REPORT

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CLARITY MATTERS

Nabarro Infrastructure Index

Attracting investment

Contents

Introduction

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Investment in infrastructure transcends national boundaries more than ever before. In a global market suffering from severe capital constraints, infrastructure commands and demands international participation. Yet while participants in the sector are prepared to look internationally for opportunities, investment decisions are necessarily affected by national factors.

Investment decisions in infrastructure take varied forms. They are made by governments and regulators, investors, financiers, service providers, technology suppliers and contractors. They include decisions to invest, decisions not to invest or indeed decisions to divest. Participants may focus on direct or indirect investments, mature infrastructure assets, new projects or a mix of both.

The Nabarro Infrastructure Index is a composite index, based on empirical and verifiable sources, which we have aggregated and weighted for application to listed countries to provide what we think is a unique tool to assist in the decision-making process. The Index includes 20 countries representing five major world regions: Asia-Pacific, Europe, Latin America, Middle East/North Africa and North America.

We want the Nabarro Infrastructure Index, for different countries, to:

1. assist in evaluating the attractiveness for investment in infrastructure;

2. benchmark current and predict future relative performance in the Nabarro Infrastructure Index; and

3. identify and encourage improvements in the conditions for investment in infrastructure.

We hope that the Nabarro Infrastructure Index will contribute to positive improvements for the infrastructure sector in terms of identifying best practices and what makes for the most attractive opportunities. In turn, that should assist not only the participants in the sector but, most of all, those nations and their communities who are to benefit from the same.

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The Research

02

Working with Opinium Research, we have developed a robust and unique index which ranks the attractiveness for infrastructure investment of 20 countries around the world.

What we had observed is that our infrastructure clients and contacts were increasingly open to trade or investment decisions in different parts of the globe. The factors behind this are innumerable but include:

- the rise of BRICS and other high-growth emerging countries;
- the growing global demand for infrastructure, particularly in emerging countries;
- emergence of proven technologies; and
- evolution of key sources for capital from across the globe.

With that background, we saw an opportunity to introduce an index that gave a broad-based assessment of the suitability of selected countries for infrastructure investment. We therefore chose to examine nine key indicators in detail as the basis for the Nabarro Infrastructure Index:

1. Credit rating.
2. Credit outlook.
3. Currency volatility.
4. Environmental performance.
5. Ecological sustainability of each country's infrastructure.
6. Innovation.
7. Tax environment/regime.
8. Ease of doing business.
9. Private sector participation in each country's infrastructure market.

While each of these components is important in its own right, investment decisions are made looking at the overall position and taking into account their combined effect. Therefore the Nabarro Infrastructure Index came to exist by grouping and weighting these nine key indicators in such a way as to result in a country achieving a Nabarro Infrastructure Index score and ranking.

In bringing together these various factors we applied a methodology, which included the following:

- Key indicators 1–3 have been combined in a sub-index – see the Composite Credit and Stability Sub-Index.
- Key indicators 4–6 have also been combined in a sub-index – see the Composite Sustainability and Innovation Index – which is a weighted index comprising Yale University's Environmental Performance Index as well as INSEAD Business School, in collaboration with the World Intellectual Property Organisation's Global Innovation Index, of which "Ecological sustainability of country's infrastructure" is a sub-index.
- Key indicator 7 represents a qualitative assessment based on the tax environment on consultancy reports mainly sourced from OECD, PwC, KPMG but also media sources such as Bloomberg, WSJ and The Economist. This results in us ranking the top five and bottom five countries respectively.
- Key indicator 8 comprises the World Bank's ease of doing business index.
- Key indicator 9 takes data from both the World Bank and the European Investment Bank and represents the total anticipated cost of any project at financial close.

Established in 2007, Opinium Research is a full service market research agency with its own research panel of 35,000 UK consumers. Opinium works with organisations across multiple geographies, using a wide variety of research methodologies to uncover commercial and social insights which deliver robust findings to guide clients towards accurate and strategic business and policy decision making.

The Index Results Table

		Sub-index based on percentiles	Sub-index based on percentiles	Percentile	Percentile	Percentile	
Rank	Country	Composite Credit and Stability Index	Composite Sustainability and Innovation Index	Tax Environment/ Regime	Ease of doing business	Private Participation	INDEX score
1	UK	66	93	26	95	74	165
2	Australia	52	53	79	89	79	161
3	France	59	77	79	68	84	161
4	US	52	54	26	100	63	147
5	Germany	59	72	79	79	53	138
6	China	72	44	26	37	68	127
7	Brazil	25	46	26	11	95	110
8	India	27	12	26	5	100	110
9	South Africa	28	14	79	58	58	108
10	Russia	26	19	0	21	89	106
11	Israel	56	65	26	63	26	98
12	UAE	40	26	79	74	26	97
13	Malaysia	53	61	0	84	16	96
14	Italy	34	77	26	42	47	95
15	Qatar	40	23	26	53	26	79
16	Spain	25	77	0	47	5	53
17	Philippines	9	53	0	0	42	48
18	Indonesia	34	23	26	16	11	42
19	Egypt	0	25	0	26	21	35
20	Jordan	3	21	26	32	0	24

The Top Five

> "The Sustainability and Innovation Index sees the UK come out top, with large scores in both innovation and sustainability. European countries dominate the top of the ranks with Spain, France, Italy and Germany coming next in the list. India comes bottom of the list."

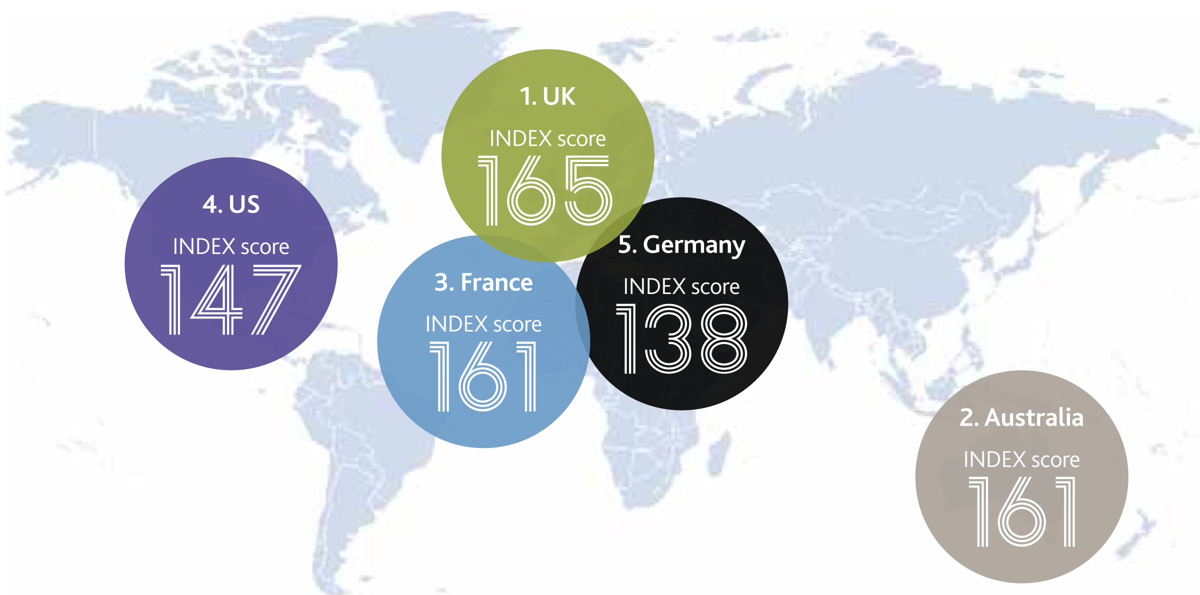
1. UK

The Nabarro Infrastructure Index ranks the UK as the most attractive infrastructure investment environment based on chart-topping sustainability and innovation, one of the highest scores on 'ease of doing business' (including a business-friendly legal framework), comparatively strong credit and currency and a relatively high degree of private sector participation in infrastructure projects.

Whether an investment decision is to invest in mature infrastructure assets or to be involved in any new projects, the global appetite to do so is very readily apparent. A noticeable feature of the current UK market is that capital awaiting investment in mature assets exceeds the assets available. Funding for new projects has been particularly challenging not just as a result of the UK government being openly austere, in the aftermath of the global financial crisis.

If recent policy initiatives are fully implemented, the UK infrastructure sector should be a net winner. In particular:

- The National Infrastructure Plan of November 2011 identified £250bn of investment in over 500 projects, with two-thirds of investment to come from the private sector. The UK Government identified 40 priority investments.
- The 2011 Autumn Statement also announced the Pension Infrastructure Platform (PIP), the Treasury's plan to encourage UK pension funds to invest around £20bn in the UK infrastructure market. By February 2013, there were ten signatories to PIP and the fund has raised around £1bn in soft commitments.



“The UK, like most of the European countries listed, lags behind the rest of the world spending only 6% of its GDP on infrastructure, compared to a huge 12% by top spender Qatar. China and South Africa follow, investing 10% of their GDP and India invests 9%.

This is not a surprising statistic given that Western Europe and the USA have established, if rickety infrastructure, and the rest of the world is catching up.”

- The introduction of the UK Guarantees Scheme in July 2012. The Scheme identifies £40bn of projects that may be suitable for government guarantees across transport, utilities, energy and communications.
- The 2013 Budget included an Infrastructure Delivery Update which highlighted a number of current initiatives, including an additional £3bn capital expenditure as well as identifying discrete projects where the UK Guarantees Scheme will provide support.

Looking ahead, we see the UK's ability to remain at the top of the Nabarro Infrastructure Index as being under pressure. The factors that we see as having a potential impact include:

- Currency volatility has become more pronounced and arguably less predictable.
- While the UK is considered to be a quality borrower, the UK was recently downgraded by Moody's from its Aaa credit rating to Aa1 in February 2013.
- The UK is perceived as a less benign tax environment for infrastructure. The Confederation of British Industry has lobbied to extend the capital allowances regime to promote infrastructure investment. The Government appears to have concurred with this approach, but, to date, only for identified enterprise zones involved in offshore wind projects.
- Amongst other key findings in the KPMG/CBI 2012 survey, an overwhelming 97% of firms say the UK's planning system is a barrier to delivering new infrastructure.

2. AUSTRALIA

Australia is widely regarded as a benign and progressive market which, due to a combination of a natural resources boom and prudential controls, avoided the extremes of the global financial crisis. From an infrastructure perspective, Australia has relatively significant infrastructure investment needs and demands, driven by factors including its geographical scale, urban density, linear growth trajectory and favourable terms of trade.

In terms of key indicators in the Nabarro Infrastructure Index, Australia scored consistently well in the various categories. Surprisingly, the Composite Sustainability and Innovation Index was slightly lower than we had anticipated, despite Australia's competitive levels of technology, research and development, due to factors such as high reliance on non-renewable energy. Currency volatility may also be an issue for Australia as the Australian Government decides whether to follow a policy which tracks the Australian Dollar as a trade and/or defensive currency.

The country has a well established PPP market and government has been progressive in seeking foreign investors, including into infrastructure, by initiatives such as Managed Investment Trusts, which are designed to reduce taxation on distributions to foreign investors.

Looking ahead, we anticipate that Australia will be a strong challenger for the top position, particularly if macro-economic and currency conditions continue such that it is perceived as an embedded safe haven.

3. FRANCE

France has a strong PPP market, with the government's dedicated PPP unit, 'Les Partenariats Public-Privé', overseeing the introduction of new legislation and facilitating PPP projects. France also has an enviable tradition of private industry participation in the infrastructure sphere, particularly in energy and research and development. Unsurprisingly then, France excelled in key indicators for Sustainability and Innovation, as well as in levels of private participation.

French President Francoise Hollande has reaffirmed his commitment to the PPP model, despite some opposition from within his party, and has publicly committed to housing, thermal renovation, broadband and digital networks as well as transport. Around 80% of the PPP projects are anticipated to be procured at local level which suggests a nationally co-ordinated but decentralised delivery approach.

Looking to the future it appears that there is a trend gap developing between the performance of the French and German economies. In February, France reported its worst four months since 2009, whilst the German economy has reported sustained growth. Unless that trend is reversed, the relative attractiveness of France is likely to be reduced.

“The US spends most on transport ($151bn), ICT/comms ($70.15bn), and China the most on utilities ($33bn). Jordan spends the least in transport and ICT/comms and Malaysia on utilities.”

4. USA

The USA scored consistently well in relation to key indicators in the Nabarro Infrastructure Index, notably with a chart-topping ease of doing business score. The nation is considered to be a best quality borrower, and its credit outlook continues to be regarded as stable, notwithstanding credit blips at state level and annual political machinations around the “fiscal cliff”. As with other currencies, the US Dollar has been more volatile following the global financial crisis.

The US has a dominant private sector, although not so as to be chart-topping. The US market for investment in public sector projects has typically been discrete but we anticipate this growing. Known as the P3 market, this appears to be gathering momentum.

As in the UK, the federal government has recognised the need for significant infrastructure investment, with President Obama calling for the passage of a $50bn federal spending plan for infrastructure projects. Commentators suggest that, as in the UK, cuts in corporate tax rates would help increase returns on private infrastructure spending, and regulatory reforms need to be introduced to remove barriers to investment.

Despite not gaining a chart-topping position, the sheer scale of US involvement in the sector with both domestic projects and overseas projects, cannot be ignored. In the future, we anticipate the US remaining in the top echelon of the table and trending towards a strengthening Nabarro Infrastructure Index score.

5. GERMANY

Germany completes the top five of the Nabarro Infrastructure Index, reflecting a strong and stable economy. Germany has a favourable ease of doing business score but this is off-set by a lower level of private participation. We anticipate that levels of private participation will trend upwards in the medium to long term.

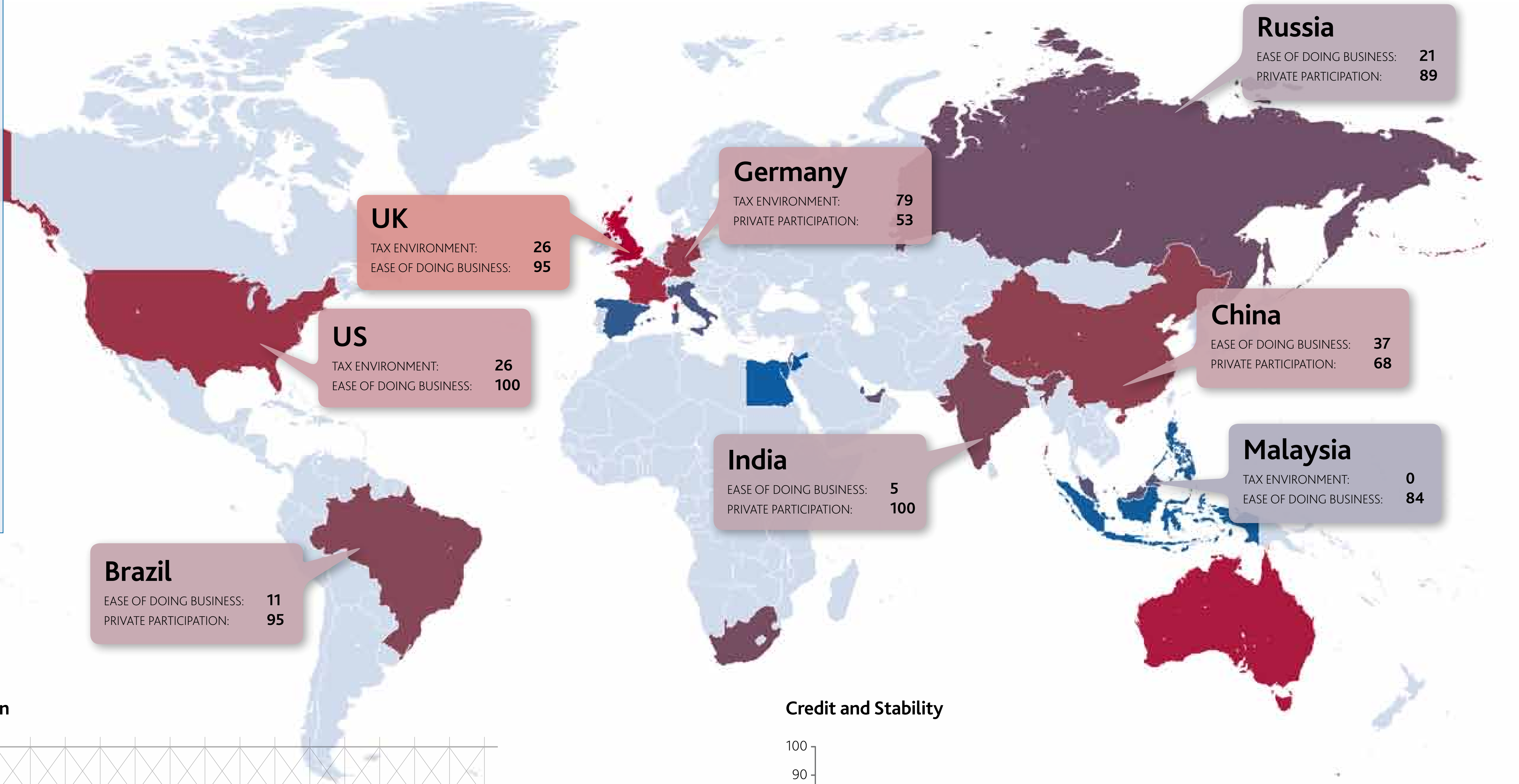
Germany’s government-owned development bank, KfW, plays a significant role in funding infrastructure projects in Germany. Some might suggest that its dominance may limit or constrain the opportunities for private investment. The market for private funding for infrastructure is small compared to the size of the German economy but there are signs that the market is growing. The German PPP market is comparatively small, in part reflecting public opinion which is generally opposed to this procurement method.

Given the comparative analysis between Germany and France, we see Germany as being a permanent entrant in the top echelon of the Nabarro Infrastructure Index in the years to come.

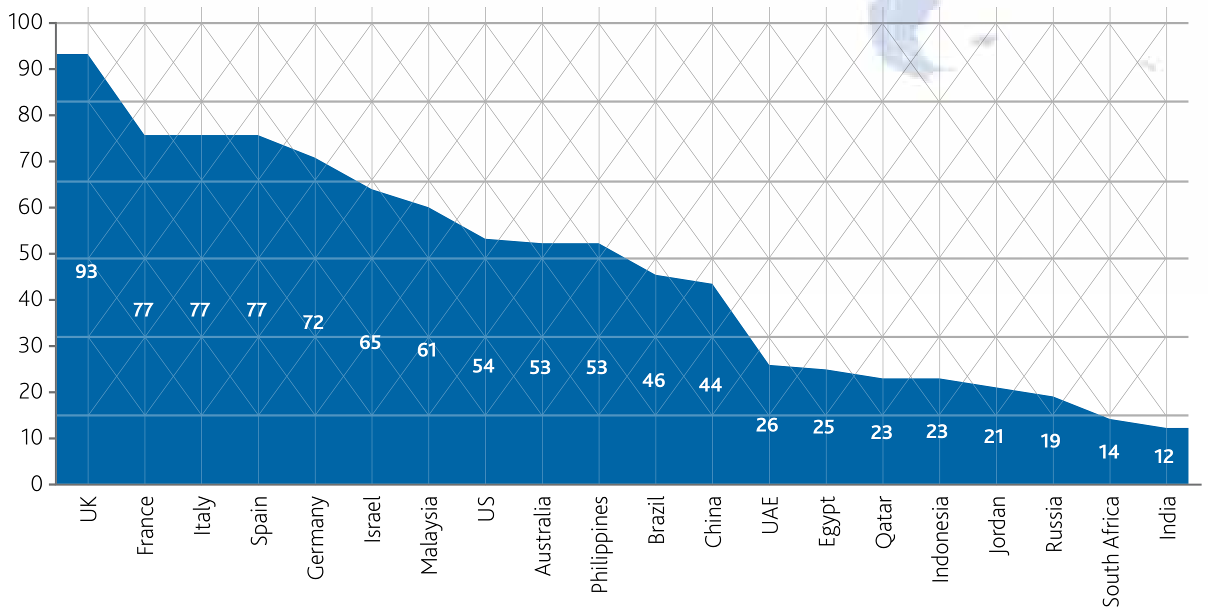
Nabarro Infrastructure Index

INDEX Score

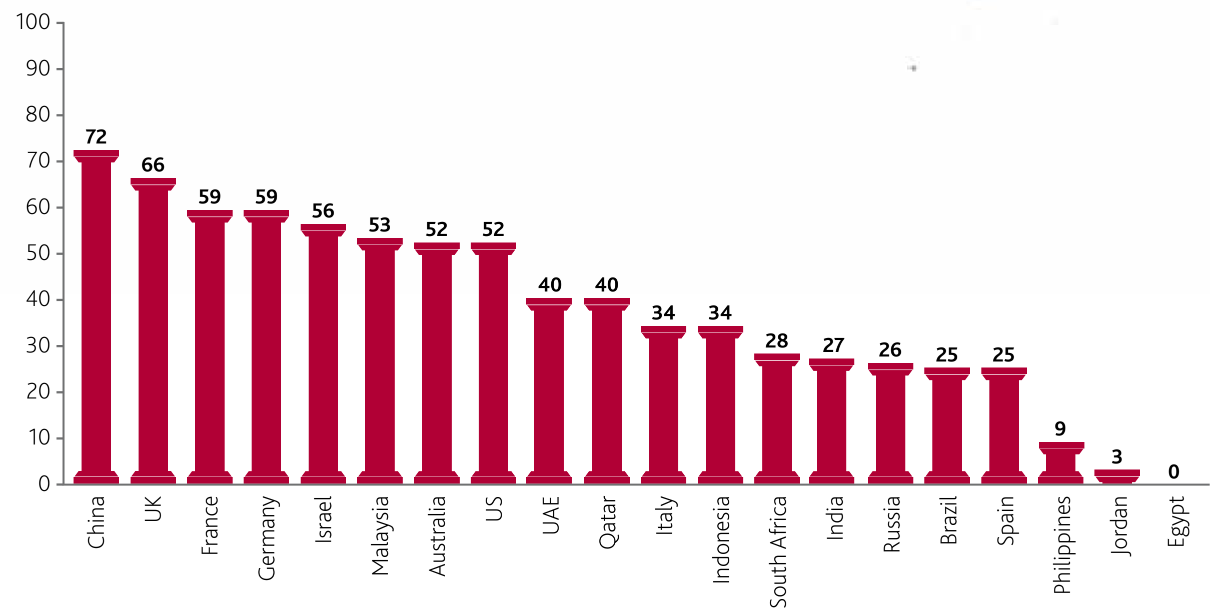
1. UK (165)
2. Australia (161)
3. France (161)
4. US (147)
5. Germany (138)
6. China (127)
7. Brazil (110)
8. India (110)
9. South Africa (108)
10. Russia (106)
11. Israel (98)
12. UAE (97)
13. Malaysia (96)
14. Italy (95)
15. Qatar (79)
16. Spain (53)
17. Philippines (48)
18. Indonesia (42)
19. Egypt (35)
20. Jordan (24)



Sustainability and Innovation



Credit and Stability



Europe

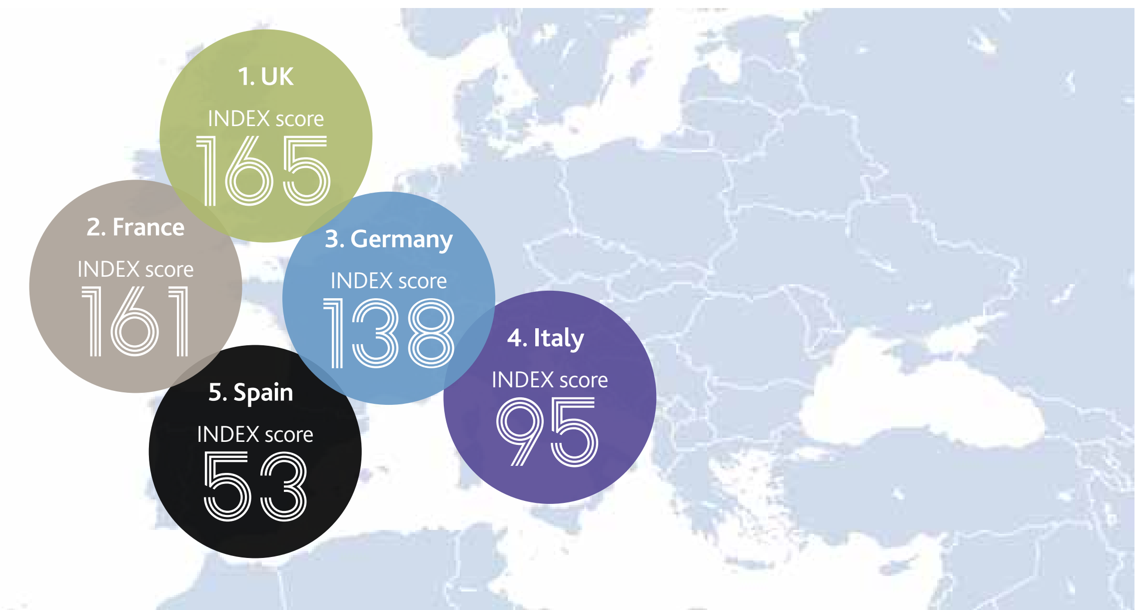
The Eurozone has a polarised performance, particularly following the credit crunch and its aftermath. Therefore while the UK, France and Germany are in the top five in the Nabarro Infrastructure Index, Spain and Italy are noticeably down the order.

This is in part explained by low rankings in terms of credit and stability. Levels of private participation are also particularly low in relation to Spain and ease of doing business is markedly lower than some other Euro countries.

At the pan-European level, in June 2012 France, backed by Germany, Italy, France and Spain, proposed a plan to kick-start growth in the EU through €130bn of investment in infrastructure projects.

Between 2003 and 2011, Spain initiated over 500 PPP projects worth around €50m. Spain had plans to spend around a further €17bn on infrastructure investments through its Extraordinary Infrastructure Plan (PEI). The plan has, however, undergone a number of revisions, with projects considered to be unaffordable or having marginal economic benefit being cancelled.

Italy has higher levels of private participation and both Spain and Italy have good scores in the key indicator of Sustainability and Innovation. With greater stability in financial and political terms, we would expect to see marked improvements in the attractiveness of those countries for infrastructure investment.



BRICS

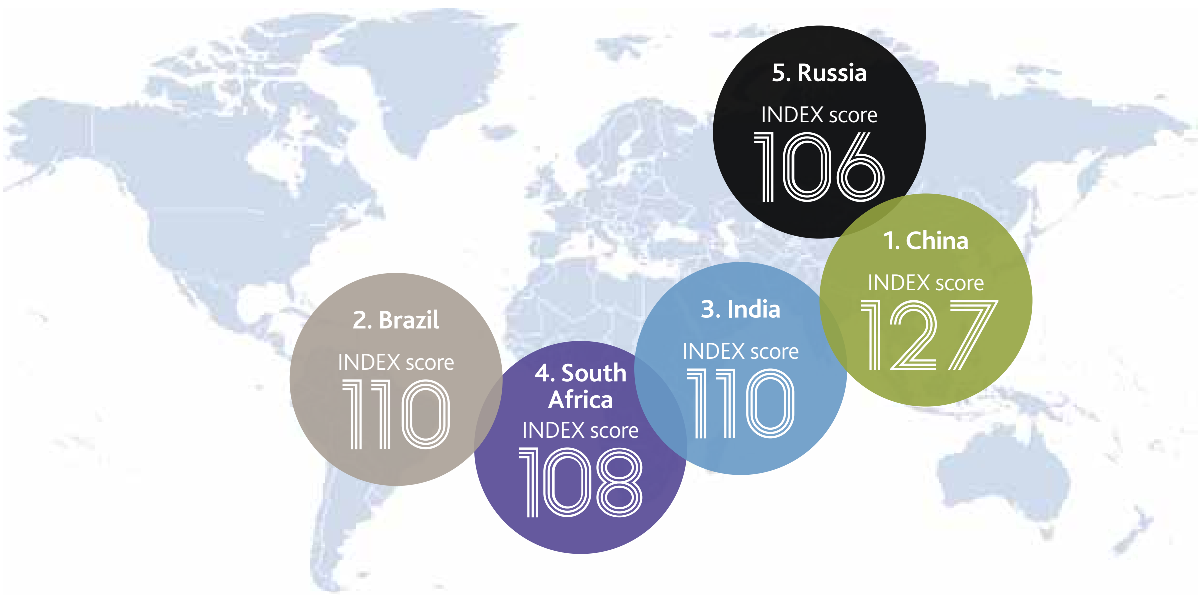
The second largest group of similarly ranked countries after the five top includes all five of the BRICS nations. China leads the BRICS group, though it falls to overall sixth rank in the Nabarro Infrastructure Index, despite its good credit rating and stability, as it scores poorly on ease of doing business.

While it is widely agreed that the BRICS nations have massive growth potential, albeit one that is moderating, each one of them has significant regulatory and economic constraints which continue to hamper foreign investment into infrastructure projects. This is reflected in rankings lower than those of economies with far lower growth rates.

Within the BRICS countries, China has the most developed infrastructure market. Brazil, Russia and India have massive infrastructure deficits and funding requirements and all three have huge infrastructure spending programmes.

BRAZIL

- Brazil has an ambitious $66bn stimulus plan which includes a significant commitment to upgrading the country's infrastructure. It recently announced a $26bn programme to expand and dredge public ports and to improve landside access over the next five years.
- Rio de Janeiro is a main focus of activity as the city prepares for the 2014 World Cup and 2016 Olympic Games. One of the larger projects is Transolímpica, the improvement of the city's transport network.
- Private sector involvement in infrastructure projects is reported to be falling and the Brazilian government has introduced a number of measures to reverse this trend such as reducing financial transaction taxes on overseas borrowings and introducing a new lower rate for subsidised loans from the government's development bank, BNDES.



RUSSIA

- A historic lack of investment in Russia's infrastructure means that it is struggling to support its rapidly growing economy, in particular the transportation of materials from its resource-rich far eastern regions.
- An estimate by the US Russia Business Council put Russia's infrastructure needs during the current decade at up to $1tn. The sector needs a hefty injection of funds which will inevitably require domestic and international private sector investment. The Russian government has put substantial effort into developing a legal framework to facilitate and attract private capital to large-scale infrastructure projects.
- However as the sector grows, each project brings with it a new set of issues, such as inconsistency between international and Russian law, matters of security for project lenders, and a lack of basis for fixed sum construction contracts under Russian law. Corruption in the construction industry and the construction tender process (currently tenderers have to meet a government fixed price rather than submitting their own proposal) will also need to be addressed.

INDIA

- India's government is planning $1tn worth of infrastructure investment over the five years to 2016.
- It has started several initiatives to accelerate the flow of long-term financing for infrastructure projects, including the launch of infrastructure development bonds to provide a means of investing in major infrastructure projects.
- Despite a potentially attractive investment market, questions remain over the political will to carry out policy reforms needed to create a stable investment environment. Reform bills to address issues such as land acquisition have stalled and politicians have balked at introducing unpopular measures such as rail fare increases. Corruption is also perceived to be a major concern for international investors. With an election in 2014, it is unlikely that there will be any significant reforms in the immediate future.

CHINA

- China is the BRICS country that has invested most in its infrastructure over the past 10 years but its growing economy and population means significant investment is still needed. Private finance will be needed to fund the scale of infrastructure investment planned in China over the next decade, with rail, gas-related and airport projects high on the government's agenda.
- For foreign investors, there are perceived to be high barriers to entry, particularly around the regulatory and legal frameworks which are difficult to negotiate. There has been deregulation in niche areas, such as wind energy and water, where the government requires foreign expertise. The country's system of doing business, known as guanxi, relies on connections and local knowledge, making the market difficult for foreign players to gain entry.

SOUTH AFRICA

- In October 2012, South African President Jacob Zuma announced that his government would spend US$97bn over the next three years to upgrade roads, improve access to utilities and boost the country's mining sector. He added that South Africa would invest $462bn on infrastructure projects over the next 15 years, financed by PPPs, public funds and tariffs.
- The government has recognised that it needs foreign investment to complete its investment programme and President Zuma has invited the European Union, USA and its fellow BRICS countries to partner with South Africa.
- Foreign investment in South Africa is treated in the same way as domestic investment, and, in order to encourage private investment the government has introduced tax incentives into its PPP system to boost investment, though a relatively high corporation tax rate and complex tax litigation regime are seen as off-putting by international investors.

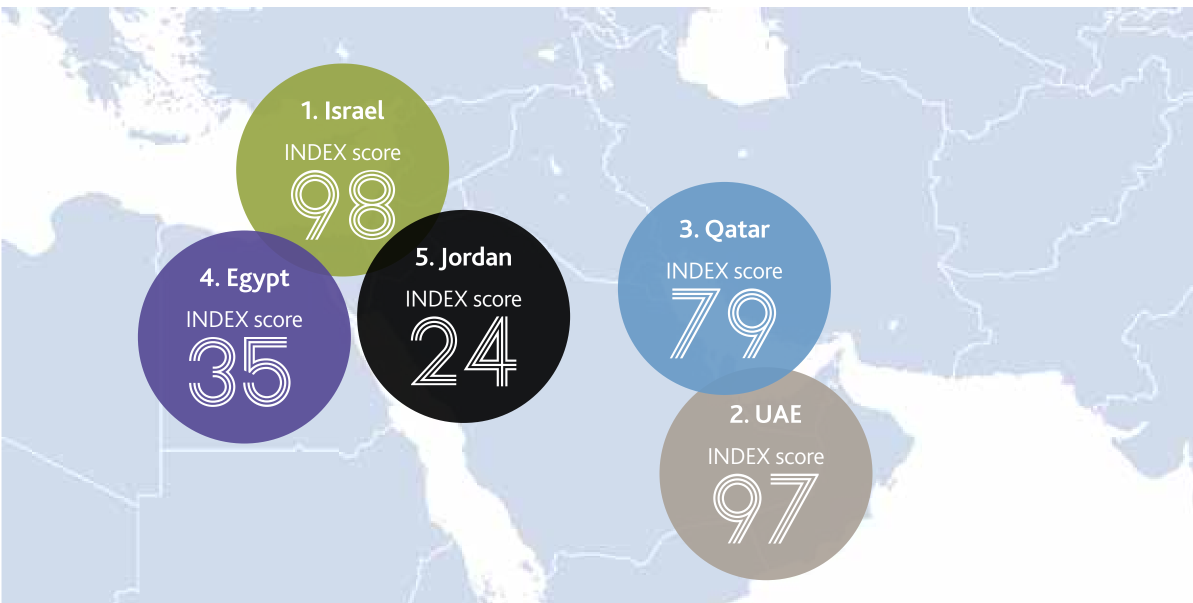
Middle East and North Africa

"Infrastructure projects in the Middle East were ranked highly in KMPG's list of innovative global infrastructure projects. Projects include social housing, hospitals, waste management facilities and a metro rail system. The Princess Noura Bint AbdulRahman University for Women won the education category and was ranked in the top 10 projects in the world."

The MENA countries, perhaps surprisingly, did not manage to achieve any listings in the top half of the Nabarro Infrastructure Index.

The most attractive in the region was Israel in 11th, followed immediately by UAE 12th and Qatar in 15th. Jordan and Egypt, although very different in matters such as scale, followed that group. The wealth of some of the Middle Eastern countries means that they are not as dependent on foreign investment as other countries, which may limit investment opportunities. However the PPP model is going to be used in some projects and the region is a growing PPP market.

We anticipate that investment opportunities will inevitably be assessed in the context of the Arab Spring and broader geopolitical factors in the region. There is cause to think that these factors weigh more heavily on key indicators than deserved, at least in some instances. Despite these concerns, the Middle Eastern countries spend comparatively more on infrastructure, as a percentage of GDP, than the Europeans and Research Venture has estimated the total value of infrastructure projects in the Middle East at around $408bn as of 2012.

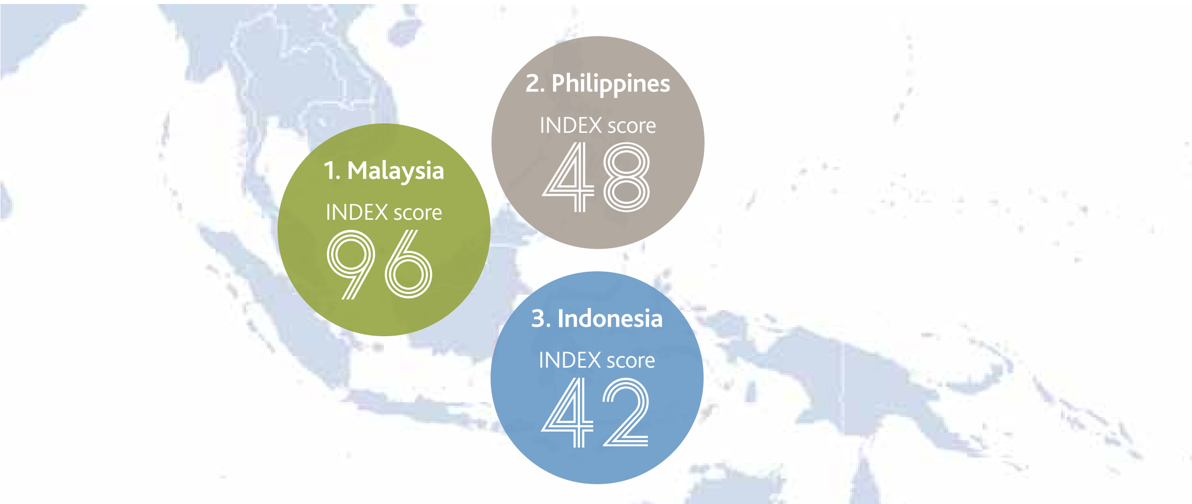


The Arab Spring had shifted the emphasis to social infrastructure projects with particular emphasis on energy, healthcare, and sustainable water supply. Other key points include:

- Saudi Arabia and Qatar are considered to be the markets offering the best value investments, while the UAE accounts for the majority of the infrastructure projects in the region.
- Qatar is spending comparatively the most on infrastructure, spending 12% of its GDP in preparation for its hosting of the 2022 World Cup.
- Jordan is developing the Disi Water Conveyance Project, a $1.2bn pipeline which will carry water next year to the capital, Amman, from deep underground sources in southern Jordan, which the country shares with Saudi Arabia.
- One example of the grand-project infrastructure schemes in the Middle East is the creation of more than 2,000km of railways linking the six oil-rich countries of the Gulf Co-operation Council, at an ultimate cost of $60bn.

Asia

- Apart from the BRICS countries of China and India, the balance of Asian countries in the Nabarro Infrastructure Index have mixed outcomes in terms of key indicators and rankings.
- Malaysia is held back in the Nabarro Infrastructure Index by a lack of private participation in infrastructure projects, an unfavourable tax environment and a perception that "the economic situation can affect finance". It also has a fairly low credit rating, leaving it in 13th place. However, it ranks highly in 4th place for ease of doing business compared to the other Asian countries which all rank in the bottom third. A 10-year $444bn investment programme was announced by the Malaysian government in 2010, with significant invest in the power sector. The country is considered to have a stable investment platform for foreign investors but is vulnerable to a downturn in its economy.
- The Philippines and Indonesia feature as 17th and 18th respectively. The Philippines are spending 8% of GDP on infrastructure and Indonesia slightly lower in percentage terms at 6%.
- Indonesia has a strong potential pipeline of infrastructure projects but the country is viewed as a risky investment market and infrastructure investment has fallen. Development of the infrastructure sector is being hampered by concerns about political stability and corruption, a slow rate of regulatory reform and concerns over excessive bureaucracy and inflexible legal structures. Presidential elections in 2014 will create further uncertainty in the market.



Methodology

The Index weightings were determined based on our assessment of their relative importance. That is not to say, of course, that these weightings will be true for each and every situation. While we are not disclosing the detailed methodology and weightings used; to help with any adaptation for use, users may find the following helpful:

1. **Private Participation:** We made a conscious decision to uprate the weighting of this key indicator. On one level, this is derived by recognition that we, as a service provider, are ourselves private participants and rely on private participation as part of an active infrastructure sector. That said, we do see a clear correlation between private sector participation in infrastructure and performance. Equally, less emphasis would be placed on this key indicator if an investment decision was to be affected by it and there are justifiable reasons to explain a lower private participation rate, particularly if the trend is towards greater private participation.

2. **Tax Environment/Regime:** Comparing tax regimes is inherently problematic. For all nations in the Nabarro Infrastructure Index, there will be ongoing competing interest amongst personal and corporate tax regimes, as linking into consolidated revenue, provision of public services and the like. For the countries listed in the Nabarro Infrastructure Index we have qualitatively assessed the top five and bottom five regimes in infrastructure. This approach would need re-evaluation were we to increase the number of countries in the Nabarro Infrastructure Index.

3. **Relativities between Countries:** In seeking to maintain relativities between countries, we tried to avoid unfair comparators, particularly between developed and emerging countries. We therefore looked to apply weightings to recognise stronger business environments and credit ratings, wherever occurring, but also to recognise efforts to provide a stable and positive macro-economic, regulatory and business environment open to private participation. The Nabarro Infrastructure Index therefore represents a "comparison amongst peers" approach.

NABARRO

CLARITY MATTERS

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