The Applicability of IT Governance on Egypt Air

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Abstract

The proper implementation of government and corporate governance within Egyptian institutions and companies became an absolute necessity in order to attract foreign investments, ensure accountability and data transparency, support healthy competitiveness among organizations and improve the living conditions of the citizens. This paper aims to discuss the existing challenges of governance in different countries at both the governmental and corporate levels. This research highlights the importance of applying governance within the Egyptian institutions and companies. It provides several examples of good governance, which should be assessed with the assistance and application of international standards, where elimination of corruption is a key to good governance and successful civil society with proactive awareness on human rights issues. The special attention is given to the issue of effective IT governance, which implementation became now possible through the established frameworks, standards and guidelines, including ISO 17799, COBIT, ITIL, COSO and Val IT. The discussed governance cases and examples could eventually support the understanding and implementation of the effective governance standards and tools within the Egyptian government and organizations, including Egypt Air.

Key Words: Governance, Corporate Governance, IT Governance, Collaborative Governances, Governance Reforms, Egypt Air

1. Principles and Challenges of Governance

The main principles of governance, including accountability, transparency, participation and equality, represent the major criteria for the successful understanding and implementation of governance norms and standards within the governments and corporate institutions. However, it is not always easy to implement all these principles due to political or economic situation in the country, lack of strong corporate ethics, existence of corruption and high unemployment, etc. Moreover, the absolute necessity to introduce IT governance within governments and organizations is not realized yet in many countries, which leads to lack of data organization and transparency, lack of unified standards, especially in case of emergency (Norris, 2008).

1.1 Effective IT Governance

The implementation of the effective IT governance among organizations and governments became now possible through the established frameworks, standards and guidelines, including ISO 17799, COBIT, ITIL, COSO and Val IT. Airline industry operates in an extremely dynamic and often highly volatile commercial environment, where not all the companies and related parties properly follow the above regulations or even know how to apply them to reach effective corporate environment and secure corporate investments.

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Any organization or government often experiences sustainability risks, including strategic, financial, social, operational and environmental. Such risks can be managed and moderated by implementing IT governance as a risk management and performance measurement tool, which will eventually provide necessary actions to extend success in e-commerce environment (Iskandar and Salleh, 2010). It is important to understand the role of IT governance and its impact on business strategy starting from ongoing operations up to strategic partnership and leadership. Figure 1 below shows the gradual degree of IT governance impact on business strategy based on such criteria as low and high level of impact, cost and value, efficiency and effectiveness and finally execution versus visionary. Starting from ongoing operations when the standard services and actions are provided the effective implementation of IT governance helps organizations to move forward to more advanced stages of cost-effective service delivery, values creation and capture, strategic partnership and strategic leadership. The last two stages of strategic partnership and leadership are vitally important as they provide strategic flexibility and new business opportunities to business while being able to respond to changing business requirements and propelling innovative technologies into the market and operations.

Figure1: Role of IT Governance

Source: A.T. Kearney
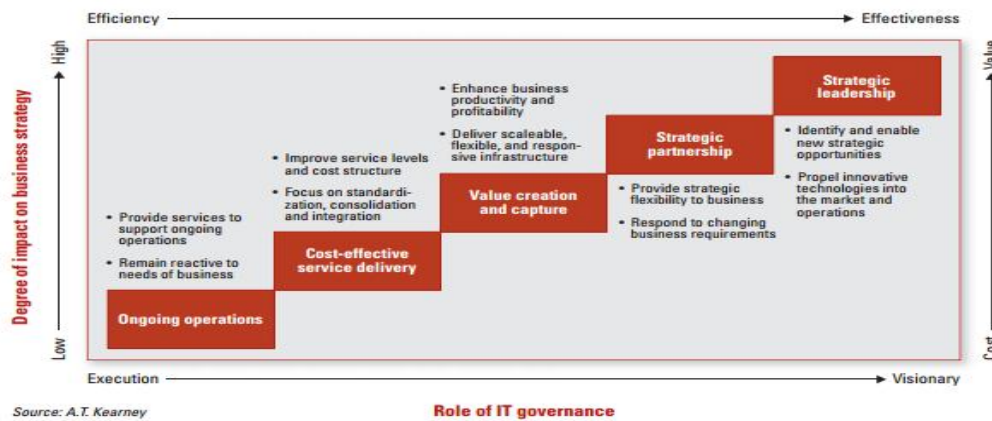
The implementation of the following seven habits of effective IT governance in Figure 2 can improve the organizations' performance, internal procedures, internal communication between the departments and employees, etc. The seven effective habits of IT governance include the following: (a) IT as strategic business asset and managed portfolio; (b) IT participates in technology investment decisions; (c) management's understanding and involvement in IT investments; (d) tailored IT governance; (e) IT as essential part of corporate planning and strategy; (f) IT as active leader in the innovations; and (g) measured and monitored IT's impact.

Figure 2: The 7 Habits of Highly Effective IT Governance

Source: A.T. Kearney

1.2 Collaborative Governance

Collaborative governance as a hybrid mode of decision making and service provision ensures the engagement of non-state entities in a formal and collective decision-making process in order to manage pending projects, solving problems and working together to achieve better results than it can be achieved by a single organization.

Such interdependency becomes necessary when single private or public organization does not have all the knowledge and power required to solve the complicated and diversified problems. The main two modes of collaborative governance include inter-institutional networks and co-production. In its turn, co-production governance presumes a mix of activities where both public service agents and citizens contribute to the provision of public services by transforming the relationship between service users and providers and enabling the user to take more control and ownership (Klassen, et al. 2016).

1.3 IT Governance and Aviation

In modern global aviation industry, the stronger governance and proper global framework on IT governance, crisis management, interconnectedness of airline safety records, the management of public expectations, attentiveness to the psychological fallout from safety lapses and the quality of international search and rescue efforts are required. During the last few years, especially 2014 and 2015, numerous incidents took place among the airlines with strong dominance in Asia. In March 2014, Malaysian Airlines' MH370 went missing followed by the crashes of MH17 over Ukraine in July and TransAsia Airways GE222 in Taiwan that same month. Later in December, AirAsia QZ8501 plunged into the Java Sea. In February 2015, TransAsia Airways GE235 went down in Taiwan and in August Trigana Air Service Flight 257 crashed in Indonesia. Given the conflicting jurisdictions of different countries, their regulations for search and rescue and other numerous procedures make it even more difficult to reach the common international framework of governance. Even the International Civil Aviation Organization (ICAO) does not always have enough power to influence airlines' and governments' decisions and actions toward specific incidents and emergency cases. Under such cases of aviation incidents and disasters, saving reputation and shifting responsibility to someone else still remain the major challenges in modern aviation instead of giving priority to saving lives of the passengers. Thus, to foster international aviation governance the following few steps might be applied: (a) sharing information in a transparent and timely manner in order to effect a quick response; (b) demonstrate capable leadership with government and military leaders taking charge and coordinating the relief efforts; and (c) drawing up and putting in place disaster relief protocols for an efficient operation (Abeyratne, 2015; TodayOnline, 2016).

To solve the above mentioned challenges the aviation industry needs to ensure the implementation of the network governance with greater involvement of interested parties from both public and private sectors in policy shaping and decision making processes. In European Union, for example, such network governance and aviation safety system is based on a close collaboration between regulators at both national and EU levels (European Commission, national civil aviation authorities), independent agencies (European Aviation Safety Agency (EASA)) international organizations (Eurocontrol), aircraft manufacturers, airlines and other involved parties. The governance of the safety system is concentrated on four main aspects within the legislative framework, including aircraft airworthiness, compliance of personnel with the highest safety standards, occurrence monitoring and reporting between states and airlines and common rules on accident investigations (Fenwick et al., 2013).

Due to its international nature, the aviation governance has not only multi-level, but also multi-stakeholder approach to understanding the dynamic interrelationship within and between different levels and groups of stakeholders, which presents one of the largest challenges because not all the countries and governments are ready for reforms and are capable to deliver the results at the same level. Moreover, their decisions and actions are based on the main four attributes, including (a) the stakeholders' position on the reform issue, (b) the level of influence they have (negotiation power), (c) the level of interest, and (d) the group/coalition to which they belong or be associated with. That is why, the continuous education and training on such governance issues should become an approved mechanism supported by the government for continuous development of individuals and active participation in a knowledge-based society (Efthymiou, 2016).

2. Challenges of governance in Egypt

The poor governance system in Egypt is defined by the missing accountability mechanisms in the government performance, including such challenges as misuse of public funds, tax fraud, bribes, misuse of power and authority, favoritism, etc. All these challenges prevent the modernization and further improvement in the country. Despite the existent laws against corruption, anti-corruption concepts such as integrity, transparency and accountability are poorly understood by public sector officials, private companies and citizens in Egypt expressing a huge challenge for the fight against corruption. Even the government officials have often difficulty in properly understanding and finding ways to make these principles as part of their oversight practice.

Though, the main challenge here is that corruption became part of a daily life in the country being widespread and commonly practiced in government, media and other fields, mainly due to merely 35 percent of informal economy. As a result, corruption and poor governance system are major obstacles to business operations and growth in Egypt. With no accurate data on the level and types of corruption in the country, it is even more difficult to fight this challenge. The acute corruption is the most prominent case for bad governance in Egypt due to political, legal, economic, social, administrative and cultural context deterioration. The realization of good governance in Egypt necessitates the adoption of numerous critical reforms, including accountability, information transparency, law rules pervasiveness, anticorruption procedures, public consent, equity and equality and effective management of government agencies (Aly, 2013; Kassem, 2014).

In theory, accountability is a cornerstone of democratic governance when those who hold public office must give account for their actions. The democratic state usually identifies two types of public accountability - vertical and horizontal. Vertical accountability refers to the power of citizens to make the responsible people in power to be accountable. For example, setting up anticorruption and human rights non-governmental organizations (NGOs), publishing corruption stories in the media and voting in public elections. Horizontal accountability embodies a wide range of institutions that oblige the accountability of officeholders to one another. In a democratic society, both types of accountability complement each other. Though, in authoritarian regimes vertical accountability is undermined by rigging elections, repressing civil society organizations and cracking down on free media. In Egypt, both vertical and horizontal accountability have been most incompetent and useless. Vertically, the depoliticization of civil society crippled the ability of civic associations to act as a control entity and demand government accountability and the ability of the media to hold the government accountable. Horizontally, one of the most important forums of holding the government accountable, the parliament, had been dominated by ruling party members and government sympathizers (Aly, 2013).

To transform Egyptian economy into a dynamic system that is able to create productive employment opportunities, to reduce poverty and to maintain social and political stability, the far-reaching structural and social reforms are necessary. The change can be facilitated by encouraging an open debate about important and sensitive issues, such as oversight and evaluation of public spending and official subsidies. Though, it will be impossible to implement all those changes without the improvement in the governance systems, including strengthening relationship of the state with its citizens, achieving sustainable growth and reducing poverty. The bonds between the government and its citizens can be strengthened due to reforms aimed at enhancing access to information and citizens' participation across most areas of public sector activity, which will reduce the sense of alienation and frustration with the state, and thus the likelihood of civil disturbances. That is why, Egyptian government plans to improve transparency and efficiency of its work and related organizations and increase citizens' trust in the state by promoting citizen engagement and feedback, decentralizing service providing citizens with access to information and feedback to service delivery and strengthening governance in the energy sector through energy subsidy and policy reforms, including higher attention to solar power systems and other innovative and effective energy solutions (Saif, 2011).

The governance systems in Egypt exhibit major defects and challenges, including the following: (a) lack of cooperation among the pillars (government, political parties and civil society) of the National Integrity System (NIS); (b) incomplete integrity system and absence of strong public control agencies due to limited political will of the governments to fight corruption and apply new legal reforms; (c) the lack of effective institutional control through honest and effective supervisors, good auditing offices, clear rules on ethical behavior; (d) political interference from the executive branch in the work of public and private agencies; (e) extremely limited access to public information preventing data transparency and public participation, mainly due to the lack of effective enforcement mechanisms; (f) predatory coalition between ruling party and business in the form of favoritism, peddling, profiteering and embezzlement; (g) lack of transparency of rules, laws and processes; (h) 'apathetic bureaucracy' with the absence of decentralization and delegation of authority; and (i) lack of rules of law and administration of justice. Government purchases, customs and taxes, job recruitment and local administration are major four governmental activities largely associated with corruption in Egypt. Furthermore, any improvements in the economic development in the country often do not have any positive effect on the high level of poverty and unemployment, which means the resources and benefits are always consumed by the high and middle class only. Moreover, the inequality of such problems and challenges in different regions only emphasize the problem of government favoritism toward the urban areas, where they might be living themselves.

Thus, governance is not equally applied within the country (Aly, 2013; Kassem, 2014). The extremely high level of national unemployment in Egypt adds another challenge to the governance system, including 18.9% among university graduates and very low rate of employed women (20-25%) compared to a global average of 52%. Labor informality, lack of signed contracts between employees and their employers and lack of fair minimum wage is a harsh reality in the country. Minimum wages are an important policy instrument for social protection and a strong indicator of the state's efforts to ensure rights at work. However, Egypt has yet to establish an effective system to guarantee a fair minimum wage. Poor governance here is identified by the state's failure to address these challenges in the proper legal and fair way. (Kassem, 2014).

Other important areas, such as business, education, healthcare, housing and food supply, also lack the good governance systems and practices. It is mainly due to an implementation gap between legal reforms and institutional enforcement and practice of those reforms. It is expected that management, board and shareholders of the Egyptian companies would seek implementation of regulations and compliance with them. Companies' external auditors and legal consultants should play a significant role in prompting companies' compliance with the required regulations and monitoring their implementation. The proper implementation of the corporate governance is especially important for those companies planning to or already listed on the Egyptian Exchange (EGX) and the Nile Stock Exchange (NILEX) as the proper qualification for public offering or listing is among the objectives of corporate governance. Similar to the government governance, the availability of information and transparent decisions of the top management is a vital element for corporate governance (Shehata, 2011).

3. Cases of "good" governance and reforms

The good governance centers on the responsibility of governments and governing bodies to meet the needs of the masses as opposed to select groups in society. It is a set of requirements that conform to the organization's agenda, which tries to promote more relationships between government and empowered citizens, neighborhood councils and community councils. Good governance with local government aims to increase civil engagement with more members of the community in order to get the best options that serves the people (Novy et al., 2009; Pollitt and Bouckaert, 2011).

The application of advanced and integrated government services through web-based, electronic, or virtualized environments has its roots in customer relationship management, whereby a citizen-centered management approach is employed to influence public behavior and improve public-sector performance (Cho, 2001; West, 2007).With the development of a customer-centric approach, e-governance aims to improve quality of life for its citizens and satisfaction with government services (Mehra, 2004; Nandan, 2009).

In Europe, the economy of the Netherlands, for example, remains one of the most sophisticated and innovative in the world due to its efficient and innovative corporate and government governance, excellent school system, efficient infrastructure, reliable public administration and permanent focus on innovation. Its aviation industry also shows very impressive results with 2.9% traffic increase, 0.13 minutes only flight delays where 46% of those delays were due to ATC capacity and 28% due to weather (Efthymiou, 2016).

In Asia, Hong Kong and Singapore stood out among Asian states in their efficient and effective adaptation of reforms and governance tools to macroeconomic, political and state systems. In Singapore, the economical governance is distinguished by the presence of numerous state-owned enterprises and statutory boards set up by the state as the engine of economic development. In addition, privatization and liberalization in finance, banking, telecommunication and insurance industries helped to decrease market restrictions and allow more foreign ownership. In Hong Kong, despite the noninterventionism approach for quite long time the state eventually decided to play a more proactive role in the formulation of effective governance tools, long-term strategic goals and initiatives for business (Lee and Haque, 2006). Since the Information Communication Technology (ICT) constitutes the fastest growing component of the global economy and high revenue generated by the interactive information industry, the Indian government has set the target of delivering at least 25 percent of its services in the electronic format. It has been emphasized that e-government could largely advance the governance system and economic reforms, help to fight corruption and poverty as well as provide transparency and empowerment. It is especially important for the Indian government and citizens considering that despite two decades of e-governance, e-commerce and e-citizen, the country remains one of the poorest countries in the world, where 44.3 percent of adults are illiterate, 25 percent of people do not have access to health services, 71 percent without access to sanitation and 35 percent of citizens living below the poverty line.

That is why; it is of high importance for the Indian government to implement new economic and social reforms in order to help its citizens improve the living conditions and level of education to get better opportunities in the future (Margaret and Kumar, 2015; Kaushik, 2015). In terms of social impact, the implementation of e-governance helped the Indian government to reach the following: (a) increased transparency and reduced corruption as a result of reducing the number of intermediaries; (b) increased efficiency and effectiveness of service delivery due to decreasing the number of steps involved, cutting the timeframe and reducing the number of agencies that need to be consulted; (c) combating corruption in the public sector through e-government by introducing data transparency, making decisions traceable, developing accountability and supporting competition among electronic delivery channels; and (d) empowerment of rural communities. In terms of economic impacts, the following achievements have been reached: (a) cost reduction in service delivery; (b) control of government expenditure; and (c) growth of tax revenue. The first and foremost example of e-governance initiative in India with wide ramifications, especially on the life of common man, was the computerized railway reservation system in the Indian Railways. Government of India has launched variety of initiatives at various levels of governance, of which some are related to e-administration especially observed at the ministerial level and some at state level. Nevertheless, there are scores of other forms of e-governance initiatives launched under private-public partnership, especially seen in connecting citizens and building interactions within society (Margaret and Kumar, 2015).

4. Airline Governance Cases

Corporate governance is an important aspect of organizations, national and international entities that allow them to work smoothly due to the existence of a clear level of accountability and communication amongst the organization clear understanding of the roles and responsibilities and the unified set of actions. It is the system of rights, processes and controls over the management of a business entity to protect the interests of stakeholders as well as to set the rules and mechanisms for policy and business strategies with stakeholder involvement. Moreover, human rights should be enjoyed by the citizens through good governance, which is no longer assessed by the provision of services by the government or other governing body, but by the extent to which improvements were made possible to the quality of life of the individuals. Good governance should be assessed with the assistance and application of international standards and be rewarded to inspire others. Finally, the elimination of corruption is a key to good governance and successful civil society with proactive awareness on human rights issues (Abeyratne, 2015).

It is difficult to imagine the modern governance without the effective and innovative applications of IT and electronic governance that provide the controlled corporate environment due to improved technologies. The efficient IT governance is essential to protect privacy, secure information, manage services and nurture corporate knowledge The primary objective nowadays is that all levels of organizations and governments adopt IT governance and e-governance as strategic tools for enhancing the quality of external services and streamlining internal operations, including offering public information, services and promotional tools for government policies based on web-based collaborative filtering system. Table 1 below shows the focus areas for the IT governance based on which all the organizations should be analyzed, including strategic alignment, resource management, performance measurement, value delivery and risk management. Recently, airline industry was heavily affected by e-commerce technology by moving to e-ticketing as a mandatory requirement by The International Air Transport Association (IATA) (Iskandar and Salleh, 2010; Cho, 2014).

Table 1: IT Governance Focus Areas

Focus Area	Description
Strategic alignment	Focuses on aligning with the business and collaborative solutions.
Resource management	Optimizing knowledge and IT infrastructure.
Performance measurement	Tracking project delivery and monitoring IT services.
Value delivery	Concentrating on optimizing expenses and proving the value of IT.
Risk management	Addressing the safeguarding of IT assets, disaster recovery and continuity of operations.

Source: Iskandar and Salleh, 2010

Airline corporate governance is a key determinant of airline performance. However, the relationships between governance and performance are complicated by the diversity of governance arrangements surrounding airlines. Improving trust in the airline industry requires attention to all the levels of governance in a manner consistent with national and international business contexts. The leading global airlines are constantly reassessing their governance structures, memberships and mandates in order to achieve high quality airline governance. To achieve this, airlines have to constantly assess the appropriateness of their current governance structures, the correct balance of non-executive and executive members of their board committees, etc. Nowadays, many well-known airlines successfully applied corporate governance principles and strategies into practice, including such aviation leaders as KLM Airlines, British Airways, Singapore Airlines, etc.

The effective corporate governance at the Singapore Airlines is reflected in its sustainability reports on the airline performance presented to shareholders and stakeholders in a transparent and accountable manner covering such important issues as the governance, stakeholder engagement, community projects and the environment. The good governance is ensured by the Board, which follow the guidelines of the revised Code of Corporate Governance issued by the Ministry of Finance in Singapore in May 2012. The newly appointed directors serve an initial term of three years, after which the new responsible people are elected after the approval of the special board member, the Minister for Finance. In such a way, the airline ensures the high level of proficiency of its members, lack of bureaucratic procedures, innovative ideas and strategies from the highly qualified members. Singapore Airlines is committed to continually strengthening our relationship with the investment community and believes in timely and consistent disclosure of pertinent information to enable a transparent assessment of the company's value. All financial results and price sensitive information are released in a timely manner through various media, including press releases posted on the corporate website, which is an important source of information for shareholders and the investment community. Quarterly results announcements, news releases, presentation slides, monthly operating statistics, annual reports, sustainability reports and other key facts and figures about the company are available on the investor relations page. In such a way, the airline ensures the availability of transparent information and corporate actions to its shareholders and stakeholders (SingaporeAir.com, 2015).

In the Middle East, Saudi Arabian Airlines as one of the leading airlines in MENA region represents the most successful good governance in the aviation industry with progressive outlook of the future development of the organization and its competitiveness in the regional and international aviation markets. The company aspires to the highest standards of ethical conduct, reporting results with accuracy and transparency and maintaining full compliance with the laws, rules and regulations that govern the company's business. The Board of directors provides central leadership to the company, establishes its objectives and develops the strategies that direct the ongoing activities of the company to achieve these objectives. Directors apply the required skills and care in exercising their duties to the company and are subject to fiduciary duties. They are accountable to the shareholders of the company for the company's performance. The company's shareholders at all times have the authority to remove the Board of Directors from their office.

Nevertheless, the outdated technology that weakened company's ability to compete with other leading airlines in the region and in the international market pushed the airline to recognize the crucial necessity of large investments into its technological development in order to support its region's status as the leading travel carrier. Since the airline is planning to expand internationally with new business opportunities and sales increase, development and implementation of its new products, financial leverage and online markets as major opportunities to market its products and services to a much wider audience, the investments into IT governance and updated technological innovative tools became of the highest priority. As a result, the airline made numerous investments into its further development in technology, latest types of aircrafts, human resources, inflight entertainment system and online marketing. In such a way, Saudi Arabian Airlines benefits from the ultimate combination of efficiency, performance and reliability to create a premium entertainment experience throughout the aircraft (Bardwell, 2015).

British Airways is another example of the good governance in the aviation industry as it has led the way on sustainability for twenty-five years. Moreover, in 1992 it became the first airline to produce an environmental report and in 2002 the first airline to take part in carbon trading. The airline actively strives to help set the standards for safe and responsible aviation in the future. The corporate governance and responsibility program addresses such important issues as creating the sustainable and responsible communities, promotion of wellbeing and inclusion, conducting business responsibly, reducing British Airways' environmental impact and reducing waste and improve recycling.

Numerous sustainable projects and trainings are led by British Airways for those who live challenging lives, such as Flying Start program for children in need, and cannot afford to fly or get appropriate training, such as Gold Standard Program. The airline ensures the conduction of its business responsibly, a fair and transparent tender process for the partners and suppliers and a safe working environment for its employees. Moreover, the airline ensures that aviation reduces its impact on climate change by developing new low-carbon fuels, implementing emission-saving initiatives, supporting environmental projects with the help of customers' donations and providing proactive support for appropriate government regulations. (BritishAirways.com, 2017). Considering the large investments into IT governance and IT-enabled changes, it is obvious that many airlines wonder about the value of these investments and their impact on daily operations and profits of the company. Only with the right governance and management processes and full engagement from all management levels such IT-enabled investments can bring huge rewards. The applied changes in KLM's structures, processes and relational mechanisms have helped to restore trust between the business and IT organizations. In addition, the changes have increased the resources allocated to IT innovation, which eventually made KLM as one of the leading airline in social innovation (De Haes and Van Grembergen, 2013).

It requires strength of leadership and clear direction to transform an organization successfully and to seek internal efficiencies and growth in existing and new markets. Though, the organization operating with a common purpose and with full commitment to its program of change from top to bottom can potentially reap high rewards. Although all organizations, including KLM, face some unique challenges and concerns around effective governance of IT in addition to realization of real business value from today's significant and increasingly complex investments in IT. Other organizations can certainly benefit from the experiences and lessons learned by KLM in this area. The factors that have been key to KLM's success to-date include: (a) senior management commitment with a strong executive leadership team; (b) business engagement with strong collaboration and partnership; (c) clearly defined and well communicated set of principles and practices (d) clear and transparent business drivers; (e) strong front-end demand process; and (f) evolutionary approach (De Haes et al., 2013).

Based on the example of other airlines that have successful implementation of corporate governance into their daily operations and services, Egypt Air should largely improve its own corporate governance since numerous challenges are still present. First of all, the airline does not have an effective and efficient governance approach with administrative accountability, data transparency, risk management, financing, monitoring and control, which guarantee enhanced decision making with stakeholder participation, including social innovation partners. The airline lacks constitutional and legal instruments to foster and empower stakeholder participation in the social innovation governance of governance reform. In addition, without visible economic strategy and development indicators it would be difficult for the company to attract investments. Moreover, it is of high importance to apply social and environmental responsibility and implement the latest technology and innovation tools, such as the use of social innovation governance for governance reform and investments into improved technologies required at Egypt Air Training Center to ensure their pilots, cabin crew, administrative and ground handling employees are well trained according to the latest methodologies and technical tools (TodayOnline, 2016).

In order to stay competitive at the international market Egypt Air has to continue investing into new modern aircraft fleet, like it did in July 2016 when the airline and Boeing signed an agreement for order of 9 Next-Generation 737-800s during 2016 Farnborough International Airshow. The 737-800 is the best-selling version of the successful Next-Generation 737 family. Known for its reliability, fuel efficiency and economic performance, the 737-800 was selected by Egypt Air because it provides the flexibility to serve a wide range of markets. However, the number of employees should be largely reduced. As the Minister of the Egyptian Civil Aviation stated, Egypt Air has 31,600 employees working on 62 airplanes, which is higher than the existing international rates. The flotation of the Egyptian pound augmented air carrier Egypt Air's already significant losses to more than LE 15 billion. That is why; the fewer number of highly qualified employees can operate the flights in more efficient and effective ways (EgyptIndependent.com, 2017). Egypt Air should start to consider science and research and development as a mandatory part of its reforms and strategies, as other major airlines already did, such as KLM and Cathay Pacific. The airline should not just copy or apply innovations done by others, but to be one of the creators and leaders of such innovations related to aviation and tourism industries, as well as community overall. Egypt Air needs to implement innovations in the field of technology, in working methods, rules and conduct. This calls for a joint approach on the part of Egyptian government, airline industry members, knowledge institutes, the business sector and citizens.

It also calls for an interdepartmental approach by government bodies, as socially based tasks often overlap through different government departments and layers of administration. An innovative, enterprise-friendly Egyptian government is another requirement, one that not only supports innovations in every possible way, but also innovates itself. If all the above changes are applied and implemented into the governance reform of Egypt Air, numerous advantages for the government, company's management and its employees exist, including: (a) revenue needed by the government to create new jobs for workers displaced by industrial restructuring; (b) reduction of the government's administrative responsibilities and the burdens of government intervention in enterprise management; (c) improvement of Egypt Air's activities at the local and international markets; (d) higher chances to increase company's efficiency and effectiveness; and (e) an opportunity to be one of the leading companies in the Middle East and African regions (TodayOnline, 2016).

5.   Concluding remarks and implications

The values of corporate governance, which are transparency, accountability and responsibility, offer the key for the modernization of the countries of the Middle East and North Africa. In these countries, including Egypt, the private sector is expected to have a leading role in economic, political and social reforms, which would provide the greatest promise for meeting the challenges caused by the region's tepid economic growth and surging youth demographics. If applied properly, the good governance allows the citizens and employees of organizations to enjoy their human rights, which are assessed by the achieved improvements to the quality of life of those individuals. To accomplish such improvements the international standards of good governance should be applied with decreased corruption and proactive awareness on human rights issues. Moreover, in case of Egypt Air the wise reduction of existing employees and efficient re-employment will allow the airline operating the flights and daily business operations in more productive and effective ways. Finally, the national institutions, laws and regulations based on international standards and norms would enable these countries to modernize their corporate sectors, attract foreign investments and apply the latest technological innovations in order to become internationally competitive.

6. Recommendations

IT governance is considered as the magic solution to a lot of problems facing any airline, through clarifying specific problems or defining additional details to highlight what an airline needs exactly. Egypt Air should adopt various clear strategies with transparent vision, aiming to achieve strategic basics, including and not limited to the strategic direction, cost-benefit analytics, marketing techniques, fund policies, competent key position holders, human resources development, independent quality management and creative communication. To achieve such progress and gain profitability, the current situation of Egypt Air cannot be evaluated correctly without published balance sheet, research and development system and outsourcing key position leaders with unique competencies at the managerial level in order to set the effective policies of decision taking, while hiring should be coordinated by assessment centers with clear criteria for selection or promotion.

Due to severe competition, open skies if applied with its full phase on Cairo International Airport, then the small aging fleet of Egypt Air will not be able to compete effectively. In spite of being the flag carrier, Egypt Air should be ready to survive in the ocean of severe competition, being proactive is an essential and extremely important to keep the company in the sky. Initial public offering, merging or acquisition seems to be the best scenario to transfer great financial losses into profit and high revenues, while cost reduction, re-employment, retrenchment, downsizing, rotation and reallocation policies may be the tools of restructuring the company business, depending on the limitation of bureaucracy and governmental positive or negative interference in applying the suitable IT governance strategy with appropriate investment fund directions.

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