

Marching forward

2018 Saudi Arabia CEO Outlook



December 2018

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Balancing optimism with pragmatism. Technology focus.

Welcome to the second edition of the Saudi Arabia CEO Outlook report. For this edition, we reached out to 50 CEOs of organizations nationwide for their thoughts and insights on the potential opportunities that they have while preparing for the challenges that lie ahead.

This year's report aims to explore a wide range of viewpoints, including digital disruption and transformation, a key priority area for CEOs. In the 2017 report, CEOs identified technological disruption as an opportunity. This has continued this year, with both private sector and the government, focusing on emerging and disruptive technologies such as Artificial Intelligence (AI) and Cloud technologies.

Technology is also a risk as cyber attacks are a matter of 'when' not 'if,' as mentioned by the CEOs. Data privacy is thus an important focus area, along with the hiring of cyber security specialists.

CEOs in Saudi Arabia are more optimistic about growth than their global counterparts, in terms of their company and industry. However, this optimism is balanced by some amount of pragmatism as they are wary of the many challenges that lie ahead, reflected in their moderate top-line revenue growth expectations for their own organizations.

In terms of decision making, reliance on data-driven models and analytics is not yet fully leveraged as CEOs are still relying on experience and intuition in making strategic calls for the future of their organizations.

We thank all the CEOs who have provided us with their valuable inputs and insights and the KPMG in Saudi Arabia partners and professionals for their views and opinions.

This report aims at highlighting the ways CEOs intend to 'march forward' to meet their business objectives, regardless of a fast-changing and challenging domestic and global environment.



Abdullah Al Fozan Chairman KPMG in Saudi Arabia

Key findings



Positive future outlook despite interim economic challenges

Seventy-two percent of Saudi Arabian CEO's are confident about the future growth prospects for the Saudi economy, and 92 percent are confident about the growth of both their companies and industries. They are also more confident about the global economy (94 percent) as compared to CEOs in other countries' (67 percent).



Focusing on agility and relying on intuition

Seventy-two percent of the CEOs agree that agility is the new rule of the game and that if they are too slow, they will be bankrupt. CEOs feel agility can be achieved by focusing on third-party partnerships. Moreover, CEOs in Saudi Arabia (76 percent) also rely sometimes on their experiences and intuition, rather than data analysis or computer-driven models to drive strategic decisions.



Emerging technologies — major focus area

All the CEOs in Saudi Arabia agree that technological disruption is more of an opportunity than a threat. Emerging technologies such as artificial intelligence (AI), 3D printing, advanced robotics, internet-of-things (IoT) and augmented reality (AR), are on the verge of being implemented as foundational tools for businesses and CEOs in Saudi Arabia must adopt them quickly.



Cybersecurity — making strong foundations

Thirty-six percent of CEOs in Saudi Arabia, compared to 51 percent of Global CEOs, say their organization is prepared for a cyber attack. However, CEOs are aware and giving importance to this threat. Seventy-two percent said that a strong cyber strategy is critical to engender trust with key stakeholders. They also expect cyber security specialists (62 percent) and data scientists (58 percent) to be important for an organization's growth plans.



Digital is now personal

Fifty-eight percent of the CEOs in Saudi Arabia say they are taking personal ownership of digital transformation to personalize customer experiences. Moreover, 80 percent CEOs say that they are either meeting or exceeding customers' expectations. CEOs in Saudi Arabia are positive about digital transformation and are trying to keep up with the digital race across the globe.



Strategic alliances — the need of the hour

Seventy-two percent of CEOs in Saudi Arabia agree that the only way for their organization to achieve the agility it needs is to increase the use of third-party partnerships. Eighty percent ranked 'strategic alliances with third parties' (inorganic growth) as either the first or the second most important strategy for achieving growth.

1. A survey of 1,300 CEOs in 11 of the world's largest economies: Australia, China, France, Germany, India, Italy, Japan, the Netherlands, Spain, the UK and the US



Positive future outlook despite interim economic challenges

CEOs in Saudi Arabia are moderately optimistic about growth, considering the economy is diversifying away from oil and real growth is expected to be supported by services and manufacturing. Moreover, a moderate recovery in oil production levels and marginally higher public spending are also expected to support a positive macroeconomic outlook. However, CEOs are still cautious and pragmatic due to global and local factors such as the slowing down of the private sector.



The economy of Saudi Arabia is moving forward beyond oil era. Deeper implementation of economic and social reforms under Vision 2030 is crucial to achieve sustainable growth over the medium term. In the short term, the economy is expected to grow by 2.2 percent in 2018, driven by the moderate recovery in oil prices, which has had a positive impact on government spending. It is vital to retain a strong momentum to implement structural reforms under Vision 2030 and avoid complacency with respect to the recent increase in oil prices.

Dr. Hussain Abusaaq

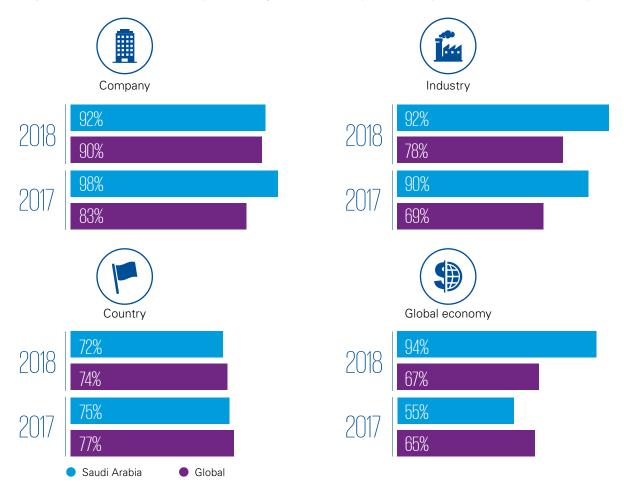
Chief Economist and Head of Research, KPMG in Saudi Arabia

CEOs in Saudi Arabia are largely confident about their growth prospects, with the majority (92 percent) sure of their organization as well as industry's growth prospects over the next three years. This is a continuation with respect to the 2017 survey results, in which, 98 percent were confident about their organization's growth while 90 percent were confident about their industry.

Positive macroeconomic outlook

The government of the Kingdom of Saudi Arabia (KSA) is expected to step up its drive to diversify the economy away from its dependence on oil. This strategy is outlined in the Saudi Vision 2030 and its realization programs. In May 2018, the International Monetary Fund (IMF) said that the country was making 'good progress' in implementing reforms in line with its Vision 2030 initiative which is expected to boost economic growth.

Chart 1: CEOs level of confidence in growth prospects over the next three years in their own companies, industries, country and the global economy (and comparison with 2017 survey)





Growth prospects'

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We are at a stage in history where our 21st century will be marked as the century of new city developments, as never before have we seen so many new cities planned for across the globe.

It is projected that urbanization will continue in the coming years, raising the urban population from 4 billion today to 6 billion by 2045 (UN).

Nonetheless, over 60% of the land projected to become urban by 2030 is yet to be built (UN).

KSA has a high urbanization rate 78%, and expected to be as high as 88% by the year 2025, making the need for new viable cities a necessity and a must (Ministry of Municipal and Rural Affairs (MMRA).

At King Abdullah Economic City, we are strongly optimistic about our growth prospects, as we're building our city arranged on a strong manufacturing & logistics hub, a wide range of housing solutions and leisure facilities, a vibrant community life, and a promising human capital development strategy including schools, universities, and vocational training centers, all feeding into high quality of life standards that our Saudi population aspires to. This is what's setting KAEC apart, making it viable, livable, and sustainable.

Fahd Al Rasheed

Group Chief Executive Officer and Managing Director of Emaar the Economic City

Uncertainty in the world economy

According to the 2017 Saudi Arabia CEO Outlook report, 55 percent of CEOs in Saudi Arabia were confident about the global economy. This figure increased to 94 percent in this year's survey results. However, only 67 percent Global CEOs were confident about the global economy, primarily due to a return toward nationalist sentiments and political and economic changes in developed countries. According to the IMF, world economic growth is projected to reach 3.9 percent in 2018 and 2019, but the expansion is becoming less even, and risks to the outlook are mounting. Recently announced and anticipated tariff increases by the US and retaliatory measures by trading partners (such as China, Canada, EU and Asian countries) have increased the likelihood of escalating and sustained trade actions. Moreover, the IMF forecasts a slowdown by 2020, likely to be accompanied by trade wars. In line with this, CEOs in Saudi Arabia (74 percent) ranked 'return to territorialism' as one of the top three risks posing the greatest threat to their organization's growth.



Chart 2: Risks posing the greatest threat to the organization's growth



Return to territorialism (e.g. US renegotiating NAFTA, UK leaving EU)



Environmental/ climate change risk



Emerging/ disruptive technology risk



Operational risk



Regulatory risk



Cyber security risk



An important element of the People Agenda going forward is to have a fresh look at the Hiring Strategy. Taking a proactive approach to modernizing the Hiring Strategy, by putting in place "humans first" as the primary agenda, would transform the future of hiring and would attract prospective energetic employees. The war for talent will continue to rage as every business becomes concerned in identifying, recruiting and retaining a workforce with the right skill sets. Whilst a successfully implemented Hiring Strategy would provide a platform for the organization to identify and recruit the right workforce, however, protecting and building a relationship of trust and transparency with workers would continue be a priority.

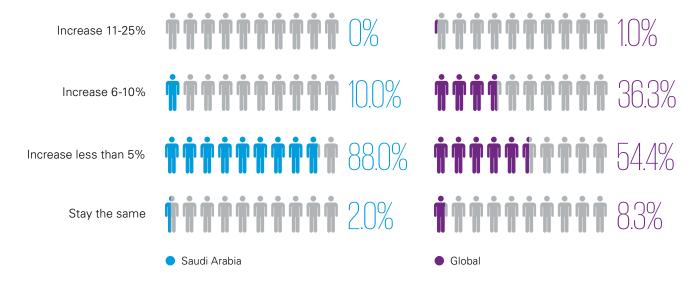
Abdullah Akbar

Head of Audit - Jeddah Office, KPMG in Saudi Arabia

Modest hiring strategy

CEOs in Saudi Arabia are expecting moderate levels of headcount increase over the next three years. According to survey results, 88 percent expect headcount to increase by up to 5 percent. CEOs are aware that due to digital transformation which is now a big priority and a matter of survival, they need to hire new skills in the short term. Hence, even though they expect a low headcount increase of upto 5 percent, 82 percent of CEOs say they will hire new skills regardless of future growth targets. This is due to a more pragmatic and cautious approach compared with Global CEOs.

Chart 3: Expected headcount change over the next three years





KAEC is a dynamic project with a vision to build not only a new mega city for KSA but a new economy. Given the dynamic nature of the project, opportunities evolve rapidly and as a company we need to evolve just as fast. We believe that the new economy is the economy of talent. EEC strategically targets progressive, tenacious and passionate talent through a very well structured recruitment process. We proactively seek top talent and futuristic skills needed to deliver the KAEC dream.

Our strong employee base is consistently growing as the city grows.

Fahd Al Rasheed

Group Chief Executive Officer and Managing Director of Emaar the Economic City

Developed markets a greater priority

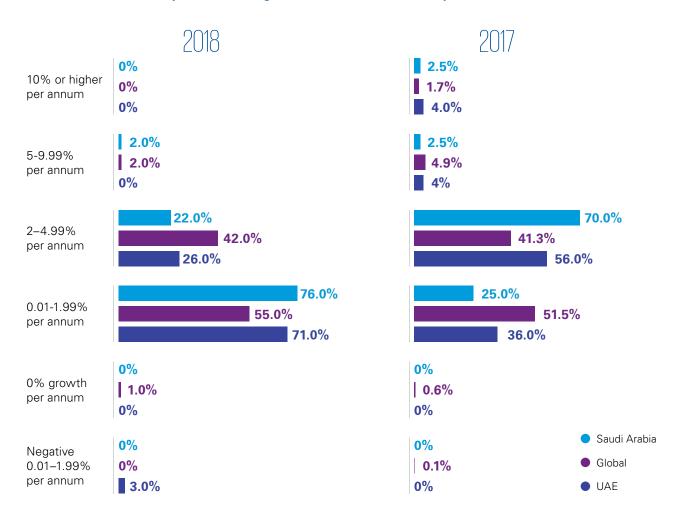
CEOs in Saudi Arabia were asked about the geographic markets they will prioritize for expansion — 62 percent cite developed markets (especially North America and Australasia) as the greatest priority for expansion over the next three years. On the other hand — 70 percent of Global CEOs cite emerging markets (especially Central/ South America and Eastern Europe) as the greatest priority for expansion. A key reason for this is that the fast pace and advancement of new and emerging technologies in developed regions, compared to emerging regions, provides greater incentives for Saudi Arabia to invest in developed markets. This is reflected in the recent investment projects and partnerships of the PIF of Saudi Arabia. In March 2018, the PIF announced that it invested US\$400 million in US-based mixed reality technology company Magic Leap. The PIF also announced the signing of a MoU with UK-based technology fund, Softbank Vision Fund, in March 2018, to create a New Solar Energy Plan 2030. Moreover, in August 2018, it was reported that the PIF was in talks to invest US\$1 billion in US-based electric

car maker Lucid Motors. However, winds are shifting east. In June 2018, the PIF was looking to invest in India's infrastructure sector.

Conservative topline growth

The CEOs' confidence and optimism in the macroeconomic environment does not translate into high growth in their topline revenue. Of the CEOs in Saudi Arabia, 76 percent are anticipating less than 2 percent growth in topline revenue over the next three years. In 2017, 70 percent were anticipating comparatively higher growth between 2-5 percent. This decline can be attributed to CEOs being cautious and pragmatic due to the global threat of a 'return to territorialism' and local factors such as the slowing down of the private sector. It was recently reported that Saudi Arabia's non-oil private sector continued to lose momentum in April 2018, as growth slowed to a new nine-year low. However, despite gloomy conditions it is expected that the current slowdown is temporary and topline growth anticipation shall improve in 2019 and 2020.

Chart 4: Outlook for topline revenue growth over the next three years



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In power and water desalination space the growth is tremendous and is directly linked to various degrees of reforms being implemented in the region and other emerging markets we operate in. The business model is of long term competitive procurement that requires being innovative and strategic, staying ahead of the competition internationally. Operating beyond national boundaries provides us that the edge, capability, experience and resources to be able to champion the reforms being implemented domestically as part of the KSA Vision 2030. Our global operations bring us diversity, innovation, access to the latest technology, financial and managerial resources, economies of scale, and the integration opportunities which keep us agile. We also take pride in being a Saudi company operating internationally.

Thamer S. Al-Sharhan Managing Director, ACWA Power 8 2018 Saudi Arabia CEO Outlook

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Zamil Group considers geographic expansion as a fundamental strategic direction that helps the Group to better secure its future growth and sustainability. This strategic direction, whether it is through exports or through Group's investments in foreign business units, is seen as an opportunity to penetrate new markets and widen the size and range of business opportunities beyond the potential of KSA, and also as an approach to diversify its customer base to reduce the risk associated with market concentration.

Adib Abdullah Al Zamil Managing Director, Al Zamil Group



Emerging technologies shaping the future

Easy access to 'business model enablers' such as Big **Data and Cloud Computing** has led to emerging technologies becoming disruptive on a large scale. Hence, it is imperative that CEOs adopt emerging technologies quickly as they become foundational tools for businesses.



Emerging technologies are becoming truly disruptive on a large and wide scale. Historically, there were challenges faced during scaling and adoption. However, easy access to 'business model enablers' (such as Big Data and Cloud Computing) nowadays help in overcoming those challenges. Companies have greater access to platforms, processing power, software and data to turn emerging technologies into useful, scalable solutions.

Most industries around the world have seen disruption in some shape or form, primarily due to digitalization. Technological disruption is likely to have a transformative impact on the business environment globally. Emerging technologies such as artificial intelligence (AI), 3D printing, advanced robotics, internet-of-things (IoT) and augmented reality (AR), are on the verge of being implemented as foundational tools for businesses across the world. In November 2018, the National Housing and Industrial Development and Logistics Program announced Saudi Arabia's first house built using 3-D printing technology.

Technology disruption gaining more prominence

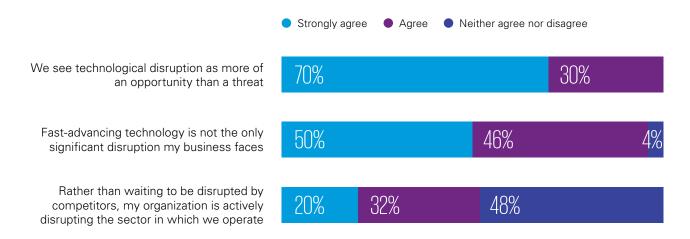
CEOs views on disruptive technology continues to gain prominence, increasing from 95 percent in 2017 to 100 percent in 2018, reconfirming their belief that technological disruption is an opportunity to grow their business instead of a threat. Moreover, more than half the CEOs (52 percent) say that they are actively disrupting the sector in which they operate, rather than waiting to be disrupted by competitors.

According to the 2018 survey results, a majority of the CEOs in Saudi Arabia (58 percent) are prepared to lead their organization through a radical change in operating model. This statement supports technological disruption and subsequent transformation of operating models happening across companies. CEOs in Saudi Arabia are optimistic and forward-looking about investing in emerging technologies for their business' overall growth and transformation.





Chart 5: Extent to which CEOs agree or disagree with statements about disruption within their industry



Government's approach to digital investments

The National Digital Transformation Unit (NDU) was established in 2017 by royal decree with a primary mandate to accelerate digital transformation in Saudi Arabia, and achieve the objectives of becoming digital nation, society, and economy. Working closely with other government entities, the NDU developed roadmaps for digital transformation for many sectors including health, education, smart cities, and e-commerce. NDU also plays a key role with the private sector bridging the gap between government entities and technology providers.

Further, in April 2018, strategy consulting and analytics firm Avascent signed a MoU with KSA in support of technology commercialization and localization initiatives. Avascent has a strategic partnership with RPD Innovations, the national center for technology development and commercialization in Saudi Arabia.

The government's digital transformation strategy is on track and other focus areas include localizing technology, building human capital and investing in emerging technologies. Saudi Arabia plans to be the technology hub for the Middle East by 2030, and is looking to attract talent and companies, especially in the areas of AI, AR and data mining.

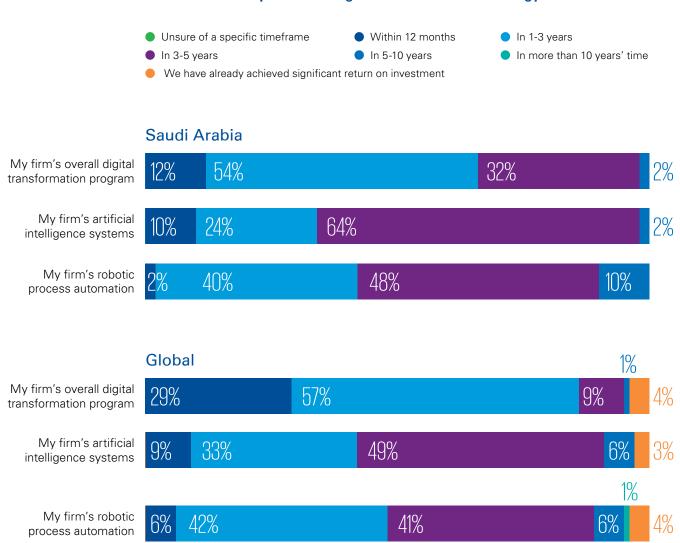
Al to boost ROI and productivity

Saudi Arabia has initiated investments in emerging technologies, especially focusing on the production of prototypes, mobile applications and AI. The Saudi Federation for Cyber Security and Programming (SAFCSP) signed an agreement with Google, in April 2018, to set up five Innovation Hubs in KSA and to develop advanced technologies and Al.

According to a recent global economic survey, business leaders said they will choose technology over human capital for greater value returns. In line with this, CEOs in Saudi Arabia expect significant ROI from AI (98 percent) and robotics process automation (90 percent) within the next five years. CEOs (96 percent) are already piloting/ trialing AI in a small number of processes, or have started limited implementation or already implemented AI for some specific processes, for the overall purpose of automation.

Al has the potential to boost productivity, by reducing the amount of human capital required for repetitive tasks, thereby leading to increased returns on capital investments. Moreover, government regulators are looking to use AI to gain efficiencies.

Chart 6: The duration in which CEOs expect to see significant ROI from technology investments





Data center consolidation in the Cloud provides economies of scale by reducing maintenance costs and day-to-day operations. However, Cloud-enabled business transformations could bring forward potential issues and implications that companies and tax professionals might face. For instance, consolidating and outsourcing the management of data centers may result in a change in location of people and property. This could change a company's taxable presence and hence be subjected to various taxes in multiple jurisdictions. Companies also need to consider tax implications when they decide to buy or rent a data center. Hence, the early evaluation of tax implications of Cloud transformations, during the planning stage, can result in higher cost savings, return on investment and increased risk management.

Wadih AbouNasr

Head of Tax for Saudi - Levant region, KPMG in Saudi Arabia

Cloud computing — an area of interest

Saudi Arabia is advancing toward digitalization and is aiming to become a technology hub in the near future. The government is currently focusing on innovation and cloud technology to drive forward the country's digitalization initiatives. Cloud computing is forecasted to grow 25 percent by 2022 as a result of the expansion of the digital economy and smart government initiatives.

In early 2018, the Saudi Communications and Information Technology Commission (CITC) issued a new Cloud Computing

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Regulatory Framework (CCRF) following a public consultation process. The CCRF applies to cloud services provided to customers who are Saudi residents. These services comprise all information and communications technology (ICT) services provided via cloud-based platforms, including storage, transfer or processing of customer content.

CEOs in Saudi Arabia are confident in the importance of cloud technology. They are planning to embrace it and agree that 'Cloud is the future'. According to the survey results, 'partnering with third-party cloud technology providers' was ranked as the second-most important action that CEOs (62 percent) intend to undertake while pursuing their growth objectives. In April 2018, SAP announced the first live Public Cloud Data Center in the Kingdom, empowering Saudi Vision 2030. It is expected to enable Saudi public and private sector organizations to securely digitally transform their business. Additionally, Saudi Arabian business technology company Virtual Vision (V2) announced in April 2018, that it is partnering with Switzerlandbased Cloud Sigma and US-based Hewlett Packard Enterprise (HPE). They launched the V2 Public Cloud — a public cloud offering based in KSA. The investments in cloud computing show the growing demand in the Middle East and GCC region for cloud services. Moreover, locally based public cloud solutions are appealing to both private and public entities.

Rapid increase of social media usage

The use of social media has increased rapidly in the Kingdom. According to a recent study, Saudi citizens use social media for an average of five hours per day. The number of internet users in the country was estimated to reach 30 million by 2018, with internet penetration at 91 percent. WhatsApp, YouTube and Facebook are the top three social networks in terms of penetration rate. In line with this, 'making products and services available via an online platform such as social media platform' is ranked as the most important action that CEOs (64 percent) intend to undertake while pursuing growth objectives.

The government is also supportive of these changes. It utilizes social media to engage with citizens and to measure public consciousness. Moreover, in December 2017, the Ethical Charter of Social Media was launched by the New Media Center with the support of the Saudi General Commission for Audiovisual Media, aiming to establish ethical frameworks for social media use.

Important action items

In pursuit of their growth objectives, majority of the CEOs in Saudi Arabia (60 percent and above) believe in four key action items that they intend to undertake - selling online, joining technology related industry consortia, partnering with cloud technology providers and increasing investments in disruption detection and innovation processes.



The creation of Jabal Omar's in-house innovation lab that fosters ideas for new ventures is an example of the organic growth measures we are taking. We have 9 spin-off companies in various industries. One of them is Warfiat, a hospitality asset management business. The interaction among our spin-offs will enhance our operational and financial performance. We are also taking growth measures such as acquisitions that are challenging and risky. We are confident in the steps we take due to our solid market research and risk assessment.



CEO, Jabal Omar



Chart 7: The actions organizations intend to take over the next three years in pursuit of their growth objectives

Make products and services available via an online platform provider (e.g. social media platforms) Partner with third-party cloud technology providers Join industry consortia focused on development of innovative technologies 60% Increase investment in disruption detection and 50% innovation processes 58% Set up accelerator or incubator programs for startup firms Corporate venturing Collaborate with innovative startups (e.g. fintech, insurtech, healthtech firms) 54% Partner with thirdparty data providers Saudi Arabia Global

Digital gets personal

CEOs in Saudi Arabia are positive about digital transformation, and to keep up with the digital race across the globe, are taking personal ownership to enhance customer experience and internal efficiency.



Though we are bulk suppliers to the major national power and water utilities, we call them off-takers, however, the way we think business makes the difference really. We always look at the broader picture and consider ultimate utility consumers as our customers. For them, our priority is reliability and quality of supply at the cheapest possible prices while caring for the environment and keeping the project bankable. This is where we start with the project development before progressing towards next phases of financing, construction and operations. Our holistic approach makes our employees to think differently, keeping them motivated to deliver the best possible solution for maintaining our services at the highest level of efficiency.

Thamer S. Al-Sharhan

Managing Director, ACWA Power





CEOs are optimistic about digital disruption with all the surveyed CEOs in Saudi Arabia agreeing that technological disruption is more of an opportunity than a threat. Majority of the CEOs want to gain a competitive edge over their competitors which is reflected in the survey findings. 52 percent of CEOs in Saudi Arabia say they are actively disrupting the sector in which they operate, rather than waiting to be disrupted by competitors, in line with 54 percent of Global CEOs view on digital disruption.

While keeping pace with this digital transformation taking place across the world, CEOs are aiming to take ownership of digital transformation to personalize customer experiences. CEOs in Saudi Arabia (80 percent) seem to be more confident of currently meeting and exceeding customer expectations than their Global counterparts (75 percent). According to the findings of the 2018 survey, CEOs believe they are either meeting or exceeding customers' expectations for a "personalized" experience (i.e. products, services and marketing are highly tailored based on individual customer needs and desires).

However, 20 percent of CEOs in Saudi Arabia still feel that they are below customers' expectation, compared with 25 percent of Global CEOs. This is a large number of potential detractors, and the presence of social media could cause major churn and reputation damage. Hence, CEOs also need to be cautious and adaptive towards fast changing trends such as the usage of digital channels in providing better customer experience. Even though there is caution, CEOs can still use this as an opportunity by efficiently using digital interfaces.

Chart 8: CEOs' perception of their organization's performance in meeting customers' expectations of a 'personalized experience

•	•
Far exceeding our customers' expectations	0%
	28%
Exceeding our customers' expectations	23%
Meeting our customers' expectations	52%
	52%
Below our customers' expectations	20%
	25%
Far below our customers' expectations	U% Saudi Arabia ● Global
	•



Owning transformation

In November 2018, government officials, experts, and industry leaders gathered for the 'Digital Saudi 2030' Conference in Riyadh. Sponsored by the National Digital Transformation Unit, it hosted local and international companies to discuss innovative solutions to help companies in their digital transformation initiatives. Topics covered included smart cities, cloud, artificial intelligence, cybersecurity, and customer-centricity.

Digital transformation remains the core strategy of the Saudi Vision 2030 as well. Hence, Saudi Arabian companies and CEOs are increasingly adapting themselves to become a part of this strategy. In this digital era, CEOs in the Kingdom are prepared to lead their organization through technology and digital transformation. 58 percent say that they are personally prepared to lead their organization through a radical transformation of their operating model to maintain competitiveness.



Keeping up with expectations

Experts have predicted that emerging technology, including Al and cloud computing solutions, will see greater adoption in 2018 in the KSA. Companies are expected to increasingly embrace new technologies in their digital transformation strategies. However, CEOs in Saudi Arabia face pressure in terms of delivering results on the investments made for the adoption of

Almost half of the CEOs in Saudi Arabia (46 percent) and over half of the Global CEOs (51 percent) say that their board of directors have an unreasonable expectation of returns on digital transformation investments. They, thus, feel it is very important to set realistic and accurate expectations as some amount of patience is paramount in the entire process of digital transformation. Almost all the CEOs surveyed in Saudi Arabia this year (98 percent) say that the lead time to achieve significant progress on transformation can seem overwhelming.

Digital transformation is not a choice anymore; it is more of a mandate and a matter of business continuity. Companies can go out of business if they do not start implementing it.



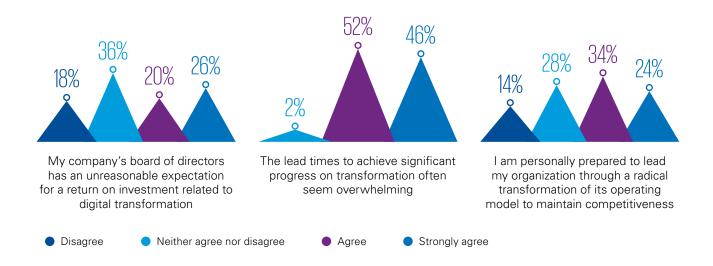
The reason for the long lead times are typically due to one of many issues. The first is a lack of talent. Our region does not have the wealth of talent and pace of innovation that would easily help us overcome such lead times but the risk can be mitigated through collaborations and effective talent acquisition. The second is a bureaucratic approach that often conflicts with the unpredictable nature of technical innovation and the fast decision requirements of operation. There has to be a recognition that this new order requires agility and large corporations have to find way to cater to it. Finally, lack of realistic timing and therefore capital forecasting required often lead to disappointment and abandonment of projects and ideas that may otherwise survive, it is important to see precedents around us and globally, evaluate the time and money required and only proceed if you have the luxury to do that with a very comfortable buffer. If not, reduce the scope and aim for a more manageable adoption of technology, but find a way to do it.

Anees Ahmed Moumina

CEO of The Savola Group

Chart 9: Extent to which CEOs agree or disagree with statements about disruption within their industry

Saudi Arabia





Al creating jobs

According to Vision 2030, Al is of prime importance for the region. In line with this, the survey findings suggest impact of artificial intelligence will be positive; 84 percent state that AI will create more jobs than it destroys, the need for highly skilled people to design, program and However, in the medium to long term, Al could potentially lead to technological unemployment.

Additionally, 56 percent of CEOs in Saudi Arabia mention that they are piloting AI in a limited number of processes, compared to 36 percent of Global CEOs. On the other hand, 40 percent of CEOs in Saudi Arabia have begun a limited implementation of AI for some specific processes, compared with 51 percent of Global CEOs. This may be due to the earlier adoption and implementation reflecting the maturity of the Global market. CEOs in Saudi Arabia are conscious of the future potential of Al and are hence working towards implementing it.

Dr. Samer Abdallah, Head of Digital, believes that "Human talking more about task replacement rather than jobs. Some jobs will be right in the cross hairs - call centers, drivers, clerical and administrative tasks. However most jobs will be enhanced and made safer and easier with cognitive technology and intelligent automation. The jobs of the future will revolve around innovation, software development and data sciences, design, curation, algorithms training, and cyber security"

Dr. Abdallah added that "as the pace of digital disruption is exponential, it will be harder for businesses to adapt without innovation as a core competency. Many routine, repetitive jobs will be candidates for automation, but as these technologies emerge, new innovations will follow. As risk is taken out of the physical and cognitive world, new innovations will emerge that were previously inconceivable."



Dr. Samer Abdallah Head of Digital, KPMG in Saudi Arabia

Artificial Intelligence represents major changes in business models, security, infrastructure and management - the ability to train algorithms and improve the working relationships between human and machine. As more transparency is achieved through AI and data analytics, more problems will be identified, and people will need to lead the charge to make the changes and train the systems to help people solve the business issues. This will continue to drive risk out of the system. These technologies will also be available to people who wish to do harm so cyber security will be paramount.

Humans have a critical role to play in the digital era - while robots may handle the mundane, unskilled and dangerous work we will be freed up to do more meaningful and valuable thinking, including inventing, evolving and managing new innovations. No matter what computers achieve many human traits cannot be replicated by technology. Intelligent automation has the promise to lead to breakthroughs we haven't been able to achieve with solely human inputs - i.e. cancer diagnosis and treatment - in this case Al isn't taking human jobs; it's saving human lives.

Chart 10: CEOs' views on the most likely impact of Al and robotics technologies on their workforce

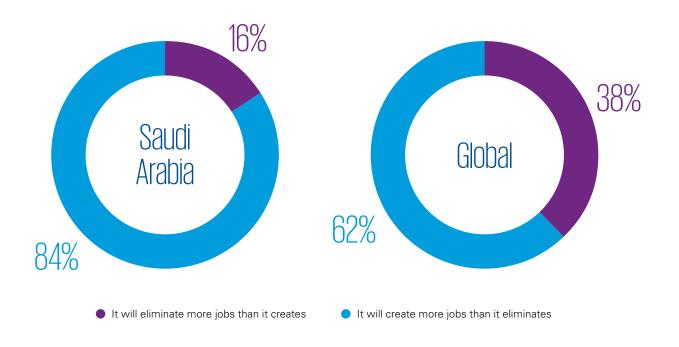
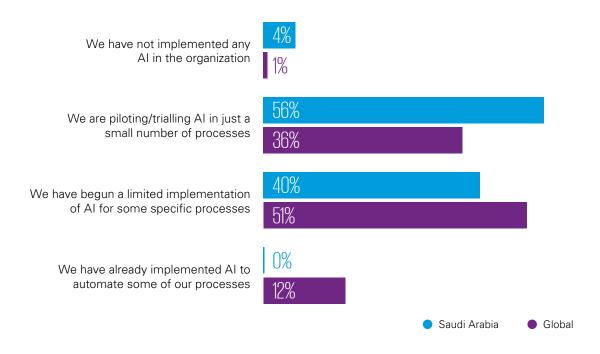


Chart 11: Application of artificial intelligence in the automation of the organization's processes



Preparing for challenges ahead

Cyber security and understanding millennial customers are the two most imminent challenges that CEOs in Saudi Arabia foresee; they are preparing for them by improving certain capabilities.



In November 2017, Saudi authorities said they had detected an 'advanced' cyber-attack targeting the country. Hence, it has become imperative for CEOs in Saudi Arabia to increase their focus on cyber security. With cyber attacks such as the Shamoon 2.0 virus, which could potentially destroy data and a firm's infrastructure. it has become essential to work toward the protection of networks, IT systems and data through regulatory and operational strategies and frameworks.

According to the 2018 survey results, 62 percent and 58 percent of CEOs in Saudi Arabia, expect cyber security specialists and data scientists respectively, to be important for an organization's growth plans. Only 36 percent say their organization is prepared for a cyber attack, compared with 51 percent of Global CEOs. Hence, cyber security is a growing cause for concern and CEOs need to take steps to mitigate the risks involved.

Saudi Arabia faces a high number of cyber attacks, which have the potential to disrupt its economy. In August 2017, a petrochemical company in the Kingdom faced a cyber attack that could have led to loss of data and major disruption of operations. This clearly indicates that Saudi Arabia needs a robust IT infrastructure for cyber security.

Digital transformation has the potential to bring substantial value across operations. However, greater connectivity means increased cyber vulnerability. More than half of the CEOs surveyed (52 percent) across Saudi Arabia said that becoming the victim of a cyber attack is a case of 'when', not 'if.'

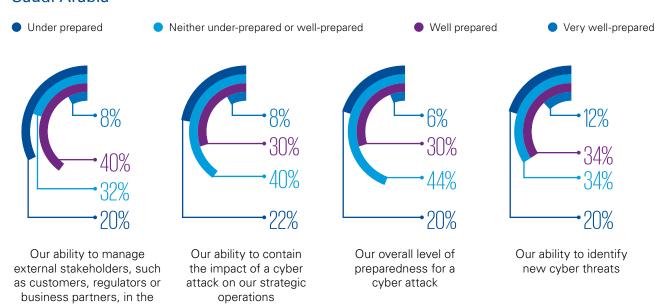
The need to prevent cyber attacks led to the creation of the National Cybersecurity Authority (NCA) in 2017. With the creation of NCA, Saudi Arabia has taken a step toward fulfilling the objectives of Vision 2030. In line with this, 72 percent of CEOs in Saudi Arabia said that a strong cyber strategy is critical to engender trust with key stakeholders, compared to 55 percent of Global CEOs.



Chart 12: Organizations' preparedness for a cyber attack in relation to certain capabilities

Saudi Arabia

event of a cyber attack





Businesses are facing major challenges in coping with the specific demands of millennials. Nowadays, millennial customers require the incorporation of technology in all that they do. For businesses to succeed and adapt to their distinctive demands they will need to incorporate data science, lean customer journeys, and innovative solutions in their product offerings.

Islam Al Bayaa Head of Advisory, KPMG in Saudi Arabia

Providing personalized services to millennials

With a growing base of millennials across the globe, it has become increasingly important for employers to attract, retain and engage with millennials to achieve success. However, while engaging with this age group, CEOs in Saudi Arabia face certain challenges.

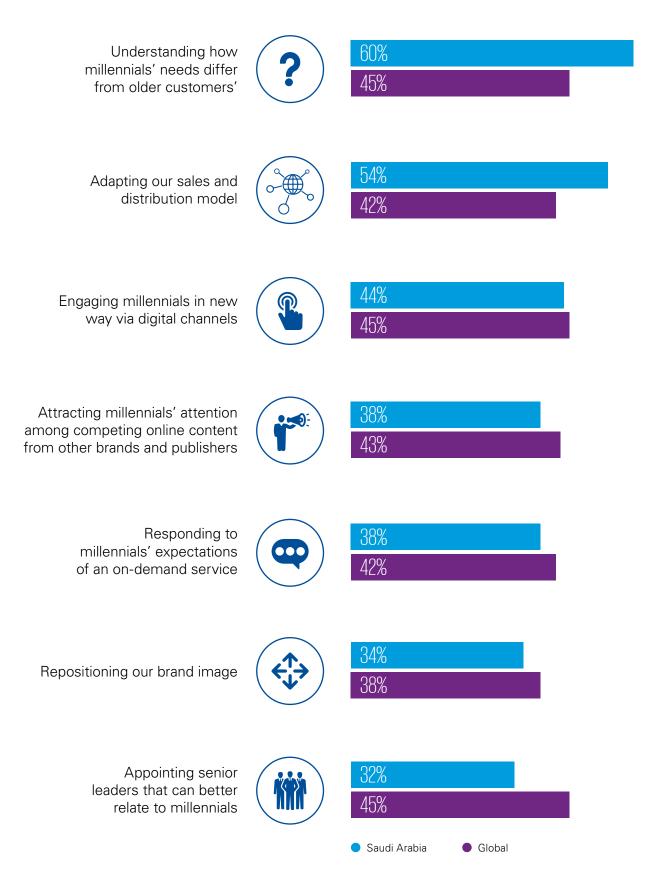
According to the survey results, 60 percent of the CEOs in Saudi Arabia face a challenge in understanding how the needs of millennials are different from those of their older customers, compared with 45 percent of Global CEOs. They also struggle in terms of adapting their sales and distribution model, engaging millennials in new ways through digital channels. Moreover, this issues may compound itself given the young population of Saudi Arabia.

Millennials are also expected to be key in driving e-commerce growth in Saudi Arabia in the near future. Hence, it is imperative that CEOs understand the needs of millennials to leverage this opportunity.

Personalization for millennials is also expected to play an important role. In line with this, some companies have already started implementing initiatives aimed at providing personalized services to millennials. For instance, the Saudi Telecommunications Company has launched a new mobile service, Jawwy, aimed at providing flexible and personalized solutions for millennial consumers. Thus, getting insights on millennial needs is imperative, and businesses that achieve them the quickest shall lead in the market place. Businesses will need to look at convergence of business platforms to serve millennials, through an innovative lens of partnerships and co-creation.



Chart 13: The biggest challenges of meeting the needs of millennial customers



Instinct over data

CEOs in Saudi Arabia believe that agility is the new currency of business that can be achieved by focusing on thirdparty partnerships and leveraging their own experiences and intuition over data analysis or computer-driven models.



Arvind Singhi Head of Markets, KPMG in Saudi Arabia



Agility is the new currency in business and business model disruption requires Agility. Disruption is led principally by the use of and access to new technology. Even small businesses are able to leverage technology at affordable costs to disrupt much larger and established businesses. A key factor beginning to take shape in the region is a new approach to business partnerships. Businesses are increasingly coming together in a more agile way, to bring value to customers, against more traditional integrated large businesses, unable to quickly respond to business model disruptions, majorly from large fixed costs and inefficiencies in their value chain.

It's not that large businesses cannot be agile, they only need to evaluate efficiency and value add within everything they do. For example, we can see the interest that a number of regional banks are showing in Fintech companies. Their approach is not to invest huge amount of time and energy in development of technology platforms, rather they can partner with, or acquire, Fintech's with established IP to gain a competitive edge.





Data-driven insights are a great starting point and a useful input to a decision-making process, but we have to be aware of a number of pitfalls. For example, data analysis can carry the unconscious biases of people collecting and analyzing the data. I have seen examples where data analysis suggests correlations between two variables and appears to be great insight at first, but similar or different correlations can be established if other variables are added to the analysis, and they may lead the decision to a completely different direction. However, it may not be right to completely ignore the data analysis unless an effort has been made to understand why the analysis is not aligned to a person's real life experience.

Muhammed Tariq

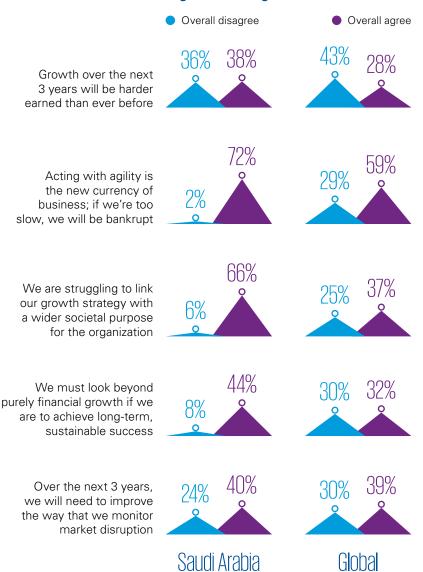
Head of Audit, KPMG in Saudi Arabia

Focus on agility

According to the 2018 survey results, 72 percent of the CEOs agreed that agility is the new currency of business, lacking which could lead to bankruptcy.

With several strategic challenges, changing customer demands and technological advancements in the economy, CEOs consider agility as the new currency of business. Along with agility, CEOs in Saudi Arabia also rely more on their experiences and intuition rather than data analysis or computer-driven models, while making strategic decisions.

Chart 14: Extent to which CEOs agree or disagree with statements about their organization's growth





Strategic alliances are now an essential pillar within any industry to drive growth. Companies do not possess all the necessary knowhow or resources to meet all the demands of their customers. In the IT industry, the targeted audience has evolved and is no longer limited to IT professionals, but rather it expanded to include business decision makers within the customers' organizations. Forming strategic alliances allows tech companies to complement their technology expertise with their partners industry/functional expertise and diffuse new technologies. Which will provide the customers with end to end vertical and horizontal solution thus helping them fuel their growth.

Thamer Alharbi

President, Microsoft Saudi Arabia



Entering into third-party partnerships

CEOs in Saudi Arabia (72 percent) believe that agility can be achieved only by focusing on third-party partnerships, compared to only 53 percent of Global CEOs.

Additionally, 80 percent of CEOs in Saudi Arabia mentioned that after an unsuccessful experience with their third-party partners (mainly due to misalignment around culture and purpose), they did reconsider the situation to understand how the partnership would have helped the organization to achieve growth. This supports the belief that the best and most agile response for Saudi businesses in such a scenario is to partner with third-party firms to build capacity and capabilities to achieve growth.

In line with the survey findings, several companies have partnered with third-party firms to benefit from their skills/technology.

Recently, the Saudi Arabian Monetary Authority (SAMA) — the central bank for the Kingdom of Saudi Arabia — partnered with Ripple, a company that enables banks and payment providers to transfer money globally by using blockchain. With this partnership, the central authority aims to enable banks to improve their payments infrastructure.

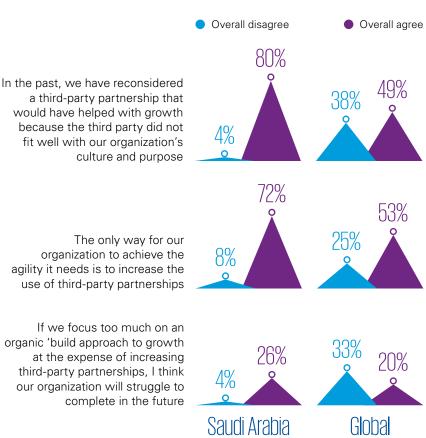
Additionally, Medopad, a UKbased healthcare technology company partnered with Johnson & Johnson and SAP to utilize artificial intelligence to complement the

Kingdom's current initiatives to digitize health care and accelerate Vision 2030. This is also in line with the Kingdom's Vision 2030, which includes creating a more digital and connected healthcare ecosystem.

Additionally, 54 percent of CEOs in Saudi Arabia stated that they intend to collaborate with innovative start-ups such as fintech, insurtech or healthcare firms to accelerate growth, which is in line with Global CEOs (53 percent).

When collaborating with third parties, a firm can face several barriers. CEOs identified data sharing as the biggest barrier. Therefore, it is important for them to ensure that these do not hamper the benefits derived from the collaboration.

Chart 15: Extent to which CEOs agree or disagree with statements about their organization's experiences of partnering with third-party firms



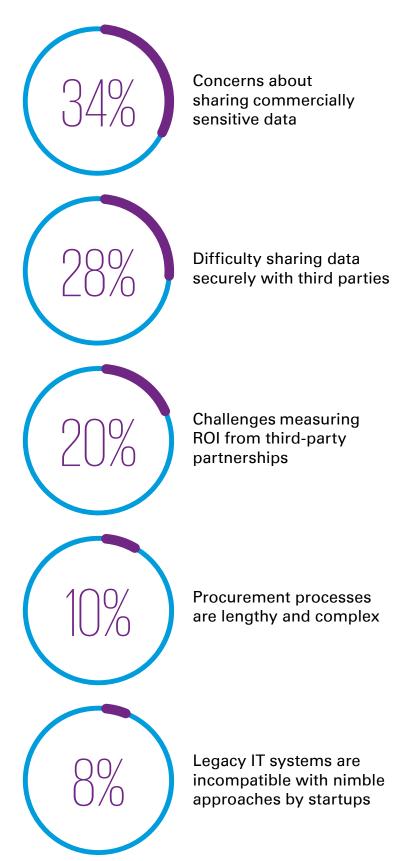
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Much of business growth in Microsoft is due to our partners, and we see thousands of partners coming into the Microsoft ecosystem every year. We are committed to helping partners transform their businesses and lead customers to new cloud opportunities, and we're focused as much on selling 3rd party solutions as our own, and connecting partners with customers and help them capture that opportunity. Which is core of the Microsoft Partner Network's methodology.

Thamer Alharbi

President, Microsoft Saudi Arabia

Chart 16: The biggest barrier to CEOs' organizations extracting value from networks of third parties



Relying on experiences and intuition

With several strategic challenges and increasingly uncertain environment, CEOs in Saudi Arabia need to embed geopolitical intelligence while making strategic decisions. Therefore, it is imperative for them to be certain of the information they consider while making critical business decisions. Although data and analytics, and predictive tools have introduced new ways of making critical decisions, CEOs rely to a greater extent on their experience and intuition. This is perhaps due to the non-availability of reliable data at their organization, and/or advanced analytics tools to drive insights and decision making.

According to the 2018 survey results, 76 percent of the CEOs stated that in the past three years, on a number of occasions, they overlooked the insights provided by data analysis models or computer-driven models because they were contrary to their own experience or intuition, compared to 67 percent of the Global CEOs. The primary reason behind this could be due to data being scarce and not yet reliable.

Additionally, 70 percent of the CEOs stated that they are usually less confident about the accuracy of predictive analytics than historical data, due to data quality and input quality. The survey findings also suggest that over the next three years, 40 percent of the CEOs are likely to increase the usage of predictive models or analytics for decision making.

Chart 17: CEOs have overlooked the insights provided by data analysis models or computer-driven models because they were contrary to their own experience or intuition

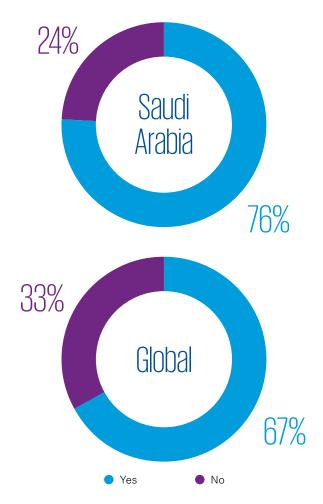




Chart 18: Extent to which CEOs agree or disagree with statements about the data they rely on for decision-making



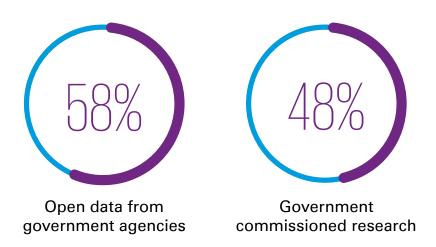
Selecting data sources

In terms of selecting data sources, CEOs in Saudi Arabia are also concerned about the reliability of sources from where the data is sourced. Among all, social media emerged as the most reliable source while making strategic decisions, with 84 percent CEOs in Saudi Arabia and 81 percent Global CEOs mentioning it. Reliance on social media data is perhaps due to the high social media penetration in Saudi Arabia, and/or lack of other source of data.

Chart 19: Level of trust in each of the following data sources for informing CEOs' strategic decisions

Ranking of trusted sources of insight





Conclusions

In summary:

The 2018 Saudi Arabia CEO Outlook finds business leaders optimistic about their organization, industry and economy. They are excited by the potential opportunities offered by digital transformation. At the same time, they are also wary of the challenges that lie ahead. Marching forward with a positive outlook is what CEOs must focus on in the near future.





Optimistic growth and economic outlook

On the back of the Saudi Vision 2030 and its realization programs, CEOs are optimistic about growth prospects and have a positive macroeconomic outlook. The government is focused on diversifying the economy away from its dependence on oil and with the transformation of the PIF into a US\$2 trillion sovereign wealth fund, CEOs are overall confident of their own growth as well as the country's growth. They also said that they plan to hire new skills regardless of future growth targets.

Emerging technologies shaping the future

Al, cloud and social media are currently the big focus areas for business leaders and the government. Today, business model enablers such as crowdfunding and cloud computing allow firms easy access to funding, platforms, processing power, software and data. Hence, emerging technologies can be turned into useful, scalable solutions that can be easily adopted. Multiple technologyrelated initiatives and investments made by the government are also helping boost the Kingdom's digital transformation agenda.

Making digital a personal crusade

With an optimistic approach toward digital disruption, CEOs foresee it to be more of an opportunity than a threat. However, they do face pressure while attempting digital transformation in terms of delivering results on the investments made for the adoption of technology. The leaders are on the other hand willing to take personal ownership of digital transformation to personalize customer experiences. In line with this, the CEOs are positive about the impact of automation and artificial intelligence on jobs as they feel it will create more jobs than eliminate.

Mitigating challenges ahead

Cyber security is one of the most imminent challenges that CEOs in Saudi Arabia foresee; they are preparing for them by hiring cyber security specialists. Moreover, the government has created the NCA to draft the national cyber security strategy and framework. CEOs also identified understanding millennials' needs as one of the challenges they face. Since millennials are expected to drive e-commerce growth in Saudi Arabia in the near future, CEOs must focus on understanding their needs and profit on this opportunity.

Putting instinct over data

With changing customer demands and technological advancements in the economy, acting with agility has become the new currency of business. In line with this, organizations in Saudi Arabia are focusing on investing in collaborations with third-party firms or innovative startups, though firms face challenges around data sharing while collaborating. However, CEOs believe that agility can also be achieved by effectively using sophisticated data and analytics including predictive and prescriptive analytics, although at present they rely more on their experience and intuition than data-driven insights while making strategic decisions. It is imperative for the leaders to ensure that the data and analytics efforts leverage the most valuable opportunities to ensure that the new forms of data can be trusted.

Methodology and acknowledgments

The data published in this report is based on a survey of 50 CEOs in Saudi Arabia, who participated in a Global CEO survey conducted by KPMG International.

The Global CEO survey was conducted among 1,300 CEOs from Australia, China, France, Germany, India, Italy, Japan, Spain, the UK and the US, between 22 January and 27 February 2018. These CEOs operate in 11 key industries: asset management, automotive, banking, consumer and retail, energy, infrastructure, insurance, life sciences, manufacturing, technology and telecom.

Among the 50 CEOs in Saudi Arabia, 10 came from companies with revenues between US\$500 million and US\$999 million; 20 from companies with revenues between US\$1 billion and US\$9.9 billion; and 20 from companies with revenues of US\$10 billion or more.

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- Yasser F. Al-Sharif, CEO, Jabal Omar
- Thamer Alharbi, President, Microsoft Saudi Arabia

Chart 20: Industries from which the survey respondents hailed



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