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## **Strategy of adaptation in the management system at the Egyptian Universities after Arab Spring Uprising - revolution and aftermath**

### **1. Introduction**

Organizations, enterprises, firms operate in a changeable and unpredictable environment. At a time of revolution and battles in the squares and public places of the biggest cities in Egypt, at a time when people are killed at the streets, in the time of globalization and academic staff mobility, there are some fundamental questions which should be asked. How long this unpredictable situation will last and how scientific society will function after revolution, are the most important factors concerning the development of Egyptian Universities and also the role of the cross-national determinants which are needed in order to understand the creativity and competitiveness of Universities' management (Hoegl et al. 2012). It is easy to notice the recent global phenomenon in which academics from non-English-speaking backgrounds move to foreign universities (with English language as instruction) all over the world (Phereli 2012). With business and economy becoming more international, there is increasing interest in understanding cross-cultural antecedents of individual behavior. A common corporate social-identity frame

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promotes knowledge transfer, the diversity of various subgroups' social-identity frames, in combination, with interaction and temporary tension between them, advances knowledge creation (Regnér and Zander 2011).

International business and management research has emphasized knowledge transfer and its associated characteristics and challenges as a primary undertaking of multinational companies. In this paper the Universities will be considered as companies, enterprises, because at present, Universities also are organizations who earn money and generate financial performance. The higher education system in Egypt is made up of 18 public universities with more than 2.4 million students, 12 public non-university institutions and 15 private universities providing technical and professional training. There is more than 63.000 teaching staff in the Egyptian higher education system (State Information System 2014, Higher Education in Egypt 2010). There are three bodies for the governance and control of higher education: Ministry of Higher Education, the Supreme Council of Universities and the Central Administration of Al-Azhar Institute. Universities, especially private universities can be regarded as international organization because very often the founder or management is a group of foreigners, which is shown in table 1.

**Table 1. Example of foreign universities in Egypt**

British University in Egypt	A group of UK universities, led by Loughborough University, will provide the academic direction, teaching and quality management processes thereby ensuring the "British" quality of the education. Ambition was the formation of the British University in Egypt (BUE) that could produce graduates of UK standards to enter key sectors of the Egyptian economy.
American University in Cairo	The American University in Cairo was founded in by Americans devoted to education and service in the Middle East. Throughout its history, AUC has balanced a strong commitment to liberal education with a concern for the region's needs for practical applications and professional specializations. Today, AUC emphasizes liberal education and all undergraduate students study a common set of courses in the humanities and the natural and social sciences as part of the university's Core Curriculum. In addition, the university maintains its strong commitment to fostering understanding across world regions, cultures and religions.
German University in Cairo	German University in Cairo was established in cooperation with the State Universities of <i>Ulm</i> and <i>Stuttgart</i> , under the patronage of the Egyptian Ministry of Higher Education, the Ministry of Science, Research and Arts, State of Baden-Wuerttemberg, Germany, and supported by the German Academic Exchange Service (DAAD), the German Embassy in Cairo, the Arab/German Chamber of Industry and Commerce (AHK), the Federal Ministry of Education and Research, Germany, The State University of Tuebingen and The State University of Mannheim.

French University in Egypt	French University in Egypt was founded by Sorbonne University, Haute Alsace University, Corse University and Nantes University. The University was inaugurated by President Jacques Chirac and President Hosni Mubarak.
Egyptian Russian University	Egyptian Russian University was established in cooperation with seven of the best Russian institutions as patrons and partners. They guarantee high-standard of academic programs at ERU. Besides, they provide ERU students with the opportunity of doing summer training and/or studying for one or more semesters in Russia

**Source:** description based on official materials of each university

At the Arab Universities we can observe influence of internationalization, especially in Egypt after Mubarak revolution in 2011, but the level of internationalization depends on status of universities (state, private universities). The world is no longer separated as many walls have been brought down by the power of globalization which made movement and reach of people easier than ever and made competency in the job market an inevitable prerequisite to get any job. Since the fall of the old regime, Egyptians have been struggling to build a new democratic one. Change is one of the most subtle and tough areas. Implementing a new change, in any context, is not an easy task (Al-Maghraby 2013). The main source of difficulty is coming from the human factor, resistance to system and culture changes. It is observed and described in the literature that there are different perspectives and problems related to the conceptualization of organizational culture (Ebeid, Gadelrab 2009). Culture is a set of values, guiding beliefs, understanding, and ways of thinking that is shared by members of organization and is taught to new members as correct. It represents the unwritten feelings part of the organization. Akdere and Schmidt describe organizational culture as a pattern of basic assumption which have been established, discovered or developed by a given group in learning to handle an organization's problems of external adaptation and internal integration. The organizational cultures of Egyptian Universities are worth considering for several reasons. Firstly we can notice that public and private Universities focus for and aim at different groups of students, so organizational culture working in these units is also in different way. Secondly at the Universities we can notice closed/homogenous groups of academic staff. To join those groups by foreign academics is very difficult because the style of management can be called a "clan" culture style (Berrio 2003). Thirdly important factor is the language of lectures. Language in which subjects are taught also depends on the legal status of the university. In private universities the language of instruction is English,

while in the state one language is Arabic. It determines the chances of future employment of graduates. Finally public universities operate along principles similar to those in other Egyptian governmental institutions and relations of authority in public schools are relations between them and State. The style of management depends on CEOs of Universities. Faculty members are key agents in the institutional internationalization process within higher education (Friezen 2013). In the growing volumes of literature on internationalization, however, few authors consider how faculty members perceive their role in this process. For organizational change and environmental adaptation to occur decision makers must be motivated to act (Boeker and Goodstein 1991).

Institutional theory (Tolbert, Zucker 1996) argues that the firms' practices result from values, norms, and beliefs originating in the context of an environment. Firms must conform and adapt to these values and beliefs to meet the expectations of most stakeholders if they hope to gain "legitimacy" within the institution in which their operations are rooted (Cheng, Lu 2013). Thus, a practice reflects the shared knowledge that has been approved and spread among most firms in an institution. Some practices that have been tested by many early adopters and are regarded as legitimate by key stakeholders will be broadly imitated by other late adopters. According to institutional theory the Universities try to offer wider range of subjects and adapt their program to market requirements resulting from increased public and social awareness. At present the awareness plays an increasingly important role also in Universities life. For the first time in Egypt's modern history millions of citizens participated in a referendum to put an end to the constitution they had during Mubarak's era. Some Egyptians believe the revolution is over, some want to continue the struggle for democracy, whilst others believe demonstrators should be forcibly stopped for the sake of the country's economy and stability. Universities in Arab countries are nowadays facing many stakeholders (internal, external) whose long-term satisfaction through the creation of value could lead to organizational performance (Kaoutar and Bouchra 2013). The behavioral components namely: the generation of information on stakeholders, dissemination of this information between the different departments of the organization and organizational response. Egyptian Universities aim at bridging the gap between the skills of the Egyptian youth and the ever-growing need of competence in the work force. In addition to introducing new training techniques inside the Egyptian universities, there are some programs which have put forward the new booming industry of Business Process Outsourcing (BPO) and Information Technology Outsourcing (ITO) to the Egyptian market. The outsourcing industry promises

youth Egyptians every year thousands of job opportunities contributing by this to the reduction of the unemployment and its challenging consequences.

Focusing on tertiary education we can observe and examine influence of information and communication technologies in the education sector (Igwe 2012), first as a way to better participate in the advancement of the knowledge economy and second as a way to introduce innovations.

The main goal of the research is to show how Universities in Egypt adapt to the new political situation including effect of international environment on Universities activities after revolution.

This article poses 3 main hypothesis concerning strategy of development of Egyptian Universities.

H1 - Universities adapt to market, to international environment requirements. Adaptation is the strategy used by universities. This strategy helps them to adjust and to match in gentle and gradual way to changeable and variable conditions. The environment can be described as factors, which there are outside of organization but have influence on activity of each enterprise (university) or as the major external and uncontrollable factors that influence an organization's decision making and affect its performance and strategies. Environment in the last decades of XX century and in XXI century is very changeable and unpredictable. In addition, the environment becomes more complicated and multi-cultural. Turbulent environments are characterized by their high level of dynamism (showing nonlinear positive feedback), complexity and uncertainty.

H2 - Universities are open for foreign influences. The international programmes, knowledge and experience are in the fingertips. Universities plan to embark on a career or continue that involves sophisticated analysis of international market.

H3 - Level of internationalization is wider after revolution. The environment is connected with globalization process all over the world. The organizations function and operate in the world that we can describe as a global village. After revolution the access to international markets is easier (e.g. internet, mobile phones etc.)

## **2. Political environment and Education**

The environment we can describe as factors which there are outside of organization but have influence on activity of each enterprises or as the major external and uncontrollable factors that influence an organization's decision making and affect its performance and strategies. The macro environment is primarily concerned with major issues and upcoming changes in the



environment as follows: Socio-cultural and demographics; Technology; Economic conditions; Ecology and physical environment; Political and legal. The last years have seen major economic, political, legal change on a global scale. The purpose of the macro environmental analysis is to determine what outside influences may have an effect on the economy and industry, and, therefore on the business (Borowski 2012). How to adapt to increasingly unstable, unpredictable business environments? The primary purpose of strategic management is to ensure a fit between an organization's external environment and its internal situation (Duncan et al. 1998). Environmental factors play a major role in determining an organization's success or failure. Managers should strive to maintain the proper alignment between their organization and its environment. All organizations have both external and internal environments. Organizations and their environments affect each other in several ways. Environmental influences on the organization can occur through uncertainty, competitive forces, and turbulence (Griffin 2012). Organizations, in turn, use information management; strategic response; mergers, acquisitions, and alliances; organization design and flexibility; direct influence; and social responsibility to adapt to their task environments. The external environment includes among other things, the regulations, political and low, technologies, demographic and cultural factors. To ensure compatibility and survival, organizations must be able to comprehend those significant environmental shifts taking place around them and to equip strategically their organizations to succeed in the new environment. Effective strategic management requires an understanding of organizational resources and competencies as well as how each contributes to the formation of organizational strengths and ultimately to the development of a competitive advantage. Political and legal environment is one of the fundamental factors because all companies operate on the basis of legal requirements. At present in Egypt more than one million people have lost work since the start of 2010 and of those without work, 80% are under the age of 30 and two out of every five Egyptians continue to live on less than 2 dollars a day. According Coughlan (2013) there were several drivers of opposition to President Mohamed Morsi at present, but economic problems and woes were the most important. Egypt cannot afford a prolonged crisis, which is why the army is eager to intervene. The army will hope that providing a road map for the country will stabilise the economy and provide security. The outlook is not bright, the IMF (International Monetary Fund) forecasts economic growth of 2% in 2013 year, about the slowest since 1992. The lender says the country could end up with the fastest inflation

and slowest growth among all the Middle Eastern countries with traded foreign debt. The rating of that debt has been pushed further into junk status by the three main ratings companies since the Arab Spring (Mail and Guardian 2013). A central question hanging over Egypt – what is to become of President Morsi. More than few weeks after the military removed President Morsi from power (July 2013), intense efforts to bring the generals and the ex-president's Islamist supporters to an agreement have so far come up empty, deepening Egypt's political crisis. This is political environment in which Universities should exist and find path to develop.

### 3. Adaptation

Adaptation according to Webster dictionary is the “adjustment to environmental conditions as (a) adjustment of a sense of organ to the intensity or quality of stimulation (b) modification of an organism or its parts that makes it more fit for existence under the conditions of its environment”. In economy we can use similar interpretation. The skill of adaptation to the new reality allows companies to survive at the market and go towards the leader position. For organizations seeking to operate in the new reality and to seize opportunities which they can appear on the market the ability to adapt may become a factor of competitive advantage. The ability to adapt in a manner considered appropriate by principal decision makers in the firm informs about their dynamics capability (Borowski 2013). Adaptation to change on the market is the vital force of each organization. Organizations should adapt to the environment to succeed. Scott and Davis (2006) posited that “every organization exists in a specific technological, physical, cultural and social environment to which it must adapt” and some tended to overlook or underestimate the importance of organizations-environmental linkages. In the strategy adaptation the decision are based on culture and value of each country where the organization operate or adapt to environmental requirements and rules functioning at the market (Ogunmokun and Li 1999). It seems that organization which modified their activity to the market or international markets tend to enjoy better performance. Furthermore, although the organizations' products were successfully offered to stakeholders, most of them were substantially modified to suit their markets, so total adaptation towards international markets may be an extreme strategy. According Ogunmokun and Li (1999) the full adaptation strategy is very rare achieved by organization. Sometimes firms adapt and modify some parts of their activity.

In the case of multinational or international organization this is a larger challenge because they must adapt simultaneously to the differences environments requirements and different experiences. To adapt to the challenges of professional life today the Universities need to rediscover their entrepreneurial instincts and use them to forge new sorts of career. Training program's objective is to introduce advanced technical training for undergraduates that would enhance their direct employability and fulfill the market needs.

The globalization of markets and influence of environment has disrupted the existing status quo of the universities, delineated the first mover advantage of leaders and their fixed strategies. Incumbent Universities with decades of heritage and legacy must adapt to the new competition or be faced with a future of gradual decline of students' number. There is a new era of competition on the educational industry. This is a time to dictate the way of life value for customers. New vision is created for customers and shareholders. Competitive strategies are implemented and the use of standardization and adaptation practices in the pursuit of competitive advantage is required. The strategic management according Chakravarthy (1982) is the process through which a manager ensures the long term survival and growth of a firm. His study provided a comprehensive framework for strategic management based on adaptation.

#### 4. Methods

In this study the market research methods were used: (1) primary research, (2) secondary research and (3) observation (Creswell 2009). Author carried out the series of research listed above on site in Egypt. Primary research and observations were realized directly at Egyptian Universities within 2011-2014. To investigate the features of a market through in-depth research that explores the background and context for decision making in the strategy development of Universities, the qualitative research was applied. Qualitative market research means measure of the quality. Qualitative research methods were designed in this study to talk to a relatively few academic staff and students in the target audience of interest (27 interviews). Qualitative market research methods include focus group studies, depth interviews and observational techniques (Belk 2008).<sup>1</sup> In order to explore Universities market in Egypt the depth interviews were conducted and the face to face interview with Professors and students from Cairo (Ain

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1 Belk, R.W. (2008), Handbook of Qualitative Method Research in Marketing, Elgar Publishing.



Shams University, Cairo University, 6 October University, British University in Egypt), Aleksandria (Pharos University) and Aswan (Aswan University) were realized. The interviews were carried out on base of the similar questions: how many foreigners (students, academic staff) are there at the university, how many lectures is taught in foreign languages, do the students have possibility to join to the university council/university senate, what changed after revolution in managing system. Whereas own observations have been subjected to such elements as: physical-real access to the university, time for the response by e-mail (unless there was a response at all), www page in English.

**Table 2. Number of interviews in particular group of respondents**

Type of university	Name of the University	Number of deep interview with Professors	Number of deep interview with students
state	Ain Shams University	0	6
	Cairo University	3	3
private	6 October University	2	0
	British University in Egypt	3 (incl. President of Univ.)	0
	Pharos University	4	3
	Aswan University	2	1
	All Professors/Students	14	13
	<b>Totally</b>	<b>27</b>	

Source: own research

To know the point of view and way of management of University the primary research in the form of mini-depth and long interviews took place (e.g. interview with Professor Mostafa Gouda - the President of British University in Egypt). As a result of those researches it was possible to know the point of view, opinions and deeper knowledge of respondents' outlook. The market observation was also applied to enhance results. The research in the form of observation and direct interviews were carried out at 6 Egyptians universities. The questions were concern adaptation to foreign standards, opening to foreigners from West world, level of internationalization and level of cultural influence on management style.

Secondary research, called desk-research, were also executed. Thanks of this kind of research some data figures concerning to numbers of students, gross

enrolment ratio in Egypt were indicated. These indexes can show the level of scholarization and we can analyze the direction of development of higher education, to find important incentive to make an effort to study at this level and obtain higher qualifications among Egyptian society.

## 5. Results of quality research and observations

Based on the results of interviews and observations it is possible to collect all answers and own experiences with Egyptian Universities and it can be presented in the summarizing-final matrix.

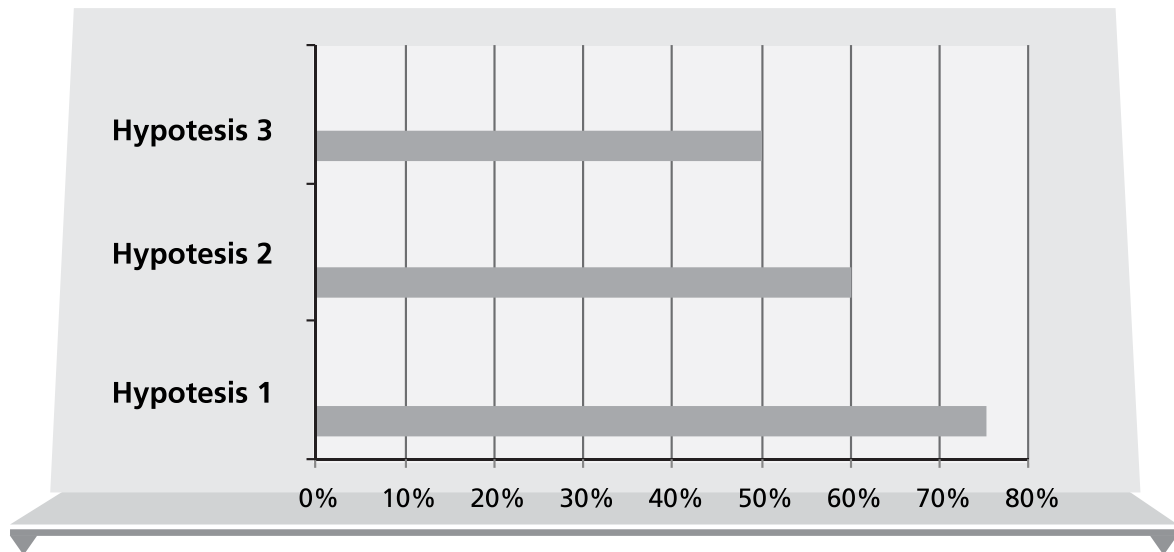
**Table 3. Matrix summerazing the results of research**

	www in English	Foreign academic staff	Foreign students	e-mail contact with university	Physical, real access to university
State Universities	in some of them	Low <sup>minus</sup> level of internationalization	Low level of internationalization	Very difficult	Very difficult, restricted
Private Universities	in all	Low <sup>plus</sup> level of internationalization	Low level of internationalization	Very difficult	Very difficult, restricted

Note: low<sup>plus</sup> – there are some foreign students, number of foreigners is noticeable  
low<sup>minus</sup> – there is no foreign students or number of foreigners is insignificant

Source: own research

The hypotheses were verified successfully but none of them in 100% positive. Hypothesis H1 concerning adaptation to the market had the most positive relation while hypothesis H2 relating to foreign influence and hypothesis H3 associated with level of internationalization after revolution were lower level of positive connotation. Adaptation to the market requirements (e.g. wider students access to university council/senate, multi-cultural style of managing) is noticed and it among others testifies to adaptation. The issue of universities opening for foreign influences is in the mid achieved. Level of internationalization, access foreigners to the university is on the low level. It is easy to notice a kind of fear of foreign visitors. If full positive verification is 100% in this research hypothesis H1 achieved 75%, H2 60% and H3 only 50% what is shown at the picture.



**Figure 1. Hypothesis verification**

Source: own research

Because the results of the research consist of quality study, the hypothesis achieved percent can be subjected of a little error. None of hypothesis achieves 100% because there are many difficulties and problems in full openness of Egyptian Universities for foreigners and internationalization. There is too much cultural legacy and still is observe distance and distrust to external world.

## 6. Conclusion

The results of conducted research show that the universities in Egypt can be divided into 2 main groups: state universities and private universities. The management of those two groups is different.

1. In the state universities we can observe less number of foreign students but total number of students is higher than in private universities. In private universities the ratio of internationalization is higher than in state universities, but objectively still very low.
2. The access to the university, in terms of real (a) and virtual (b) is very difficult:
  - a) There is no free entrance to the campus and university buildings. In order to visit university it is necessary to have invitation from academic staff and in the entrance you should leave your passport which is required by guard.
  - b) Most of state universities have no English website.

3. The program of study at private universities is similar and adequate to American or European universities. Program is adapted to foreign standards.
4. After revolution there is wider level of participation of students in management process. There are representatives of students in the council of university.
5. In Egypt we can observe very high gross enrolment ratio (GER) on BSc level while the ratio at MSc level is lower. Total GER for Egypt is 32,37 while for North Africa and Near East is 27,4 and for Europe is 55,1.

The Egyptian Universities need more time to be open, in real, not only nominally. Programs of study based on American or British standards are not everything in management. Universities should be more flexible and open-minded for foreign experience, culture, know-how, people and management style.

#### Recommendations

Assimilation, imitation and convergence is the way of development in future of Egyptian Universities. Private universities with foreign capital have already captured behaviors and procedures of "West style" and this way is recommended for other universities in Egypt. The strategy of assimilation will be the next step of my academic research.

#### Summary

##### **Strategy of adaptation in the management system at the Egyptian Universities after Arab Spring Uprising - revolution and aftermath**

This paper presents the results of the research concerning of selection of an appropriate strategy for the development strategy of Egyptian universities, in an era of political crisis. In Egypt after the revolution of 2011 and the fall of President Mubarak there was a period of unpredictable political changes, which result are continuous demonstrations and riots in the streets of large cities. In July 2013, there took place a further social unrest that led to the fall of President Morsi and the introduction of control by the army. In such an unstable, turbulent and unpredictable environment the universities seek their proper path of development. One of approach used by Universities is an adaptation strategy, which meets in Egypt, however, with strong cultural and social circumstances.

**Keywords:** *strategic management, adaptation, macro environment.*

## Streszczenie

### **Strategia adaptacji w systemie zarządzania na egipskich uniwersytetach po Arabskiej Wiośnie Ludów - rewolucja i jej następstwa**

Artykuł prezentuje wyniki badań dotyczące doboru odpowiedniej strategii rozwoju przez uniwersytety egipskie, w dobie kryzysu politycznego. W Egipcie, po rewolucji roku 2011 i obaleniu prezydenta Mubaraka, nastąpił okres nieprzewidywalnych zmian politycznych, których efektem są ciągle demonstracje i zamieszki na ulicach dużych miast. W lipcu 2013 roku miały miejsce kolejne niepokoje społeczne, które doprowadziły do upadku prezydentury Morsiego i wprowadzeniu kontroli przez armię. W tak niestabilnym, burzliwym i nieprzewidywalnym otoczeniu uniwersytety poszukują dla siebie właściwej ścieżki rozwoju. Jednym z przyjętych rozwiązań jest stosowana przez Uniwersytety strategia adaptacji, która w Egipcie spotyka się jednakże z silnymi uwarunkowaniami kulturowo-społecznymi.

## Słowa

*kluczowe:* zarządzanie strategiczne, adaptacja, makrootoczenie.

## References

1. Akdere, M., Schmidt, S.W. (2007), *Measuring the Effects of Employee Orientation Training on Employee Perception of Organizational Culture: Implication for Organizational Development*. The Business Review, 8, 234-239.
2. Al-Maghraby, R. (2013), *Change Management Struggles in Post-Revolution Egypt*. PM World Journal, 2(7), 1-4.
3. Belk, R.W. (2008), *Handbook of Qualitative Method Research in Marketing*, Elgar Publishing.
4. Berrio, A. (2003), *An Organizational Culture Assessment Using the Competing Values*, Journal of Extension, 41(2).
5. Boeker, W., Goodstein, W. (1991), *Organizational Performance and adaptation: Effects of Environment and Performance on Changes in Board Composition*. Academy of Management Journal, 34(4), 805-826.
6. Borowski, P. (2012), *Adaptation as a mode of the company development in changeable environment*, International Conference ICEASM2012, Dubai, 153-157.
7. Borowski, P. (2013), *Strategy of adaptation as a mode of development in the contemporary companies on energy sectors examples*, 2<sup>nd</sup> International Conference on Energy Systems and Technologies, ICEST2013, Cairo, 1-8.
8. Chakravarthy B.S. (1982), *Adaptation: a promising metaphor for strategic management*. The Academy of Management Review, 7(1), 35-44.



9. Creswell, J.W. (2009), *Research Design: Qualitative, Quantitative and Mix Methods Approaches*. Sage Publication Inc.
10. Duncan, W.J., Ginter, P.M., Swayne, L.E. (1998). Competitive advantage and internal organizational assessment, *Academy of Management Executive*, 12(3), 6-16.
11. Ebeid, A., Gadelrab, H. (2009), *Identifying dominant organizational culture types in public Egyptian universities and their relationships to a set of developmental indicators*. *Problems and Perspectives in Management*, 7(4), 23-32.
12. Friezen, R., (2013), *Faculty Member Engagement in Canadian University Internationalization. A Consideration of Understanding, Motivations and Rationales*. *Journal of Studies in International Education*, 17(3), 209-227.
13. Griffin, R.W. (2012), *Management*, 11th edition, Texas A&M University.
14. Higher Education in Egypt, OECD 2010.
15. Hoegl, M., Parboteeah, P.K., Muethel, M. (2012), *Cross-National Differences in Managers' Creativity Promoting Values*. *Management International Review*, 52(4), 565-595.
16. Hoffman, R., & Casnocha, B. (2012), *The Start-up of You: Adapt to the Future, Invest in Yourself, and Transform Your Career*, Crown Publishing Group, New York, p. 4.
17. Hsiang-Lin Cheng, Chwo-Ming Joseph Yu, (2013), *Adoption of Practices by Subsidiaries and Institutional Interaction within Internationalised Small- and Medium-Sized Enterprises*. *Management International Review*, 52(1), 81-105.
18. Igwe, D.O. (2012), *The Roles of ICT Development in Open and Distance Education: Achievements, Prospects, and Challenges*, *African Journal of Teacher Education*, 2(2), 1-14.
19. Kaoutar, B., Bouchra, E.A. (2013), *Rethinking Market Orientation of Universities in Morocco an Internal Stakeholders Orientation*. *International Journal of Engineering and Innovative Technologies*, 2(10), 1-6.
20. Kayalar J. (2013), *Marketing Strategy: Standardization vs. Adaptation: Standardization and Adaptation Practices in the Commercial Vehicles Industry*, Lambert Academic Publishing.
21. Ogunmokun, G.O., Li, L.Y. (1999), *Globalization versus adaptation strategy in international marketing*. *AAM Journal*. 4(2), 23-38.
22. Pherali T. (2012), *Academic Mobility, Language, and Cultural Capital. The Experience of Transnational Academics in British Higher Education Institutions*, *Journal of Studies in International Education*. 16(4), 313-333.
23. Regnér, P., Zander, U. (2011), *Knowledge and Strategy Creation in Multinational Companies*. *Management International Review*, 51(6), 821-850.
24. Scott, R. & Davis, G. (2005), *Organization and organizing: rational, natural and open system perspectives*. Pearson Inc.
25. State Information System in Egypt (2014).
26. Tolbert, M., Zucker, L. (1996), *The Institutionalization of Institutional Theory*, Cornell University ILR School, 176-190.