



Professional accountants – the future:

50 drivers of change in the public sector



About ACCA

ACCA (the Association of Chartered Certified Accountants) is the global body for professional accountants, offering business-relevant, first-choice qualifications to people of application, ability and ambition around the world who seek a rewarding career in accountancy, finance and management.

ACCA supports its **198,000** members and **486,000** students in **180** countries, helping them to develop successful careers in accounting and business, with the skills required by employers. ACCA works through a network of **101** offices and centres and more than **7,291** Approved Employers worldwide, who provide high standards of employee learning and development. Through its public interest remit, ACCA promotes appropriate regulation of accounting and conducts relevant research to ensure accountancy continues to grow in reputation and influence.

Founded in 1904, ACCA has consistently held unique core values: opportunity, diversity, innovation, integrity and accountability. It believes that accountants bring value to economies in all stages of development and seek to develop capacity in the profession and encourage the adoption of global standards. ACCA's core values are aligned to the needs of employers in all sectors and it ensures that through its range of qualifications, it prepares accountants for business. ACCA seeks to open up the profession to people of all backgrounds and remove artificial barriers, innovating its qualifications and delivery to meet the diverse needs of trainee professionals and their employers.

More information is here: www.accaglobal.com



Part of our ground-breaking *Professional accountants – the future* series, this is one of a series of country reports, following on from our global report *50 drivers of change in the public sector*. It focuses exclusively on identifying the 50 drivers of change in Malaysia that are expected to have an impact on the public sector and the likely timing of these. It also assesses how professional accountants will need to continue to play a pivotal role in the decade ahead.

The public sector is as complex as it is diverse and it is not the same in any two countries; what is considered to be part of the public sector often varies from one country to another.

The global public sector is changing, with the landscape being reshaped by a combination of factors: a growing and ageing population, the need for better infrastructure and increasing concerns over sustainability and consumption. At the same time, demands are growing for greater transparency and accountability for public funds. These challenges are heightened by advances in technology and by economic and political uncertainty. As the social and economic environment shifts, all these factors will have serious consequences for public sector organisations and their finance professionals.

The public sector is as complex as it is diverse and it is not the same in any two countries; what is considered to be part of the public sector often varies from one country to another. For example, in some countries, such as the UK and Scandinavian countries, health care is deemed to be a public sector function, while in some others it is a hybrid between the public and private sectors.

For professional accountants working in the public sector, the challenge is twofold. First, they need to understand the key forces shaping the future and how these could affect public sector organisations and the country they serve. Secondly, they need to provide support and influence financial decisions that will ensure that public funds are deployed cost-effectively and efficiently.

To help professional accountants and leaders in the public sector prepare for an uncertain future, ACCA undertook a global

study to explore which emerging drivers of change could have the biggest impact and to highlight the skills that will be required over the period to 2026.

The recently launched global report *50 drivers of change in the public sector* is part of our ground-breaking *Professional accountants – the future* series and is the first report to focus exclusively on identifying the 50 factors that will impact the public sector, the likely timing of these and how they will shape the future.

The global study draws on a survey of ACCA's global forum for the public sector, ACCA members and members of other professional accountancy bodies working in the public sector. This was complemented with a series of roundtable events held across 12 countries, from the US in the west through to China in the east, and high-level interviews with key public sector figures.

This particular report focuses specifically on the results from the global report for Malaysia and follows a recent roundtable held in the country to discuss these key issues. This report explores the drivers of change that are particularly affecting Malaysia's public sector. These include the quality and availability of the talent pool; the use of public private partnerships; business leaders' responsiveness to change and disruption; foreign direct investment (FDI); competition for limited natural resources; economic growth; and clarity in financial reporting.



Malaysia's economic situation is broadly favourable, though there are some challenges with debt management. Public service delivery models continue to shift, and the quality and availability of talent is identified as the biggest driver of change in the public sector.

Malaysia is one of the recent economic success stories of South East Asia. According to the World Bank, in the past 30 years: 'Malaysia has successfully curtailed high poverty rates and reduced income inequalities. Its goal is to attain high income status by 2020 while ensuring that growth is sustainable' (World Bank 2017a). It is one of the 13 countries identified in *The Growth Report* by the Commission on Growth and Development (2008) as having recorded 'average growth of more than 7 percent for 25 years of more'.

Malaysia is an increasingly significant economic hub and a key part of the infrastructure for the South East Asian economy and the broader Asian market. Its economy has become increasingly diversified, producing a wide range of products and services across varying sectors. The financial services sector continues to expand, and financial markets continue to liberalise. Yet it is also a significant producer across many other different industries, from chemical products, textiles, electrical appliances, to car production. It is also a major economic player in many traditional products such as palm oil and rubber, as well as being a strong exporter of oil- and gas-based products. In more recent years it has enjoyed growth through significant innovation and adoption of free market economic policies. It has also been a leading player in the privatisation of many previously state-owned industries, notably airlines and telecommunications. In the wider economy, it is a prominent member of the Trans-Pacific Partnership free trade negotiations, which seek to drive economic growth and reduce poverty by job and wealth creation through innovation and competitiveness.

Even in the face of relatively good longer-term prospects for the economy, Malaysia nonetheless faces a number of future challenges and these could all have an impact on future performance of the public sector and the role of the Malaysia economy in the wider region. Attracting new talent to the country is a critical priority, particularly if growth in the services sector is to continue and to ensure that Malaysia capitalises on its pre-eminent role in the South East Asian economy (and to ensure that the public sector also has access to the right talents). It also needs to continue to invest in education to develop home-grown talent effectively. As the

Malaysia economy continues to transform it will also need to invest in service industries and digital technology to compete effectively. There are also opportunities for further improvement of governance frameworks, the rule of law and the regulatory environment, to continue to attract inward investment. Income inequality is also a challenge; according to the World Bank the government's focus has 'shifted to addressing the well-being of the poorest 40% of the population' which is 'vulnerable to economic shocks as well as increases in the cost of living.' (World Bank 2017a)

Within the context of a relatively successful economic story, the public sector in Malaysia continues to undergo significant transformation. This report suggests that the adoption of effective technologies and transition to digital working will be increasingly important. Public service delivery models must continue to transform, too. Public private partnerships could be a key to future success, but, as with the wider public sector services framework, such activities must be underpinned by adoption of good technologies and better exploitation of data and information. Access to talent is also identified as a critical driver of change in the Malaysian public sector. To seize the opportunities for driving significant value in the sector in Malaysia, professional accountants will need to continue to ensure that their skills are future proof – here, too, professional education and technology developments will play a critical role.

The 50 drivers of change are ranked in Table 1 and the top three drivers for the public sector in Malaysia are:

1. Quality and availability of the global talent pool
2. The level of economic growth
3. Use of public private partnerships.

Each of the drivers in Table 1 are grouped into one of the following categories: economy; politics and law; society and demographics; business of government; science and technology; environment, energy and resources; the practice of accounting; and the accountancy profession. Each of these categories will be elaborated in a later part of the report with the top three drivers identified for each of the categories.

Table 1: Ranking of the top 50 drivers of change for the public sector for Malaysia

The drivers of change are categorised into eight key themes: Economy; Politics and law; Society and demographics; Business of government; Science and technology; Environment, energy and resources; The practice of accounting and The accountancy profession.

RANK	DRIVER OF CHANGE	THEME
1	Quality and availability of the global talent pool	Business of government
2	The level of economic growth	Economy
3	Use of public private partnerships (PPPs)	Business of government
4	Manageability of national and international debt	Economy
5	Big data: the development and exploitation of large organisational databases, data mining and predictive analytics	Science and technology
6	Stability of the global economic infrastructure	Economy
7	Stability of national revenue bases	Economy
8	Balance between external financial accounting and internal managerial accounting	The practice of accounting
9	Spread of diversity in society and the workplace	Society and demographics
10	Accounting skills capacity in transitional economies	The accountancy profession
11	Speed and duration of business cycles	Business of government
12	New industries and production models	Science and technology
13	Opportunities arising from adoption of global regulation	The practice of accounting
14	Rate of democratic transition	Politics and law
15	Competition for limited natural resources	Environment, energy and resources
16	Clarity in financial reporting and defining the audit function	Practice of accounting
17	Business leaders' responsiveness to change and disruption	Business of government
18	The workplace expectations of Generations Y, Z and beyond	Society and demographics
19	Level of entrepreneurial skills in the accountancy profession	The accountancy profession
20	Carbon tax and other environmental market mechanisms	Environment, energy and resources
21	Defining the scope of the accountant's role	Practice of accounting
22	Non-financial information and integrated reporting	The practice of accounting
23	Cost and ease of access to higher education	Society and demographics
24	Focus of global governance institutions	Politics and law
25	Global climate change	Environment, energy and resources
26	Experimentation with and adoption of new business models	Business of government
27	Level of international political volatility	Politics and law
28	Cybersecurity challenges for government	Science and technology
29	Flexibility, suitability and cost of accountancy training	The accountancy profession
30	Public perception and attractiveness of the accountancy profession	The accountancy profession
31	Workforce age structure	Society and demographics
32	Extent of foreign direct investment in developed and developing economies	Business of government
33	Crowd sourced funding for innovation: the consumer as investor	Business of government
34	Enterprise risk management capability	Business of government
35	Evolution of corporate governance regulation and practice	Business of government
36	Societal expectations and definitions of accounting	The accountancy profession
37	Governance and delivery of outsourced public services	Politics and law
38	Advances in genetic science, Impact of nanotechnology advances and robotic science across business sectors	Science and technology
39	Adoption of globally accepted accounting standards	The practice of accounting
40	The digitisation of work	Science and technology
41	Consideration of alternative economic perspectives	Economy
42	Scale of take-up in alternative energy by business	Environment, energy and resources
43	Scale and distribution of global population growth	Society and demographics
44	Total scale and distribution of global inequality and unmet needs	Economy
45	Broadening measurement of public sector value and progress	Economy
46	Size and complexity of the CFO's remit	The practice of accounting
47	Scope and diversity of expectations of external stakeholders	Business of government
48	Pressure to manage reputation as part of business strategy	Business of government
49	Adoption of integrated systems thinking to manage business complexity	Business of government
50	Level of investment required to maintain national physical infrastructure	Economy

Malaysia, like other growing and advanced economies, continues to face significant economic challenges though its economy is faring relatively well.

MALAYSIA: PERSPECTIVES ON THE PUBLIC SECTOR – GLOBAL THEMES

ACCA's global report *50 Drivers of Change in the Public Sector* outlines a number of core themes facing governments across the globe. Across both advanced and maturing economies, governments are increasingly challenged on a number of different fronts. Technology is having a significant impact as the public sector seeks to adopt new emerging technologies to drive value and better service propositions. Demographics in most countries continue to shift, and there are threats to revenue in markets that are increasingly globalised and competitive.

Demographics and the financial implications of a rapidly changing population profile represent the one of the most severe challenges facing many countries, and Malaysia may no longer be an exception. According to the United Nations Economic and Social Commission for Asia and the Pacific's 2016 population sheet, Malaysians aged 60 or over comprise 9.5% of the population (Straits Times 2017). On current trends it is suggested that by 2050 almost one-quarter of the population will be over 60, officially defining it as an 'aged' society. Advances in health care also mean that people are living longer. The proportion of the population aged over 100 is growing evermore rapidly and this now represents the fastest growing demographic of all (Goodman 2017).

As more people live longer, however, so too do more of them live longer with chronic illnesses, which in itself will create significant challenges for both the operational provision of health care and its funding. Health care in Malaysia is funded through four main primary channels: general taxation, private health insurance, social health insurance and paid by individuals directly. In countries where health services are paid for out of taxation, this places enormous pressure on state budgets. Health care and social care must inevitably then take an increasing share of national spending.

Diversity is another dimension of the changing demographics in growing and advanced economies, and Malaysia is no exception here. People in deprived countries, particularly those in conflict, seek a better and safer life in wealthier nations. And, in recent years, both growing and advanced economies have sought to tap into an immigrant workforce.

According to the World Bank, Malaysia has increasingly sought to bring in immigrant workers as its economy expands. Malaysia has the fourth-largest number of migrants and the seventh-highest ratio of migrants to total population in east Asia Pacific (World Bank 2015a). Yet as the economy matures, the skills requirements of many advanced economies (and growing economies such as Malaysia will continue to evolve. The World Bank suggests that if Malaysia is to achieve 'high income' status by 2020, it will be reliant on both high- and low-skilled labour.

In recognition of a challenging economic climate and pressure on government budgets, there is growing expectation that private citizens will pay more for public services, particularly through privatisation measures. One of the most common ways this has been achieved has been through the use of public private partnerships (PPP); many governments in South East Asia have used these initiatives to secure funding and create improved customer value, and Malaysia has been a leading player in adoption. Supporters of PPP have advocated the benefits of reduced risk, away from full government ownership, reduced costs, improved financial management and better service delivery, yet critics argue that these schemes often result in pressure to cut costs and, consequently, potential job losses. Historically, this has led to higher levels of productivity and improved efficiency, which in turn have created demand for new workers at a rate that has compensated for, or exceeded, the job losses.

Whether all the benefits accruing from PPP can be sustained in the Malaysian context is less sure. Malaysia, like other growing and advanced economies, continues to face significant economic challenges though its economy is faring relatively well. In the fourth quarter of 2016 the Malaysian Economy expanded at 4.5%, although across the year the rate was 4.2% versus a higher rate of 5% in 2015 (Chin 2017).

Beyond the economic landscape, the ascent of digital technology may have an even broader impact on the public sector in advanced and growing economies alike, particularly if workers are replaced by machines in some vocations. The advance of automation, artificial intelligence and machine learning could have significant implications for the labour force, with one study suggesting that as many as 38% of

‘60% of the government revenue comes from tax and customs. When I talk about tax and customs, it’s related to economic growth...That’s why the level of economic growth is very important to the Malaysia perspective’.

Malaysia roundtable participant

jobs in the US could be at risk (Berriman and Hawksworth 2017). According to a recent report by the Khazanah Research Institute, more than half of all jobs are at risk of being lost to automation over the next two decades in Malaysia (Kok Leong 2017).

All these issues go beyond social and financial dimensions. Across the public sector in all countries they illuminate what citizens believe their government ought to be doing and what they expect their state to provide. Should a government act to protect its citizens, or is its role to enable markets to service the needs of people as consumers? Where does the balance lie? And in a period of challenging revenue streams for governments, how should public services be funded in the future, and what role can technology play in changing the face of public service provision? While these are significant issues to consider, perhaps for finance professionals they also present new opportunities to add value in their careers. Particularly in the public sector, there is no doubt professional accountants will have a key role to play in many of these developments.

ECONOMY

2 The level of economic growth

4 Manageability of national and international debt

6 Stability of the global economic infrastructure

Malaysia’s economic growth slowed down in 2016 owing to lower oil prices and decreased demand from China, and both factors will continue to affect GDP growth in 2017, although exports are expected to pick up slightly. **The level of economic growth** is mainly driven by private consumption and investment. While oil and gas exports are important for the Malaysian economy, low prices do not necessarily pose a risk for growth prospects in the long term. The economy is diversified, and while exports of oil and gas account for about 22% of total exports, those of machinery and transport equipment account for 45%. Malaysia was one of 13 countries identified by the World Bank’s Commission on Growth and Development in its Growth Report (Commission on Growth and Development

2008) as having recorded average growth of more than 7% per year for 25 years or more. Economic growth was inclusive, as Malaysia also succeeded in nearly eradicating poverty (World Bank 2017a).

GDP growth was 4% in 2016 and is expected to be the same in 2017, whereas in 2014 it reached 6%. A prudent fiscal policy has limited the consequences of low oil and gas prices, by raising tax income and abolishing subsidies on fuel and sugar. That said, the goal of a balanced budget in 2020 will probably be reached later (Atradius 2017). The roundtable respondents in Malaysia supporting this study recognised the importance of economic growth as a key driver in the public sector, but also pointed to the critical role of the government in creating appropriate policies to influence the level of economic growth.

The manageability of national and international debt also remains a challenge, according to this study. Moody’s Investors Service, in its latest report, stated that Malaysia had a much higher external debt to GDP ratio than the other large economies in the region, at 66 % in 2015 compared, for example, with 32 % in Thailand. The ratio has also grown 11 percentage points since 2009 and Malaysia now has the second highest external vulnerability indicator (EVI) in the region, after Mongolia (Damodaran 2016). In addition, Malaysia’s household debt-to-GDP ratio remains high, according to the IMF, and increased to 89.1% in 2015 from 86.8% the previous year. The government has implemented reforms and macro-economic measures to contain this debt, particularly among the lower-income group. The IMF has noted that ‘domestic risks are primarily related to the public sector and household debt, along with pockets of vulnerabilities in the corporate sector, adding that although the household debt-to-GDP ratio was likely to decline, household debt remained high, with debt servicing capacity growing only moderately’ (Star Online 2017a).

‘Government policy is one of the most vital aspects of economic growth. Policy determines the direction of the economy’.

Malaysia roundtable participant

‘As an accountant you know you can’t draw a budget if you don’t know where the money’s coming from. So the stability of your national revenue base is important’.

Malaysia roundtable participant

‘The government need[s] to inject CAPEX for national economic growth’.

Malaysia roundtable participant

Even so, the World Bank overview maintains that, despite some risks, Malaysia’s near-term economic outlook remains broadly favourable, reflecting a well-diversified economy (World Bank 2017a). Domestic demand is expected to continue to anchor economic growth, supported by continued income growth and a stable labour market, while expected improvement in global trade would contribute positively to the external sector. The government has implemented a series of reforms and remains committed to fiscal consolidation, with the fiscal deficit target set at 3% of GDP for 2017.

As in many other countries, the **stability of the global economic infrastructure** is important for Malaysia’s continuing economic progress. The country has felt the impact of global commodity prices and financial market volatility, but the IMF has attributed the country’s economic resilience to its diversified production and export base, strong balance sheet position, flexible exchange rate, responsive macroeconomic policies and deep financial markets (Star Online 2017a). Malaysia relies on five countries – Singapore, China, Japan, Thailand and the US – for approximately half of its imports and exports (Atradius 2017). The main risk for Malaysia is arguably a ‘hard landing’ of the Chinese economy, as China is a main export destination. The stability of the global economic infrastructure and the stability of the national revenue base were also recognised by the roundtable participants as key influences on the public sector.

‘If there is movement in the global economy it will affect our economy in terms of rising cost[s] [and] inflation’.

Malaysia roundtable participant

POLITICS AND LAW

14 Rate of democratic transition

24 Focus of global governance institutions

27 Level of international political volatility

Malaysia is a moderate and democratic state. The country is a parliamentary democracy with a federal constitutional monarchy. It is a multi-ethnic, multi-religious federation of 13 states and three federal territories. The Barisan Nasional (BN) coalition led by the United Malays National Organisation (UMNO) has been in power since Malaya achieved independence in 1957 (the enlarged state of Malaysia being formed in 1963). Despite growing electoral successes by opposition parties, UMNO remains firmly in power (Atradius 2017). Some external commentators have called for the **rate of democratic transition** to be further progressed and this survey suggests it is seen as an important driver affecting the public sector.

‘The rate of democratic transition is maybe [identified] as a concern because [the perception is] it is growing negatively rather than positively’.

Malaysia roundtable participant

As an increasing economic force, Malaysia needs to be conscious of how the **governance of global institutions** and the **level of international political volatility** could possibly affect the economy and, therefore, the public sector. Perhaps of most note here are the recent developments with the Trans-Pacific Partnership (TPP) trade agreement following the election of President Trump. Malaysia is part of the TPP, which includes Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam and, until 23 January 2017, the US. The signatories of this multilateral trade deal have to seek a way forward for the agreement after the US stated its intention of withdrawing from it

By putting less emphasis on age, companies could also widen the talent pool and attract quality candidates into the public sector.

shortly after President Donald J. Trump's inauguration (Panda 2017). Following the withdrawal of the US it has been argued in Malaysia that if TPP is going to proceed without US participation, the country needs to ensure that its interests remain protected and that the benefits derived from it still outweigh the costs (Babulal 2017). Many of the Southeast Asian TPP members had hoped that the TPP would help them to carry out reforms involving liberalisation and regulation.

Nonetheless, a more positive indicator for stability and trade is the establishment of the ASEAN Economic Community (AEC) in 2015, which includes Malaysia (ASEAN n.d.a). AEC describes itself as a milestone in the regional economic integration agenda in ASEAN, offering opportunities in the form of a huge market of US\$2.6 trillion and over 622 million people. In 2014, AEC was collectively the third-largest economy in Asia and the seventh-largest in the world (ASEAN n.d.b).

SOCIETY AND DEMOGRAPHICS

9

Spread of diversity in society and the workplace

18

The workplace expectations of Generation Y, Z and beyond

23

Cost and ease of access to higher education

A survey of Malaysian businesses in April 2017 by recruitment firm Michael Page found that companies were supporting the **spread of diversity in society and the workplace** (New Straits Times 2016). The top three diversity areas identified were gender, age and minority ethnic groups (Ismail 2017). Diversity and inclusion (D&I) efforts were supported by 94% of companies, a finding on a par with that for six other Asian countries in the survey. The survey concluded that the government's support for the advancement of women in the workplace had created a conducive environment for addressing work-life balance challenges for female employees.

In a 2013 survey of Malaysian public listed companies, it was found that 92% of board positions were occupied by men, while men occupied 76% of top management positions. The same survey found that fewer than one-third offered family-friendly

facilities, while only 35% offered some sort of flexible work arrangement. Approximately half the respondents said they planned to enhance their work-life benefits (48%) and approximately one-third planned to introduce family-friendly facilities (37%) and flexible work arrangements (34%) (TalentCorps and PwC 2013). A recent survey by Hays noted that: 'Although Malaysia leads from the front compared with many other countries in terms of female ambition for the most senior roles, there are still fewer women aspiring to a top leadership position in their career than men. Employers should ensure opportunities are communicated to all and recognise and draw out the skills and ambitions of those around them' (Hays 2016).

The April 2017 survey by Michael Page noted above also said that meritocracy should be the only basis for rewarding employees, not their years of service (New Straits Times 2016). By putting less emphasis on age, companies could also widen the talent pool and attract quality candidates into the public sector. **The workplace expectations of Generations Y, Z and beyond** may also have implications for the public sector and these were highlighted by a recent global ACCA report, *Generation Next* (ACCA 2016) – implications particularly for talent retention risk. Malaysian respondents to this study across all sectors indicated high levels of mobility, with 28% suggesting they wanted to change role in one year and 83% suggesting they would desire a role in a different country or region in the future. This puts significant strain on public sector attraction and retention strategies.

Other concerns about talent have been raised elsewhere – a Deloitte survey on Millennials found that in South East Asia (the survey considered Singapore and Thailand as well as Malaysia) respondents said that their 'leadership skills are not being fully developed' (Deloitte 2016). There are also broader talent problems – particularly graduate and youth unemployment, which is an increasing issue. In 2017 youth employment in Malaysia, at 10.7%, was three times the average unemployment (3.1%); of the 405,000 youths with tertiary education, 15.3% were unemployed (Shanmugam 2017).

This is not helped by problems with the **cost and ease of access to higher education**. The Malaysian government has realised that the present education system

‘If the cost to obtain education is high, then the public sector may be deprived of talents...but generally Malaysians still have access to education’

Malaysia roundtable participant

needs further development if the country is to transform itself into a knowledge- and innovation-based high-income economy. The Malaysia Education Blueprint 2013–2025 was launched in September 2012 as the government’s latest initiative for transforming the education system into one that produces the thinking and innovative workers required to meet the needs of the new economy (Ministry of Education Malaysia 2013).

At the higher end of the education scale, a recent survey found that Malaysia had the fifth-highest education cost to income ratio – Malaysian parents expect to spend 55% of their salary on sending their children to university (Leigh-Morgan n.d.). The roundtable participants in Malaysia as part of this study suggested that cost and ease of access to higher education could on reflection be considered to be the greater driver of change for society and demographics. While the sentiment was that at present the situation was stable, some concerns were expressed about the future.

‘Our education is still relatively cheap and free compared to many other jurisdictions where access to higher education is not cheap or free’.

Malaysia roundtable participant

Considering broader demographics, Malaysia has a population of 31m of whom 29.6% are under 15; 65.4% are between 15 and 64; and only 5% are over 65. The dependency ratio of population is the ratio of people who are generally not in the labour force (the dependants) to those in the workforce of a country (the productive part of a population). Research by Countrymeters (2017) shows that the total dependency ratio of Malaysia’s population is 52.9%. The value of more than 50% shows that the pressure on the productive population in Malaysia is slightly high.

‘I think cost and ease of access to education is going to be a problem [in the future]. As the government budget is cut for education, universities have started to look into the possibility of increasing the fees’.

Malaysia roundtable participant

BUSINESS OF GOVERNMENT

1

Quality and availability of the global talent pool

3

Use of Public Private Partnerships (PPPs)

11

Speed and duration of business cycles

The **quality and availability of the global talent pool** is an urgent problem for Malaysia and in this study it was identified as the top driver of change in the public sector. The quality of talent will have a huge impact on the public sector’s ability to provide value in the future. In the Malaysian roundtable supporting this report, one of the key themes attendees identified impeding talent development was the structure of government departments. It was noted that succession planning was often challenging owing to the poor availability of roles at a senior level within different ministries and public sector departments.

More broadly, the OECD suggests that Malaysia will need to address some important long-standing economic weaknesses in the medium term in order to continue to progress towards becoming an advanced economy within the next decade. Skill shortages and the challenges in the education system that underlie them, together with the relatively low participation of women in the workforce, are recognised issues (OECD 2013).

The World Bank estimates that female participation in the workforce was 49.3% in 2015 (Department of Statistics Malaysia 2016), up from 43.8% in 2010. Currently, the talent base of the workforce of Malaysia is lagging behind the standard found in high-income nations, according to the OECD (2013). The country suffers from a general shortage of skilled workers, and is heavily reliant on unskilled and low-wage migrant workers. In 2010, 58% of the Malaysian labour force had only a secondary-level education, 13.2% had only primary-level and 2.6% had no formal education. That implies that nearly three-quarters (73.8%) of the Malaysian labour force in 2010 was relatively low-skilled. Another noteworthy point is that

In Malaysia, the development of toll highways, ports, airports, flood tunnels, and government office buildings, among others, has been made possible through PPP arrangements.

more than 47% of non-Malaysian citizens in the labour force, ie migrant workers, had only a primary-level education.

Employers' over-reliance on unskilled and cheap foreign labour has led to inadequate growth in the number of skilled workers in the labour market. As a result, only approximately 25% of Malaysia's labour force is composed of highly skilled workers, as compared with significantly higher proportions elsewhere in Asia: for instance, the figure in Singapore is 54% (Ang 2015). This has a natural impact on access to talent for public sector entities in Malaysia.

As well as talent challenges, public sector delivery and financing models are also changing, and these were identified as a key driver of change in this sector. In May 2017, the World Bank held a conference in Kuala Lumpur, Malaysia to discuss Islamic Finance and the **use of public private partnerships** for infrastructure development (World Bank 2017b). According to the OECD, there is a wide recognition that many developing countries currently face a substantial infrastructure deficit, with many people lacking access to good-quality infrastructure and reliable basic services. Recent estimates indicate that, in low- and middle-income countries, an additional \$1 trillion to \$1.5 trillion of annual investment will be required globally through 2020 to meet the infrastructure demand from industry and households.

Particularly in Malaysia, the use of Islamic finance for infrastructure development has been receiving increased attention in the past few years. Islamic finance instruments such as *Mudarabah* (trust financing), *Musharakah* (equity financing), *Ijara* (lease financing) and *Istisna'a* (work-in-progress financing) have inherent features of risk-sharing and asset-backing that make them suitable for infrastructure projects. The increased use of *Sukuk* (Islamic bonds) has also opened up an important potential new source of funding for infrastructure projects that require large capital outlays with long construction and amortisation periods.

In Malaysia, the wider PPP model has been seen as one of the key instruments in implementing government projects (RSM Malaysia 2017). The 10th Malaysia Plan (10MP) set out 52 projects worth MYR 62.7bn (US\$14.7bn). A Facilitation Fund

was established for the 2011 to 2015 planning period where development covered the areas of transportation, waste management, health care and hospitals, master planning, education and other public infrastructure and services. The government has sought to change its role from an active participant to a supporter and facilitator of private-sector-led growth. It is envisaged that private sector investment will account for 92% of the MYR1.4 trillion investment required and public funding will account for only 8%.

According to the World Bank, in Malaysia the average annual investment in PPP over the five year period 2011 to 2015 was US\$883m but the 2015 investment was much higher at \$2,675 million, a 203% increase (World Bank Group 2015).

In Malaysia, the development of toll highways, ports, airports, flood tunnels, and government office buildings, among others, has been made possible through PPP arrangements. Projects such as the North South Highway, Port of Tanjung Pelepas, and government office buildings in Putrajaya spurred Malaysia's economic growth and created new areas of development as well as improved accessibility and mobility. To date, 31 toll highways and toll bridges have been built using the Build-Operate-Transfer (BOT) method, involving varying concession periods from 30 to 50 years. Under this method, the private sector suppliers, as concessionaires, are allowed to collect toll charges in return for funding the projects. These highways include North South Highway (PLUS), Puchong-Damansara Highway (LDP) and Elite Highway. Apart from facilitation of movement of passengers and goods, new highways create spill-over effects by creating new townships and industrial areas. By December 2014 Malaysia had implemented 698 PPP projects (Chief Secretary to the Government of Malaysia 2015)

The main sectoral distribution of PPP programmes is in the fields of construction (27.8%), transportation and communication (12.3%), manufacturing (10.0%), wholesale and retail, trade, hotel and restaurant (11.2%), finance, real estate and business services (8.3%), government services (7.0%) and other services (8.3%).

‘This is where the expectation of external stakeholders comes in. The public has to demand a certain level of accountability’.

Malaysia roundtable participant

Early detection of a turning point in a business cycle is crucial, as information about the changing phases in business cycles enables policymakers, the business community and investors to cope better with unexpected events brought about by economic and business situations. Malaysian business can continue to expect further uncertainty with the **speed and direction of business cycles** identified as a key driver in this survey for Malaysia, although these factors differ across the South East Asia region (Damodaran 2017). For 2016, although growth in the ASEAN economies increased, economic cycles within the region continued to diverge. Moody’s noted that the Malaysian economy was under pressure from weak external demand for its exports, but this has now eased, with higher commodity prices, especially for oil, and the tech cycle enjoying an upswing.

Capital spending has been fairly subdued owing to business uncertainty about future economic conditions (Moody’s Analytics and Economy.com 2017). Yet investment is key: as technologies such as the internet compress time and distance, organisations are under pressure to adapt their structures, processes and systems on an almost continuous basis. As a result, there is a growing emphasis on the need for speed, flexibility, adaptability and responsiveness. These in turn demand rapid decision-making and shortening cycles for the execution of change, all of which are factors entirely relevant to the future public sector in the country and which they will need to factor this into policy development and implementation. Sound delivery here is also highly dependent on good corporate governance in the relevant public sector organisations. It was interesting to note from the roundtable discussion with Malaysian participants that the evolution of corporate governance regulation and practice was also argued to be a key driver of change in the sector as this affects overall delivery capability.

SCIENCE AND TECHNOLOGY

5

Big Data: large organisational databases, data mining and predictive analytics

12

New industries and production models

28

Cybersecurity challenges for government

Advances in science and technology lie at the heart of many of the developments that will shape the public sector over the next decade as they offer the potential for disruptive innovation in literally every aspect of human life, society and work. **Big Data: the development and exploitation of large organisational databases, data mining and predictive analytics** is actively being explored by Malaysia and its impact will be significant. It was identified as the fifth-biggest driver of change for the sector in this study, with one roundtable respondent suggesting that it could be the greatest influence.

‘[The biggest challenge] for the public sector is actually big data... government data is enormous and voluminous. We are talking about billions of ringgit or dollars and so on. So how can we actually [make] it more integrated? The data must have integrity’.

Malaysia roundtable participant

Malaysia is one of the few countries with a structured Big Data Analytics (BDA) roadmap for exploiting the value of big data. Big data can be used to describe a problem, assess a situation, forecast results and prepare solutions. Business owners, government and citizens all stand to gain from Malaysia’s vision as ASEAN’s leading BDA hub (MDEC 2017).

The communications and multimedia ministry (KKMM) is committed to ensuring the development and comprehensive use of the big data in the country to enhance the government’s ability to provide best service to the people (MDEC 2017). In May 2017 deputy secretary-general (operations), Datuk Dr Mohd Ali Mohamad Nor said that the government’s ability,

‘The government security system is very effective... but it will be (Increasingly) challenging...[because] the hackers are evolving’
Malaysia roundtable participant

especially in decision-making based on facts and information, could also be enhanced with the implementation of the big data pilot project. To realise this goal, the ministry has worked closely with the International Telecommunication Union (ITU) to support the development and comprehensive use of big data (Star Online 2017b).

Malaysia is also working with the Open Data Institute, an international body that promotes open-source data and big data analytics, to help improve the country's rating on the e-government index at international level as developed by the United Nations (UN 2016; Scott 2017). KKMM is also in collaboration with the Malaysian Administrative Modernisation and Management Planning Unit and the Malaysian Digital Economy Corporation to drive the implementation of National Big Data Analytics by implementing its pilot project for big data in the public sector. Development and progress in information and communication technologies has apparently brought many benefits (MAMPU 2017).

As the development of big data demonstrates, one of the key drivers of change is the potential of **new industries and production models**. If the country is to transform itself into a knowledge and innovation-based, high-income economy, the ability to embrace change and innovation will be crucial. Advances in science and technology are yielding radical new industrial processes that could be the basis of major future industries. In many cases, new industries are also introducing new business models and distribution approaches. For Malaysia, introducing new models of production could help to boost productivity. One relatively new industry of particular note is the environmental sector.

One area where the country does appear to be productive is in addressing the **cybersecurity challenge for the government**, which was identified as a key driver of change in the public sector in this report. Malaysia could become a leading player in Asia for cybersecurity, along with its neighbour Singapore. A PwC survey reported that 42% of Malaysian organisations have seen an increased risk of cyber threats, yet their approach to risk mitigation is reactive at best (PwC Malaysia 2016). Cybersecurity is also a critical issue for governments across the world. With cybercrimes constantly increasing and

many government computer systems being targeted, it is pivotal that governments keep their critical infrastructures secure from intruders and hackers (Kumar 2017).

‘Cybersecurity is a major issue, because the reliance on digitisation is going to grow, it's not going to get less’.

Malaysia roundtable participant

I think it's not just about breach of security but I think, for example, now there's a lot of government services now delivered through technology.

Malaysia roundtable participant

ENVIRONMENT, ENERGY AND RESOURCES

15

Competition for limited natural resources

20

Carbon tax and other environmental market mechanisms

25

Global climate change

This study suggests that Malaysia is in the **competition for limited natural resources** and this is identified as a potential key driver of change for the public sector. For example, it has recently faced a number of water scarcity challenges. The country also appears to be experiencing higher temperatures, with estimates suggesting that average temperatures could rise by 3.1 degrees centigrade by the end of the century as an effect of **global climate change** (Clean Malaysia 2016a). A recent survey suggested that 81% of Malaysians were concerned about the issue (Malay Mail Online 2017; MalaysianDigest.com 2017). Apart from water, Malaysia is well endowed with other natural resources. Malaysia is rich in mineral resources, and mining (including petroleum extraction) accounts for a significant portion of GDP. The major metallic ores are tin, bauxite (aluminium), copper and iron. A host of minor ores found within the country include manganese, antimony, mercury, and gold (Encyclopaedia Britannica n.d.).

‘I think in the context of Malaysia, we have been relying on fossil fuel...much [has] been said about fossil fuel in terms of the market, in terms of price drops. But in term[s] of the reserves, it’s depleting. So now actually the urge must be to go into alternative sources’.

Malaysia roundtable participant

According to data published by the World Bank, ‘East Asia’s Changing Urban Landscape: Measuring a Decade of Spatial Growth’, Malaysia is among the more urbanised countries of East Asia, and its urban population continues to increase rapidly (OKR 2017). Even so, urban areas in the country are among the least dense in East Asia. The Kuala Lumpur urban area is one of the largest in the region as measured by area, but not as measured by population (World Bank 2015b). Its urban population increased during the period 2000–2010 from 10.2m (43% of the total population) to 15m (53%), making it among the more urbanised countries and economies in the region in demographic terms. Growing urbanisation naturally has implications for pressure on natural resources.

Malaysia is on course to reduce its carbon dioxide emissions significantly in its bid to help tackle the **global threat of climate change**, which was also identified as a key driver of change in the public sector in the country. Malaysia seeks to reduce those emissions by 40% overall by 2020 and has already succeeded in reaching the 33% mark (Clean Malaysia 2016b). The government has a range of tax incentives to encourage green technology, and eco parks to encourage water recycling (MIDA 2017). According to EU Gateway, the business platform which helps to establish business partnerships between Europe and Asia, The government also has ambitions for Malaysia to be a green technology hub by 2030, when the industry is expected to reach a target contribution of €13bn of the national GDP. The focus is on technologies such as green public transport (electric buses), electric vehicles, solar rooftops, green ICT, green building, and ways of converting waste into energy (EU Gateway 2016).

Modelling in the OECD’s 2016 Economic Assessment has suggested that **introducing a carbon tax** with an appropriate redistribution of revenue gains would not only reduce CO₂ emissions but would also promote growth in Malaysia (Koen et al. 2017). The 11th Malaysia Plan notes that economic instruments such as a ‘green’ or carbon tax, and reducing emissions from deforestation and forest degradation, will be considered but this has yet to occur (Chapter 6 of the 11th Malaysia Plan 2016–2020)

‘Global climate change is a lot more significant than we think. In Malaysia we are still very agricultural. And every climatic report I’ve seen would suggest that we won’t have enough water for our oil palm trees, our dairy and everything else’.

Malaysia roundtable participant

‘Climate change is already here because Kelantan [a rural state in the northeast of Peninsular Malaysia] was hit by a big major flood which had never happened for many, many years. And that had a lot of economic consequences’.

Malaysia roundtable participant

THE PRACTICE OF ACCOUNTING

8

Balance between external financial accounting and internal managerial accounting

13

Opportunities arising from adoption of global regulation

16

Clarity in financial reporting and defining the audit function

Trust in public institutions is key, as underlined by the publication of *The Report on the Strengthening of the Accountancy Profession in Malaysia* by the Committee to Strengthen the Accounting Profession (CSAP 2014). The report noted that it is important that governments provide accurate and complete information on expenditure and transactions, in order to demonstrate accountability and stewardship, and to reinforce their credibility. This means providing clear, comprehensive information about the financial consequences of economic, political, and social decisions. This information should look at the longer-term impact of decisions, which cannot be communicated through the reporting and disclosure of cash flows alone.

This type of information is best communicated through a high-quality, robust, and effective accrual-based financial reporting system where government assets and liabilities are appropriately recorded and reported and,

‘When we are going to accruals, there’s a complexity in terms of accounting treatments. But I’m worried about whether the top people understand accruals. And how do we impact the decision-making or the policymakers at [a] very high level?’

Malaysia roundtable participant

hence, effectively monitored. The most globally accepted high-quality accrual-based financial reporting system is the International Public Sector Accounting Standards (IPSAS). It provides for the disclosure of assets, liabilities, and contingent liabilities: vital for assessing the economic implications of public sector financial management. Malaysia saw the **opportunities arising from adoption of global regulation** in this case and fully implemented accrual accounting for the public sector in 2015 for financial reporting.

As part of this bid for **clarity in financial reporting and defining the audit function** in its financial reporting, Malaysia has already adopted IFRS Standards and the IFRS for SMEs Standards for all companies (IFRS 2017). Although more work may be needed. A recent survey suggested companies need to strengthen their internal audit function (Hafidz Mahpar 2017). A 2016 academic paper also suggested that internal audit in the public sector could be improved, identifying weaknesses including poor-quality work, work not completed to the specification and delays in completing the work (Yusof et al. 2016).

Global regulation also presents an opportunity, through integrated reporting. There has been growing realisation that traditional financial reporting provides insufficient information for decision-making. The integrated reporting, <IR>, movement, advocated by the International Integrated Reporting Council (IIRC), goes further than the financial resources captured on the balance sheet to include other resources that are less easy to measure, such as human, natural and intellectual capital, which have a bearing on the value of an organisation. As a result of these considerations, <IR> is being championed by many regulators, professional bodies and corporates as a significant improvement to current, mostly financial-based, reporting practices (Williams 2017). In 2014 an analysis of the Bursa Malaysia’s top 30 companies’ annual reports by PwC against the IIRC’s Integrated Reporting Framework found that while Malaysian companies had covered the basics of reporting, their reporting did not yet meet the IIRC’s definition of ‘integrated’ (PwC 2014). Similarly, ACCA and MIA’s Integrated Reporting Survey 2016 found that over half the respondents (51%) had little or no knowledge of <IR> while only a small minority (13%) suggested they had good or ‘in depth’ knowledge.

‘[Of the] six capitals...I think one of the [key ones] beside financial is the human [capital]. I think on talent development...the information [around this] is quite crucial’.

Malaysia roundtable participant

‘I think the demand for nonfinancial information has been there for many years. The only thing is [this]: can the profession meet the challenge [of providing this]’.

Malaysia roundtable participant

‘You can’t do outcome-based budgeting if you have no way of collecting non-financial information to assess your outcome’.

Malaysia roundtable participant

A constant challenge for accountants is striking the right balance between external financial reporting requirements and internal management accounting, and this was identified as another key driver of change in the public sector in Malaysia. Both are expected to become more demanding and complex over time and this issue is particularly relevant to the public sector in the country. The CSAP (2014) report (The Report on the Strengthening of the Accountancy Profession in Malaysia) notes how the global financial crisis demonstrated the need for the public sector to strengthen its financial management and accountancy practices to cater for more sophisticated economic needs; in short, more accurate and meaningful financial information is valuable.

‘We need the financial information to be much...clearer and more transparent’

Malaysia roundtable participant

‘There needs to be more focus on the information that the ministries themselves use to manage themselves. The question is: do the ministries have relevant, accurate, and timely information to be able to make managerial decisions?’

Malaysia roundtable participant

‘I would argue that many of the skill sets of a commercial accountant would be equally relevant in government. It goes back to the integrity of the data being collected...I would not say that a government accountant should behave differently from a commercial accountant’.

Malaysia roundtable participant

THE ACCOUNTANCY PROFESSION

10

Accounting skills capacity in transitional economies

19

Level of entrepreneurial skills in the accountancy profession

29

Flexibility, suitability and cost of accountancy training

Accounting skills capacity in transitional economies is a key issue in many countries, including Malaysia, according to ACCA's study. As the country moves towards becoming a developed country by 2020, the structure and size of the economy will continue to change, influenced by regional and domestic developments. In its report noted above, the CSAP (2014) argues that the private and public sectors will become more competitive, and this would increase demand for the services of accountants across all sectors. Hence, the availability of talent – both in number and with the required relevant competencies for different economic sectors – would become critical.

Government plans for driving the economy forward can be expected to increase the demand for qualified professional accountants. Such demand can only be met if the infrastructure available for the education and training of accountants in Malaysia is designed to produce the required number of suitably qualified accountants.

‘I think one important thing is where the finance function of [the] public sector is able to connect with the whole function of public financial management in the economy. So that [professional accountants] are able to connect and understand the whole ecosystem, they are able to see what their roles are in term[s] of producing the numbers as well as giving the [appropriate] information’.

Malaysia roundtable participant

In addition to domestic factors, the Malaysian accountancy profession is also influenced by global and regional developments. Changes to international standards and regulations would change expectations on the competencies required of accountants in this market, such as Integrated Reporting, as noted above.

In this complex and fast-moving scenario, the study suggests that the **level of entrepreneurial skills in the accountancy profession** is a key driver of change in the public sector in the country. According to the World Bank, fiscal consolidation may require a second wave of reforms in the public sector as the scope for further reducing operating expenditures narrows and collection from goods and services tax (GST) levels off. . The government may consider additional reforms to raise revenue and improve public sector efficiency (World Bank 2017a). Accelerating structural reforms to enhance public sector performance and boost the productivity of public spending will be vital for sustaining robust growth in an adverse external environment. Public sector financial professionals would be involved in such reforms and having an entrepreneurial mindset is likely to be advantageous.

‘I think if you look at the way the private sector works and why the accountants in the private sector have a fairly high profile, it's because of the transparency and accountability that we see in the private sector...I believe that if you have greater transparency in the public sector, then you will raise the profile of the accountant in the public sector’.

Malaysia roundtable participant

The **flexibility, suitability and cost of accountancy training** are all key factors in the supply of professional accountants. In Malaysia there is forecast increased demand. The CSAP (2014) report suggests that concerted efforts are needed to promote professional accountancy to accountancy graduates, especially at the early stage of their careers. Students who have a strong interest in pursuing professional accountancy could be encouraged to enrol into the entry-level programmes offered by professional accountancy bodies. This would help provide a necessary pipeline of candidates for the public sector in the future. Some universities are already offering students the option of taking a number of professional papers during their undergraduate programmes. This reduces the number of professional papers that need to be taken post-graduation.

‘Usually, most accountants will look at things [that are] more current but forecasting forward is something that we would want the future accountant to be looking at as well’.

Malaysia roundtable participant

Training also needs to be flexible to suit employers’ and employees’ work commitments and locations, and employees’ preferred learning styles. Training needs to be suitable for training the professional accountants who are required today and for equipping them with a solid foundation of technical/professional skills while instilling a culture of life-long learning across the public sector in the country. Malaysia is looking at reforms to achieve these objectives according to the CSAP 2014 report. Having the relevant technical knowledge is the foundation, but professional accountants in the public sector will need additional skills and qualities and, as their role evolves, these other skills will become more important. The CSAP report (2014) also notes that while the demand for training and retraining of existing accounting personnel in the public sector will certainly increase, the availability of specialists and specialised education and training

programmes catering for the specific needs of the public sector remain relatively limited. It is important for the needs of the sector to be addressed, including establishing special interest groups with a deep understanding and knowledge of public sector requirements.

‘The government has upgraded the pay scale of people with professional qualifications to attract them into government. And there’s a lot of effort now to actually train government accountants with professional courses...there’s certainly a lot of effort to try and either retrain or hire professionally trained accountants to come into government...[but]...can you get enough good people in?’

Malaysia roundtable participant



Malaysia's public sector's financial professionals face a complex web of challenges. To provide greatest value they need to ensure that they are fully aware of the factors that are driving change in the sector and that they have the skills to be able to rise to the challenges and/or maximise opportunities.

Malaysia's public sector's financial professionals face a complex web of challenges. To provide greatest value they need to ensure that they are fully aware of the factors that are driving change in the sector and that they have the skills to be able to rise to the challenges and/or maximise opportunities. The economic challenges, spread of diversity in the workplace; opportunities of new technology such as Big Data – all these drivers affect the public sector and, inevitably, the level of public services required. The public sector in Malaysia will have to deal with challenges posed by international political volatility and the withdrawal of the US from the Trans-Pacific Partnership (TPP) as well as working on developing Malaysia's role in the ASEAN Economic Community. And more broadly, while Malaysia's prevailing economic performance seems relatively strong in the first half of 2017, its reliance on a number of key countries for exports (particularly China) could present growth challenges in the future. China is also a key investor for Malaysia in the 'Belt and Road' initiative (ACCA 2017).

Yet significant opportunities for professional accountants in the public sector are also arising from all these developments. In Malaysia, both the practice of accounting and the accountancy profession are changing with the introduction of international regulations and standards, particularly the adoption of IPSAS, which will have an effect on the professional accountant in the public sector. These changes give professional accountants new opportunities for shaping more effective financial reporting in the sector in the future, driving transparency and control over public spending and demonstrating appropriate accountability and stewardship. Accountants also have new opportunities for demonstrating their value through integrated reporting adoption, with greater transparency for stakeholders. The Malaysian public sector is also particularly influenced by competition for natural resources and the country faces significant climate challenges – professional accountants in the sector should have a continuing role to play in driving best practices for capturing and reporting on green performance measures.

More broadly, one of the key drivers of change shown in this report to be affecting Malaysia was the quality and availability of global talent – in fact, this was identified as the most important driver of change for the public sector in the country as a whole. Access to great people will enable the sector to improve service offerings and meet many of the challenges that lie ahead, and access to talented finance professionals will be particularly essential to this. The changes highlighted in this report will have significant implications for the future capabilities that finance professionals will need to possess – particularly if one considers the probable developments in areas such as technology, proliferation of financing options and the use of public private partnerships in the public sector in Malaysia. The growth in analytics and big data is also likely to have significant implications for the skills that finance professionals in the sector will have to nurture, as well as their role in helping manage risk, including that of rising cybersecurity threats. All this has implications for the quality of training and learning support, as well as a broader general education system that will ensure a sufficient pipeline of future talent in the country: professional accountants could be well placed to play their role across the sector in helping transform Malaysia into an innovation-based and knowledge economy.

A PLATFORM FOR ENGAGEMENT

The aim for this global project is to provide a platform for engagement between Malaysia's public sector organisations, professional accountants and the wider community of stakeholders. No future-oriented work of this type can ever hope to be definitive, but this report provides an important input into the development of future public sector strategy. It provides accountancy professionals, and the organisations in which they work, with a framework for preparing for, adapting to and influencing change.

ACCA would like to thank those roundtable guests who participated in producing *Drivers of Change: Malaysia*.

Dato' Richard Abbas, The Representative for Asia Council member, Council of Chartered Accountants Australia and New Zealand (CAANZ)

Zakaria Bin Hj Ahmad, Ketua Penolong Pengarah Kanan, Bahagian Perkhidmatan Operasi Pusat dan Agensi, Accountant General Department

Dr Norhayati Alias, Senior Lecturer, Universiti Teknologi MARA (UiTM)

Dato' Mohammad Faiz Azmi, President, Malaysian Institute of Accountants (MIA) and Chairman, PwC Malaysia

Datuk Surendran C.K. Balan, Ketua Komunikasi Korporat, Public Service Malaysia (Jabatan Perkhidmatan Awam)

Farizah Harman, Assistant Director, Audit Badan Berkanun Persekutuan, Auditor General Department

Dato' Lukman Ibrahim, President of ACCA Malaysia Advisory Committee Malaysia

Datuk Nur Jazlan Mohamed, Deputy Minister of Home Affairs, ACCA Council member

Dato Dr Amin Khan, Head of the Public Service Delivery Transformation group, Performance Management and Delivery Unit (PEMANDU)

Subramaniam Krishnasamy, Senior Officer, Industry Relations Division, Ministry of Higher Education

YM Raja Azura binti Raja Mahayudin, Chief Executive Officer, Yayasan Peneraju Pendidikan Bumiputera

Dr Nurmazilah Dato' Mahzan, Chief Executive Officer, Malaysian Institute of Accountants (MIA)

Assoc. Prof. Dr Muslim Har Sani Mohamad, Head of Accounting Department, International Islamic University Malaysia (IIUM)

Dr Yacob bin Mustafa, Pengarah, Bahagian Perkhidmatan Operasi Pusat dan Agensi, Accountant General Department

Kamarul Ariffin Ngah, Financial Advisor, Ministry of Finance, Malaysia

Zulfa Abdul Rahman, Manager, Malaysian Institute of Accountants (MIA)

Assoc. Prof. Dr Zakiah Binti Saleh, Deputy Dean (Higher Degree)/ Director, UM Graduate School of Business, Faculty of Business and Accountancy, University Malaya (UM)

Gary Dinesh Selventhiranathan, Associate Director, NKRA Reducing Crime, Performance Management and Delivery Unit (PEMANDU)

Arief Putera Mohd Sharipudin, Deputy Director – Jabatan Operasi Cukai, Inland Revenue Board

Faziyatun Mohamed Yahya, Timbalan Pengarah, Seksyen Pembangunan Perakaunan dan Pengurusan Strategic, Accountant General Department

Normahiran Yatim, Head of Learning Centre, Professional Accounting Studies, Universiti Teknologi MARA (UiTM)

Nik Hasyudeen Yusoff, Former Chairman, Audit Oversight Board, Securities Commission Malaysia (SC)

Dato' Yusli Bin Mohamed Yusoff, President, Malaysian Institute of Corporate Governance (MICG)



ECONOMY

1. Stability of the global economic infrastructure

The global economy, trade and financial flows are dependent on a complex underpinning infrastructure that comprises a range of key agreements, standards, systems, checks, balances and governance frameworks.

2. The level of economic growth

Growth expectations influence business confidence, consumer spending, government planning and budgeting, and management of the micro and macro economy.

3. Consideration of alternative economic perspectives

The financial crisis has offered a chance for nations to explore new economic perspectives and models traditionally neglected by mainstream economic thought. A serious examination of these perspectives could help reformulate the global economic system along more environmentally sustainable and equitable lines.

4. Total scale and distribution of global inequality and unmet needs

Higher income inequality, (as noted by OECD) within countries correlates with higher unemployment, higher crime rates, lower average health, weaker property rights, limited access to public services, lower social mobility, more social unrest, and less trust within and across the society, leading to more fragile democracies. This presents huge challenges for public sector and how it develops policies to meet these challenges.

5. Broadening measurement of public sector value and progress

How we assess value, progress and performance for government is expanding rapidly to take account of non-financial measures of development encompassing everything from innovation to happiness.

6. Stability of national revenue bases

The stability of national revenue bases is considered a prerequisite for the economic well-being of countries as it affects governments' ability to provide public services. Generally, government revenues are derived from direct taxes paid by households (mainly personal income tax) and corporations; and indirect taxes, social contributions and revenues from state owned assets and enterprises.

7. Manageability of national and international debt

The manageability of national and international debt is important for macroeconomic stability, business confidence and future economic development prospects. Levels of public debt also have important ramifications for citizen well-being, unemployment levels and the provision of social welfare services. Globally, the economic outlook is increasingly influenced by the views of policymakers, central bankers and financial institutions on the sustainability of sovereign debt.

8. Level of investment required to maintain national physical infrastructure

Physical infrastructure forms the economic backbone of all economies. The quality and resilience of a national infrastructure has a direct influence on the growth, competitiveness and attractiveness to inward investment of a nation's economy. The standard of economic infrastructure, encompassing water, waste, transport, energy and communications, affects the quality of life for citizens as well as the ability to meet objectives and commitments regarding sustainability and reducing carbon emissions.

POLITICS AND LAW

9. Focus of global governance institutions

A network of governance institutions such as the World Bank, IMF, World Trade Organization (WTO) and the UN could face intensifying pressure to adapt their structures to the reality of the changing world. There is, however, still a belief among developing nations – such as the G77 grouping – in particular that they need a stronger voice in the wider set of global governance institutions.

10. Rate of democratic transition

The rate of democratic transition is changing the global landscape. Political changes may open up the economy, attract foreign investment, create business opportunities and drive the growth of domestic segments but swift changes in power can be violent and disruptive – creating political and economic instability.

11. Level of international political volatility

The level of political volatility caused by popular uprisings or the actions of hostile nations and terrorists groups can pose a threat to both the physical and economic integrity of a state. Such fluctuations can affect inward investment and spending in a country thus seriously affecting the state's economic performance, and reduce confidence of global financial markets.

12. Governance and delivery of outsourced public services

The way in which public services are managed, funded, supplied and consumed is changing fundamentally, in line with the financial struggles that nations face. In order to meet higher demands with smaller public funds, it is likely that 21st century public services will look radically different in the future and from what was seen in the 20th century.

Public sector provision is increasingly moving to the private sector raising questions around governance and risk.

SOCIETY

13. Scale and distribution of global population growth

A number of key trends are shaping the world's demographic landscape. The global population is expected to continue to grow at least until 2050, forecast to reach 9.3 billion. At the same time, overall fertility levels are declining. These global trends mask marked differences at the national and regional levels. There are numerous cultural, social and economic factors that both affect and are affected by global demography.

Rapidly growing populations also present economic and capacity-building challenges for governments seeking to provide public services.

14. Spread of diversity in society and the workplace

Greater mobility across the globe has a great impact on the level of diversity. Cultural diversity and Increasing levels of female participation in the workforce is seen as both an important social goal and a vital way of maximising the use of available talent to maintain or bolster economic development.

15. Workforce age structure

A downward trend in global fertility coupled with an ageing society means that each future generation could be smaller than the previous one. Although the global population is still growing the average age is also rising.

With the abolishment of the default retirement age and workers staying in senior positions longer, organisations have to factor in increased salary and healthcare costs. As existing retirees re-enter the workforce owing to a combination of low pensions and removed barriers, organisations will have to consider how to attract, retain and integrate older talent.

16. The workplace expectations of Generation Y, Z and beyond

One of the biggest challenges faced by organisations today is how to understand and respond to the expectations of generations coming into the workplace.

17. Cost and ease of access to higher education

The economics of education is changing as public budgets shrink and institutions have to compete for funds, raise fees and cut unprofitable courses. Rising cost of higher education has important ancillary impacts for the level of personal debt for students and their equality of opportunity.

Online channels for delivering education are also changing the nature and delivery of professional development. The uptake of online learning may increase in emerging economies.

BUSINESS

18. Use of Public Private Partnerships (PPPs)

Governments have been and are increasingly looking to partner with private sector to help fund large scale public infrastructure programmes. This has led to significant growth in the adoption of PPP/PFI initiatives. However the perception that any risk of failure lies with public sector and reward is with the private sector.

19. Business leader responsiveness to change and disruption

Momentous economic and social forces are currently reshaping the world. At the same time, disruptive advancements – often enabled by technology – are affecting everything from industry structures, through societal governance to the nature of human interaction. The ability of organisations to adapt to new challenges and opportunities created by change and transformation is becoming a key determinant of success or failure in a turbulent operating environment.

20. Quality and availability of the global talent pool

Access to talent at all levels is consistently identified as a critical future success factor for all organisations. The challenge of securing a suitable flow of talent is increasingly becoming a top priority for leaders who are finding growth and development ambitions hampered by talent shortages. The quality of education itself seems to be a critical talent issue.

21. Extent of foreign direct investment in developed and developing economies

Foreign direct investment (FDI) flows are an important source of investment and economic growth for many countries. In an uncertain and highly competitive global economy, ensuring that a destination is seen as a safe location for FDI is becoming an increasing priority for many countries and their governments.

22. Speed and duration of business cycles

As technologies such as the internet compress time and distance, organisations are under pressure to adapt their structures, processes and systems on an almost continuous basis. As a result, there is a growing emphasis on the need for speed, flexibility, adaptability and responsiveness. These in turn demand rapid decision making and shortening cycles for execution of change. Public sector organisations will need to factor this in policy development and implementation.

23. Experimentation with and adoption of new business models

In an uncertain economic climate, the pace of introduction of new business models could accelerate. These new models have the potential to disrupt and reinvent industries. As pressure on public finances increase the need to develop new models of financing and alternative revenue and pricing models.

24. Crowd sourced funding for innovation: the consumer as investor

The internet has facilitated the emergence of new finance models that allow organisations to fund product development and service delivery in advance via crowdsourcing using online platforms. The public sector needs to be able to respond to such rapid changes.

25. Adoption of integrated systems thinking to manage business complexity

The perceived shortening of business cycles is creating major challenges in terms of how we design, manage and change highly complex, globally interconnected and rapidly evolving businesses. While the timescales for action are shortening, the perceived complexity of the task of making change happen is growing.

26. Enterprise risk management capability

There is growing concern and increasing uncertainty over the nature and scale of risks to which organisations are – or could be – exposed. At the same time, new risks and sources or concepts of risk, such as resource wars, are emerging. The ability to effectively manage this is increasingly important.

27. Evolution of corporate governance regulation and practice

Traditional structures of corporate governance stem from legislation, regulation and institutional best practices. They are intended to oversee the conduct of business and the management of relationships among and between internal and external stakeholders. These governance rules should improve accountability, reduce corruption and avoid conflicts of interest. A general push for greater transparency for public spends has driven increased expectations for accountability and demonstration of robust risk-management policies.

28. Scope and diversity of expectations of external stakeholders

The range of stakeholders for public sector organisations and the breadth of their concerns and expectations are increasing in the wake of a period of enormous economic turbulence and systematic failures. As a result, regulatory, transparency, ethical and performance demands of this growing range of external stakeholders are expanding for the organisation, the finance function and the accountancy profession.

29. Pressure to manage reputation as part of business strategy

The public sector has always had challenge of corporate reputation management which has been compounded by the instantaneous nature of the internet and social media in particular. The challenge is to manage long term government priorities whilst managing short term 'shocks'.

SCIENCE AND TECHNOLOGY

30. The digitisation of work

Increasing digitisation is transforming the nature of work and working practices in almost every sector. It is reasonable to assume that task automation will extend to ever-more knowledge-intensive, analytical and judgement-based work activities over the next decade and beyond.

31. Cyber security challenges for government

The increased reliance on computers in our daily lives and digitisation of financial services has opened up individuals and organisations to threats from cyberspace. Threats and attacks are typically conducted by groups and individuals who hack systems to attain both ideological and financial goals.

32. Big Data: the development and exploitation of large organisational databases, data mining and predictive analytics

There is a growing interest in how organisations can exploit 'Big Data' – the large and growing databases of customer and transactional information being generated through daily activities. The challenge is to create new toolsets that enable the management and manipulation of these large datasets and to generate powerful predictive insights about future customer behaviour. As governments are usually the largest collector of data, increasing use of data mining and predictive analytics should help to spot possible future opportunities, shocks, issues and challenges.

33. New industries and production models

Advances in science and technology are yielding radical new industrial processes that could be the basis of major industries of the future. In many cases, these industries are also introducing new business models and distribution approaches.

34. Advances in genetic science, Impact of nanotechnology advances and robotic science across business sectors

Advances in science have revolutionised humankind's understanding and control over the natural world. Opportunities are being created through nanotechnology and rapid progress in robotic science has led to the development of sophisticated machines that perform a wide range of industrial and domestic tasks. In medicine, a major field of study is the development of miniature robots that can be ingested and then repair damaged cells and organs in the body. This places great pressure on governments to ensure there is regulatory rigour to address ethical concerns raised and simultaneously explore opportunities to manage better healthcare provision.

ENVIRONMENT, ENERGY AND RESOURCES

35. Global climate change and

There is increasingly widespread agreement that the planet faces a real and growing risk from dangerous climate change and their impacts are unpredictable. New environmental risks – such as hereto unforeseen extreme weather events place significant pressure on public funds to manage the aftermath and develop robust preventative measures such as effective flood defences.

36. Competition for limited natural resources

Increasing demand for finite resources places pressures on governments to promote ethical resource consumption and maintain economic growth.

37. Carbon tax and other environmental market mechanisms

There is a growing move by governments to use taxation and market mechanisms to encourage more environmentally sound behaviour and provide the funds to finance environmental protection and clean-up costs.

38. Scale of take-up in alternative energy by business

Governments are evaluating and encouraging the greater use of alternative energy sources as one route to reducing dependency on carbon-based fuels. Increase of alternative forms of green energy, such as solar, wind and bio-gas, has given organisations a wider range of options for fulfilling their energy needs.

THE PRACTICE OF ACCOUNTING

39. Defining the scope of the accountant's role

Definitions of the accountant's role vary around the world. Common features include maintaining a record of an organisation's assets, transactions and financial activities, carrying out audits and ensuring compliance with financial and tax regulations.

The evolution towards becoming a more strategic partner within a business or as an external supplier may allow accounting to become a more integrated part of organisations.

40. Size and complexity of the CFO's remit

Organisations face a series of threats including macro-economic instability, consumer uncertainty, market volatility and increasing administrative complexity. At the same time, rising energy prices and a reconfiguration of the global landscape towards the emerging economies also present prominent and persistent challenges. As such, the role of the CFO is changing rapidly in line with constantly evolving expectations, demands and operating contexts.

41. Non-financial information and integrated reporting

The challenge of providing a total picture of organisational health is driving the move to communicate both financial and non-financial performance data in an integrated reporting format. Non-financial information is increasingly recognised to be as important as financial information as a driver of business value and risk. In response to demands for a holistic picture of organisational health, the model of integrated reporting is increasingly being adopted.

42. Clarity in financial reporting and defining the audit function

The goal of financial reporting is to present shareholders and regulators with a clear picture of an organisation's financial health.

The role of the audit function is to ensure that the accounts have been prepared in accordance with the regulatory framework, verify that the underlying procedures are robust and that the organisation's financial position has been clearly represented

43. Balance between external financial accounting and internal managerial accounting

A constant challenge for accountants is striking the right balance between external financial reporting requirements and internal managerial accounting. Both are expected to become more demanding and complex over time. Furthermore, as demands grow for a more integrated and holistic approach to external accounting, so the distinction between the two may reduce.

44. Opportunities arising from adoption of global regulation

As business globalises beyond traditional boundaries and more economies open up to adopt global practices and norms, the need for global regulation increases. Both opportunities and challenges arise from the implementation of global regulatory systems.

There are a number of significant factors for governments, firms and accountancy practitioners trying to implement global regulations. These include the rate of change, the distance between practitioners and those defining and implementing legislation, the operational context, and the complexity of regulations required to deal with the range of issues.

45. Adoption of globally accepted accounting standards

The introduction and global adoption of international accounting standards is seen by many as a desirable but unachievable goal. Others argue it is an essential prerequisite of true globalisation. In accountancy, steps towards global norms have been achieved with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and International Public Sector Accounting Standards (IPSASs) that are being aligned to IFRSs to ensure greater comparability between public and private sector financial reporting.

THE ACCOUNTANCY PROFESSION

46. Societal expectations and definitions of accounting

One of the big long-term questions for the profession is the extent to which the definition of what accounting is, and what it entails, may change over the next decade or more. The evolving scope and nature of accounting and the role of the accountant are being shaped by changes in multiple influencing factors. These include how the global economy is regulated, political motivations, disruptive technology developments and evolving business expectations.

47. Flexibility, suitability and cost of accountancy training

In a changing world, the spotlight inevitably falls on the capability of the education system to respond to the continuously evolving training needs of businesses and the professions. Economic changes, new business models and evolving regulatory demands will continue to create new and additional strategic, accounting, compliance and reporting requirements. The profession must demonstrate its ability to operate in a state of 'continuous evolution'.

48. Accounting skills capacity in transitional economies

Many developing economies are now producing significant numbers of well-trained professional accountants. Others, however, may have to undergo a fundamental transformation of their accountancy education system. Such a transformation process would include bolstering higher education course design and teaching methods.

49. Level of entrepreneurial skills in the accountancy profession

CFOs are increasingly expected to adopt a broader strategic and entrepreneurial role across the organisation. A greater emphasis on basic entrepreneurial skills such as business leadership, creativity, team-building, communication, negotiation and sales literacy could be integrated into accountancy training and continuous professional development.

50. Public perception and attractiveness of the accountancy profession

The public standing of and trust in accountants are critical to the effective functioning and attractiveness of the accountancy profession. Any issues could hamper the ability to recruit and retain top talent to the profession. Another key consideration for would-be entrants is the level of remuneration a big issue for the public sector where salary tends to be lower.

- ACCA (2016), *Professional Accountants – the Future: Generation Next* <http://www.accaglobal.com/content/dam/ACCA_Global/Technical/Future/generation-next-full-report.PDF>, accessed 11 June 2017.
- ACCA (2017), *The Belt and Road Initiative: Reshaping the Global Value Chain* <http://www.accaglobal.com/content/dam/ACCA_Global/professional-insights/beltandroadinitiative/pi-belt-and-road-initiative.pdf>, accessed 31 July 2017.
- Ang, J. (2015), 'Singapore has the Highest Proportion of High-skilled Employment in APAC', Human Resources [website] <<http://www.humanresourcesonline.net/singapore-highest-proportion-high-skilled-employment-apac/>>, accessed 11 June 2017.
- ASEAN (Association of South East Asian Nations) (n.d.a), 'ASEAN Member States' [website] <<http://asean.org/asean/asean-member-states/>>, accessed 11 June 2017.
- ASEAN (n.d.b), 'ASEAN Economic Community' [website] <<http://asean.org/asean-economic-community/>>, accessed 11 June 2017.
- Atradius (2017), 'Country Report Malaysia' [website], 31 January <<https://group.atradius.com/publications/country-report-asia-pacific-malaysia-2017.html#>>, accessed 11 June 2017.
- Babulal, V. (2017), 'Trans-Pacific Partnership: Malaysia Must Not Quit', *New Straits Times* [online article], 25 May <<https://www.nst.com.my/news/nation/2017/05/242531/trans-pacific-partnership-malaysia-must-not-quit>>, accessed 11 June 2017.
- Berriman, R. and Hawksworth, J. (2017), 'Will Robots Steal our Jobs? The Potential Impact on the UK and other Major Economies' in *UK Economic Outlook*, March <<https://www.pwc.co.uk/economic-services/ukeo/pwcukeo-section-4-automation-march-2017-v2.pdf>>, accessed 31 July 2017.
- Chief Secretary to the Government of Malaysia (2015), '03/03/2015 – Public-Private Partnerships: Nation [sic] Path Through The Next Decade' [speech reported on Chief Secretary's website] <<http://ksn.jpm.gov.my/home.php?frontpage/speech/detail/2000>>, accessed 12 June 2017.
- Chin, J. (2017), 'Malaysia's Economy Records 4.5% Growth in Q4 of 2017' [online article], *The Star Online*, 16 February <<http://www.thestar.com.my/business/business-news/2017/02/16/malaysia-economy-records-4pt5pct-growth-in-q4-of-2016/>>, accessed 31 July 2017.
- Clean Malaysia (2016a), 'RM40 Trillion: the Costs of Climate Change for Malaysia' [website article], 22 April <<http://cleanmalaysia.com/2016/04/22/rm40-trillion-the-costs-of-climate-change-for-malaysia/>>, accessed 12 June 2017.
- Clean Malaysia (2016b), 'Najib: Malaysia's on Course to Reduce its CO2 Emissions' [website article], 25 March <<http://cleanmalaysia.com/2016/03/25/najib-malysias-on-course-to-reduce-its-co2-emissions/>>, accessed 12 June 2017.
- Commission on Growth and Development (2008), *The Growth Report: Strategies for Sustained Growth and Inclusive Development* <http://siteresources.worldbank.org/EXTPREMNET/Resources/489960-1338997241035/Growth_Commission_Final_Report.pdf>, accessed 11 June 2017.
- Countrymeters (2017), 'Age Dependency Ratio' in 'Malaysia Population' [website/online data] <http://countrymeters.info/en/Malaysia#Dependency_ratio>, accessed 31 July 2017.
- CSAP (Committee to Strengthen the Accountancy Profession) (2014), *The Report on the Strengthening of the Accountancy Profession in Malaysia*, December <https://www.sc.com.my/wp-content/uploads/eng/html/aob/csap_141211.pdf>, accessed 13 June 2017.
- Damodaran, R. (2016), 'Malaysia's External Debt to GDP Ratio Higher than Others in Region at 66pct: Moody's', *New Straits Times*, 21 July <<https://www.nst.com.my/news/2016/07/159852/malysias-external-debt-gdp-ratio-higher-others-region-66pct-moodys>>, accessed 11 June 2017.
- Damodaran, R. (2017), 'IMF Projects 4.7pct Economic Growth for Malaysia Next Year', *New Straits Times* [online article], 9 May <<https://www.nst.com.my/business/2017/05/237674/imf-projects-47pct-economic-growth-malaysia-next-year>>, accessed 11 June 2017.
- Deloitte (2016), *The 2016 Deloitte Millennial Survey: Winning Over the Next Generation of Leaders* <<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-millennial-survey-2016-exec-summary.pdf>>, accessed 11 June 2017.
- Department of Statistics Malaysia (2016), 'Labour Force Survey 2015' [Website article], 29 April <https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=126&bul_id=TFVqZ2NtWW9iNlJBV0%20pTQnZUUzBEZz09&menu_id=U3VPMldoYUxzVzFaYmNkWXZteGduZz09>, accessed 11 June 2017.
- Encyclopaedia Britannica (n.d.), 'Malaysia: Resources and Power' [website article] <<https://www.britannica.com/place/Malaysia/Resources-and-power>>, accessed 12 June 2017.
- EU Gateway (2016), *Market Insight: Green Energy Technologies in Malaysia*, 20 June <<https://www.eu-gateway.eu/printpdf/356>>, accessed 12 June 2017.
- Goodman, S. (2017), 'How Many People Live to 100 Across the Globe?' [website article], 1 June <<http://www.thecentenary.co.uk/how-many-people-live-to-hundred-across-the-globe.html>>, accessed 31 July 2017.
- Hafidz Mahpar, M. (2017), 'PLCs Need to Strengthen Internal Audit Function – IIAM', *The Star Online*, 4 April <<http://www.thestar.com.my/business/business-news/2017/04/04/plcs-need-to-strengthen-internal-audit-function---iiam/>>, accessed 13 June 2017.
- IFRS (2017), 'Malaysia' [webpage] <<http://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/malaysia/>>, accessed 31 July 2017.
- Ismail, L. (2017), 'Workplace Diversity: Malaysian Companies' Back Diversity and Inclusion Efforts', *The Straits Times* [online article], 16 April <<https://www.nst.com.my/news/nation/2017/04/230945/workplace-diversity-malaysian-companies-back-diversity-and-inclusion>>, accessed 11 June 2017.
- Koen, V., Asada, H., Nixon, S., Rahuman, M.R.H. and Arif, A.Z.M. (2017), *Malaysia's Economic Success Story and Challenges*, OECD Economics Department Working Papers 1369, <<https://www.oecd.org/eco/Malaysia-s-economic-success-story-and-challenges.pdf>>, accessed 31 July 2017.
- Kok Leong, C. (2017), 'More Malaysians May Lose Jobs to Automation in Future, says Report' [website article], *The Malaysian Insight* <<https://www.themalaysianinsight.com/s/2488/>>, accessed 31 July 2017.
- Kumar, K. (2017), 'Malaysia Can Be Leader in Cyber Security After Singapore, Expert Predicts', Yahoo News [website article], 25 May <<https://sg.news.yahoo.com/malaysia-leader-cyber-security-singapore-expert-predicts-052700506.html>>, accessed 12 June 2017.
- Leigh-Morgan, E. (n.d.), 'The Most Expensive Places to Send Your Kids to University', Focus [website] <<http://www.expertmarket.co.uk/focus/most-expensive-places-for-university>>, accessed 11 June 2017.
- Malay Mail Online (2017), 'Malaysians Worried about Climate Change, Survey Shows after Earth's Hottest Year' [online article], 1 March <<http://www.themalaymailonline.com/malaysia/article/malaysians-worried-about-climate-change-survey-shows-after-earths-hottest-year#sthash.aZ4MNFUO.dpuf>>, accessed 12 June 2017.
- Malaysian Digest.com (2017), 'Call For Span to Implement River Basin Management' [website article], 24 May <<http://www.malaysiandigest.com/news/676916-call-for-span-to-implement-river-basin-management.html>>, accessed 12 June 2017.
- MDEC (Malaysia Digital Economy Corporation) (2017), 'Big Data Analytics (BDA)' [website] <<https://www.mdec.my/digital-innovation-ecosystem/big-data-analytics>>, accessed 12 June 2017.
- MIDA (Malaysian Investment Development Authority) (2017), 'Tax Incentives for Green Industry' [website article], 9 June <<http://www.mida.gov.my/home/tax-incentives-for-green-industry/posts/>>, accessed 12 June 2017.
- MAMPU (Malaysian Administrative Modernisation and Management Planning Unit) (2017), 'DRSA: Public Sector Big Data Analytics' [website article], <<http://www.mampu.gov.my/en/drsa>>, accessed 30 July 2017.

- Ministry of Education Malaysia (2013), *Malaysia Education Blueprint 2013–2025: Pre-School to Post-Secondary Education* <http://www.moe.gov.my/images/dasar-kpm/articlefile_file_003108.pdf>, accessed 30 July 2017.
- Moody's Analytics and Economy.com (2017), 'Global Business Cycle Map' [website] <<https://www.economy.com/dismal/tools/global-business-cycle-map>>, accessed 12 June 2017.
- New Straits Times (2016), 'Creating a Diverse Talent Pool' [online article] <<https://www.pressreader.com/malaysia/new-straits-times/20170416/281792808897638>>, accessed 30th July 2017.
- OECD (2013), *Structural Policy Country Notes: Malaysia* <<https://www.oecd.org/dev/asia-pacific/Malaysia.pdf>>, accessed 11 June 2017.
- OKR (Open Knowledge Repository, The World Bank), 'East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth' [webpage] <<http://www.worldbank.org/en/topic/urbandevelopment/publication/east-asias-changing-urban-landscape-measuring-a-decade-of-spatial-growth>>, accessed 30 July 2017.
- Panda, A. (2017), 'TPP Signatories to Meet in Chile to Explore the Future of the Agreement', *The Diplomat* [online article], 13 March <<http://thediplomat.com/2017/03/tpp-signatories-to-meet-in-chile-to-explore-the-future-of-the-agreement/>>, accessed 11 June 2017.
- PwC (2014), *The State of Integrated Reporting in Malaysia* <<http://read.pwc.com/i/342680-the-state-of-integrated-reporting-in-malaysia/0?>>, accessed 13 June 2017.
- PwC Malaysia (2016), 'PwC Study Finds a Disconnect Exists Between Strategy and Practice in Malaysian Companies, Contributing to a Persistent Rise in Economic Crime Risks' [online press release] <<http://www.pwc.com/my/en/press/160623-gecs-2016-msia-report.html>>, accessed 12 June 2017.
- RSM Malaysia (2017), 'Public Sector Infrastructure and Public Private Partnership (PPP)' [online article] <<https://www.rsm.global/malaysia/service/public-sector-infrastructure-and-public-private-partnership-ppp>>, accessed 11 June 2017.
- Scott, A. (2017), 'Late to the Game' but Committed: Malaysia's Open Data 'Change Agent' on <Challenging Cultural Norms and Plans for the Future' [website article] <<https://theodi.org/blog/malysias-open-data-change-agent-on-open-data-challenging-cultural-norms-and-ambitions-for-future>>, accessed 30 July 2017.
- Shanmugam, M. (2017), 'Unemployment among Graduates Needs to be Sorted Out Fast', *The Star Online*, 25 March <<http://www.thestar.com.my/business/business-news/2017/03/25/unemployment-among-graduates-needs-to-sorted-out-fast/>>, accessed 11 June 2017.
- Star Online (2017a), 'Malaysian Economy Stays Resilient, Says IMF' [online article], 5 May <<http://www.thestar.com.my/business/business-news/2017/05/03/malaysian-economy-stays-resilient/>>, accessed 11 June 2017.
- Star Online (2017b), 'Big Data to Better Serve the People' [online article], 22 May, <<http://www.thestar.com.my/news/nation/2017/05/22/big-data-to-better-serve-the-people/>>, accessed 30 July 2017.
- Straits Times (2017), 'Malaysia is Ageing: The Star' [online article], 25 May <<http://www.straitstimes.com/asia/se-asia/malaysia-is-ageing-the-star>>, accessed 30 July 2017.
- TalentCorps and PwC (2013), *Diversity in the Workplace: A Survey of Malaysian Public Listed Companies* <<http://flexworklife.my/wp-content/uploads/2013/12/Diversity-in-the-Workplace-FINAL.pdf>>, accessed 11 June 2017.
- UN (2016), *United Nations e-Government Survey 2016: e-Government in Support of Sustainable Development* <<http://workspace.unpan.org/sites/Internet/Documents/UNPAN97453.pdf>>, accessed 30 July 2017.
- Williams, P. (2017), 'Interview: Richard Howitt, Chief Executive of the International Integrated Reporting Council' [republished online from *Accounting and Business*, May] <<http://www3.accaglobal.com/scotland/en/member/member/accounting-business/2017/05/interviews/richard-howitt.html>>, accessed 31 July 2017.
- World Bank (2015a), 'Malaysia Economic Monitor, December 2015 – Immigrant Labor' [website article] <<http://www.worldbank.org/en/country/malaysia/publication/malaysia-economic-monitor-december-2015-immigrant-labour>>, accessed 31 July 2017.
- World Bank (2015b), 'Malaysia among Most Urbanized Countries in East Asia' [website article], 26 January <<http://www.worldbank.org/en/news/feature/2015/01/26/malaysia-among-most-urbanized-countries-in-east-asia>>, accessed 12 June 2017.
- World Bank (2017a), 'Where we Work: Malaysia: Overview' [website], April <<http://www.worldbank.org/en/country/malaysia/overview>>, accessed 11 June 2017.
- World Bank (2017b), 'Islamic Finance and Public-Private Partnerships for Infrastructure Development' [website article], 8–9 May <<http://www.worldbank.org/en/events/2017/05/08/islamic-finance-and-public-private-partnerships-for-infrastructure>>, accessed 11 June 2017.
- World Bank Group (2015), *2015 Global PPI Update* <<http://ppi.worldbank.org/~media/GIAWB/PPI/Documents/Global-Notes/Global2015-PPI-Update.pdf>>, accessed 12 June 2017.
- Yusof, N.A.Z b. M., Haron, H.b. and Ismail, I.b. (2016), *Internal Audit Practice in Malaysian Public Sector Organizations*, Paper given at the National Conference for Postgraduate Research 2016, Malaysia Pahang <<http://umpir.ump.edu.my/15936/1/P019%20pg120-126.pdf>>, accessed 13 June 2017.

