the country has a low score of -1,20.



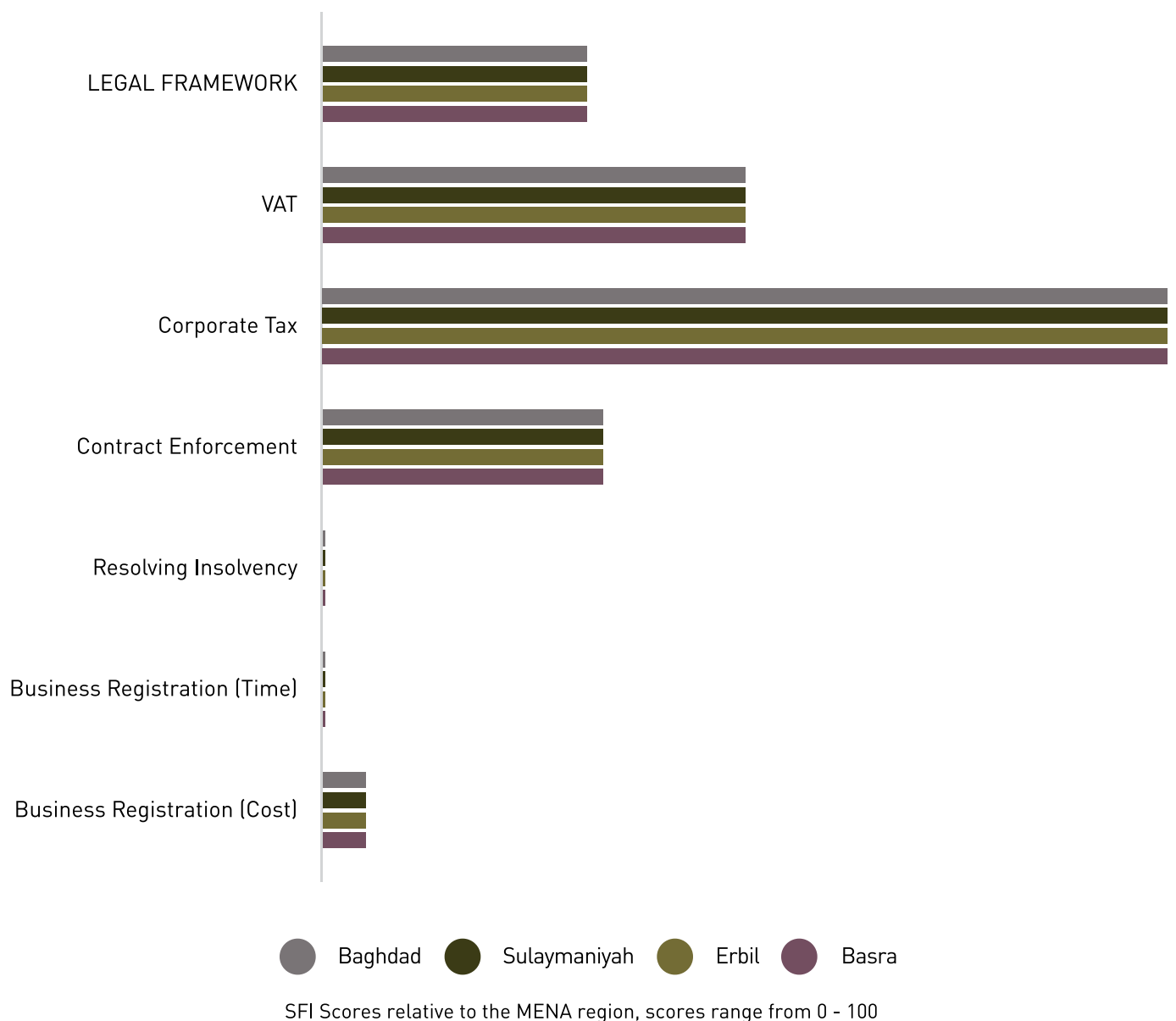
**Iraq has a
low score on
political stability.**

Legal Framework

Subdomain of Macro

The Legal Framework subdomain considers aspects such as VAT, Corporate Tax, Contract Enforcement, Resolving Insolvency, and Business Registration time and cost.

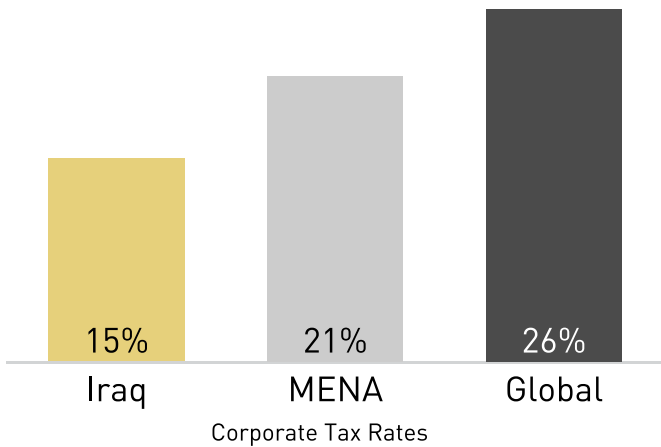
On this subdomain, Iraqi cities are measured from a country-level, and rank at the bottom of the MENA SFI and the global SFI (above only Caracas, Venezuela), despite better performance than the Political subdomain. The country-wide score is 31,36 out of 100.



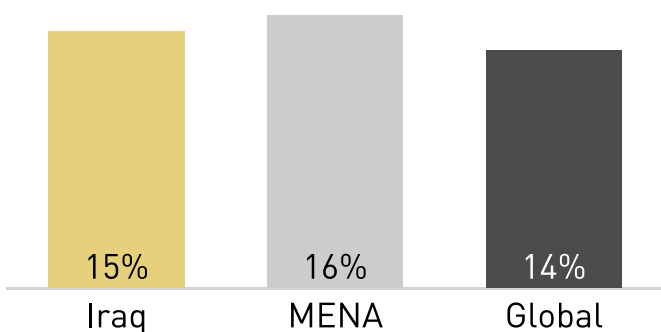
National

Legal Framework Subdomain

The Corporate Tax indicator has the best score on this subdomain, ranking Iraqi cities first in the MENA region and global SFIs (along with Beirut, Lebanon). The Corporate income Tax in Iraq is 15%, lower than the average in the region of 21%.



The VAT indicator also scores well, positioning the cities just after Beirut, Lebanon and Cairo, Egypt in the region, and approximately in the middle of the global SFI. VAT in Iraq is 15%, just above the global SFI average of 14%.



VAT for Iraq, the MENA regional average, and global SFI average

In contrast, the Contract Enforcement indicator has a low score of 33,21, positioning the cities 15th in the global SFI.

Resolving Insolvency is a significant issue for Iraq. The country is the worst performing country according to the World Bank Index. Concerns about lack of opportunities to resolve insolvency were echoed in several entrepreneur interviews.

Business Registration time and costs are also a weak spot in the country. The score for the time indicator positions the country last in both SFIs, and the cost indicator's score ranks them above only Beirut, Lebanon. It takes around 26 days to register a business, though this can variate depending on the city and can be longer. This is much higher than the MENA average of close to 15 days. Costs are also high, 39% of total income per capita in Iraq, compared to 28% in the region.

According to Zarah Shah from Re:Coded, "Registering is a pain all over the country, so a lot of people don't bother registering and it doesn't seem to impact the way they operate because no one is going to come after them....so no one is paying taxes either...It does [however] impact investors, [since] investors always want you to be registered."

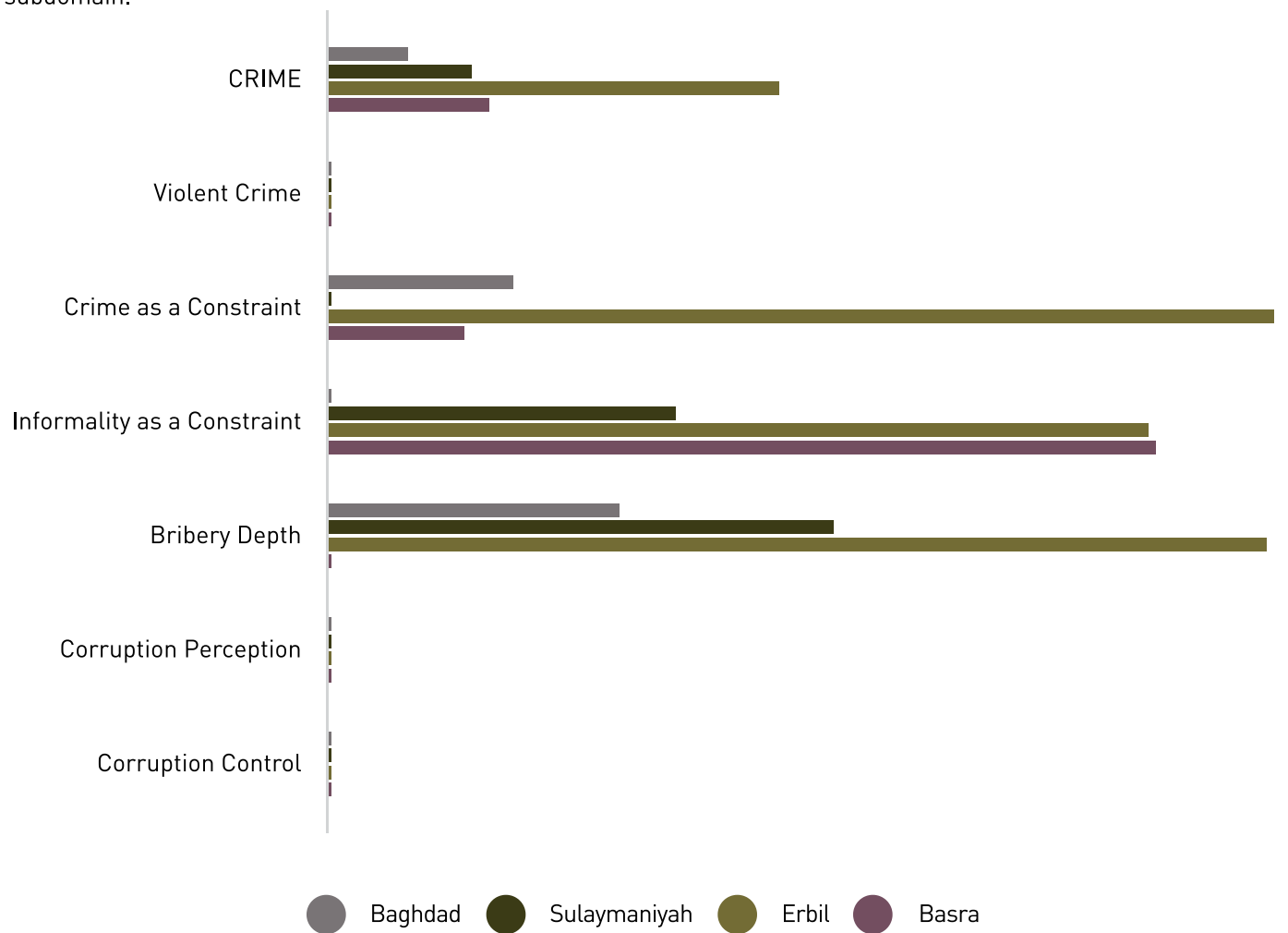
Crime

Subdomain of Macro

In the Crime subdomain, more variation exists on a city-by-city level. This subdomain measures violent crime, corruption, and informality.

Overall, Iraqi cities rank at the bottom of the MENA SFI for this subdomain. Within a country comparison, Erbil scores the highest with 47,67, ranking at position 9 of 13 in the MENA SFI. Basra follows with a significant gap scoring 16,95, ranking at position 11. Sulaymaniyah is next with a score of 15,03 and ranking 12th, and Baghdad is last with a score of 8,39, at the bottom of the MENA cities.

In this subdomain, three indicators (Violent Crime, Corruption Perception, and Corruption Control) are country-level, and the remaining indicators are discussed on a city-by-city basis. There is significant variation between the cities on the city-level indicators, with one main trend that the national-level indicators are the poorest performers in the subdomain.



● Baghdad ● Sulaymaniyah ● Erbil ● Basra

SFI Scores relative to the MENA region, scores range from 0 - 100

National

Crime Subdomain

Violent Crime and indicators of corruption are assessed on a national level in this subdomain. On all three of these indicators Iraqi cities score at the bottom of the MENA and global SFIs.

Violent Crime in Iraq is very high. Based on a scale between 1 and 5, Iraq has the highest possible score of 5. This is not surprising given the recent conflict with ISIS.

Corruption is also high in general, an issue which has even been acknowledged by the government.^[17] The Corruption Perception indicator is not favourable. Based on the Transparency International Index which favours higher scores, Iraq scores only 17.

Similarly, the Control of Corruption indicator captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The country scores relatively poorly with -1,37 on a ranged score between -2,5 (very weak control of corruption) and 2,5 (very good control of corruption).

”

Iraq is one of the lowest ranking countries in terms of Ease of Doing Business, based on the World Bank. Corruption is a major issue.

Jochen Zimmermann - GIZ

Baghdad

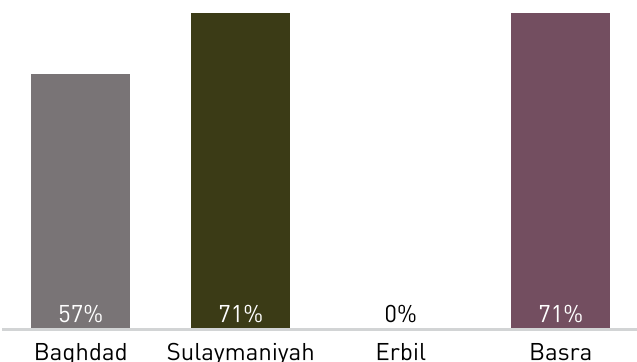
Crime Subdomain

Crime is a point of divergence among the measured Iraqi cities. Baghdad has poor scores on the three city-level indicators: Crime as a Constraint, Informality as a Constraint, and Bribery Depth.

On the indicator Crime as a Constraint to doing business, 57% of firms identify that crime, theft, and disorder are major hurdles for their business, a high figure compared to the MENA SFI average of 11% and the Iraq-wide average of 45%.

Informality is also identified as a major problem, with 87% of surveyed firms identifying practices of competitors in the informal sector as a major constraint to doing business. On this indicator, the city ranks at the bottom of both the global and MENA regional SFIs.

Bribery depth, or percentage of public transactions where a gift or informal payment was requested, is identified as 77%, higher Sulaymaniyah and Erbil but lower than Basra. Baghdad scores 30,83 and ranks 12th in the region, indicating that bribery is a major issue in the city.



Percentage of firms that identify Crime as a Constraint to doing business in the city

Sulaymaniyah

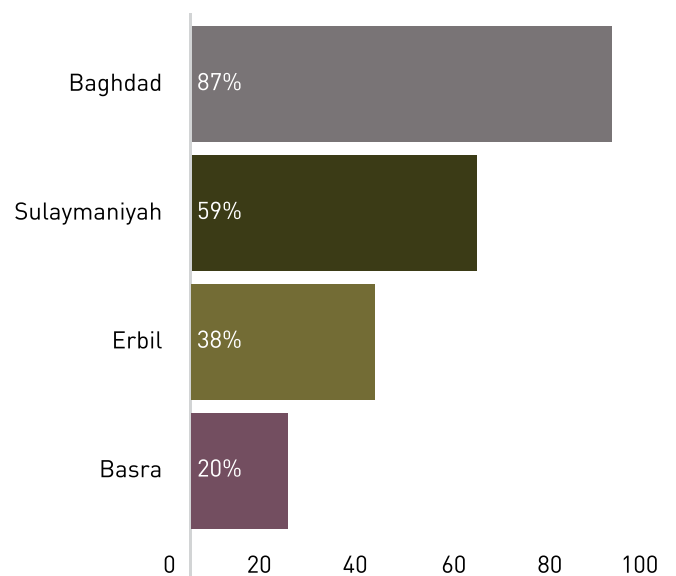
Crime Subdomain

The Crime subdomain is difficult for Sulaymaniyah, with the city ranking second from the bottom on the global and MENA regional SFI.

Sulaymaniyah has significant challenges on the indicator Crime as a Constraint, with the lowest score in Iraq and the region; 71% of firms identify that crime, theft, and disorder are major hurdles for their business, based on the World Bank Enterprise Survey. This is in comparison to the MENA SFI average of 11% and the country average of 45%.

Informality is also a problem, with 59% of the firms surveyed identifying practices of competitors in the informal sector as a major constraint. The city outperforms only Baghdad on this indicator in the global and regional SFIs.

Bribery depth is identified as 49%, close to the country average of 48%.



Percentage of firms that identify Informality as a Constraint to doing business in the city

Erbil

Crime Subdomain

Erbil is the strongest performing city in Iraq in the crime subdomain, ranking 15th in the global SFI and 9th in the MENA region.

A major point of optimism is the Crime as a Constraint indicator, which identified that none of the firms stated that crime, theft, and disorder are major hurdles for their business.

Informality seems to be less of an issue than in other Iraqi cities as well, with 20% of the firms surveyed identifying practices of competitors in the informal sector as a major constraint. On this indicator, the city ranks fourth in the region, after Basra.

Regarding the Bribery Depth indicator, Erbil has a favourable score and position in the region, ranking third with a score of 99,26. This indicator measures the percentage of public transactions where a gift or informal payment was requested, which is identified as only 6%, compared to 48% on average at the national level.

According to Rebeen Pasha, the founder of MyeDream Incubator Incorporation, “The problem with Erbil is more about its perception than the reality. In terms of security, it’s one of the most stable places in the world – but people don’t often realise that until they get here. Of course, Kurdistan is a nascent ecosystem recovering from a period of economic crisis, so there are challenges. But this kind of environment can level the playing field and serve as a brilliant opportunity for those previously sidelined to find scalable, sustainable solutions.” [24]

Basra

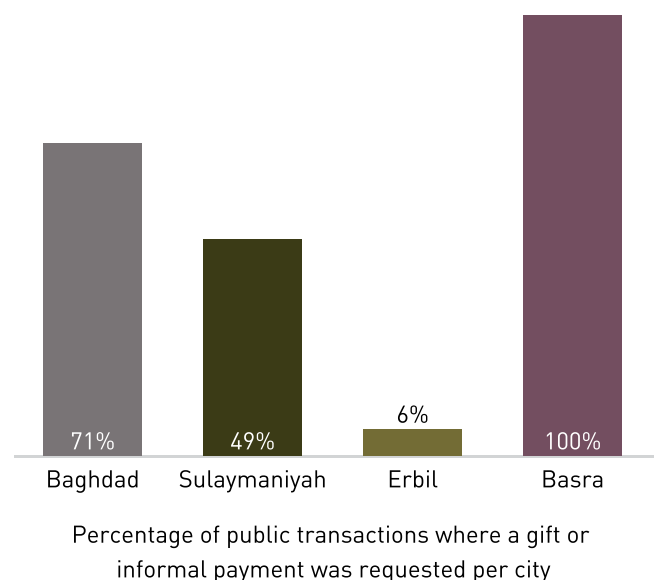
Crime Subdomain

Basra scores in the middle of cities in Iraq on the Crime subdomain indicators, and at the bottom of the MENA and global SFIs. The city scores poorly on Crime as a Constraint and Bribery Depth, though stands out in the Informality as a Constraint indicator.

Crime as a Constraint has a score of 14,29 which ranks the city at position 12 of 13 in the MENA region SFI. Sixty-one percent of firms identify crime as a constraint to going business, a high figure.

Basra also faces challenges with bribery, with firms stating that 100% of public transactions require gifts of informal payments, based on World Bank data.

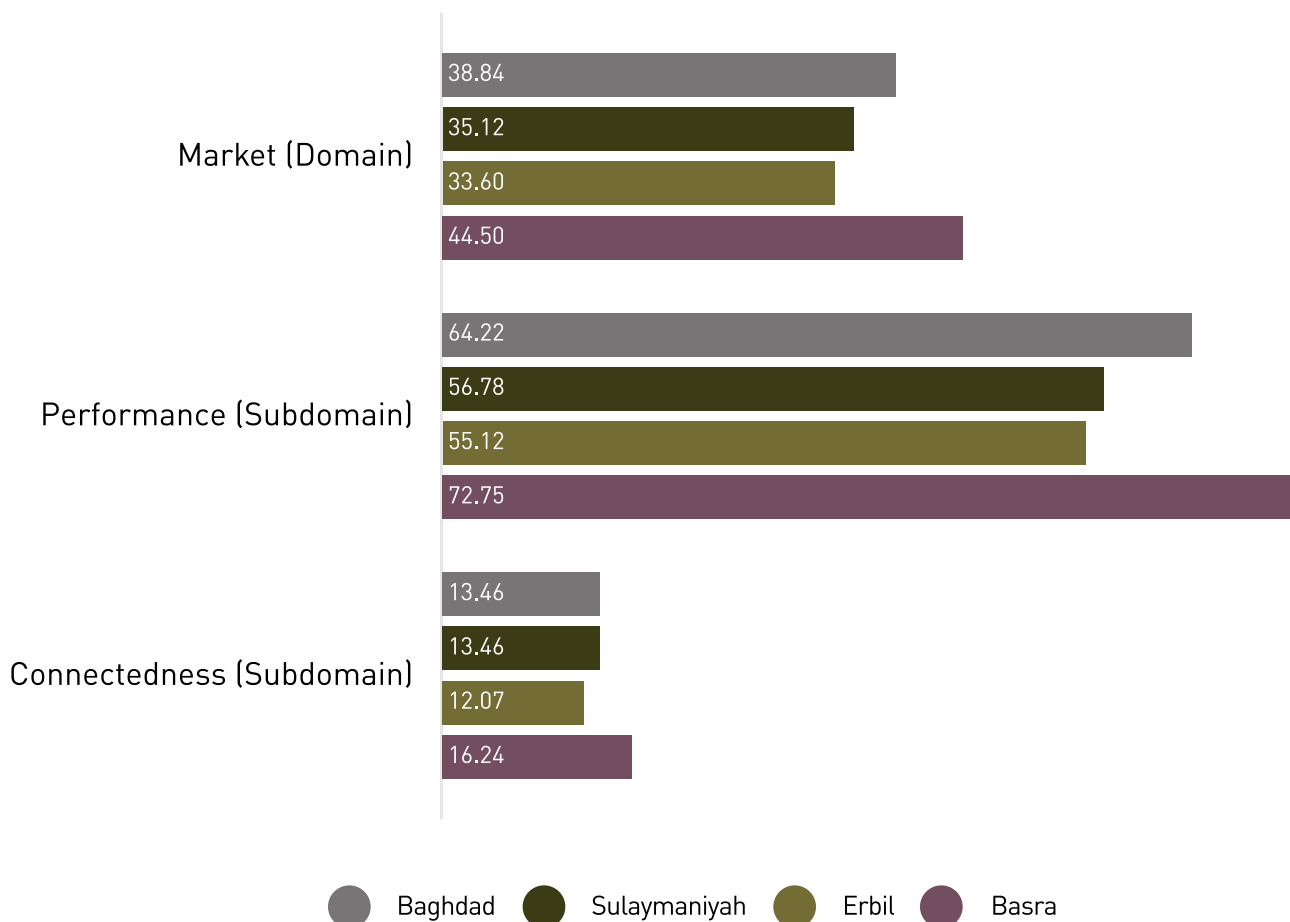
In contrast, Informality seems to not to be a significant problem, with 20% of the firms surveyed identifying practices of competitors in the informal sector as a major constraint. On this indicator, Basra scores very well with 87,39, and ranks third in the region.



6. Market

A thriving economy has a direct effect on entrepreneurs' ability to maximise their potential. An open and connected market with strong growth and logistic performance allows startups to reach a larger audience and grow their ventures. The Market domain describes macroeconomic conditions in terms of performance and connectedness, such as growth of the economy, tourism and logistics; essentially, the size of the economy and how active and dynamic it is within a city. Market performance is different for each city in Iraq, but overall they still have a long way to go to improve the conditions for entrepreneurs to develop their businesses.

Within the country, Basra scores the highest with 44,50 out of 100, positioning the city 8th of 13 in the MENA regional SFI, and 17th of 24 in the global SFI. Baghdad ranks 21st of 24 globally, with a score of 38,84. Sulaymaniyah follows, scoring 35,12 and ranking in positions 12 and 23 of the MENA region and global SFIs, respectively. Finally, Erbil comes last in both SFIs, with a score of 33,60.



SFI Scores relative to the MENA region, scores range from 0 - 100

National Overview

Market Domain

Iraq's economy is highly dependent on the oil industry and is the main driver of growth. With the fifth largest proven crude oil reserves in the world at 141.4 billion barrels, the industry needs more investment.^[14]

”

Iraq's overall growth outlook is expected to improve due to increasing oil production, a more favorable security environment, gradual pick up of investments for reconstruction and economic recovery, and a more benign global and regional outlook.

World Bank ^[14]

World Bank economic assessments indicate that the non-oil economy in Iraq has contracted since 2014, but growth outlook is expected to improve due to reconstruction and improved safety. Although structural reforms are still needed, the economy has great potential in industries such as tourism, which generated \$4 billion USD in earnings in 2015.^[14]

In line with this, the government in the National Development Plan considers the tourism sector within its strategic objectives to further develop the economy.^[7]

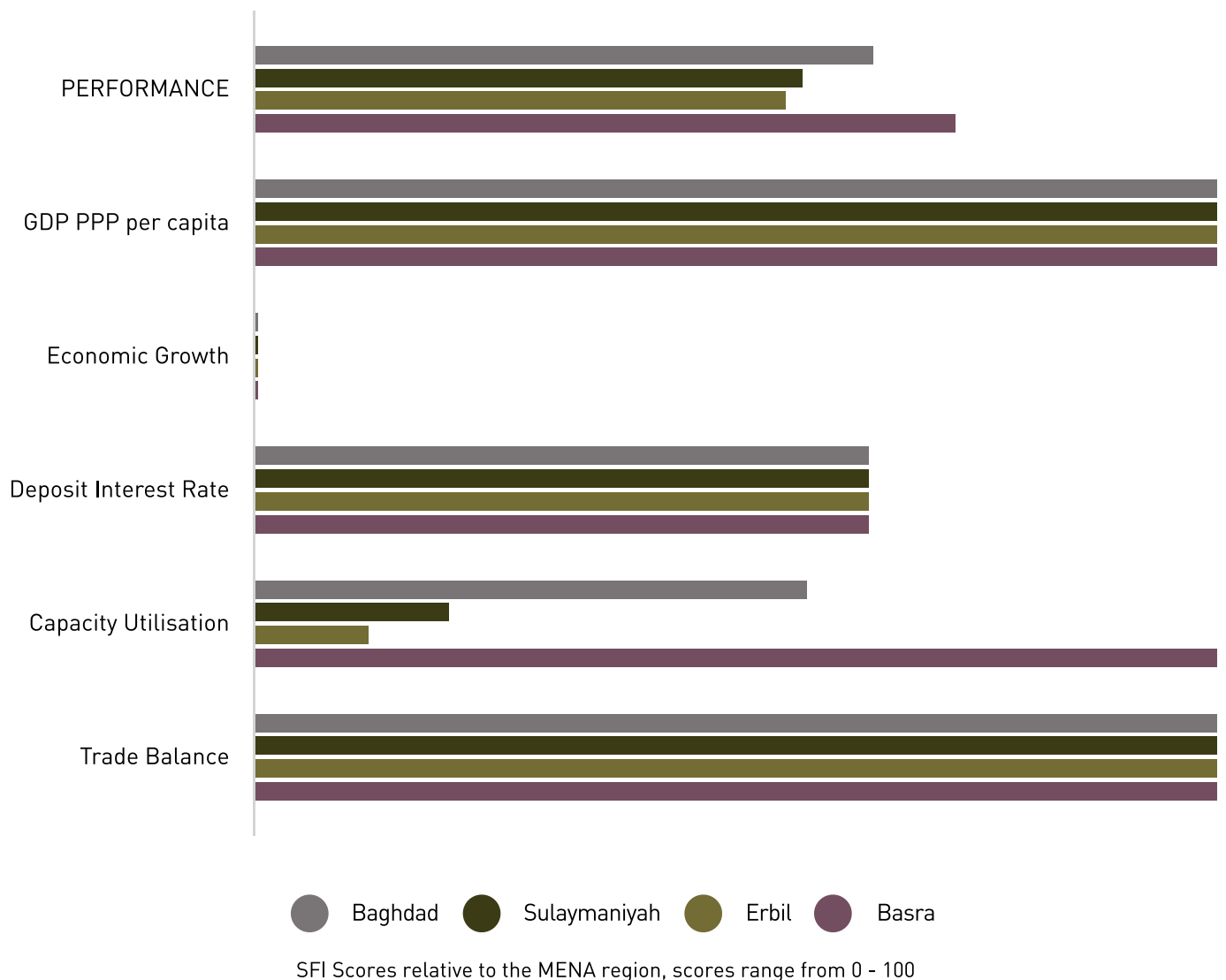
The EU is also involved with Iraq in its reconstruction process as well, because of their trade partnership interest. The EU is Iraq's second-largest trading partner, behind China. The EU-Iraq Partnership and Cooperation Agreement is the first contractual relation between the two partners, entering into force in 2012.^[25]

Performance

Subdomain of Market

The performance subdomain considers primarily country-level indicators on economic performance, potential, and growth. The only point of divergence is on the indicator of Capacity Utilisation, which is measured on a city-level.

Overall, the Iraqi cities perform well on these indicators compared to other MENA cities, ranking in the first half of the MENA regional SFI. However, their relative scores are not as favourable on a global comparison. Basra is the highest performer in the region, ranking 1st in the MENA SFI and 9th in the global due to high scores on the Capacity Utilisation indicator. Baghdad follows, ranking 2nd in the MENA region and 17th globally. Sulaymaniyah and Erbil are approximately average for the MENA region, though near the bottom of the global SFI. Highlights for the country are GDP PPP p.c. and Trade Balance, while Economic Growth is low.



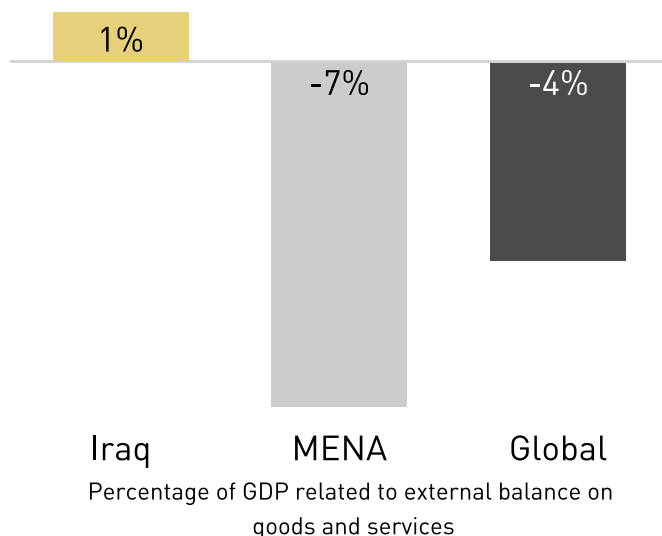
National

Performance Subdomain

The strongest performing indicator in the Performance subdomain in Iraq is GDP PPP per capita, which totals \$16.899 USD per year in the country. This is well above the regional average of \$12.875, ranking Iraqi cities at the top of the MENA regional SFI, and position five in the global SFI. This is despite the recent economic contraction in the country.

The Trade Balance indicator is another strength for the Iraqi ecosystems, also ranking Iraq at the top of the MENA regional SFI, and the third position in the global SFI. The Trade Balance indicator measures the external balance on goods and services of the country related to the GDP, which country-wide equals to 1% of the total GDP, compared to the regional average of -7%. It is also favourable relative to the global SFI average of -4%.

The next most positive indicator is Deposit Interest Rate (the rate paid by commercial banks for demand, time, or savings deposits). With a 5% rate, the country has a good score of 63,77, behind only Amman, Jordan, and Rabat, Morocco in the MENA region, and ranking at position seven of the global SFI.



\$16.899 USD

GDP PPP per capita



5%

Deposit Rate

In contrast, the indicator on Economic Growth is extremely challenging for Iraq. At -2,53%, Iraq ranks at the very bottom of both the MENA regional and global SFI.

Baghdad

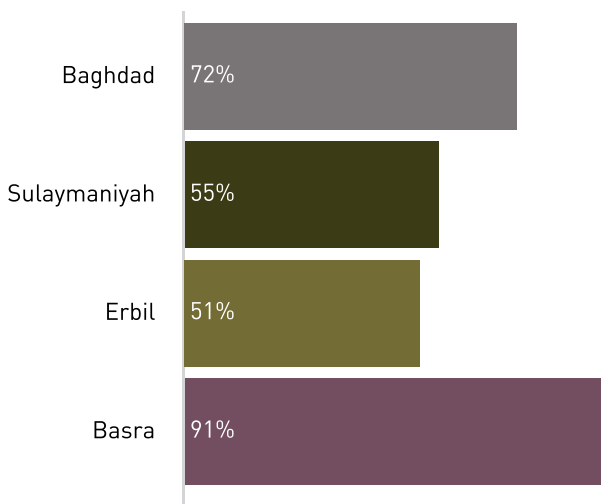
Performance Subdomain

The only city-level indicator in the Performance subdomain is Capacity Utilisation, which measures the percentage of current output relative to the maximum potential of the city. Baghdad performs well on this measure relative to other Iraqi cities at 72%, ranking 2nd in the MENA region and 10th in a global comparison.

Erbil

Performance Subdomain

Erbil fares similarly. At 51% Capacity Utilisation, the city ranks just below Sulaymaniyah: second-from-the-bottom in both SFIs.



Percentage of current output relative to the maximum potential of the city (Capacity Utilisation)

Sulaymaniyah

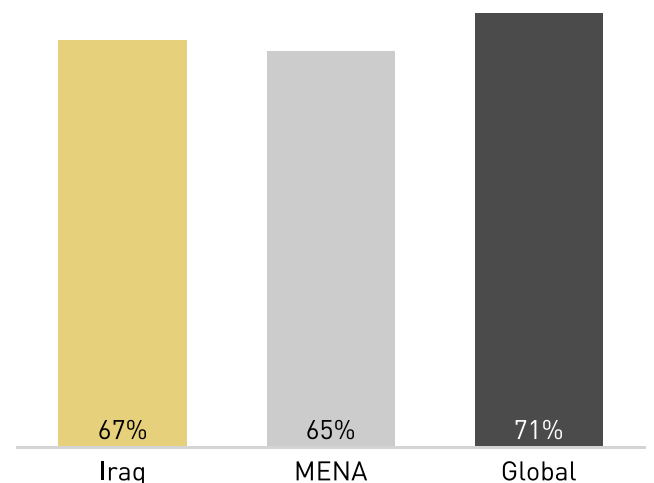
Performance Subdomain

Capacity Utilisation is not as favourable for Sulaymaniyah, with the city currently making use of 55% of its overall potential. This is below the Iraq-wide average of 67%, MENA average of 65%, and global average of 71%. As such, Sulaymaniyah ranks near the bottom of both SFIs: 11th in the MENA region, and 21st in the global.

Basra

Performance Subdomain

Capacity Utilisation is a strength for Basra, which ranks at the top of both the MENA regional and global SFI, utilising 91% of its potential.



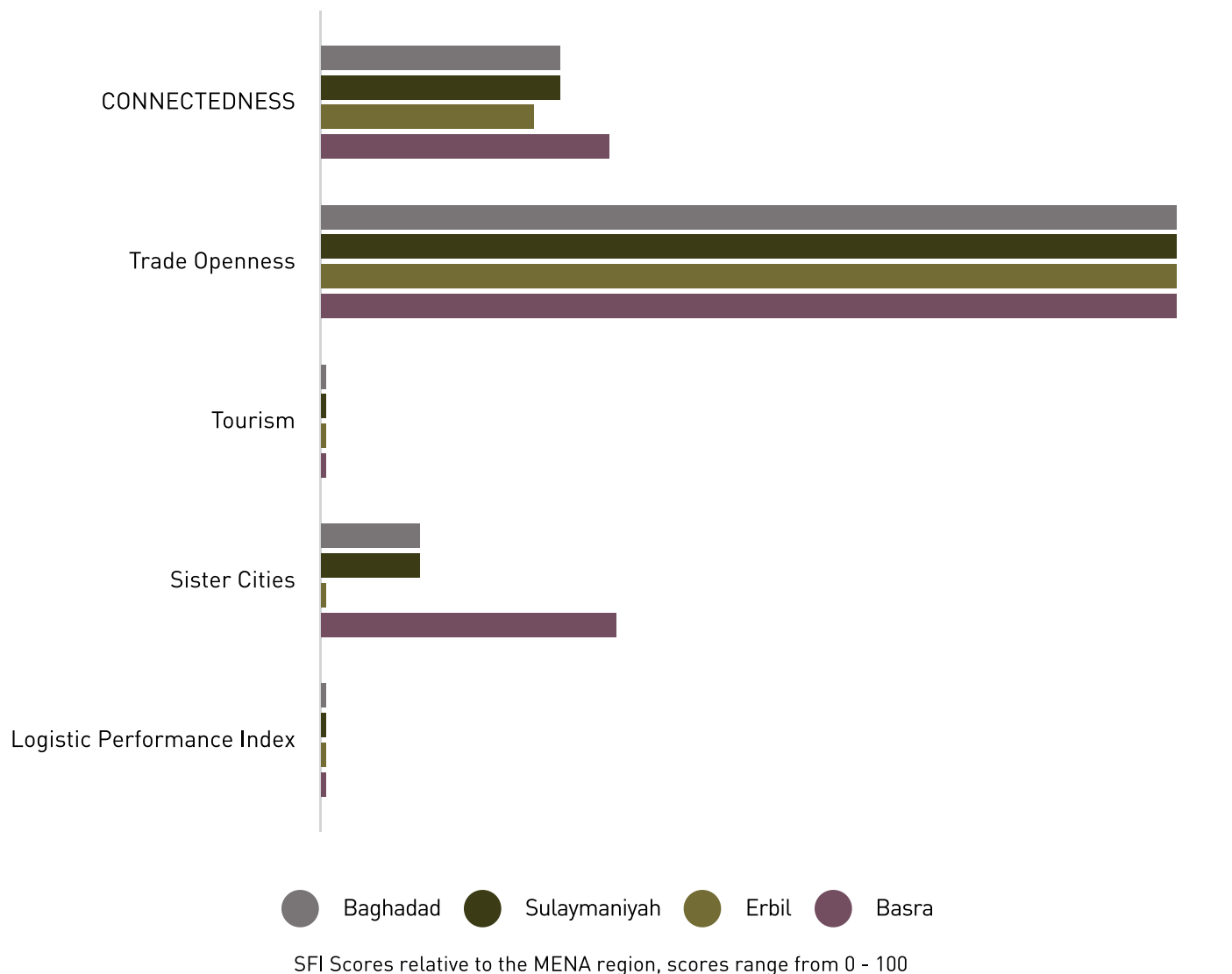
Average Capacity Utilisation

Connectedness

Subdomain of Market

The Connectedness subdomain considers elements such as openness to trade and tourism. Overall, Iraqi cities score poorly in this subdomain, ranking at the bottom of the MENA regional SFI and global SFI (along with Caracas, Venezuela). Despite strong scores on the Trade Openness indicator, low scores on Tourism and Logistic Performance Index bring down the rankings. Given that three out of four indicators in this subdomain are on a national level, scores are similar across cities.

The strongest performer, Basra, scores 16,24 and ranks 9th in the MENA SFI and 19th in the global SFI. Baghdad and Sulaymaniyah score similarly with 13,46, and Erbil scores the lowest in the country and the region with 12,07, ranking at the very bottom of both SFIs.



National

Connectedness Subdomain

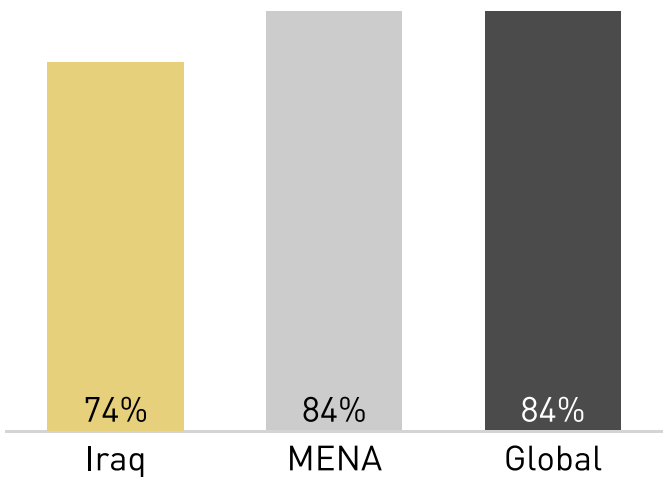
Three indicators are measured from a country-level: Trade Openness, Tourism, and Logistic Performance Index.

The Trade Openness indicator measures the sum of imports plus exports as percentage of GDP. In Iraq, this equals 74% of the total GDP of the country, below the regional and global average of 84%.

Thus, despite being the strongest indicator in this subdomain, the cities still fare in the bottom half of the global SFI.

The Tourism indicator ranks Iraq in the least favourable positions in the MENA SFI, and above only Caracas, Venezuela, in the global SFI. However, in 2016 the World Bank estimated 892.000 international visitors came to the country, and the last few years have shown an increasing trend in travel and tourism for Iraq. According to the World Tourism and Travel Council, the growth of this industry was around 3,9% in 2018. This organisation expects the number of international arrivals to raise to 1.3 million visits in 2019, mainly due to religious tourism, which may help improve conditions on this indicator moving forward. [26]

On the Logistic Performance Index indicator, the country also scores the lowest in the region. This indicator assesses trade logistics performance, with a score ranged from 1.60 to 4.23. Iraq scores 2,18, slightly below the regional average of 2,61 and global average of 2,74.



Percentage of GDP related to the sum of imports plus exports (Trade Openness)

Baghdad

Connectedness Subdomain

Sister Cities is the only indicator measured on a city-by-city basis, and while there is divergence among the city, none shine on this indicator.

The city of Baghdad has two sister cities, Beirut, Lebanon, and Pyongyang, North Korea. This gives the city a score of 5,0 out of 100, ranking above only Erbil in the global and MENA SFIs.

However, in 2018 Baghdad’s Mayor, Zikra Alwash, declared her intention of making Paris a new sister city in the short term.^[27]

Sulaymaniyah

Connectedness Subdomain

Sulaymaniyah fares similarly to Baghdad with identical scores and rankings. The city has two sister cities: Tucson, Arizona, and Naples, Italy.

Erbil

Connectedness Subdomain

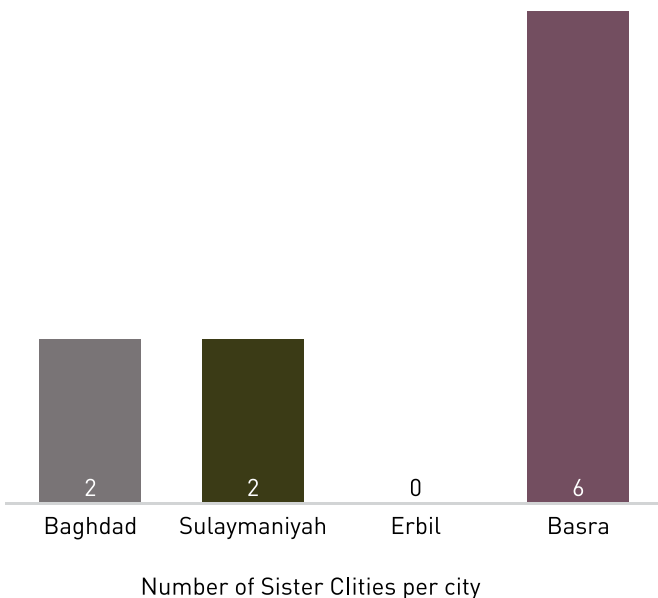
Erbil currently has no sister cities, so ranks at the bottom of the MENA region and global SFI on this indicator.

Basra

Connectedness Subdomain

With six sister cities, Basra is the highest scoring city in Iraq on this indicator. However, this is still far below the global SFI average of 15 sister cities, and the MENA regional average of 11, so Basra ranks only 17th out of 23 in the global SFI.

Basra’s sister cities include Dubai, United Arab Emirates, Houston, Texas, Nishapur, Iran, Baku, Azerbaijan, and Aqaba, Jordan.



Ecosystem

Development

Recommendations

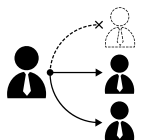
Iraq is currently in a transitional period, recovering from war and conflict with the support of the international community. While significant efforts have already been made, much remains to be done to create a stable country with the institutions necessary to foster the growth of entrepreneurship.

Therefore, our policy recommendations focus on a two-part strategy; first, basic necessities such as infrastructure and education must be secured, and second, entrepreneurship policies to promote startups and entrepreneurship can be developed from this foundation.



Foundational Strategies

1. Create a secure legal and financial system that can encourage investment and lower transaction costs.
2. Improve infrastructure
3. Encourage higher levels of educational attainment
4. Include women more meaningfully in the workforce



Promoting Entrepreneurship

1. Streamline bureaucracy and modernise the legal system to accommodate startups
2. Enhance financing opportunities
3. Improve education to bridge the “skills gap”
4. Empower female entrepreneurs
5. Build a startup culture

Foundational Strategies

Given the decades of war and instability in Iraq, the country lacks many basic necessities for economic growth. Crime, corruption, and security remain salient issues that affect everyday Iraqi citizens, and impede their potential. While many of these foundational needs will be difficult to tackle, our research has indicated that there are several key areas which need to be developed to create a positive environment from which entrepreneurs can build.

Legal and Financial

In interviews with both entrepreneurs and development professionals, the lack of legal and financial security for investors, both domestic and foreign, was identified as a major problem in Iraq. Private sector investment will be critical to boost economic growth, but investors are hesitant because of a lack of legal certainty and the inherent risks in the country.

Another major issue is the lack of proper institutions to handle financial transactions in a modern economy. Few people hold bank accounts or credit cards, and online payment platforms are not widely used. This is increasing transaction costs for entrepreneurs and presenting a major hurdle as many startups are in e-commerce, or similar fields.

Additionally, the lack of a development bank is slowing the process of providing loans to entrepreneurs, as the under-resourced central bank is currently responsible for such programmes.

Infrastructure

Recent wars and conflict have damaged infrastructure significantly, so there is a notable need for investment and reconstruction. It will be important during this effort to streamline the process of international support, and minimize the risks of corruption.

This infrastructure development, particularly in the areas of transportation, public services, and ICT, are major areas of opportunity for Iraq. This issue has been specifically outlined as a priority in the National Development Plan, which highlights the need for development of the transport, energy, electricity, and water supply systems.

Specifically, our research has determined that the country is in great need of modernising the transportation and connection opportunities between cities, and basic public services within cities.

Additionally, improving access to internet and mobile networks will be critical in the coming years, as this will allow for the proliferation of critical new technologies, such as e-payments, and the success of businesses related to digital industries and technological development.

Foundational Strategies

Education

Given the years of conflict, there remain high numbers of children that are currently out of school. Ensuring their quick return should be a high priority in the coming years. The National Development Plan has also highlighted many goals for increasing enrollment generally in the country, which is critical since educational outcomes generally remain sub-standard throughout Iraq.

Including Women

Women in Iraq are highly under-utilised. The country scores at the bottom of the SFI in terms of female entrepreneurship, and inequality exists in education, the workforce, and society. The National Development Plan prioritizes the promotion of female empowerment, particularly in education and expanding the role of women in the private sector, which is a good first step.

Improving equality of access to education and social norms regarding women in the workplace would have an immediate and profound effect on the Iraqi economy, and as such, should be a foundational consideration for any entrepreneurship policy.

Promoting Entrepreneurship

In addition to the fundamental requirements for a startup's success, many more specific policies are also required to ensure that new ventures are able to reach their full potential.

Legal

The development of legislation specifically for entrepreneurship should be a priority for Iraq. Such a policy should address several key points:

1. Creating a new legal entity for startups that would allow an easier and more affordable registration process than the one in place
2. Improving the mechanisms to resolve insolvency such as bankruptcy protection mechanisms, which was consistently noted by entrepreneurs as an important challenge for doing business.
3. Tailoring laws, policies, and plans from both national and local governments to increase the motivation to create a new business in Iraq, such as tax incentives.

Finance

Access to financing is a major challenge for entrepreneurs in Iraq. While the government does have a grant programme in place (the Tamwil Fund), it is extremely difficult to access.

In addition to the challenges registering a business in the first place, grants are provided through the Central Bank, and then through a private bank which requires the support of a public servant from the government to vouch for the entrepreneur. Because of this, only 6% of the funds have so far been distributed.

The government fund should improve the ease of access, reducing the the number of bureaucratic obstacles to receive a grant. This may also help to reduce the potential channels for corruption linked to the funds.

Additionally, banks requirements should be adapted to support entrepreneurs with lower interest rates. Microfinancing projects supported by public sector policies could also have a major impact.

The improvement of security for investors is key for Iraq's development. Our research indicates that there is significant interest in investing in the country, were the proper institutions in place technological development.

Promoting Entrepreneurship

Education

The skills gap for young Iraqis is an important challenge to the further development of the startup ecosystems in the country. Low enrollment and basic educational attainment is a major issue. Additionally, the educational system is in need of modernisation.

The Iraqi labour force is largely educated to work for the public sector, and there are major gaps in the necessary skills required to participate meaningfully in the modern economy.

Over the long term, curriculum should be adapted to include more technical programmes. In the short term, trainings in cooperation with the private sector may help empower potential entrepreneurs with the tools necessary to start a business, or to support the work of startups already in place.

Mentoring programmes, internships, and educational partnerships with the private sector are all opportunities for ecosystem growth.

In addition, specific programmes facilitating entrepreneurial thinking and empowerment could provide an efficient tool to support entrepreneurs.

Tailor-made initiatives, backed by international development cooperation and the private sector, could cater to the needs of individual entrepreneurs as much as to support organisation. A blended mix of learning opportunities, skills and capacity development, and access to international networks and funding could provide an impactful and sustainable tool in this regard.

One recommended action is the development of an online entrepreneurial education platform with materials and tools to educate entrepreneurs, and trainings in the existing private sector institutions working in entrepreneurship.

Promoting Entrepreneurship

Empowering Women

The role of Iraqi women in society is in a process of transformation, becoming more active with time. The creation of empowerment programmes targeting female entrepreneurs is another area of opportunity in the country. Women largely lack the necessary business skills, training, and mentorship to develop their startups to their full potential.

Courses on business and entrepreneurship for women may improve confidence and encourage women to start businesses, knowing that they have the necessary skills to run their businesses well.

A specific suggestion is the creation of programmes "by women for women," with female mentors and female entrepreneurs helping newcomers to address leadership style, communication style, social responsibility.

Social stigma and traditional social roles play a significant role in the current limitations on female business owners in the country. Shifting cultural attitudes towards having a more favourable view of women in the workplace and as leaders, perhaps through information campaigns featuring successful female Iraqi entrepreneurs, could help to address this.

Finally, improved access to funding for women can allow them start their startup ventures. Women face particular hurdles in accessing funding due to lower rates of property ownership and inequitable inheritance rules in the country. Funds specifically for women can help to overcome these challenges.

Promoting Entrepreneurship

Building an Entrepreneurship Culture

The entrepreneurship culture in Iraq is still in its early stages. The young population has a high unemployment rate, but in general they rely on public sector job opportunities. Transforming the mindset of professionals is crucial to engage young Iraqis into considering the private sector as an employer, or as an opportunity to pursue their own business ideas.

Awareness campaigns or communication campaigns with success stories from Iraqi entrepreneurs can build on interest and support the growing culture. International actors such as GIZ are already making impactful contributions by supporting the creation of co-working spaces, and encouraging the development of a community based on events that expand the networks. There is room for further development of these resources in the coming years.

Building an umbrella organisation could serve to the purpose of advocating for national, regional, and local policies targeting entrepreneurs' needs and giving them a voice and means to influence policy reforms.

The creation of such a new entity could be facilitated and moderated with the support of external actors (such as GIZ and other international NGOs working on the promotion of entrepreneurship) - but ownership and actual implementation should be developed on a local basis.

Here, additional capacity-building, mediation between existing parties, as well as financial support for pilot projects and programmes could be very impactful.

Acknowledgements

We would like to express our gratitude and appreciation to the entrepreneurs and professionals involved in entrepreneurship projects in Iraq for taking the time to provide us with the necessary information and knowledge about startup ecosystems in the country.

We especially thank our interviewees:

Zahra Shah, Re-Coded

<https://www.re-coded.com/>

Hala Taleb Al-Mayahi, M.Phil - UTM and part of the Science Camp Basra

<https://www.hackster.io/hackerspaces/science-camp>

Fadhel Bahaa, The Station

<https://the-station.iq/>

Marwan Ahmed, Karim Tech Company and Entrepreneur

Ameen Hadeed, Five One Labs and Iraq Response Innovation Lab

<https://fiveonelabs.org/>

Randi Barznji, Entrepreneur

<https://www.shopyobrand.com/>

Mamoon Ahmed, Entrepreneur

Thank you to GIZ Iraq's Jochen Zimmermann, Inga Niere, and to GIZ Berlins's Bernadette Hoberg.

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Indicators and Sources

Indicator Name	Source
Workforce constraint	World Bank, Enterprise Survey
Skilled workers	World Bank, Enterprise Survey
Universities	TopUniversity.com; 4icu.org; Own Research For the Missing Data
University Students	TopUniversity.com; 4icu.org; Own Research For the Missing Data; Berlin Business Location Center.
Tertiary education	World Bank - Gross enrollment ratio, tertiary, both sexes
R&D Expenditure	World Bank - Research and Development Expenditure / OECD Database
Labor regulation constraint	World Bank, Enterprise Survey
Graduate salary	Own Research, Berlin Startup Survey
Software developer salary	Payscale.com, Averagesalariesurvey.com
Female Participation	World Bank, Modeled on ILO estimate
Unemployment rate	International Labour Organization, ILOSTAT database.
Female Entrepreneurship	World Bank, Enterprise Survey
Bank loan	Own Research - Enpact Survey
Self-financing	Own Research - Enpact Survey
Business Angel (BA)	Own Research - Enpact Survey
Accelerators and Incubators	Own Research - Enpact Survey
VC funds	Own Research - Enpact Survey
Public funding	Own Research - Enpact Survey
Funding Constraint	World Bank, Enterprise Survey
Loans Rejected	World Bank, Enterprise Survey
Collateral Required	World Bank, Enterprise Survey
Total VCs / PEs	Map of Active VCs in Asia
FDIs Net Inflows	World Bank
Business Angels (total number)	Angel List
Accelerators	Own Research, Expert Consultation
Incubators	Own Research, Expert Consultation
Coworking Spaces	Own Research, Expert Consultation
Technology parks	Own Research, Expert Consultation
Startup Events	Own Research - Enpact Survey
Total Startups	Crunchbase Pro

High Equity Funding Startups (over 5 mil USD)	Crunchbase Pro
High Equity Funding Startups (over 1 mil USD)	Crunchbase Pro
Overall Quality	Own Research, World Economic Forum
Roads Quality	Own Research, World Economic Forum
Railroad Quality	Own Research, World Economic Forum
Ports Quality	Own Research, World Economic Forum
Air Transport Quality	Own Research, World Economic Forum
Air Transport Capacity	World Economic Forum
Water Supply Quality	World Bank, Enterprise Survey
Electricity Access	World Bank, Enterprise Survey
Electrical Outages	World Bank, Enterprise Survey
Pollution Index	Numbeo
Coworking Space Cost	Coworker
Cost of Living	Numbeo
Electricity Quality	Own Research, WeForum
Utilities' Cost	Numbeo
Internet Cost	Numbeo
Mobile Internet Cost	Own Research
Mobile Subscription Cost	Numbeo
Mobile Broadband Penetration	GSMA intelligence
Internet Speed (Download)	Startup Meter Survey and testmynet.com
Internet Speed (Upload)	Startup Meter Survey and testmynet.com
Smartphone Penetration	Multiple sources; see country comments for more details.
Internet Penetration	ITU
Prepaid Subscriptions	GSMA intelligence
Mobile Subscriptions	ITU
Stability	World Bank
Effective Governance	World Bank
Regulatory Quality	World Bank
Democracy Level	The Economist Intelligence Unit's Democracy Index
VAT	World Bank Doing Business Report
Corporate Tax	KPMG Corporate income tax tables

Contract Enforcement	World Bank Doing Business 2017
Resolving insolvency	World Bank Doing Business 2017
Business registration (time)	World Bank Doing Business 2017
Business registration (cost)	World Bank Doing Business 2017
Violent Crime	Economic Intelligence Unit (EIU) analysts
Crime as a constraint	World Bank, Enterprise Survey
Informality as a constraint	World Bank, Enterprise Survey
Bribery Depth	World Bank, Enterprise Survey
Corruption Perception	Transparency International
Corruption Control	Worldwide Governance Indicators
GDP PPP per capita	World Bank
Economy Growth	World Bank
Deposit Interest Rate	World Bank
Capacity Utilization	World Bank, Enterprise Survey (under Performance)
Trade Balance	World Bank
Trade openness	World Bank
Tourism	World Bank
Sister Cities	Multiple Sources
Logistic Performance Index	World Bank, Logistic Performance Index

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The Startup Ecosystem Report Iraq is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). As part of the project „ICT – Perspectives for Modern Youth in Iraq“, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has commissioned enpact e. V. with the implementation of individual project activities.

About **enpact**

The non-profit association enpact was founded in 2013 with the aim of empowering entrepreneurship in emerging and developing countries. enpact supports founders and startups in Africa, Asia, Latin America, and the Middle East through diverse programmes, from the early idea phase until global market entry. enpact academy develops trainings to foster the quality of startup support organisations, and enpact data lab measures framework conditions (such as the startup friendliness of cities), and derives policy recommendations.

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