

# The Key Factor for Rapid Change in Cultures & Traditions; and the Emergence of “The Marketing Opportunity Life- Cycle” Theory

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*This paper tackles the rapid change in cultures and traditions. Cultures, norms, traditions, revolutions and protests are terms and notions that are widely discussed in the journal. In fact, it provides a general and sufficient marketing definition of traditions and cultures expressing how both cultures and traditions affect marketing. Hence, the journal brilliantly allows the readers to be fully aware of these concepts and terms. It also describes how the two correlated aspects usually change slowly. By the same token, the paper explores the only factor that changes cultures and traditions rapidly which is protesting and revolutions of societies. Moreover, the study includes explanatory examples for different revolutions that change people's cultures and norms dramatically and rapidly through history. The journal does not only provide recent and contemporary examples for revolutions; but also let the reader plunge into history by giving examples for revolutions that took place in Middle Dark Ages. How marketers can benefit from this rapid cultural change and seize the opportunity to market their products and services is also mentioned in this journal. Finally, the “Marketing Opportunity-lifecycle” theory is revealed to help marketers better understand how to hunt the chance of the rapid cultural change to market the products that are related to the changes that the revolutions opposed. The emergence of “Marketing Opportunity-lifecycle” theory has been done by examining the stages through which the marketing opportunity level goes. Indeed, this journal enriches readers' marketing knowledge as it sheds light on how marketing is applicable in our real life. The purpose of this journal is to encourage both private and governmental marketers to seize the marketing opportunity after cultural changes that can only be achieved by revolting and protesting. Unlike other theories that point to a problem and come with solutions, “Marketing Opportunity-lifecycle” diagnoses a phenomenon and how it is useful. Genuinely, applying the theory of “Marketing Opportunity-lifecycle” will affect positively on marketers and market place. Thereupon, the national income will flourish and increase.*

**Field of Research:** Marketing

## 1. Introduction

The problem the paper is discussing is that after revolutions and protesting, companies pass through a “depression” stage. They're afraid to waste any money on marketing their products; and as a results they decide to save money and downsize the company through cost cuttings and other actions because, from their point of view, this will keep them in a constant stage until they pass the “economical recession” stage of after revolutions.

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Hence, the paper's main objective is to encourage and motivate companies to market their products and services safely at the hard times of after revolutions and protesting; and prove to those companies that this is, in fact, a safe and excellent opportunity that must be exploited rather than discarded!

The history proved many times that marketing products and services that are attached to the changes took place after revolutions came to be successful at all times! Starting from the Dark Middle Ages in Europe, and till the revolutions of the Arab Spring; precisely Tunisia and Egypt.

The paper is organized to show first how, naturally, cultures and traditions of societies take long time to be changed; and then prove, historically and among different ages, that it can be changed rapidly at the presence of certain key factors that cause this rapid change. After that the paper presents the orientations of marketers after the changes and how they can utilize these rapid changes, and market their products and services, for the benefits of their and companies or countries; by understanding the new emerged marketing opportunities, that came on sight, and the life-time of those opportunities.

## 2. Literature Review

Theoretically, the instability of the economic environment of any country after a revolution causes companies to freeze and try to save money as much as it could. One of the saving money ways is to stop marketing its products and services. They believe that people's attitudes and behavior are the same. But yet they don't know that those attitudes and behaviors have changed and they should market their products using those new changes people have adopted. After the revolution against the Catholic Church role in Europe in the dark/middle ages, and precisely at the reformation stage, people became more interested in science and Education.

Additionally, in the Arab Spring 2011, it was proved that people's behavior and attitudes were changed after the revolutions. Egypt and Tunisia were great examples of that; buying cleanings and paintings to repaint and clean their countries proved to be a true fact; marketers were able to successfully market and sell their products accordingly.

Every society has its own culture and traditions. If we attempt to define the concept "culture", a possible definition would be the way of life that includes languages, beliefs, customs, arts, sciences, social activities and norms of any nation. Hence, cultures differ from one nation or society to another. In Marketing, culture represents behaviors and beliefs of a society which lead to the way people observe, consume and interact with the market. "In the business world, 'culture' is one of those terms which are easily overused and often misunderstood. How we do things around here, is a common and simple definition. "The values and beliefs which underpin how we operate," is another, more theoretical way of expressing culture. However you define it, managing and changing culture are difficult issues for many corporate communicators to come to terms with." (Coley-Smith 2006) Usually, marketing divides culture to three categories. National culture is the first category in which culture relates to a country. The second category is sub-culture in which culture is contributed with a distinct section of the community. In sub-cultures, segments or specific groups in the society define the norms, traditions, and customs of the society. When a culture is acquired from an

organization, it would be corporate culture, which is the third category that many marketers divide cultures to. Corporate culture is the shared experiences, stories, beliefs, and traditions that characterize an organization. (Kotler and Keller 2009) Therefore, culture means all what people learn in relation to values, norms, beliefs, customs, religions, rituals and artifacts; according to Marketing specialists. Consequently, a person is not born with a culture; he learns or acquires it.

### 3. The Methodology

In order to test our hypothesis if companies should market their products after revolutions safely and successfully or not; we have contacted five managers of different Egyptian companies to get from them the results of the Marketing Campaign initiated by governmental and private marketers in addition to the media man, Mr. Amr Adeeb, to enhance the Egyptian economy after the revolution of 2011. Our testing schema is to know the sales of these companies, after the revolution, before and after the “Buy Egyptian” marketing campaign in order to prove that it is a safe time marketing related products after revolutions. The 5 managers'/companies sample was picked upon the acceptance of those managers to expose their approximate figures and percentages with us.

#### 3.1 The Slow Changes in Cultures and Traditions of Societies

Norms and beliefs vary between nations according to their cultures and traditions. Since both cultures and traditions are derived from norms, religions, beliefs and values; cultures and traditions are related to each other. An efficient definition of “traditions” would be “A tradition is a ritual, belief or object passed down within a society, still maintained in the present, with origins in the past.” (Green 1997) Indeed, traditions are inherited and transferred from one generation to another and that’s what makes traditions difficult to be changed. Thus, traditions and cultures are two correlated aspects that change slowly. “Changes within cultures are influenced by many factors, from other cultures to movies and mass media. A society, for example, may slowly change its way of living to be more like a popular culture or a different country seen on television or in the movies.” (Brightman 2005) Undeniably, the change in traditions and cultures may take decades if not centuries. For instance, the “Americanization”, which is the implantation of the American culture in the Eastern societies; was mostly delivered through mass media for decades. This process took more than thirty years to achieve its goals and it is still going. At the beginning, the Americans started to introduce their liberal culture. They were very proud of their identity as Americans which grabbed the attention of people all over the world. Then, the next level was promoting for their American culture by songs, brands, movies, programs, cloths and food. Many American restaurants and coffee shops were opened in the Middle East; in addition to dubbing and subtitling American movies. In other words, their cuisine was also exported to the Eastern societies and American figures started to shine in the Eastern world. Many American expressions such as “give me space, go bananas, and cheer up” were borrowed and commonly used by the youngsters who are the most influenced category by the Americanization process in the Eastern societies. Eventually, it becomes normal to find people in the Middle East who speak English language with an American accent and wearing like Americans. Despite of the fact that they are different; the values, customs and beliefs of the United States of America were assimilated with those in the Eastern cultures very slowly.

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Aforesaid, cultures and norms need time to be changed. However, uprisings and revolutions affect societies dramatically, which in return changes their cultures and traditions rapidly. Indeed, cultures and norms that need at least decades, if not centuries, to be changed; may rapidly change because of a revolution or protesting. When people protest and revolt, they do not only change their political status, their norms, culture and traditions get also changed. Manifestly, societies experienced rules and obligations that were imposed on them for a long time until these rules became part of their daily life and then converted to be their available cultures and traditions. Later, those pressured societies birthed protesters, who in return protested against the imposed rules, obligation, and regulations on them; and when their demonstrations and revolutions went victorious, they were so much willing to accept and adopt new values and traditions and form a new culture that represent their beliefs. Here said that demonstrations, protests and uprisings are the only way to alternate the imposed traditions and norms with better ones to develop the society. At that point, the local economy of the country of revolution will be affected either positively or negatively. Therefore, the one and only factor to that changes cultures, norms and traditions rapidly is considered to be the factor of revolutions and protesting of societies.

### **3.2 The Rapid Changes in Cultures and Traditions are solely caused by Revolutions**

#### **3.2.1 The Dark middle Ages in Europe Proof**

The rapid change in cultures and traditions because of revolutions and protests was proven in history more than once. One of the most known examples in history is what happened in the Dark Middle Ages in Europe, when people protested against the rule of church which lasted for 10 centuries!! In Europe, the Roman Catholic Church; which was the main form of Christianity during the Middle Ages from the fifth century to the fifteenth century, was the dominant power that controlled people's life. Politics and economy were determined by the church; as a consequence, traditions and norms were imposed on people in the Dark Ages. The pope, the head of the church, had an ultimate power. In order to have a better future in heaven, people followed the church and the pope as a representative of God on earth. The reason why the church ruled for such a long period is that many people believed that life is short and difficult during the Middle Ages. As a result, the Medieval Church dominated people's life because they are terrified and afraid of hell and the trepidations waiting for them in the afterlife. Poverty, sickness and most importantly ignorance were widely spread during the Dark Middle Ages in Europe due to the absolute power that was given to the Catholic Church. Unfortunately, the Roman Catholic Church misused the power that it had in hands. The greed and absolute power of the Catholic Church, doctrinal disputes and schisms by the Church members and the barbarian invasions and wars in which Europe was involved are the main reasons for the Protestant Reformation movement which took place in the sixteenth century. "Scholars since the Eighteen century have agreed that some sort of major change took place in western European civilization in the period from 1300 to 1600. However, the extent and nature of this change have been widely debated. Some have seen the period as one in which a radically new sense of the world and humanity emerged, whereas others have seen instead the gradual development of ideas that had long been current. Nevertheless, there are elements in Renaissance thought that recur frequently in comparison to earlier centuries." (Thompson 1996)

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Although the Reformation movement started as a religious revolution, its effects expanded to be culturally, socially, economically and politically. People in Europe changed their norms, beliefs and traditions radically. For example, people used to believe that bad things happen only to bad people, so they have to pay money to the Catholic Church to purify themselves. However, after the protests and revolutions, they started to believe that money do not purify them and they would rather get closer to God. One more example is how education became very important and significant to people after years and years of ignorance and illiteracy. “The Reformation, realized in many forms throughout Europe between 1500 – 1700, represents the most fundamental change in societal norms and practices since the fall of the Roman Empire. Just as the social practices of that empire continue to influence our thoughts on social order, so too does the effect of the Reformation remain significant in our perception and use of leisure. The Reformation as a reaction to the Roman Catholic Church’s structure and administration throughout Western Europe shaped both the theological and political landscape of Western thought and praxis.” (DeLisle 2003). Meaning, protestants did not only reform the religious views in Europe, but also reformed the traditions and cultures of Europe especially in Germany, where the powerful religious movement began. Their lifestyles and norms were also changed. They became interested in sciences and education. Westerners became more optimistic and challenging. In other words, they wanted to rebuild Europe and worked hard to achieve their goal. People in Europe turned their dark views of life to bright ones. Indeed, people demolished all the beliefs and traditions that the Medieval Catholic Church kept instilling in Europeans’ minds for a millennium. Hence, a rapid change in cultures and norms needs and requires protesting and revolutions as was proved in history of Europe.

### 3.2.2 The Arab Spring Revolutions Proof

In 2011, an awakening revolutionary movement of demonstrations and protests has occurred in many of the Arab countries such as Tunisia, Egypt, Libya, Yemen, Bahrain and Syria. Those revolutions and uprisings, which have been started in Tunisia, are titled the “Arab Spring”. The term Arab Spring refers to the fact that Arabs are not only developing politically, but also socially, culturally and economically. Racism, unemployment, food price inflation, corruption, lack of freedom of speech and political freedom and dictatorial systems and regimes are the main reasons why Arabs protested and revolted. They started to ask for their simplest rights, such as social equality and fair elections, which were deprived from the Arab nations by the authoritarian regimes and rulers. In fact, Arab societies protested and pretended against injustice and dictatorship which caused a rapid cultural change in traditions and norms in the Arab world. Therefore, revolutions and protests that have undergone lately in the Arab world especially in Egypt and Tunisia rapidly reformed the new cultures, traditions and norms.. Certainly, when the political situation in any country is improving, its society, culture and economy will be affected positively. On the other hand, some negative norms and phenomena, which may outcome of demonstrations and revolutions, appear in cultures and societies too.

“Egyptian Revolution of 25 January 2011, was triggered by many yet mixed reasons and causes which formed and prepared the necessary climate for a successful results by overthrowing the old regime of Mubarak on Friday, 11th of February 2011, after 18 days of unrest started by peaceful demonstration on Tuesday, 25th January and ended as well by peaceful and non-violence protest and going through several

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degrees of violent clashes from the side of Mubarak's Regime against the protesters across most of Egyptian cities, including Cairo, Alexandria, Suez, Ismailia and more; following the Tunisian Revolution that saw the overthrow of the long time Tunisian president." (Wahba 2011). In the 25th of January 2011, Egyptian protesters chose "bread, freedom and social justice" as a slogan to them. This slogan represents what they were protesting for. Egyptians pretended against Mubark's dictatorial regime in order to retrieve their simplest rights. For instance, Egypt, in the last thirty years, lacked social justice and Egyptians were unfairly divided into social classes as per what took place in Europe in the Dark Ages. The middle class, which usually balance any society, was about to vanish due to many reasons such as the taxes and the minimum wages people make that have led to their inability to satisfy their basic needs. Therefore, demonstrations were all over Egypt as if people finally woke up from a nightmare that lasted for thirty years. A great willingness to change was spread all over Egypt and it became a model to societies all over the world. In spite of the several attempts of the authoritarian regime to suppress the uprising and the demonstrations; for example, banning the internet and communication for more than three days, protestors became stronger and insisted to have a better life and future. Hence, they were never satisfied with fake promises of the regime. In other words, they wanted a real change. Consequently, they tried to change their manners, traditions, beliefs and norms to the better after Mubarak's step down. In illustration, the first thing Egyptians did after the revolution was cleaning the streets, while they used to be the ones who distort them in the former regime time! They also started to obey the traffic rules which led to traffic organization that never occurred in Egypt. In fact, Egyptians became more organized that they stand in lines and became obedient to orders after the Revolution of 25th of January. Moreover, many workers in governmental places became more active in work, even if they are not well-paid. Surprisingly, they did not only put more effort in work, they also rejected bribes and reported them, which were commonly accepted in Mubarak's rule! Because of the fact that people believed that change should mainly be in their lifestyle and norms, the entire Egyptian society has been changed in almost no time. Simply put, the culture and traditions in Egypt have been rapidly changed, although no one has ever imagined that they would change due to the great revolution.

### **4. The Findings and Analytical View of the Marketing Opportunity Life-Cycle Theory**

Successful revolutions reveal the willingness of societies to adopt changes rapidly. People, after revolutions, are ready and prepared to change their norms and traditions. Accordingly, that provides a huge marketing chance and a tremendous opportunity to market the services and goods which are related to the new cultural change. Over time, the size of this marketing opportunity decreases; however, marketers must utilize the change in norms and cultures to market products that will be useful to people after adopting the change. In fact, the marketing opportunity passes through five different stages which provide a life-time for it. The first stage is before revolutions when people were experiencing their daily routine and life-time without any change in their culture, traditions or norms. And here, the marketing opportunity size and level are as regular as they are in any time of the year; with considering of course the regular demand times on certain products such as seasonal demands and so on. After uprisings and revolutions, the second stage, in which the marketing opportunity growth level reaches its peak, starts. Indeed, marketers have a

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great opportunity to market and sell products and services that meet the cultural change and satisfy people's new needs. People are excited about the changes in their norms and traditions that they are adopting. Hence, they require and demand services and products that help them in adopting the change and perform it. In the Egyptian example, Egyptians started to clean the streets and polish them after their revolution immediately. It was a huge opportunity for marketers to market and supply pigments, gloves, dyes, brushes, trash cans, dust mobs and other cleaning supplies and tools which people highly demanded. Egyptians also inside their houses and workplaces started to use cleaning equipment and substances, which were usually poorly used before, especially the Egyptian ones and products to improve the local economy. Afterward, the third stage begins when people's motifs become not as strong as they were. The marketing opportunity level, in the third stage, is constant due to the fact that people are not as excited as they were in the very beginning of the revolution. Since the demand became constant, the marketing opportunity became is constant, too. In the fourth stage, the marketing opportunity level is declining and the size of it is decreasing by time. The demand of products and services, that meet the changes in cultures and norms in societies, is not growing, nor constant. People started to demand less the products and service more than before; thus, the size of marketing opportunity of products decreases as their opportunity level declines, until it reaches to the fifth stage. In the fifth stage, the society is back to what it is used to be before the revolution. People have already fully adopted the changes in norms and cultures that those changes became a part of their daily life. Then, the marketing opportunity rebounds to that in the first stage.

### 4.1 The Orientation of Marketers after Revolutions

Doubtlessly, marketers, whether private companies or governments; should seek the chance of cultural changes to market their products and services. In other words, the dramatic changes in cultures and traditions that came as a result from revolutions and protests form a great opportunity for marketers to seize in order to market, supply, and sell their products and services. For instance, if people tend to have a healthy environment in general, indoors in specific, as a change after revolutions; companies that sell smoking cabinets will have an opportunity to market their products. Also, when people decide to keep streets, stations, and general ports clean by not throwing their wastes and trash there and around; specialized companies have an opportunity to market different trash and recycle bins and cans in which people can use to get rid of their wastes. A real example of how marketers, either private or governmental, should hunt the cultural change chance to market their products and services can be found in the Egyptian Revolution. As noted before, Egyptians started to clean up the streets and the general ports of Egypt more often, right after the revolution. Detergents companies seized the opportunity to market their products which were highly demanded then. Another example is the telecommunication companies that utilized people's awareness and their willingness to be updated with the news by offering services that provides local, international, political, economical, sports and cultural news through text and video messages to clients. "The Egyptian economy is going through a critical period as the country transitions to democracy. While the shift from authoritarianism is certainly welcome, it has inevitably incited instability unknown to Egypt for the past thirty years. The implementation of economic reform amid this uncertainty is particularly challenging as political demands take precedence." (Seif 2011) Moreover, as all Egyptians wanted to raise and improve the Egyptian economy, both governmental and private marketers established the national campaign "Buy

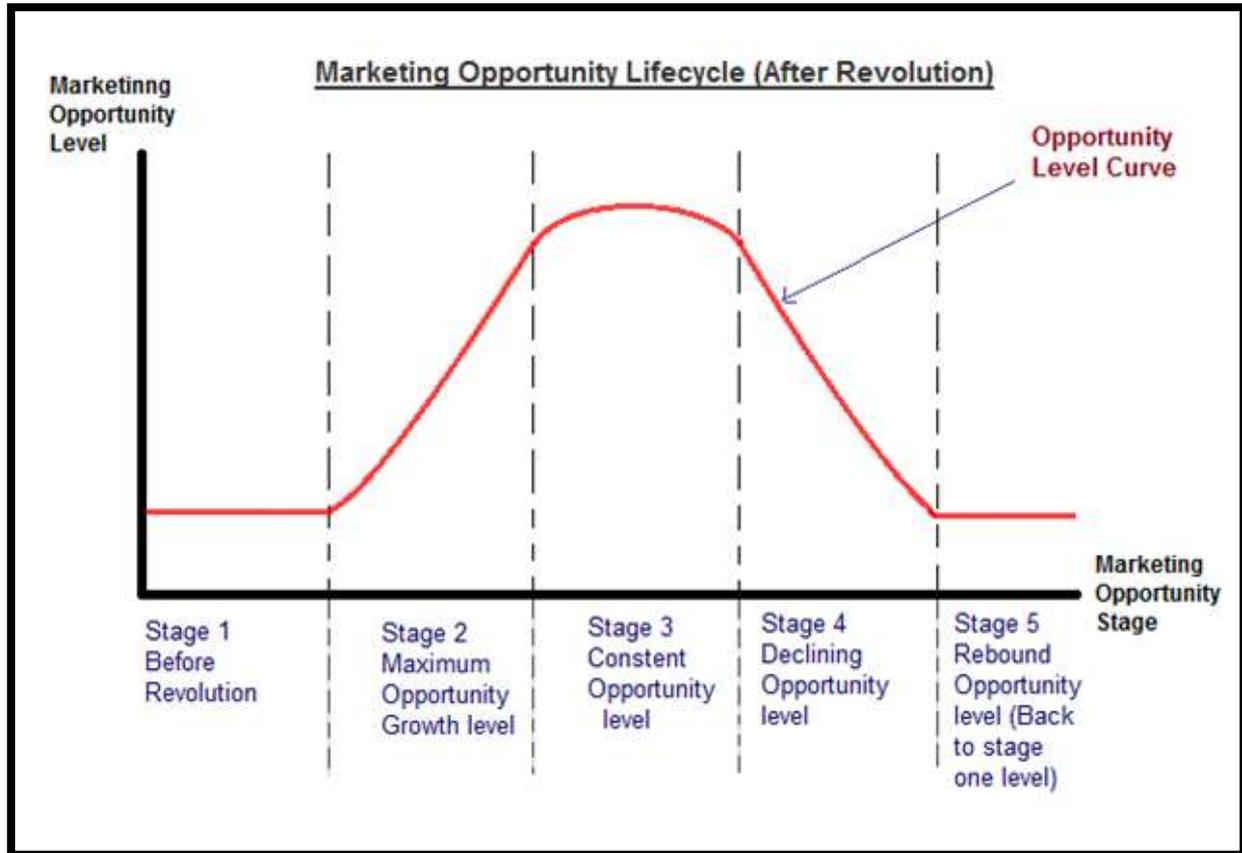
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Egyptian” whose main purpose is encouraging people to buy Egyptian products in order to enhance the Egyptian economy. Indeed, people started to buy; for example, the Egyptian cheese because it was promoted as “100% Egyptian”. “Cottonil” is one of the most famous underwear companies in Egypt that hunted the chance of the “Buy Egyptian” campaign to market its products. Cottonil’s television and radio advertisements used a soundtrack of an Egyptian national song and its slogan was “the cotton speaks Egyptian” and sales went up dramatically after a day from the advertisements. Cottonil uses direct and indirect distribution to sell their products; their sales outlets are scattered all over the country. “Cottonil’s sales volume before the revolution, per shop, use to be L.E. 4000-5000 per day; our sales volume went up radically to be L.E. 20,000, per shop, per day after the revolution!!” said the Sales & Factory Manager of Cottonil, Mr. Mohammad Al Nemr when interviewed on 15 April 2011. This is a 400% increase in sales volume! That’s only because Egyptians adopted the new cultural values that emphasize on supporting the Egyptian economy. Furthermore, marketers made discounts on Egyptian products such as dairy products in order to encourage people, Egyptians and non Egyptians, to buy them and eventually improve the Egyptian economy. As a result, 90 million pounds was the outcome of “Buy Egyptian” campaign which lasted for only a week.

### **5. Conclusion: The Key Factor for a Rapid Change in Cultures and Traditions; the Birth of the Marketing Opportunity Theory**

In conclusion, cultures and traditions of societies change slowly; the key factor for a rapid change in cultures and traditions is revolutions. The existence of rapid change in cultures and traditions is proved when people rapidly accept and adopt the new cultural changes and abandon the old imposed ones that they lived in for decades.

In fact, revolutions create new marketing opportunities; not only for new products and services such as cement, bricks, and steel for rebuilding the country; but also for those that already exist and used such as detergents and cleaning tools that people use to clean up the streets and buildings with after the revolution. More of the same, people are now triggered to maintain clean from the inside as in companies, shops, and houses; and from the outside as in streets, metro stations, and subways. Those are the new facts! And, indeed, those facts create new marketing opportunities for the existing products and the new ones. Hence, marketing opportunities emerge because of the rapid cultural change in societies. These marketing opportunities go through five different stages which form their life-cycle. That makes “The Marketing Opportunity Life-Cycle” theory come into sight as it explains not only what happens in the market, when cultures, traditions and norms of societies change after revolutions; but also how marketers should hunt these marketing opportunities that are created, to market their products and services.



## References

- Boyd, R & Richerson, P 1985, *Culture and the Evolutionary Process*, University of Chicago Press, Chicago.
- Brightman, J 2005, *Asian culture brief: Japan*, Center on Disability Studies, Hawaii, <<http://www.ntac.hawaii.edu/downloads/products/briefs/culture/pdf/ACB-Vol2-Iss6-Japan.pdf>>
- Cavalli-Sforza, L & Feldman, M 1981, *Cultural Transmission and Evolution: A Quantitative Approach*, Princeton University Press, Princeton
- Churchill, G 1999, *Marketing Research – Methodological Foundations*, 7<sup>th</sup> Ed, Fort Worth et al.: The Dryden Press.
- DeLisle, LJ 2002, 'Leisure and reformation theology: An analysis of the impact of the Protestant Reformation on the perception and use of leisure, 1500-1700 AD', Diss., University of Connecticut, Ann Arbor.
- Durham, W 1991, *Coevolution: Genes, Culture, and Human Diversity*, Stanford University Press, Stanford.
- Galal, A, 2011, *Egypt Post January 2011: An Economic Perspective*, PP\_3, Economic Research Forum, Egypt, viewed in 29 December 2011, <[http://www.erf.org.eg/cms.php?id=publication\\_details&publication\\_id=1391](http://www.erf.org.eg/cms.php?id=publication_details&publication_id=1391)>
- Green, T. A 1997, *Folklore, an encyclopedia of beliefs, customs, tales, music, and art*. Abc-clio, USA
- Kotler, P & Keller, K 2009, *Marketing Management*, 13<sup>th</sup> edn, Pearson Education, Upper Saddle River, New Jersey.

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- Kulvinskiene, V 2009, *Factors of organizational cultural change*, EKONOMIKA-2009-87, Akademinė Leidyba, Lithuania, viewed on 30 December 2011, <<http://www.leidykla.vu.lt/fileadmin/Ekonomika/87/27-43.pdf>>.
- North, D & Thomas, R 1973, *The Rise of the Western World: A New Economic History*, Cambridge University Press, Cambridge.
- Ozment, Steven E 1975. *The Reformation in the Cities: The Appeal of Protestantism in Sixteenth Century Germany and Switzerland*, Yale University Press, New Haven.
- Ritts, V 2000. *Culture and Aging*, St. Louis Community College, Missouri, viewed on 02 February 2012 <<http://users.stlcc.edu/vritts/aging.html#top>>.
- Sharp, J 2011, *Egypt in Transition*, RL33003, Congressional Research Service, 02 February 2012, <<http://fpc.state.gov/documents/organization/171381.pdf>>
- Smith, C 2006. *Eight steps to successful culture change*, Melcrum Publishing, Chicago, viewed on 20 Dec. 2011
- Srnka, K 2004. *Culture's role in marketers' ethical decision making: An integrated theoretical framework*, Academy of Marketing Science, Vienna, viewed on 18 December 2011 <<http://www.amsreview.org/articles/srnka01-2004.pdf>>.
- Thompson, B 1996, *Humanists & Reformers: A History of the Renaissance and Reformation*, Wm. B. Eerdmans Publishing Co., Michigan.
- Wahba, K 2011, 'The Egyptian Revolution 2011: The Fall of the Virtue Wall- The Revolution Systems Thinking Archetype', *The 29<sup>th</sup> International Conference of the System Dynamics Society*, Washington DC, July 25-29, 2011, viewed on 20 Dec.2011, <<http://www.systemdynamics.org/conferences/2011/proceed/papers/P1436.pdf>>