



Policy recommendations for improving tech entrepreneurship ecosystems

A comparative report on focus countries - 2018



OC&C
Strategy consultants

Commissioned by 

Introduction of the Tech Entrepreneurship Study

Section 01



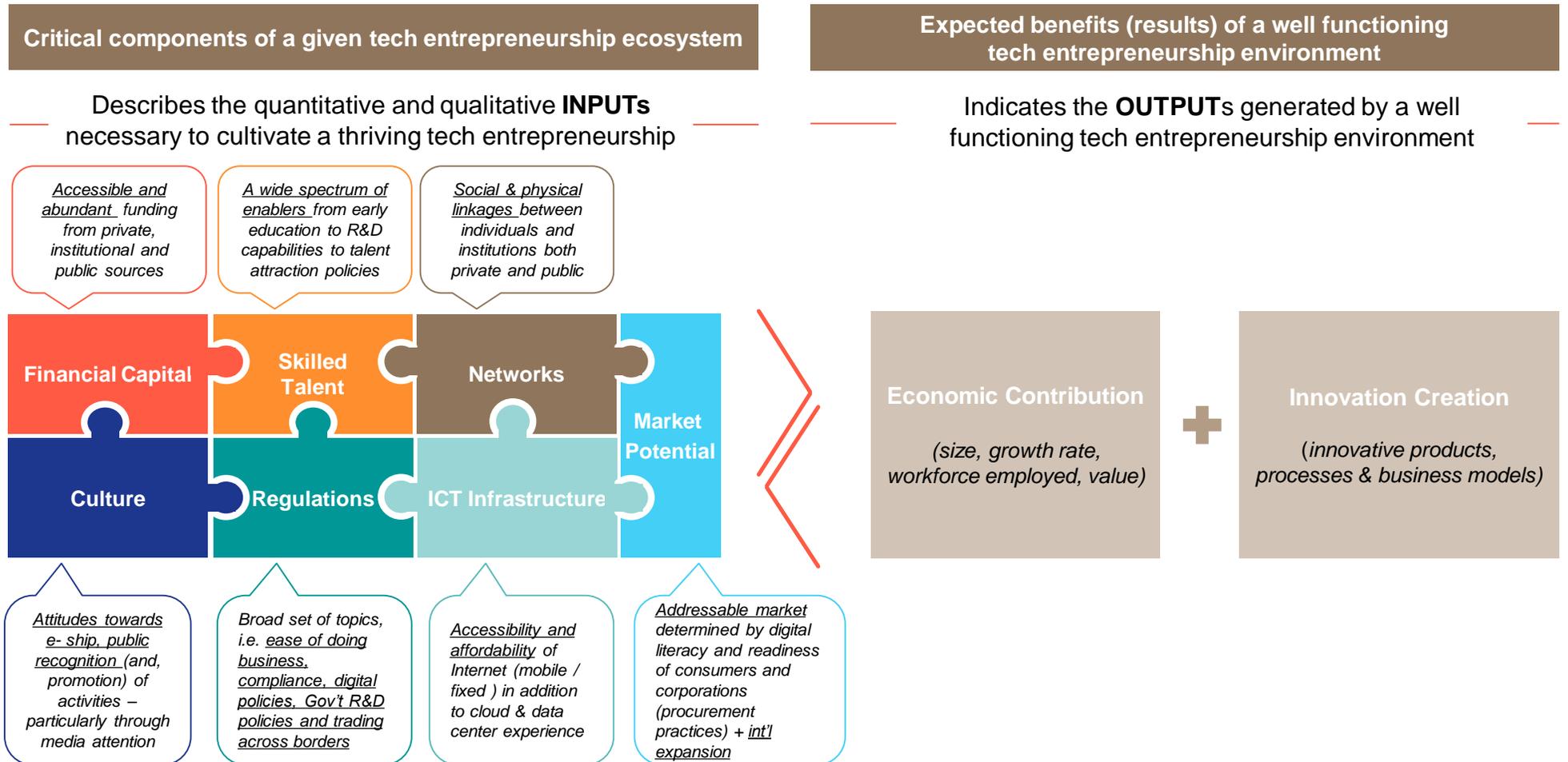
The core objective of this study was to identify factors that contribute to tech e-ship success in a given country and develop recommendations to further develop such environments

An Overview of our Approach



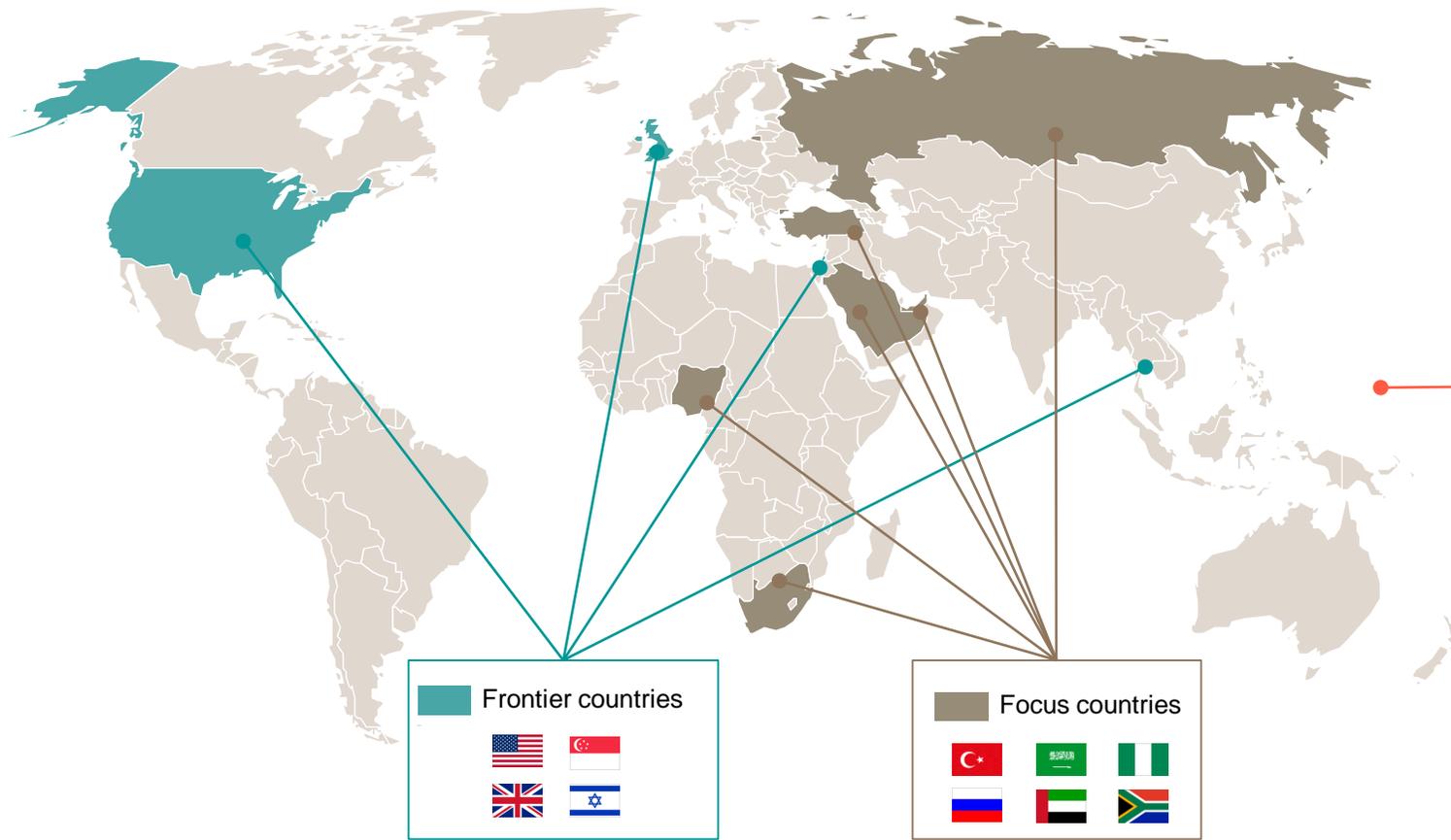
Creating an environment which offers tangible (and, attractive) economic results and innovation creation are critical for strengthening tech entrepreneurship ecosystems

OC&C's Framework For Assessing Tech Entrepreneurship Success



Our assessment put USA, Singapore, Israel and UK at the top of the list in terms of tech entrepreneurship success – where success is defined as cultivating a reliable/consistent tech e-ship market environment

Frontier countries in tech entrepreneurship



Successful countries have reached the point where they are able to inherently receive economic advantage of tech ecosystems:

- a naturally working market filter for screening best practices
- A reference to identify improvement areas and set performance targets
- point to applicable approaches which could be leveraged

Each focus country is also assessed against a peer set of countries with comparable characteristics or geographic proximity



Focus Countries at a Glance

Section 02



Focus countries are predominantly highly populated, sizeable economies that have grown significantly but, recently experienced a contraction

Focus Country Macroeconomic Highlights (I /II)

	Russia	Turkey	KSA	Nigeria	UAE	S. Africa
GDP (USD)	1,283 B (12)	857 B (17)	646 B (20)	406 B (27)	349 B (30)	294 B (39)
GDP growth, CAGR 2009-13 (USD-based)	15%	10%	15%	15%	11%	5%
GDP growth, CAGR 2013-16 (USD-based)	-18%	-3%	-5%	-8%	-4%	-7%
GDP per capita, 2016 (PPP adj. USD)	27 K (52)	25 K (57)	55 K (12)	6 K (127)	68 K (8)	13 K (89)
Population (millions)	143 (9)	80 (19)	32 (41)	186 (7)	10 (94)	55 (25)
Consumer expenditure as a % of GDP	53%	60%	43%	81%	59%	60%

1. The rankings in parentheses are according to IMF

Source: World Bank, IMF (Latest available figures between 2014-2016 are shown for each country)

OCC IP -Tech E-ship Ecosystem in Focus Countries - Comparative Look -v1 | © OC&C Strategy Consultants 2017



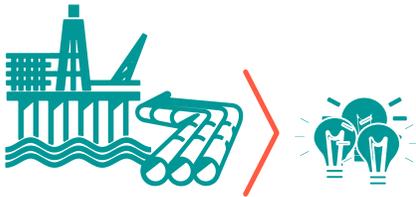
Focus countries have similarities and they all publicly mention tech e-ship as an important vehicle to support future growth, diversification and job creation

Focus Country Macroeconomic Highlights (II/II)



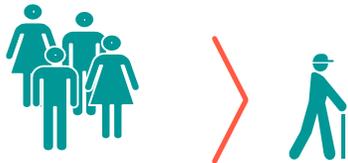
A low SME contribution to the economy

- The economic output of **Russia, South Africa, United Arab Emirates (UAE) and the Kingdom of Saudi Arabia (KSA)** is directly connected to large-scale public and/or private enterprises
- In **Nigeria and Turkey** there is greater SME and micro-enterprise participation in the economy



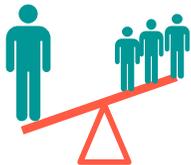
Commodity-driven economies

- **Russia, Nigeria, the KSA and the UAE** have high dependence on oil and gas exports



Young and dynamic population

- There is an urgency for these countries to create employment opportunities for their growing workforce
- The **rate of people who will be entering workforce** (aged 15-19) **significantly outweighs those who will soon be leaving** workforce (people aged 55-59)
 - Factors are highest for **Nigeria** with 1 to 4.5, **S. Africa (2.6)**, **KSA (2.2)**, **Turkey (1.8)** and **UAE (1.5)**

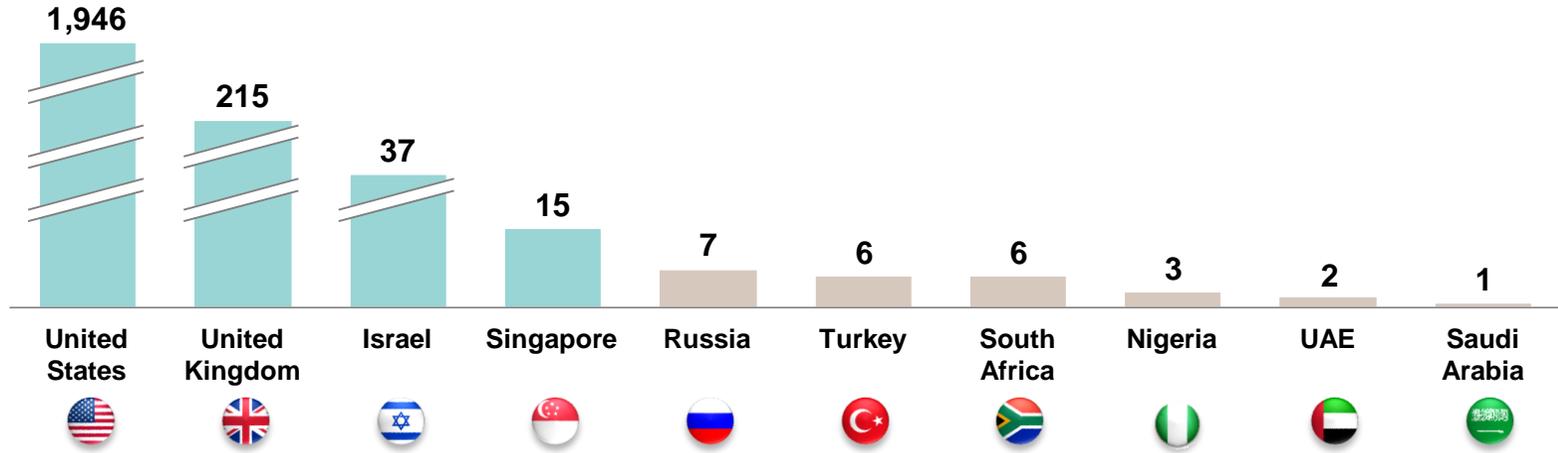
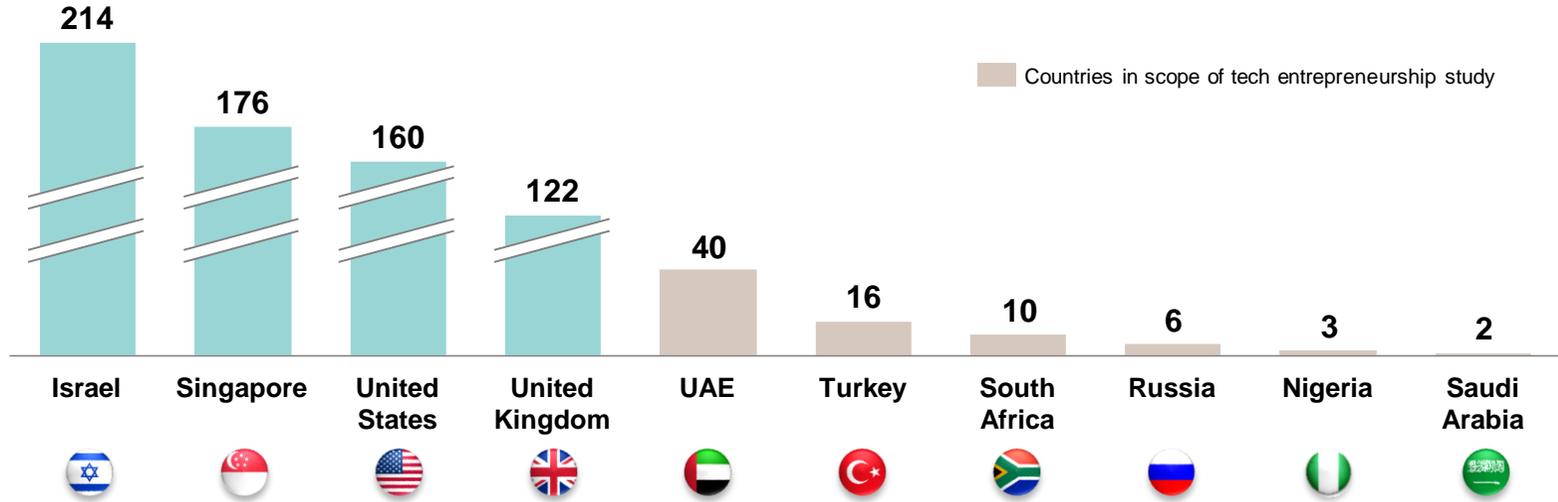


Uneven distribution of income

- The **high GINI coefficients of South Africa and Nigeria (63.1 and 48.8, respectively)** imply that addressing income inequality is an important goal for both of those countries

Focus countries demonstrate less than ideal results in tech entrepreneurship output indicators...

Tech Entrepreneurship Outputs – Economic Contribution (I / III)



Source: OC&C "A comparative report on tech entrepreneurship ecosystems in focus countries -2018"

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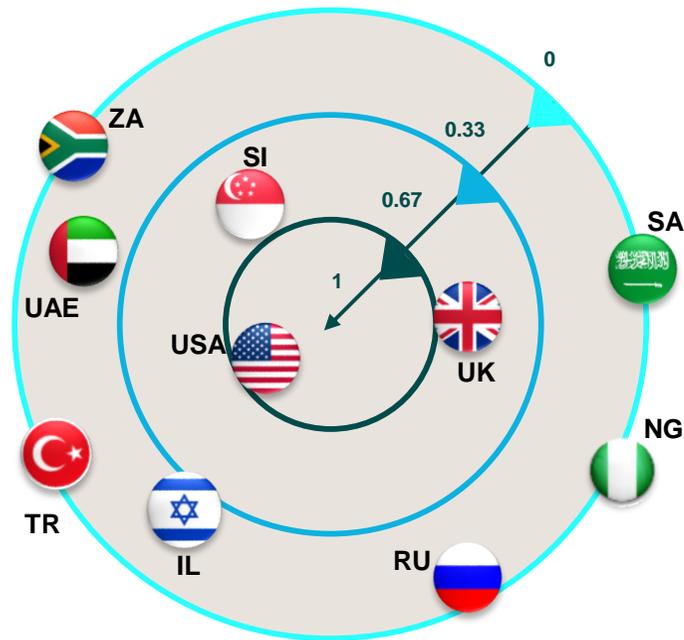


... and, there is considerable room for growth *vis-a-vis* frontier countries in order to realize tech entrepreneurship's economic potential

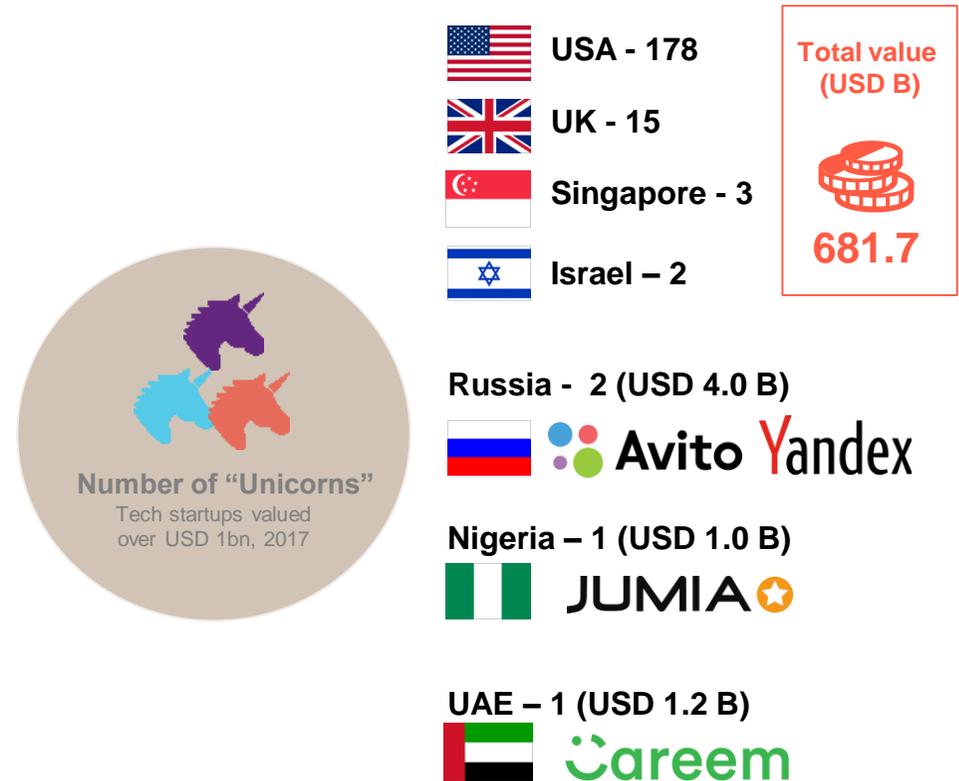
Tech Entrepreneurship Outputs – Economic Contribution (II / III)

Knowledge sectors' contribution to the economy

ICT & High-tech exports, international data flows and IP receipts
(1=highest, 0=lowest)



Ability to create globally recognized “Unicorns”¹



¹ Unicorns in tech-related categories are taken into consideration
Source: OC&C “Tech Entrepreneurship Ecosystem in Turkey” report

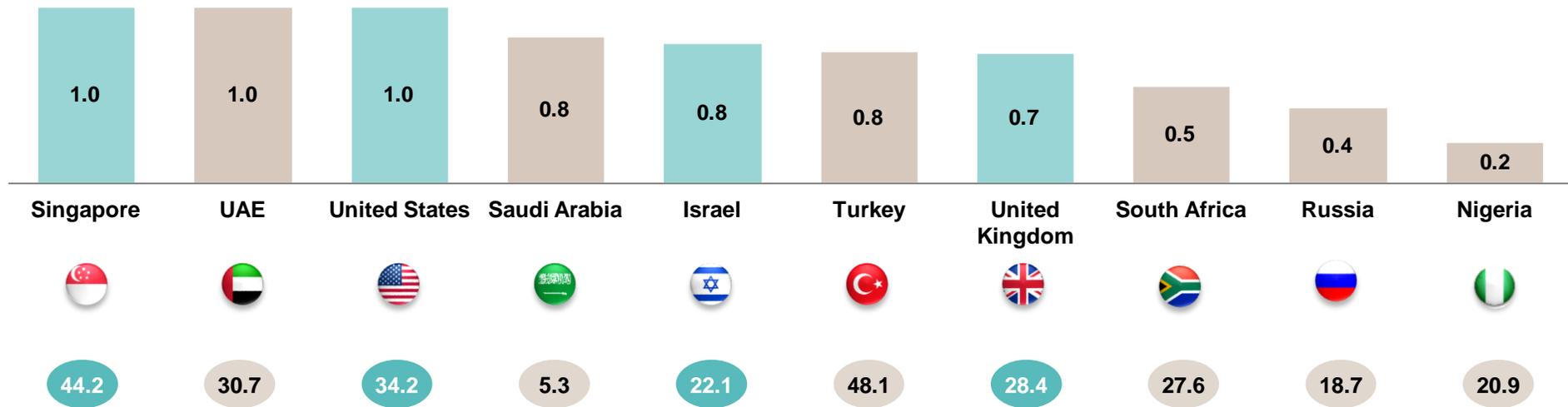


Within focus countries, UAE, KSA and Turkish entrepreneurs project the highest aspirations for the future

Tech Entrepreneurship Outputs – Economic Contribution (III / III)

Entrepreneur's growth aspiration score

A scoring based on percentage of entrepreneurs with a sophisticated growth strategy aspiring to grow at least 50% in the next 5 years and attract VC funding (1=highest, 0=lowest)



High job creation expectation (% of entrepreneurs)



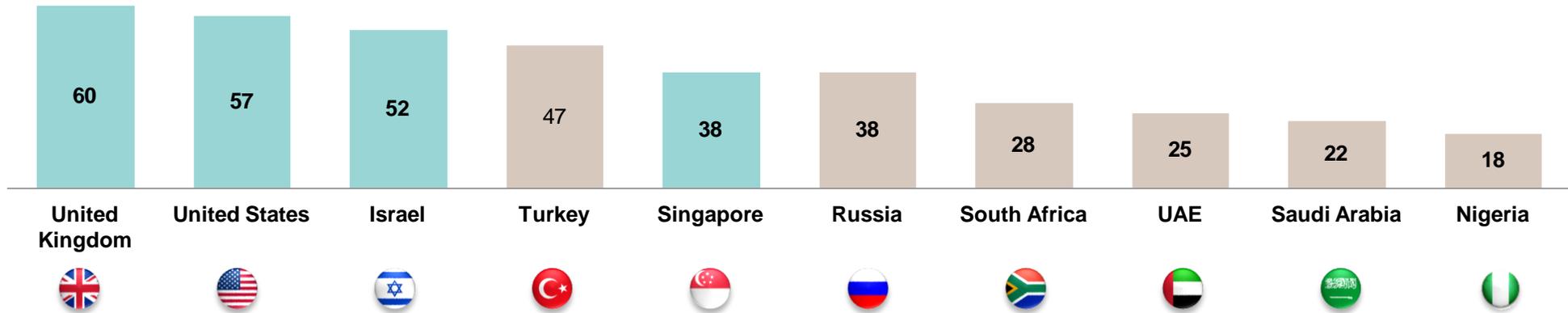
■ Countries in scope of tech entrepreneurship study

Innovation creation is crucial output of tech entrepreneurship with implications beyond domestic market; innovation effects global development

Tech Entrepreneurship Outputs

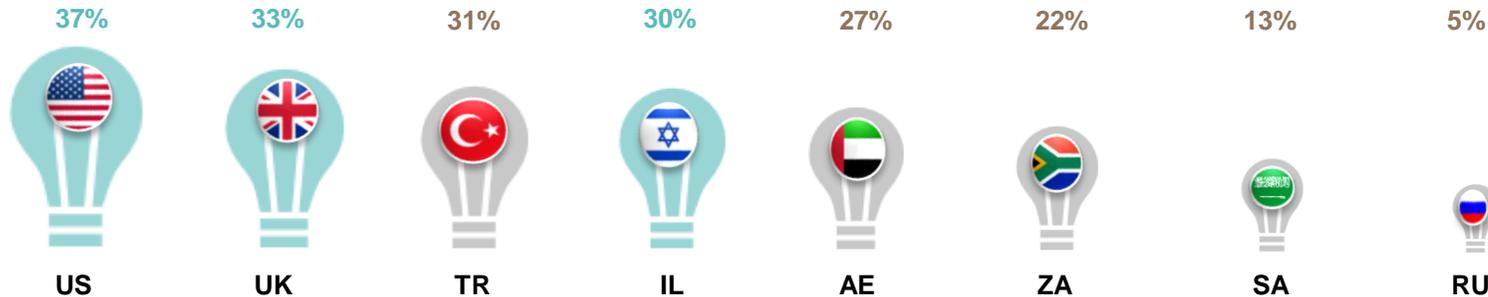
Innovative output density

The abundance of knowledge creation and intangible assets in a country (out of 100)



Entrepreneurial innovation creation

Rate of entrepreneurs involved in new product or service creation



■ Countries in scope of tech entrepreneurship study

Insights into Ecosystem Components in Focus Countries

Section 03



In general, the ecosystems in focus countries are at very early stages of development and backed up by *some* government initiatives and programs

- Ecosystems are mainly dominated by startups that have “localized” proven business models in advanced markets
- They are mostly concentrated in the countries’ business capitals (i.e. Istanbul, Moscow, Dubai) with the exception of South Africa and KSA
- Governments are giving knowledge based sectors and tech entrepreneurship pivotal roles in their strategic visions ¹ and aiming to jumpstart activities by various support programs
- Some reoccurring problems observed in government efforts in the focus countries were:
 - harmonization of different efforts among government bodies,
 - setting targets, monitoring results, and continuously revising programs with ecosystem feedback,
 - a lack of knowledge and expertise in tech entrepreneurship among those responsible for carrying out programs and regulations

There were common challenges faced in the focus country ecosystems and some good government tech entrepreneurship facilitation practices that could give others inspiration

1. Turkey’s ‘Entrepreneurship Strategy and Action Plan’, Russia’s ‘Go Russia’, Nigeria’s ‘National ICT Roadmap’, South Africa’s ‘National Integrated ICT Policy’, KSA’s ‘National Transformation Program 2020’, and UAE’s ‘Vision 2021’



Financial capital



Securing funding is a major hurdle in all ecosystems

Focus country government initiative examples:

- TR** *Business Angle Law* – Accreditation of angel investors and provision of tax relief

- ZA** *12J Venture Capital Companies*—collect funds from individuals or institutions and invest in startups and provide LPs with tax advantages

- KSA** *Sizeable government backed funds* – seed capital to accelerators and university programs or matching funds of corporate investment arms

- KSA** *Alternative markets and deal rooms* – alternative venues for entrepreneurs to attract
- NG** equity easier
- TR**

- RU** *RVC providing IPO support to tech startups*

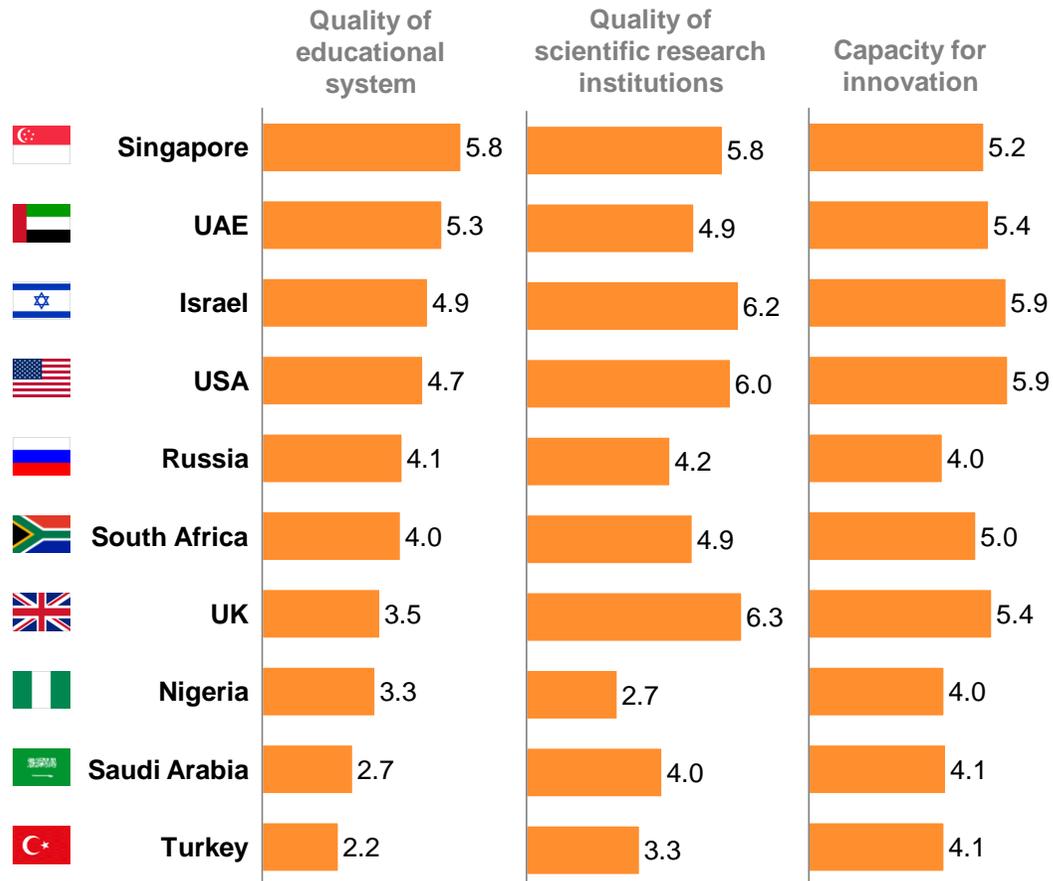
		Venture capital activity	Availability of early stage funding	Accessibility of startup investors
	Singapore	\$\$\$\$\$ 4.5	 16	 64
	Israel	\$\$\$\$\$ 4.1	 12	 82
	USA	\$\$\$ 2.7	 12	 25
	UK	\$\$ 1.2	 12	 30
	UAE	\$\$ 1.3	 4	 8
	Turkey	\$ 0.1	 1	 2
	Russian Fed.	\$ 0.1	 1	 2
	S. Africa	\$ 0.1	 1	 2
	Nigeria	\$ 0.1	 1	 1
	Saudi Arabia	\$ 0.0	 1	 1

VC investments
(as % of GDP, 2016)

No. of seed rounds
(per mn urban pop, 2016)

No. of investors
(per mn urban pop, 2016)

Rankings of Countries in Different Skilled Talent Metrics
1=lowest 7=highest



Skilled talent

STEM skills are not strong enough to yield abundant talent

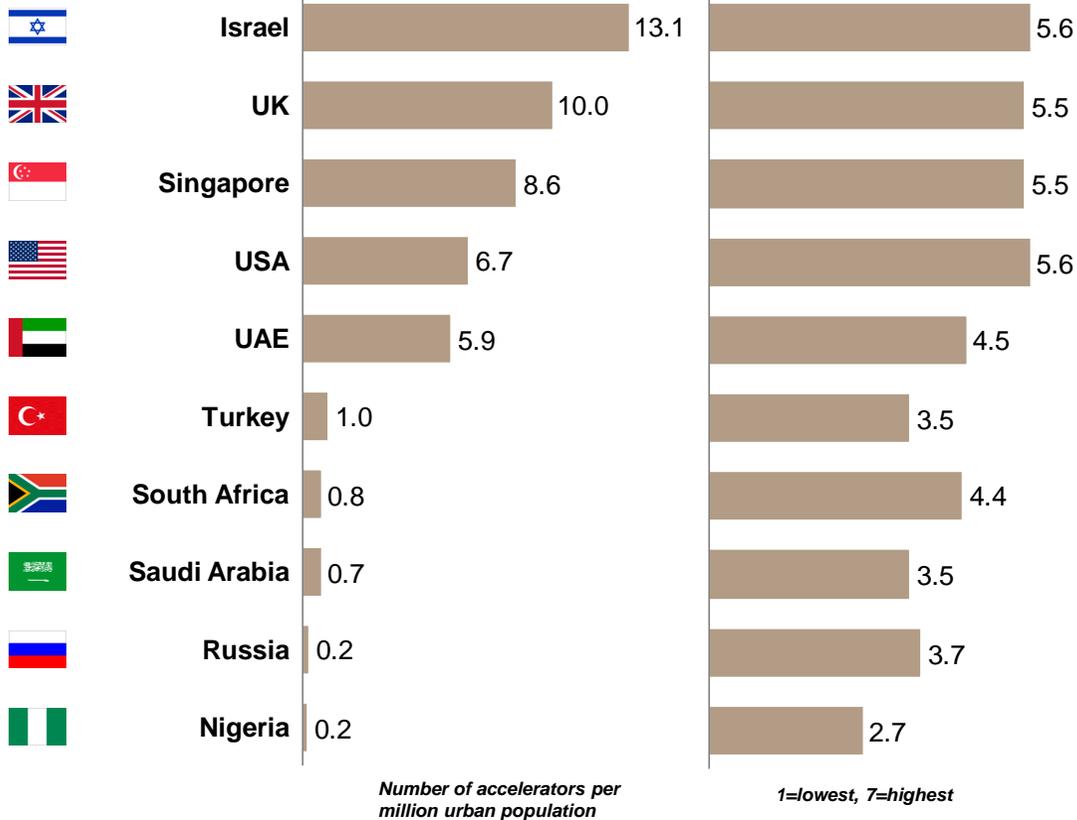
No systematic entrepreneurship training at schools

Lack of explicit migration policies regarding foreign skilled talent

Focus country government initiative examples:

RU *Superior STEM education and greater involvement in innovation* – historical legacy is carried forward

UAE *Investment in high quality business education*
KSA – partnerships with reputable int'l business schools and entrepreneurship programs



Source: F6S, World Economic Forum, OC&C analysis

Networks



Need for continuously evolving support mechanisms and mentorship

Focus country government initiative examples:

- ZA** *Support network engineering* – private enterprises contribute 3% of their income to fund accelerators and incubators under BEE program

- UAE** *Collaborate with global support institutions and corporates* – leverage knowhow and network of mentors. Use corporate challenges to involve entrepreneurs in solution generation

- RU** *Incentivize tech transfer offices* – anchored in universities TTOs help IPs and research get commercialized

- RU** *Establish self sufficient innovation hubs* – i.e.
- KSA** Skolkovo Innovation Center and King Abdulaziz City of Science & Technology



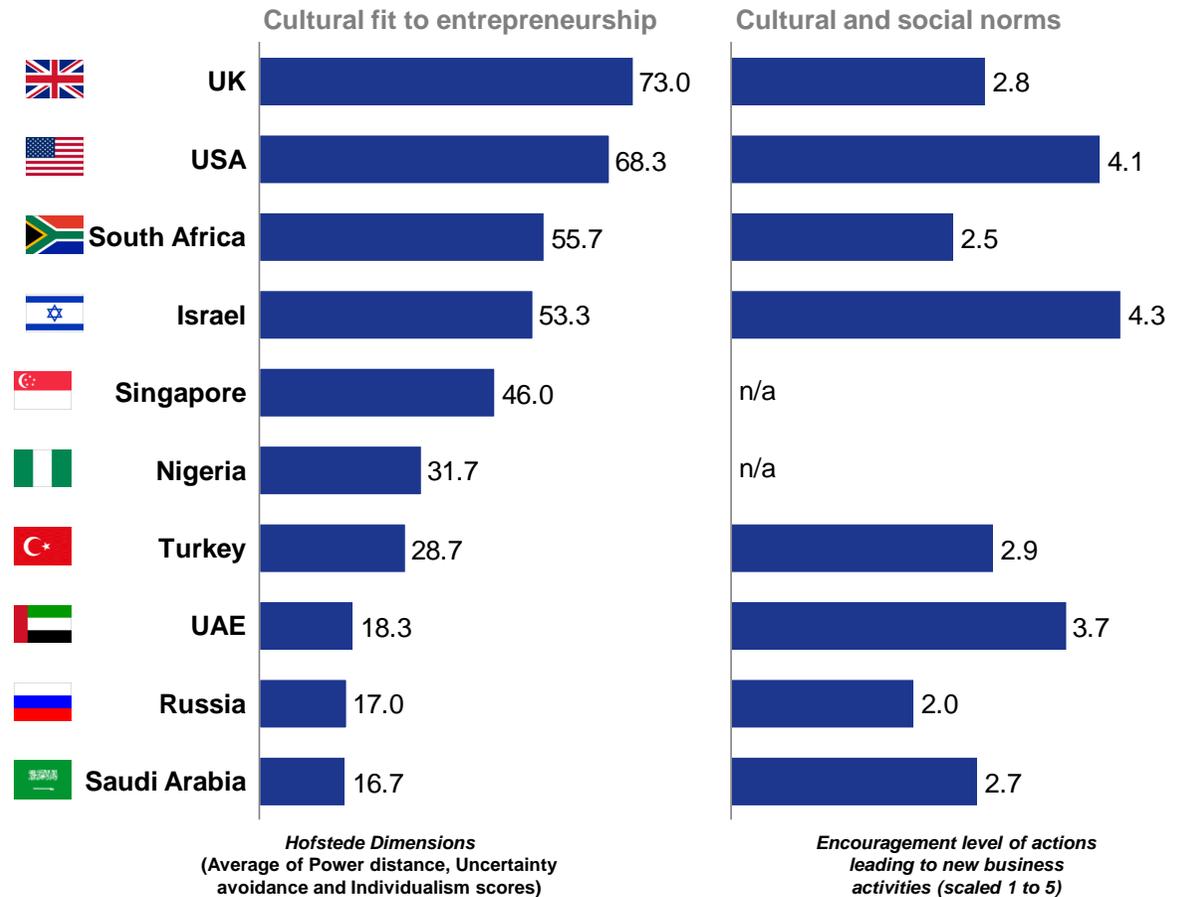
Culture

There are some cultural challenges but all gov'ts promote tech entrepreneurship

Focus country government initiative examples:

KSA *Involvement of highest authority in delivering the message* – Crown Prince Muhammed Bin Salman underlining the importance of tech e-ship for KSA's future

UAE *Creating a multinational culture* – though not specifically intended for tech e-ship, work culture in Dubai, is built around a multinational mindset that is fitting for innovation and collaboration



Regulations



More focus on easing business establishment and less on end to end consideration for all stakeholders' needs

Digital policies are work in progress; personal data protection gets most attention

All introduce R&D initiatives

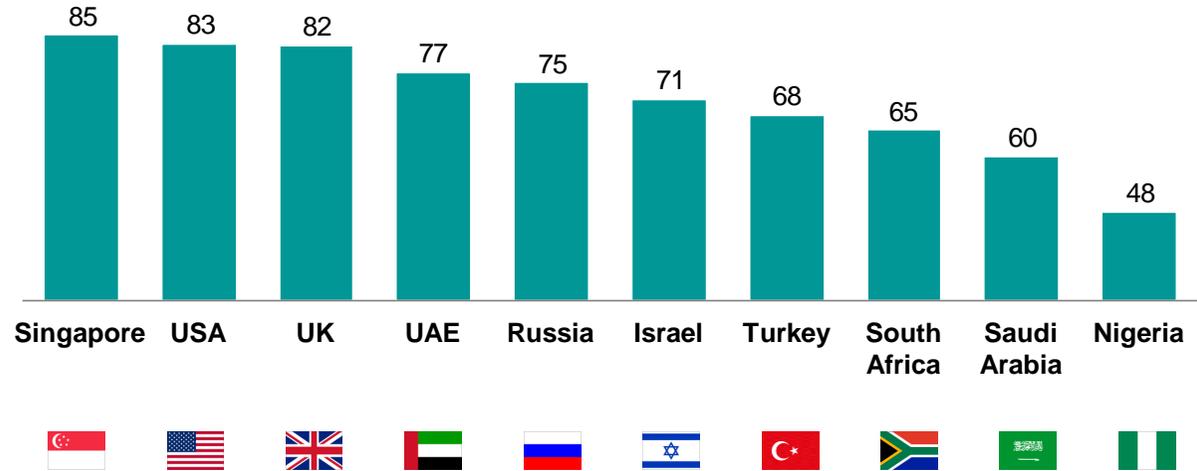
Focus country government initiative examples:

UAE *Introducing investor friendly legal frameworks* – two new free zones operating with legal frameworks similar to BVI and Cayman

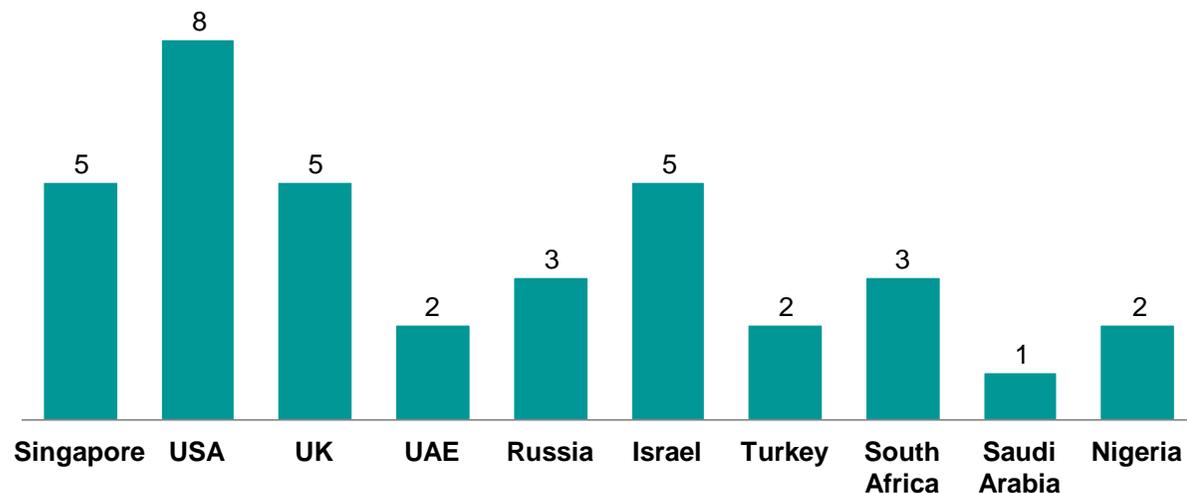
ZA *Stay in accordance with international guidelines* – both to a greater degree are parties to int'l treaties and incorporate them in local regulations

ZA *Monitor policy results and adherence* –
KSA scorecards for private sector and KPIs for ministries and public offices

Ease of doing business (0= lowest, 100=highest)

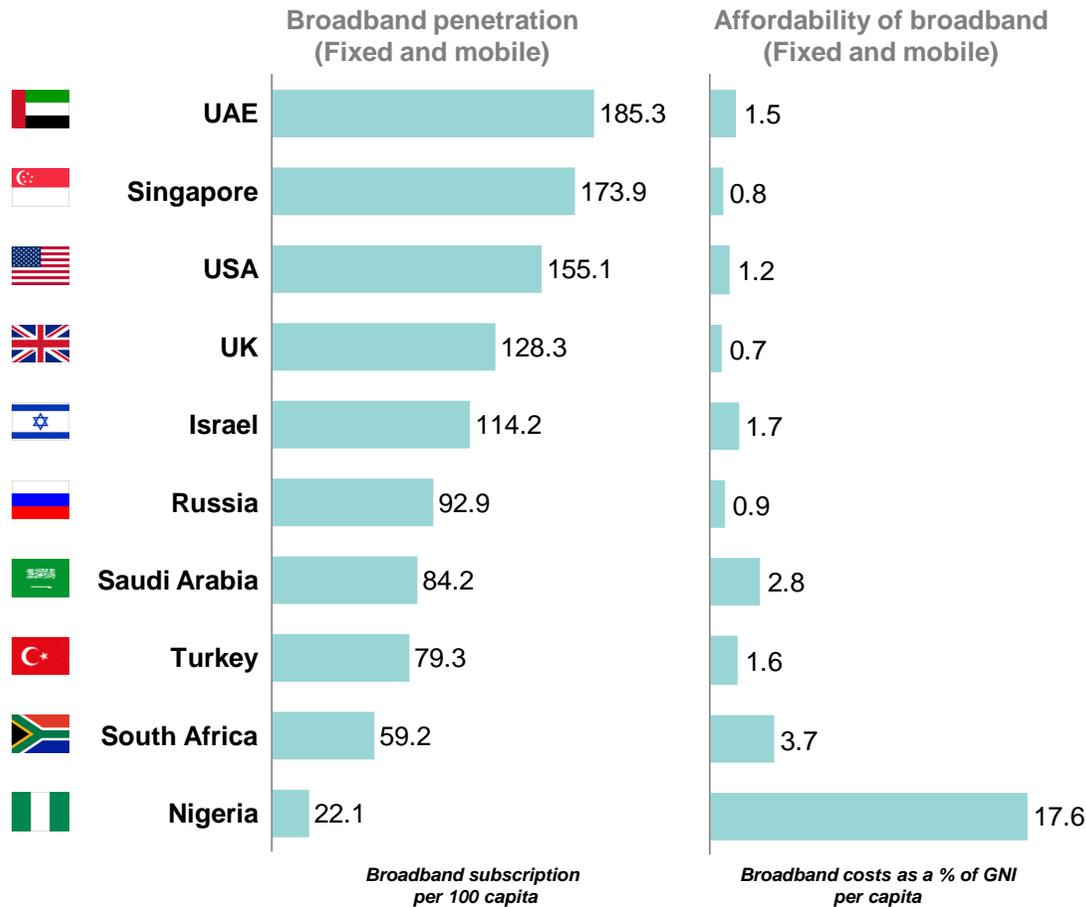


Cloud migration of companies (1= lowest, 10=highest)





Focus countries, except for Nigeria and South Africa, have strong ICT infrastructures



Focus country government initiative examples:

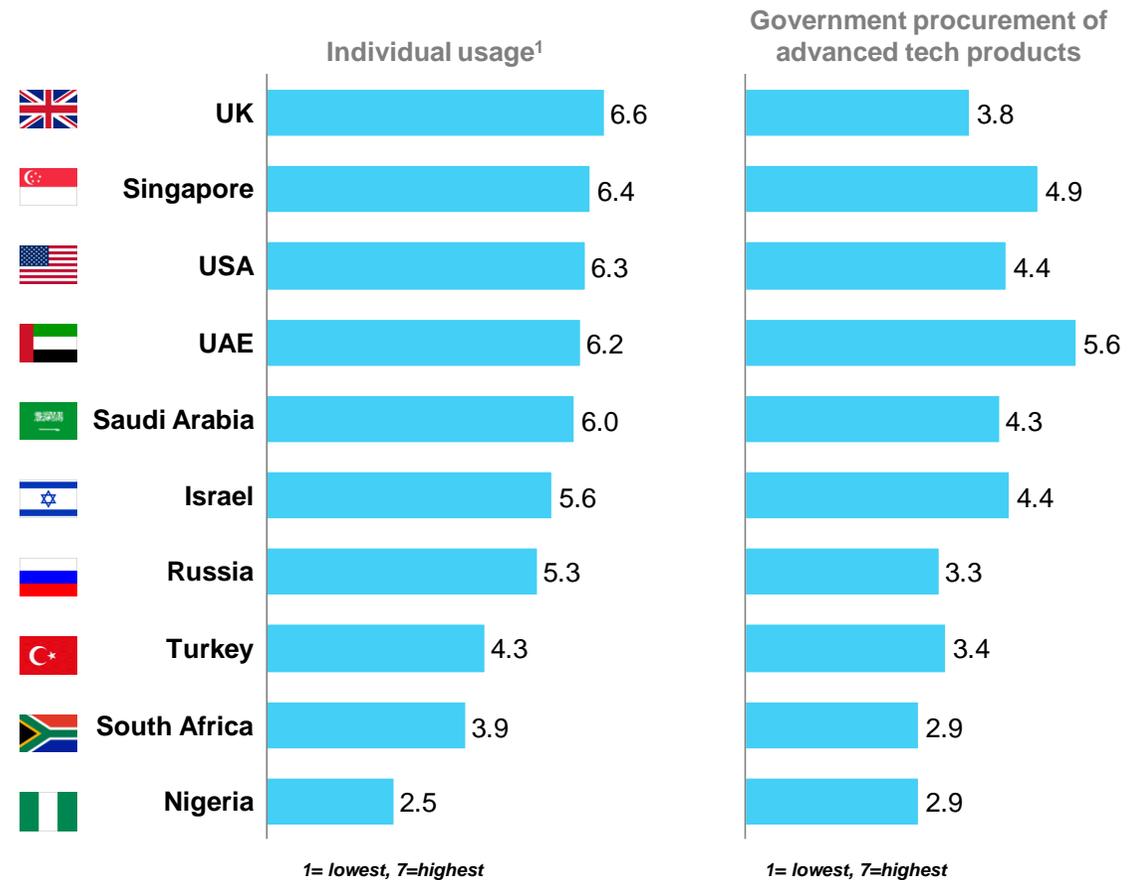
UAE *Focus on achieving higher levels of connectivity in selective regions*



Local addressable markets pose a constraint to reach the scales to be globally competitive

Focus country government initiative examples:

ZA *Encouraging private sector to procure and collaborate with startups* – black empowerment scorecard for companies entice private sector to foster inclusive procurement strategies



1. Individual usage measures the level of diffusion among a country's population, using mobile telephony penetration, Internet usage, personal computer ownership, and the use of social networks

Source: World Economic Forum, OC&C analysis

Key takeaways for policy design

Section 04



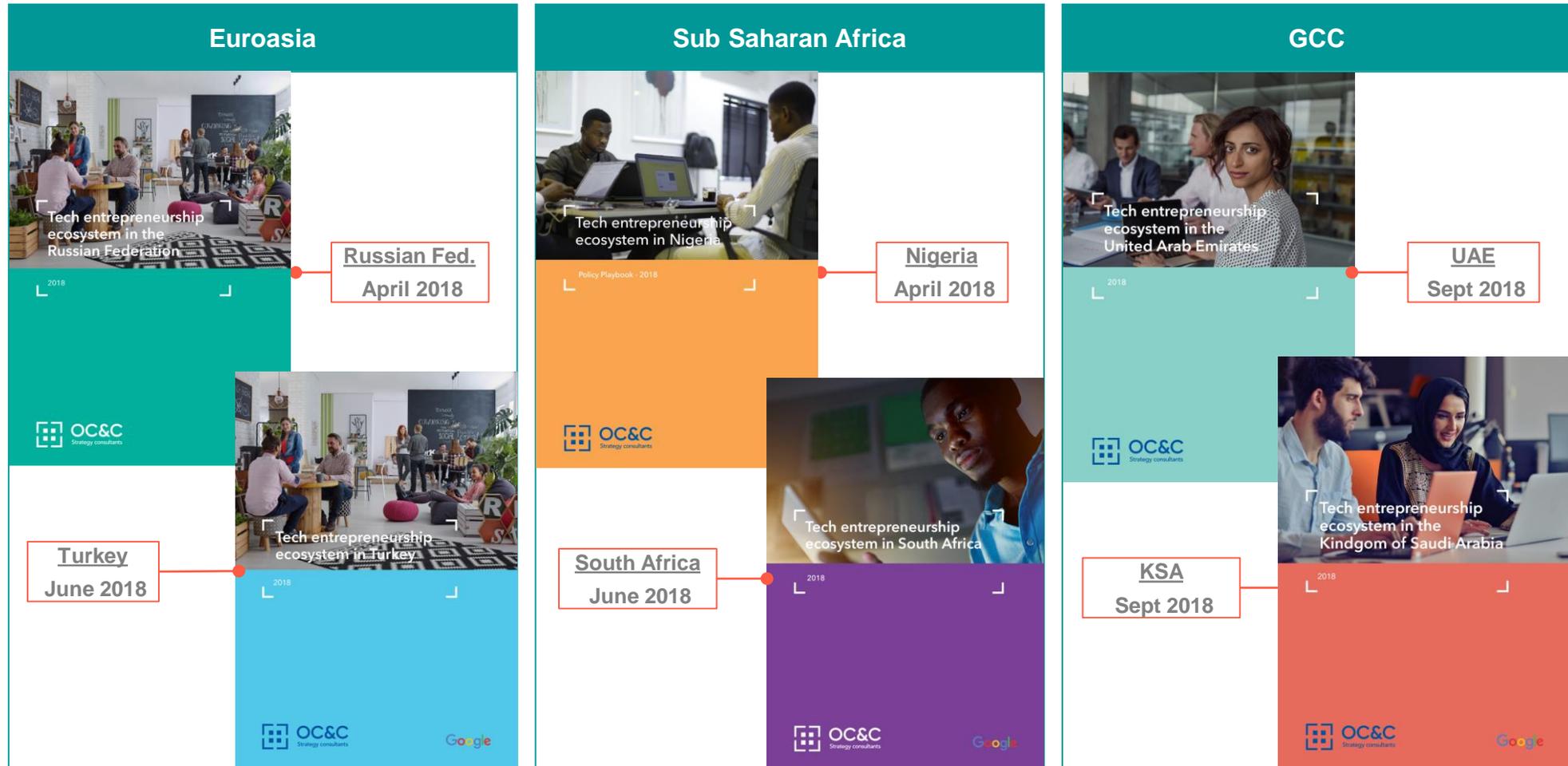
Ecosystem participants unite around key points in voicing their expectations from policy makers

- Focus on alleviating hurdles and roadblocks in existing practices for greater participation of startups in the economy
- Building strong foundations that can lead to higher entrepreneurial endeavors involving technology
 - Strengthen education – technical and entrepreneurial skills,
 - Build up R&D muscle and facilitate the knowledge flow between public and private institutions,
 - Facilitate affordable, high-speed ICT infrastructure,
 - Adopt non-restrictive, trust-building digital policies that are consistently enforced. Stay attune to global updates
 - Ease tech entrepreneurs' access to local and international markets
 - Establish linkages within own ecosystem as well as with global ones
- Adopt an orchestrator approach rather than pushing top-down agendas. Prefer indirect initiatives that focus on higher involvement of the private sector
- Build consistency and focus within government practices
- Foster existing, naturally formed ecosystems. Interact with them regularly to be in sync with their evolving needs



The individual reports on each focus country's tech entrepreneurship ecosystem will be launched starting with Russia on April 18th 2018

Launch dates of Tech Entrepreneurship Ecosystem Reports



Disclaimer

This report was prepared independently by OC&C Strategy Consultants in collaboration with local chapter partners who have been commissioned by Google to research the tech entrepreneurship ecosystem in Turkey, The Russian Federation, South Africa, Nigeria, the UAE and the KSA to identify policy recommendations to improve tech entrepreneurship. Information provided herein, including policy recommendations are prepared and intended for use as discussion materials on the ways to support the growth of tech entrepreneurship.

The report is based on a variety of inputs from multiple sources including official data sources such as various public institutes and foundations focusing on entrepreneurship, and other privately published data sources such as news articles, sector reports and interviews with tech entrepreneurship ecosystem actors. Recommendations are based on statements of ecosystem actors. Accuracy of analysis and recommendations are dependent on the detail and accuracy of declared data. Parties do not guarantee and are not responsible for the currency, propriety, accuracy or reasonableness of any statements, information or conclusions contained in the source documentation used.

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