

Considerations for Legislators and Managers in the UAE in Responding to Anticipated Developments for Year 2030 and Beyond

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RASHED ALMANSOORI – 1708881

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Introduction

This report presents an argumentative analysis of legislative considerations, particularly in relation to economic drives in the UAE in general and Dubai in particular. An overview of the business management literature on incentives and motivation is first provided. On this basis, it is argued that the economy must adapt to its environment in a manner similar to that of a business. It is thereby highlighted that nations must proactively incentivise investment into the nation for the long-term as have organisations such as Tesla, Amazon and Google. Policy recommendations are thereafter provided, and are substantiated based on the literature on the changes to the economic environment. The second half of the report establishes management guidelines of organisations in dealing with these developments and effects of these suggested legislations to thrive in its modern business environment. The report provides a detailed summary of the considerations for central governments in the region to promote business development in two areas of economic growth: 1) Artificial Intelligence 2) City Development.

Management Theories on Incentivisation

The efficient market hypothesis is a paradigm that postulates that markets comprise of rational players and that therefore, the market is efficient insofar as prices of securities are concerned. However, the rational hypothesis has been challenged by a number of psychologists and management theorists, who find that human beings are not rational, particularly in relation to factors of motivation i.e. reward and punishment, which are closely related to gain and loss. However, central governments often still operate under the economics of efficient market hypothesis, which causes them to perform sub-optimally. Tversky and Kahneman (1986) argue convincingly that normative approaches are doomed to failure, because people routinely make choices that are by nature irrational by factors that are motivational in nature. Specifically, they argue that any diversion of behavior of the market or decision maker in general from a normative or rational model is in fact, systematic, i.e. not random. While the following works concern a collective such as a company with employees as its constituents, the same concept applies to the economy with capitalists as its constituents. The commonality between these systems lies in that they are both organic systems, with ‘intellectuals’ as their players. Here, the term intellectual is as per Gramsci’s definition of the term, which he defines as “‘the capitalist entrepreneur’, who creates, ‘alongside himself, the industrial technician, the

specialist in political economy, the organizer of a new culture, of a new legal system, etc. The entrepreneur himself represents a higher level of social organization, already characterized by a certain managerial and technical (i.e. intellectual) capacity’.” (Gramsci, 1971)

Elton Mayo, a management theories noted a similar flaw in the field of management within the formerly-dominant Taylorist perspective on management. Specifically, Mayo et al. (2014). found that certain forms of rewards were highly effective in driving behaviour. These typically included intangibles such as esteem (reward) or loss of group approval (punishment), which had the most pronounced effects on performance. Since then many variety of theories of incentivisation and human motivation have emerged. These include Maslow’s “hierarchy of needs” (Maslow, 1987), Emery and Trist’s “social systems theory” (Emery and Trist, 1960) and Herzberg’s “hygiene theory” (Herzberg, 1974). However, theories such as the above investigate only a fraction of the overall dynamic in an organisation, made complex by multiple interactions. For instance, the manager’s role is considered in behavioural management by McGregor (2006) who proposed that the manager’s own perceptions and beliefs are relevant to employee behaviour. Burns and Stalker (1994) similarly find that managers are not rational and vary in their styles of management, differences between which are significant to the status of technological companies in thriving in their respective business environments. Blake and Mouton (1964) attempted to combine the behavioural science concern over workplace relationships and the Taylorist concern over output by suggesting that managers’ strategies are a blend of two factors which are ‘concern for people’ and ‘concern for production’ and these could differ among managers and individual conditions. A similar system for comprehending teachers’ behaviour has been brought forward for Lowman (1984).

The Role of Incentives in Central Government

A major consideration in the legislature as regards this theme is in the attraction of foreign investment. Foreign direct investment can be encouraged by certain incentives made available

by governments in order to attract international firms. These incentives could be financial incentives e.g. special loans and grants to multinational firms; tax (or fiscal) incentives or the lowering of corporate taxes, incentives pertaining to monopolistic freedom and market favouritism. Three particularly relevant considerations exist for nations. Firstly, tax incentives prove to be easier to offer than to solve problems in, areas such as skilled labour and infrastructure for instance. Secondly, funds-expenditure or provision of cash grants to prospective investors is not needed when providing tax incentives. Three, it is far more manageable for governments to provide tax incentives than to provide funds. The high speed of urbanization is seen as a ray of hope amidst the various global challenges countries are currently facing. As the drivers of growth, cities occupy a crucial place in the economic stabilization of nations. Together with, or, financially supported by, their central governments, several cities globally have implemented new policies as well as motivational programmes to pull themselves out of the worldwide financial crisis. Take the UK for example; its cities have served as tools to help revive its economy by backing investments in important infrastructure, driving growth, allowing more financial independence and providing paid employment.

Types of Incentives

Globally, a slashing of the corporate income taxation rate is the most commonly applied tax incentive. Nevertheless, the next most prominent form of incentive differs across developing and developed countries. For OECD nations, higher depreciation, fixed reduction in corporate income tax and lowering of other taxes at both the local and state levels are often the next generally applied tax incentives. For developing countries, tax holidays as well as import-duty freedom are often offered apart from lower basis income tax charges. The specific incentives which are aimed at increasing the volume of exports have proved to be most successful. Several MENA nations give corporate tax breaks (MENA OECD, 2007). These vary from 2 years in Jordan to 20 years in Egypt (MENA OECD, 2007). In several cases, these durations can be extended when supplementary investments are involved. For Algeria, where the incentives offered under their latest investment framework are given on a case wise basis dependent on the National Investment Council's approval, tax breaks could be unlimited (MENA OECD, 2007). Conversely, in Morocco, the allowed tax breaks for export goods are allowable to a maximum of 5 years (MENA OECD, 2007). Lower corporate rates, aimed at specific locations/sectors are provided within four countries in this region (Morocco, Jordan, Tunisia and Lebanon). Certain countries like the United Arab Emirates and Bahrain attract FDI which

exploit their plentiful natural resources that are crucial income sources, e.g. oil. These nations depend less on specific preferences such as special financial programs and tax breaks and have high corporate income tax percentages as well as minimised taxes where oil exploitation is concerned. Bahrain levies 46 percent of the net profit of oil firms while the United Arab Emirates doesn't demand corporate taxes at the federal level (MENA OECD, 2007). However, at the emirate level, oil exploitation firms and certain international bank branches pay tax whose rates range from 0 – 55 percent (MENA OECD, 2007).

Free/Export zones (FEZs) are equally popular within the MENA nations; just three nations have zero FEZs (Qatar, Saudi Arabia and Algeria). The tax incentives made available for investors within the economy, in general, are accessible to firms within the FEZs also. Furthermore, governments commonly give corporate tax exemptions (United Arab Emirates, Jordan and Kuwait) or lower corporate tax percentages (Morocco and Egypt), freedom from tariffs and duties (United Arab Emirates, Tunisia, Morocco), more charitable tax breaks (Yemen, Morocco and Lebanon) and several other incentives within these regions. The FEZs which are believed to be flourishing the most are the ones present in the United Arab Emirates. Many MENA nations have declared their intentions to copy the model of the Emirates' successful FEZs. Perhaps, the most developed plans are seen in Jordan and Egypt. For Jordan, an established tradition exists for depending on FEZs in order to attract investment. Egypt equally possesses a comparatively long historical trend of depending on free zones (some of its oldest FEZs which still operate were created in the year 1973), however, recent years look to have engineered a change of the general strategy. No public free zones were created after 1993 and even more recently, an emphasis has been placed on superior industry and economic zones (MENA OECD, 2007).

The Future of Artificial Intelligence for the Consideration of Legislators

Developments within the Artificial Intelligence (AI) tech-research and its associated fields have led to new opportunities and markets for advancements within critical sectors like energy, social welfare, health, economic inclusion, the environment and education. Recently, machines

have exceeded human abilities while performing specific intelligence tasks, e.g. certain forms of image identification. Experts predict that the rapid development within the specialized artificial intelligence field will go on at an increasingly rapid pace. Even though it is doubtful that machines would show wide and comprehensive intelligence similar to or above that of human beings over the next two decades, it is believed that they will keep reaching and surpassing human success on increasing number of tasks. AI-driven automation is expected to keep producing wealth and strengthening the economy as time goes by. However, though several nations will benefit from it, this growth will incur certain costs and will be associated with modifications in the collective skillset of a nation's workers to make headway within the economy as well as basic structural changes within the economy. Uncompromising policies will be important to aid UAE workers, particularly non-knowledge workers, who happen to be adversely affected by these revolutions and also to make sure that the several advantages of automation and AI are created by and accessible to all.

The government has a crucial duty in developing its economic capability of AI via investments in research and development. For example, within the United States, by means of public AI sensitization carried out by the OSTP (Holdren et al., 2016), the government has a history of involving technologists, economists and business leaders to collectively consult in driving higher investments in the AI-related research and development. The foremost AI scientists were confident of their chances of maintaining its rapid growth of AI and its utilization in an increasing variation of applications. Previously, several jobs with decent pay-packets required generally low skilled work; however, with the developments in technology, such as AI, these kinds of jobs will drop in number and in their relevance with time. Though it isn't certain how exactly advancements in AI, as well as the other new technologies, will impact the tomorrow job market, policymakers have to solve the problem of poor basic math proficiency and reading skills for several of its citizens, possibly millions. In this world of AI-driven skill-based technological revolution, persons possessing poor basic math proficiency and reading skills are most likely to get left out (Lu and Burton, 2017). Averagely, children hailing from poor homes often lag behind their peers from other socioeconomic classes in the areas of literacy development and early vocabulary, early maths and the social abilities they require to relate properly in the classrooms. Researches show that kids who suffer from early basic skill deficits are often unable to meet up with their peers in subsequent classes (Lu and Burton, 2017).

AI policies can be split into three classes (Brundage and Bryson, 2016). Firstly, there are policies which are specifically aimed at regulating AI-based technologies e.g. driverless automobile regulation (Brundage and Bryson, 2016). These are referred to as direct AI policies. Two, policies exist which indirectly impact AI-based tech development, however, they are technically focused on the other available technologies or even technology generally, e.g. intellectual property regulations. These are known as indirect AI policies (Brundage and Bryson, 2016). Three, policy domains exist where AI advancement is neither significantly influenced nor precisely targeted, but where the understanding of the probable futures of AI would be of benefit to policymakers e.g. welfare policies, urban planning and education. These are known as AI-relevant policies. In every one of these sectors, improvements can be made in the capability of government organizations, the amount of insight applied to resolution within these areas, the rate at which they encourage democratic inspection and influence as well as how many decisions are taken together. Long-term considerations regarding AI policy assumes various forms. The government of the United States is a major sponsor of AI-related research and development. A large part of the funding is derived from intelligence and defense agencies like IARPA, DAPRA and the scientific research departments of the military several division (Brundage and Bryson, 2016).

However, significant amounts of funding are gotten from the National Science Foundation and more civilian groups are also increasingly getting involved (Brown, 2011). A large part of these funds is for general purposes, that is, it helps the creation of AI technologies and talent which can be put to use in almost all life domains or industries. A commendable level of government backing for specific AI development is focused on certain capabilities which policymakers are interested in, e.g. AI-based monitoring and enhancing (or completely automating) of military decision-making (Scherer, 2015). Several recent advancements in robotics and AI can be traced directly to these federal investments – the DAPRA-supported driverless car technology helped to improve proficiency and bring in the huge corporate investment visible today (Brown, 2011). Another similar DAPRA contest took place not long ago for humanoid robots working within human-created environments and the deliverables from this contest will serve to boost investment and research for several subsequent years (Scherer, 2015). Apart from the federal backing made available for AI research, several legal policies exist which are directly related to AI technologies. For instance, many states and even the federal government today have instituted policies on driverless automobiles – for example, the Departments of Transportation in the US gave an affirmative reply to a demand by Alphabet

for confirmation on whether its driverless automobiles can be seen as drivers themselves for legal reasons (Scherer, 2015). States, on their part, have created a mixture of laws regulating various areas of autonomous car usage like their test running and the duty of humans within or outside the decision-making loop.

A more diverse collection of policies in the US which we refer to as indirect AI policies affect the development and distribution of AI, despite the fact that they aren't directly AI-oriented. For instance, intellectual property regulations allow small and large technology firms and persons to get patents for AI applications and algorithms and this influences which commercial goods and services would possibly be manufactured and those who will have the ability to use them after production. Tax credits made available for research and development impact engineering investment in AI. Liability regulations influence the rate at which firms are legally responsible for AI-linked faults and this might decide what states and nations AI is developed and tested as well. Also, the comprehensiveness of consumer protection organizations determines if we will possibly see firms being held responsible for misleading customers on the ability of AI devices (this is a main issue which we will come back to later on when discussing the recommendations).

Lastly, education policy influences the accessibility of AI manufacturers. However, it is equally an area which has to be updated by our predictions about probable AI futures. Though AI might not generally reduce the amount of jobs present within the economy, it will lead to significant trouble for certain regions, firms and jobs while others benefit from it. AI is being developed rapidly and in the next 2 decades, will be a lot more advanced. Despite this, the education policies which will be in effect during this period are still unchanged without consideration for the updated requirements of the future workforce. Though there are exemptions like government financing of computer science learning which is encouraged by an increasing use of computers among the workforce, yet, they are majorly inspired by the more clearly indirect AI policy-related issues. These are beneficial but insufficient. They do not serve to encourage the kind of critical thinking which education must consider. Second, policies on health are still not abreast with electronic medical recording and are completely yet to take into account the potential in robotics and AI to enhance results and to lower cost via automation. Also, though certain cities are assessing the impact of driverless tech on public transportation costs, suburban and urban planning are yet to fully acknowledge the impact of AI and the way communities and citizens could react to the potential it carries, especially for

realizing cheaper and more sustainable living. The third area where improvements in policy research can be made is in the distribution of AI technologies. As evident in areas such as energy and healthcare technologies, it isn't just sufficient to finance basic research and then expect that it is widely and fairly distributed within society by private entities. In the energy world, a long experience history reveals that private-public demonstration tasks, tax incentives as well as other approaches are important additions to the initial research funding. For AI, the notable element is the ubiquitousness of AI tech. When adequate expertise is present, AI techniques can be used in basically all domains, however, if the private world handles the distribution of these technologies, a deficit in certain areas in which AI might not swiftly cause the saving of huge quantities of money or result in a maintainable business should be expected. Despite this, these areas might be vital to the society – e.g. in areas of rare diseases, poverty mitigation and the acceleration of clean energy initiatives.

The Future of City Development for the Consideration of Legislators

Cities are becoming rapidly populated in all countries. However as they develop and their challenges become more multifaceted, they acquire knowledge from one another as well as their local host communities. A number of countries like Oman, Saudi Arabia, Qatar, the UAE and Kuwait boast a population development rate of 3.5 percent. Due to the associated increase in demand, the IHS projects that an additional 227 gigawatts (GW) of electricity will be needed in the Middle East to raise the available capacity to 483 gigawatts (GW) in year 2035 (Siemens, 2018). The Business Commission states that more jobs, about 12.4 million in number, can be generated via SDG-associated business styles within the Middle East (Business Commission, 2017). Around 6 million jobs can be generated via improvements in infrastructure, urban construction and mobility (Business Commission, 2017). The Middle East could produce 2.5 million jobs if it simply meets its projected yearly essential infrastructure needs (Business Commission, 2017). Within several areas e.g. urban housing, security and safety, urban services and increasing exclusion and inequity, new problems are rising even in the presence of existing patterns. These problems will partially influence the move to discover a fresh and more up-to-date urban agenda so as to improve the structure and control the intensity of technological, social, political and economic change which is anticipated within major cities.

About 20 percent of the overall job creation potential present within the Middle East (an estimated 2.2 million jobs) originates from a single sector: affordable housing.

A novel urban agenda can influence the future of property development, causing the kind of sustainable development required as its anticipated results reach far beyond urban settlements via a variety of ripple effects. This agenda must take into consideration that urbanization alone, and together with the other sustainable development drivers, can be exploited and guided via regulatory instruments, design and planning, policy and other interventions to play a part in national sustainable development. Furthermore, the problems of urbanization have worldwide consequences which, if not properly tackled, can endanger the possibility of accomplishing sustainable development. It is thus important to move towns and cities towards sustainable growth. It is pertinent that following the present urbanization model is not sufficiently effective at addressing anticipated changes. This requires maximal utilisation of resources to exploit future potentials. This novel urban agenda needs to have the potential of addressing ecosystems at various levels: the community to the worldwide level, as well as different measures of human settlements – starting from the village then on to the little and averagely sized town, then to the city and lastly the megacity. For this novel urban agenda to produce transformations in countries and cities both developing and developed, it has to give special consideration to the two pillars which can direct this change as well as the levers to back this creation of a fresh urbanisation model. Although metropolitan and other larger city areas have long battled with the problem of regional or translocal planning, few successful instances of regional institutions exist. Several of these are either modelled as regional/state government, withdrawing power from the local government or as advisory agencies with restricted knowledge of reality. This requires sufficient kinds of regional and metropolitan governance which can tackle territorial inequity and the various forms of exclusion and disparity.

Associated Management Challenges of AI and City Development

A number of management related challenges are anticipated to be brought about due to AI and the regulations imposed on organisations in the UAE and especially in Dubai as a result. These are elaborated on as follows:

Artificial Intelligence:

- 1) *HRM will require to consider predictive capabilities of data science in addition to judgement:* Tech-executive opinions have largely defined the discussion in literature on the anticipated management responses to developments discussed in regard to AI (Mit Sloan Management Review, 2017). It is purported that AI is set to change management into a blend of science and art. This is because AI will enable managers to utilize data science in human interactions while at work, but in the absence of general AI, human management will play a significant role (Mit Sloan Management Review, 2017). Al-Khateeb et al., (2007) state that in the UAE in particular, considerable push on education of its human capital is a prerequisite for it to benefit from such advances in technology in the effective utilisation of its human capital resources.
- 2) *HRM will require to refine its criteria for talent scouting:* AI is anticipated to serve its role as a tool for improving prediction (Hamel, 2008). However effective automation needs a host of other activities to be effective (Hamel, 2008). Tasks are composed by judgment, data, action and prediction. Machine learning is expected to take the role of just a single component: prediction. Automation equally demands that machines are involved in a system of data gathering, action and judgment. The most important workplace skills require judgment (Hamel, 2008).
- 3) *Corporate Management will require to consider the two-way directionality of human-machine management:* AI systems on their own, are already working as managers. For instance with Careem in Dubai, cars are sent out and scheduled via a ‘management’ system that receives passenger requests immediately and links them up with the nearest accessible drivers (Khan et al., 2017). Also, algorithms are serving as ‘employees’ in companies like Facebook, Amazon and Google and human ‘managers’ take feedback on their electronic workers’ efficiency, as determined by real-time marketplace information (Lustig et al., 2016). The most evident management problem of the succeeding few decades will be accomplishing maximum performance from both machines and humans in a two-way management scenario and fully realising the details of who is managed by whom (Lustig et al., 2016).
- 4) *Organisational management towards increased innovation and automaton:* Firms are increasingly discovering that basic digitalisation and a change in culture to accept the digital approach is important to measure up in the emergent digital landscape. To accomplish this, certain firms have to advance past the utilisation of legacy systems and

technologies and they can, in some cases, be opposed to the implementation of fresh policies and working arrangements. Moreover, organisation's must deal with considerable resistance to change from internal staff as well as managers. Shirazi et al., (2009) note this to be a particularly pernicious problem in their study of Islamic nations. Misinterpretation of regulations is commonly provided as a reason for skipping innovation (Grabowski et al., 1978). Firms believe that the new rules are quite more complicated than they seem and that when they change/innovate their systems, they are in greater danger of becoming noncompliant (Grabowski et al., 1978).

- 5) *Virtual and Remote Project-Management*: The availability of various communication and management tools will lift the bottleneck of geographical limitations (Guss, 1998). This necessitates the importance of developing and refining new management skill-sets like effective virtual management instead of the traditional face-to-face approach (Guss, 1998). This will be of particular importance to UAE as it has both a high concentration of multinational companies (Mellahi et al., 2011) as well as high rate of internet penetration (Binsal, 2017) among countries in the region, and therefore most likely to benefit from the widespread implementation of virtual project management practices.

City Development:

- 1) *Property-asset management*: The UAE public sector needs to consider the creation of city-region or city-wide land commissions and property boards, with the government's backing so as to enhance investment and coordination among firms and beyond local government borders (Agha, 2016). The government has tried to increase the purchasing capacity (which translates to increasing the value part of the relationship) of low-earning households via diverse financial relief programs (UAE's Federal Law No. 2 of 2001 regarding Social Security Law). Demand-related measures like rental subsidies would assist in affording more expensive rentals. Nevertheless, such interventions haven't been completely successful so far because of budget limitations, poor conceptualisation and administration challenges (Galster, 1997; Yates and Whitehead, 1998). Due to this, in several nations, the government has generally failed to properly handle the changing aspects of development cost and worth, which then leads to the question of the way the affordability problem can be overcome and handled. As the population of UAE grows at a rapid rate, it is likely to encounter the same challenge. Moreover, any norm, regulation or practice which limits the supply of smaller housing

units or multiple occupancy weakens the capability of low-earning families to reside in easily accessible regions. The supply of smaller housing units and multiple occupancy needs to be complemented with appropriate property asset management and the supply of adequate and quality public facilities.

- 2) *Need for significantly higher capital for public-sector budgets:* Capital procurement, especially within the public domain is crucial. This is especially important for the United Arab Emirates and particularly, Dubai, as in the next half-century, due to higher dependence on renewable technology and resources, export revenue derived from fossil fuels is expected to be reduced. Due to this, various regulations such as tax legislation for the local residents might have to be implemented. Also, even though the impact of the global financial crisis differed across the globe, one general effect was the lowering of foreign direct investment (FDI), which is a major contributor to the growth of the economy. Whilst the recession held sway, the globe went through a decrease in FDI inflows by over 20 percent, with the developed nations affected the most. Capital procurement, in lieu of the anticipated city development fuelled by population growth should anticipate such downturns that are especially likely given the long-run of global economic prosperity since the last recession.
- 3) *City as Gramsci's entrepreneur in stakeholder management:* The theory of stakeholder engagement and how vital it is to certain phases of the policymaking procedure has changed with time. Derived from the organizational literature as a "stakeholder approach" to handling organizations (Freeman 2010; Bingham, Donaldson and Preston 1995), this technique has equally been modified for use in the public organizations (Bingham, Nabatchi, and O'Leary 2005). Bingham et al (2005) stress that the government is supposed to include citizens as decision making stakeholders in order to deal with the importance of new governance. As citizens become increasingly mobile, retaining citizens as well as attracting both investors and tourists will become far more important in the coming future. City development will serve primarily as a hub for attracting and retaining these stakeholders. Thus, the city must act as Gramsci's entrepreneur treating stakeholders in much the same way that a business organisation would.
- 4) *CSR and Environmental Management:* The public sector will increasingly adopt CSR practices of private sector to accomplish the integration of private and public goals as greatly as possible, to make the most of core competencies and bear in mind the dangers and unintentional effects of CSR activities (Katsioloudes and Brodtkorb, 2007). The

environment will increasingly become an important consideration of private entities looking to invest into the city (Kazim, 2007). However, at the same time environmental regulations can be associated with high costs which must also be taken into consideration. For instance, new labor benchmarks can, in some cases, prevent poor households from working for an income; improved environmental quality specifications for sellers can serve as a blockage to market access for local corporations; and obligations for improved transparency and community investment could lower profit margins and deter investors (Warner, 2003).

Recommendations For UAE and Dubai Based on Literature

Artificial Intelligence

Adaptation of Human Resource Management to Revised Requirements

McKinsey and Co. identify the UAE, Kuwait and Bahrain as the three countries that will comprise of the maximum percentage of workers displaced by AI and automation by 2030. Thus, HRM in the UAE requires to consider the need for human resource from an intelligence-requirement perspective. These requirements may be broadly divided into 1) Social intelligence 2) Creativity 3) Perception and Manipulation. Within each broad category, there are a number of functions that are highly susceptible to automation and AI, while others are least likely. These are each discussed as follows. HRM must increasingly prioritise talent scouting and retention to job functions that are at least risk of automation.

High likelihood of automation

Lack of Requirement for Social Intelligence: This class of job functions includes: 1) Activities requiring mechanical operation, installation and repair of devices (David, 2015) 2) Physical lifting and movement related activities (David, 2015) 3) Cleaning and maintenance related activities (David, 2015) 4) Repetitive or programmable manipulation or gathering of data (Boyd and Crawford, 2012).

Lack of Requirement for Creativity: This includes: 1) Activities pertaining to the maintenance of documents, procedures, form-filling, auditing etc. (Rezaee et al., 2002). 2) Clerk tasks such as printing, filing, scanning, copying (Carr, 2015). 3) Low-skill programming tasks such as database programming, although may not be fully replaced, will be significantly affected through software process automation (Jones, 2015).

Lack of Requirement for Perception and Manipulation: 1) Tasks where the requirements for perceptiveness involve spatial pattern recognition e.g. fitting, electrical connection, construction (Chen, 2015; Chandrasekaran and Conrad, 2015). 2) Tasks with high-risk of fatality or injury and therefore risk of loss to organisation in claims (Gallacher, 2016).

Low likelihood of automation

Requirement for Social Intelligence: 1) Activities requiring face-to-face persuasion and negotiation (Levy, Murnane, 2012). 2) Certain activities pertaining to event planning that require interaction with humans in determining quirks, preferences, aesthetic requirements. 3) Activities pertaining to public relations where a human face/voice to the organisation is required, for instance: interviews in media. (Wiesenberg et al., 2017).

Requirement for Creativity: 1) Activities requiring scientific problem solving on a regular basis. 2) Activities requiring artistic input, especially where premiums can be charged for brand or reputation (Bakhshi, Windsor, 2015).

Requirement for Perception and Manipulation: 1) Activities involving adaptive problem solving. 2) Activities requiring dealing with unpredictable environments (Melles et al., 2017). 3) Activities where perceptiveness requires specialization (e.g. surgery) (Melles et al., 2017).

Organisational change management to facilitate increased AI implementation

Resistance to organisational change particularly in relation to innovation and digitisation in the UAE public sector has been documented in a number of studies (Al-Rashidi, 2010; Hesson, 2007). The organisation itself goes through 3 phases as the organisation goes through any digital transformation process (Morabito, 2016):

- Ending phase: where employees show a resistance to "letting go" of the old way of operations and business (Bridges and Mitchell, 2000; Venkatraman, 1994)

- A neutral zone involving disorientation and the organisation adjusts its processes, human resources, IT practices to the new model. It is characterised by doubt and anxiety owing to a lack of certainty (Bridges and Mitchell, 2000).
- The beginning phase: The organisation begins to take on a new identity in response to the digital transformation. There is clarity regarding the new situation. At this stage, the change is accepted and internalised (Venkatraman, 1994).

A number of sources in the literature indicate that not only are organisational changes resisted by employees and middle-level managers, they are also very stressful periods for these groups of individuals (Morabito, 2016; Venkatraman, 1994). This may be accompanied by a fear of loss of job security. Stress creates a lack of motivation and morale, crucial for the fast transition of the organisation. Therefore, it is essential at a managerial not to treat it merely as a hindrance to be overcome but as a productivity issue. From the point of view of management, three steps must take place. While these apply to the more general case of organisational change, they are particularly important to the digital transformation:

1. Unfreeze: A number of forces within the organisation are initially at work to maintain the current model of business and operations. The unfreezing process involves taking steps to minimise the latency created by such forces and helping individuals understand the necessity of the desired change (Burnes and Bernard, 2004; Morabito, 2016).
2. The transition phase involving restructuring, redefining values, establishing human resource requirements, and facilitating behavioural change among current staff (Burnes and Bernard, 2004; Morabito, 2016).
3. Freeze: This is the process of establishing an equilibrium of organisational forces allowing the operation of business under the new model with minimal input from management. Such an equilibrium then serves as a status quo to maintain the newly established organisational practices (Morabito, 2016)..

Virtual Project Management

There are two trends that may be extrapolated to evidence the increasing need for development of remote and virtual project management. The UAE is highly-open economy to multinationals. However, large-budget projects here are typically performed in conjunction with local firms, where sociocultural barriers are ever-present (El-Sayegh, 2008). Secondly, the UAE currently relies on a large number of expatriates (Enshassi and Burgess, 1990), With increased

globalisation and mobility, local management will increasingly be an impediment to effective management.

In relation to virtual project management, the literature advises that firms having virtual project managers (either it is a decentralized or centralized PMO in existence) make sure that every team member is kept up-to-date on the utilized technology and are trained on working with persons from diverse cultures (Khazanchi & Zigurs, 2005). The centralized firms are statistically more adept at supplying the virtual project managers with archives which allow learning and sharing. Duarte and Snyder (2001, p.17) recommend the instatement of virtual knowledge sharing tools and resources to boost the learning opportunities of virtual teams. Virtual leadership needs a different skillset from the normal face-to-face system of leadership. Trust is a crucial component of a virtual team and research shows that, in the absence of trust, a virtual team risks a higher likelihood of failure (Malhotra et al., 2007). Trust boosts communication which is important within a virtual environment, and, in fact, several communication channels should be suggested and supported. In conventional face-to-face projects, this could be viewed as noise and an element which isn't focused on the task, but in the case of the virtual team, it boosts trust and communication (Qureshi et al., 2006). The leadership of the firm must make rigorous efforts to show to the entire firm the advantages and exploits of a virtual team (Duarte & Snyder, 2001). The firm's leaders should equally back the virtual team by supplying all its required resources (Duarte & Snyder, 2001).

City Development

City as Gramsci's entrepreneurs

Each city needs to create its USPs (Unique Strategic or Selling Points). By creating a USP, cities strengthen their opportunities of leaving the competition behind in attracting people, corporations and activities which altogether will aid to build a successful future. For instance, Dubai has the unique Palm Jumeirah, and is a clever city marketing element that captures the attention of tourists worldwide (Rodriguez Roldan, M. 2013). Moreover, it is an element of symbolism that is often associated with the increasing demand for novelty in setting apart a major city from metropolitans worldwide. This has had a significant effect on the property prices in Dubai, particularly with mansions in the Palm having risen from an estimated average of \$1-2 million in 2001 to \$10-15 million by the year 2008 (Rodriguez-Roldan, 2013). However, such Unique Selling Points need to be created similarly for cities such as Abu Dhabi

and Sharjah, to the extent that they are globally renowned. In its outlook towards the future, the UAE public sector can collectively aid the development of USPs of Dubai, Abu Dhabi and Sharjah in the following respects: 1) Unique physical landmarks, 2) historical sites, 3) approach to the future i.e. openness, 4) global network value, 5) commitment to environment, climate and nature, 6) cultural institutions and sports teams, 7) attractiveness to corporations and venture capital, 8) attractiveness (reputation) of universities and colleges.

Property Asset Management

From the perspective of the UAE government, there needs to be a careful consideration of regulations directing the architecture of buildings. For instance some literature indicates that an identifiable metropolitan architectural style of international metropolitan buildings reminiscent of New York is better suited to attract tourists and investment (Bagaeen, 2007). Others indicate that a style that is unique and culturally distinct is better suited in the long-run (Stephenson and Knight, 2010; Bagaeen, 2007). However, regardless of the actual style forced upon the upcoming cities of UAE, the public sector must anticipate both benefits and costs for such a measure. The private sector will require to similarly assess opportunities brought about as a result particularly in relation to capital management. As the UAE prepares for a steep rise in its population, particularly of expatriates, strong governance for corporate property asset management will require that city government planning involve administrative, geographic and departmental boundaries. It would constitute the following measures:

- Efficient governance of corporate property asset management with the active participation of elected members and senior officials;
- A corporate asset framework which acts in response to the property consequences of the corporate objectives and creates a coordinated means to lasting divestment, investment and management strategy;
- Constant challenge of property requirements and choices for achieving future requirements collectively with a clear model for project prioritization;

Procurement of Capital

A list of recommendations presented here concerns itself with the UAE government's desire to comprehend the market states which point towards the fact that closing productive deals depends on certain issues whose effects are felt at the level of the market. Almarri and Hijleh, (2017) state that the UAE must strengthen public-private partnerships if capital growth contingent upon diversification was the objective. Dubai requires to maintain confidence in the

private sector despite both anticipated disruption from technological developments as well as economic downturns. Public-private partnerships must increasingly be reliant on foreign markets and decreasingly so on internal markets (Porter, 2010 cited in Bagaeen, 2007).

Increased stakeholder awareness - citizens and tourists as customers

City authorities will be aware of the mounting research showing the existence of verifiable connections between residents being properly educated by their city's leadership and improved degree of government approval. The major causative factors for a positive opinion among locals for a nation or city's leadership are directly related to whether citizen's believe the leadership delivers developmental value. This is in line with the UAE Smart Government Initiative, the said objective of which "is to ensure the happiness of all UAE citizens. Sheikh Mohammed describes Smart Government as "one that never sleeps, is as welcoming as a hotel, provides fast delivery and strong procedures, is innovative and adaptive, serves the citizens at any time and everywhere inside and outside the country, improves lives and responds to expectations." (Al Suwaidi, 2017). However, there is considerable scope for improvement in this regard. Positive practices within city authority reputation management identified in literature on UAE are: Being proactive in actual performance and real governmental behavioural change in rapid response to citizen's queries and requirements. This requires significant development and management of its E-government services (Mouakket, S., 2010; Al-suwaldi, 2009). Public sector should proactively foster the knowledge management as it pertains to history and heritage sources in integrating it as part of the overall tourism experience (Stephenson, 2014)

CSR and Environmental Management

It is important for the federal government to integrate environmental attention into their various economic plans as well as other policies. In the UAE, city governments are given special funds meant to help incorporate environmental elements into physical plans and its performance is handled by establishing certain targets. However, these are largely in relation to the short-term economic benefits or towards compliance with agreements at the global table. For the foreseeable future, a number of initiatives may be taken, but must be associated with appropriate incentives to ensure compliance. Recently, it was disclosed on the government's DEWA website that "The Supreme Council of Energy issued directive number 1 of 2016 to set a target for government institutions. Therefore, at least 10% of all newly-purchased cars will be electric or hybrid from 2016 to 2020. The proportion of electric and hybrid cars will rise to

2% by 2020, and 10% by 2030.” (DEWA. 2017). Most of the anticipated changes in relation to the environment concern minimisation of carbon emissions, and addressing the threats of global warming. CSR is a much broader class of initiatives. To create effective city branding as part of the value creation paradigm of CSR, the UAE must seek to become a global authority at solving important social and environmental problems facing humanity. CSR efforts must primarily concern: a) supporting underdeveloped nations with foreign aid b) supporting technology in renewable energy technology development c) gaining a reputation for providing its inhabitants the best access to health in the world d) Improving its human rights record from the perspective of the United Nations e) gaining a reputation for being a hub of learning, research and education.

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