PROCEEDINGS

The International and Middle East Conference on Sustainability and Human Development

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Dr Tariq M Khan **(Editor)**

PROCEEDINGS OF FIRST INTERNATIONAL AND MIDDLE EAST CONFERENCE ON SUSTAINABILITY AND HUMAN DEVELOPMENT

Dr Tariq M Khan (Editor)

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PREFACE

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The call for participation solicited submissions from twenty countries. Naturally, with a topic concerning human development, there was considerable interest from researchers working in developing countries, or those whose research focused on the developing regions of the world. Regardless of the origins of papers, there was clearly strong interest in the themes of the conference, and the variety of submission areas demonstrated the wide range of interests among researchers in this field. In addition to the submitted papers, three invited keynote presentations were delivered. Each of the keynotes was chosen because of its concern with the business world, and in particular, with the ways that business can and has supported the sustainability agenda. We begin with these keynotes before focusing on the winner of the Best Paper Award from among the submitted papers.

The first of our keynotes was delivered by Ms Parastoo Ghalamchi of Kanoon in Iran. The paper discusses the extent that businesses in the Middle East can satisfy the requirements of being a Social Business, and it presents Kanoon as a prime example of such a business. Interestingly, Kanoon began as a for-profit business in the education sector within Iran, and after reaching a high level of success, it adopted a model of social business. Today, Kanoon is run as a franchise business whereby it earns commission from its franchisees. However, all of the profits Kanoon earns are directed to social causes, such as building of schools and support for blind students to attend university. It is presented as an example of the transition from for-profit to social business and lessons are presented for other business in the Middle East considering such a transition.

The second of the keynote deliveries was given by Mr Mazdak Rafaty of Ludwar International Consulting FZC, UAE, in which he presented the many ways that international SME business can invest in sustainable business models through foreign direct investment (FDI). The case of the UAE is taken as a vibrant environment in which favourable operating conditions arising from free trade zones are attracting FDI from SMEs, which continue to contribute to the longer term sustainability of SMEs.

The third of the keynotes delivered by Dr Abdulmonem Almarzouqi focused on the transformation of a major shopping mall in the UAE in line with energy conservation/reduction goals. The process involved many small and often imperceptible changes to equipment, facilities or operations, which collectively amounted to significant savings in energy consumption. Many creative solutions were found to achieve the sustainability goals of the mall without impeding the functionality or effectiveness of the mall to serve its customers and employees.

The first of our regular papers by Vassilios Makrakis and Nelly Kostoulas-Makrakis was the recipient of the Best Paper Award, chosen for the paper's high relevance to the conference themes, maturity of research and potential for impact. The paper discusses sustainability in higher education in the Middle East and provides a statistically based comparison with European universities.

A wide range of submitted papers are included here that cover important issues such as architectural design, built environment, human resources, diversity and equality, business processes, complex industrial systems, sustainable cities, financial crisis, strategic planning, social movements, curriculum design, cultural factors, multiculturalism, Islamic principles, and corporate social responsibility. Collectively, this volume provides many different perspectives on the central issue of sustainability and demonstrates the high level of interest within the Middle East for the continued well-being of the region.

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SOCIAL BUSINESS IN MIDDLE EAST: CASE OF KANOON IN IRAN

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ABSTRACT

The purpose of the paper is to show how well "Kanoon" meets the requirements of a social business in Iran, and to evaluate its success with lessons that could be applied to other organizations in the Middle East. Kanoon, founded in 1993, has pioneered the development of publishing educational books and holding weekly mock exams similar to concour, and revolutionized education system to alleviate educational inequality in Iran. This study investigates the practicality and sustainability of the Mohammad Yunus's (2006) Nobel winning idea of social business in Middle East, through studying Kanoon. To achieve this aim, the systematic literature review, semi structure interview with Mr, Kazem Ghalamchi, founder of Kanoon, and 10 of its high managers are applied. It is revealed that Kanoon is a sustainable and successful example of practicing social business, in Middle East. It sheds light on the process of development in developing countries, its possibility in difficult context, if business actors think differently, and believe in their purpose.

KEYWORDS

Social Business, Well-being, Middle East, Education

1. WHY SOCIAL BUSINESS?

Most of the problems in the economic world have been emerging for many years, but now they came to their peak; junctures such as energy crises, food crises, Billion people still in poverty, severe recession in the west (Insight, 2012). In Middle East countries with oil-dependent economy are struggling with the obstacles on their way of development such as: youth un-employment, income in-equality, over stretched public sector, gender discrimination in labour-market, weak public institution, and lack of strong private sector, (Albrecht and Schlumberger, 2004) and so on. The question is the nature of the role of business in the society. The debate about the role of business in the society, has been growing at the eve of 21st century (ibid). Within this situation and because of low standards of living and oppressive regimes, people in Tunisia start protesting in 2010, and following uprising in Arab countries created a new wave of revolutions in Arab countries, called Arab Spring. In September 17, 2011 some groups such as Adbusters and Anonymouse began "Wall Street Occupy Movement" in the United States, inspired by the Arab Spring revolution. These people are protesting against the corporate greed, inequality in financial wellbeing and opportunity for most of the population (Skinner, 2011).

1.1 Social Business as a Solution

Some like the Nobel peace prize recipient in 2006, Prof. Mohammad Yunus, (2011) argues against this belief, that the main purpose of business must be profit maximization for fulfilling the values of small number of shareholders. He believes that this situation is not tenable, and our problems in society are the result of our mere focus on the individuals' greedy characteristics and neglecting their philanthropic characteristics, as social beings. Professor Muhammad Yunus - Social Business, (2011) established a new concept of business model: "social business", as a result of his entrepreneurial characteristic, inspired by the poverty he saw in a village, near his university in Bangladesh (Professor Muhammad Yunus - Social Business, 2011) He established Grameen Bank, as a social enterprise. Prof. Yunus has been working with

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Grameen Bank, that helps to improve the lives of tons of people, and most of them (97%) are women borrowers in his native home, Bangladesh (ibid).

1.2 What is Social Business?

Purpose of business is the main factor distinguishing two extreme types of corporate bodies. Figure1 shows that companies can either create share-holder values by profit-maximizing, or fulfill social objectives(Yunus, 2011). If the purpose of the business is the later, it is scocila enterprise, but its design and the way it operates are like a 'regular' business. Thus, a social business either produc product or provide servies, it has customers, markets, expenses and even revenues. The main characteristics of a social enterprise are that it is a no-loss, No-dividend Company. A social enterprise is self-sustaining, because it sells goods or services and repays investments to its owners(Yunus et al., 2010).
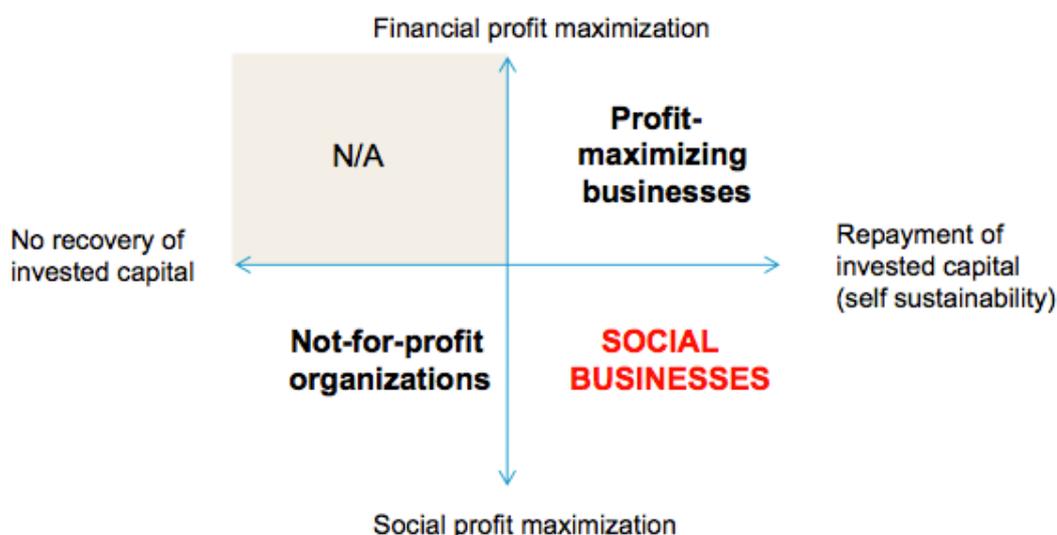
Figure 1: Social business vs. Profit maximizing business and not-for-profit organisations. Taken from "Building social business: The new kind of capitalism that serves humanity's most pressing needs" by Yunus (2011).

1.2 Social Business vs NGOs

Social business differs from NGOs. Non-for-profit organizations are not sustainable, because they are designed as resource consumer, and they are not able to recover their total costs. NGOs must devote their resources to raise money, and after spending that money for social purposes, the previous circle continues. NGOs are not sustainable and they always rely on their investors, while a social enterprise only relies on its investors at the start point of the establishment project(Yunus et al., 2010). "In recent years, non-for-profit organizations (NGOs) have been depicted as saviors of failed economies in some circle while reviled as stooges of Western imperialism in other cases in Middle East"(Carapico, 2000). NGOs are primarily a liberal approach of addressing the needs of the poor by providing a "safety net". Developmentalists view NGOs as incapable agents of liberalization, and the orientalist stereotype of Arab society. In Middle East, NGOs are classified as private voluntary organizations, PVOs; small-scale popular organizations (POs); community-based organizations (CBOs); and international NGOs (INGOs)" (Carapico, 2000). NGOs' might be a development buzzword, but they are no magic bullet. Impact of NGOs on social movements is found negative in a number of studies. In support of this argument the researchers highlighted the case of depoliticisation of the Palestinian women's movement by NGOisation, and filling the generated vacuum with the militancy of the Islamic Movement (Hamas). Thus, the relation between NGOs and social mobilisation is questioned. Overall, it is noted that spread of NGOs should not be taken for granted as a positive process of democratising, representing 'civil society' (Jad, 2007). Hence, the purpose of NGOs integrated with the

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structure of 'regular' businesses can be a profitable, sustainable, no-dividend, and no-loss business structure, named *social business*. Social enterprise not only has the advantages of NGOs and regular business, but also lacks their disadvantages.

2. METHODOLOGY

This paper aims at studying social business in Middle East. To do so, a case of private educational institution *Kanoon* in Iran will be studied. We follow the deductive methodology, by assuming that Kanoon is a case of social enterprise in Middle East, and testing Yunus's social business model by studying the case of Kanoon in Iran. This study applies the methods of: (1) systematic literature review; (2) semi-structured interview with the founder of Kanoon, Mr, Kazem Ghalamchi; (3) Semi-structured Interview with ten higher managers of Kanoon, those who worked in Kanoon between 10-16 years; (4) and analyzing the secondary data generated in Kanoon's annual reports. To achieve our aim, first, it is investigated whether Kanoon is a social enterprise or not, through analyzing the demographics, education sector in Iran, and kanoon's business model. Secondly, Kanoon's similarities with (Yunus et al., 2010) social enterprise will be studies to see whether Kanoon is a sustainable social enterprise. To conclude, should the answer is positive, then the lessons that could be applied to other organizations in the Middle East will be depicted.

3. RESULTS

3.1 Social Problem initiating Kanoon: Knowledge Inequality

Iran is the 16th most densely populated country in the world, the second largest OPEC oil producer. Iran's particular demographic situation results in the difficulties youth encounter in entering university, employment and marriage (Salehi-Isfahani, 2009). Iran is experiencing one of the biggest youth bulges in the world, due to its demographic shifts after rising fertility in time of Islamic revolution (1979) and a sharp decline after 1985 (Abbasi et al., 2002). To have a sense of demographic situation in Iran, 25 years after Islamic revolution, the share of Iranian youth (15-29) in 2006 was 35.4%, but in Egypt and Turkey, two similar size population in Middle East countries, the youth ratios were 29% and 27%, respectively (Salehi-Isfahani, 2008). Figure2 shows one of the side effects of youth bulge, which is an abundant job applicant pool and high unemployment in Iran (Egel and Salehi-Isfahani, 2010). Ironically, educated youth are more severely affected by unemployment (Salehi-Isfahani, 2009), because Iranian have an obsession with engineering and medical university degree, after two demolishing events of Islamic revolution (1979) and Iran-Iraq war (1980-1988).
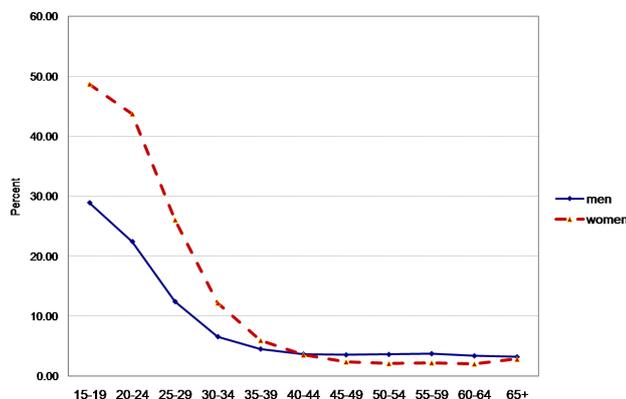

Figure2: Unemployment by age, 2006. Taken from "Youth transitions to employment and marriage in Iran: Evidence from the school to work transition survey" by Egel, and Salehi-Isfahani, in 2010, published in Middle East Dev. Page: 93.

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3.2 Concour and Knowledge inequality in Iran:

In Iran, higher education HE and research activities can be traced back to the third century to Gondishapour University. In the mid-19th century, Under the Safavid dynasty, Amir-Kabir, the Prime Minister founded Dar al-Fonoun ("polytechnic") (Rahimnia, 2006). After about one century, the University of Tehran was established, and other universities were established based on its organizational structure. HE institutions spread across Iran, and the number of state universities has grown from 22 in 1978 to 98 in 2000 (ibid). In Iran, Education system emphasis on testing and on university degree, compared with other countries in Middle East (Salehi-Isfahani, 2009). The infamous university entrance examination (the concour), which is administrated by government, determines whether or not a young person can enter university (ibid). Entering university turned to a national competition for Iranian youngsters, at the edge of their adult life. Maily, because the number of state universities were less than the number of student applicants, created by youth bulge, during the earlier 30years. Establishment and development of private universities, around Iran solved the problem of supply and demand in educational sector. However, the competition for entering state universities has been continued. State universities in large cities of Iran are fully funded by government and academically higher ranked, but private universities require students to pay to study in an academically lower ranked university. Consequently, the graduates of public university have a more prosperous employment future, than other graduates.

3.3 Kanoon born as a private educational organization:

All together, youth bulge, obsession with degree, imbalanced supply and demand in educational sector, lack of resources for large number of youngsters created a large market for personal tutors and supplementary educational books, to help students pass "concour", and win the educational competition and future employment market. In this situation, Mr, Kazem Ghalamchi, founded Kanoon in 1993, with 121 students. He was a personnel tutor from 1989 ("kanoon.ir.rar," n.d.). He says:

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In 1983 I taught Math to Tisafern Mir-Fakhraaiyan, who was my first student,
and achieved the second grade in Concour, among one million students competing
in this exam. I taught him and consulted him with his learning program. He was
among the first students, who applied my "Planning Notebook", in the recognized
way, that today the students are using as Ghalamchi "Planning Notbook". After
eight years, the public trust on our services had been increased, and in 1995,
40% of the first level students in Concour were members of Kanoon. After 16
years, in 2003, 70% of Iranian top students are Kanoon's members, who are
seeing the result of their trust on Kanoon. This statistics shows that hard-
working and talented students have more trust on Kanoon, in comparison with
other students. During past few years, 50% of third level students in Concour,
60% of second level and 70% of first level students in Concour, were Kanoon's
members, attending Kanoon's mock exams, and using our educational books, and
learning guidlines. It means that the more the students achieve knowledge, the
more they trust Kanoon.
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3.4 Kanoon a private institution turned into a social enterprise:

In 2013, Kanoon has 300 branches in 310 cities of Iran, 14500 permanent employees, and 450,000 students attending its novel weekly mock exams, similar to Concour. In 2005, the profit of Knaoon is devoted to eliminate knowledge inequality in Iran. Kanoon was founded as a private institution in 1993, and in 2005 it turned into a social enterprise. Since then, 24 schools are built from its ravenous. During these nine years about 270,000 talented but deprived students, are funded by Kanoon's profit, to use its books, and attend its exams. 30% of these students get monthly financial help (figures are available in Kanoon's annual report). Mr, Kazem Ghalamchi the founder of Kanoon noted that:

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I was not aware of Muhammad Yunuse's "social business" concept, when I devoted
Kanoon's profit for eliminating knowledge inequality in Iran. My means to
achieve this result was initially similar to establishing and developing a
private organization, in role of an entrepreneur. Our main concern in
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developing Kanoon was and still is providing high quality services, and being
innovative in the process of establishing every new project. For example, the
role of "personalized tutor" that we call it "Poshtiban" is first developed in
Kanoon, and it links us with each student. This role helps Kanoon to keep the
pulse of each student, and apply his or her feedback. I devoted Kanoon's
profit, because when I was publishing educational books, and planning
innovative ideas for students, many of them were not abale to use these
services, because of financial deprivation. I turned Kanoon into a social
enterprise to keep it sustainable institution. At that time I was not sure,
whether this structure can survive. I was not even sure whether I would remain
motivated to lead Kanoon, but as you see the result after 9 years, Kanoon is
still developing and this social enterprise business model has been worked.
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One of the high managers of Kanoon in Mashhad Mr. Saadati is asked about the Kanoon's sustainability. He worked at managerial level for 16 years, and has been involved in Kanoon's establishment since the beginning.

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Concour created a market for private educational sector, and its domino effect
was inequality in having access to expensive services, around Iran, in small
and under-developed cities. For example, the services of Kanoon were not
affordable for students with poor family background, and those students who
achieved first ranked result in Concour, were mainly from large and developed
cities of Iran, such as Tehran, Mashhad, Tabriz, Shiraz and Esfhan. These
privileged students could enter state universities, which were fully funded by
government, and provided them with high ranked academic equipment.  Further,
their university degree helped them to win better jobs in future job market.
The business model of Kanoon, requires all of the Iranian students attend its
mock exams, to simulate the similar situation for students, exactly like
Concour. Thus, we tried to expand Kanoon in other cities. Further, the
educational public sector put many obstacles on ourt way to establish these
branches, and develop Kanoon. In 2005, by devoting Kanoon's profit back to the
society, the government support Kanoon, to survive in educational competition.
However, all of the employees and managers of Kanoon, are achieving reasonable
income, which is still their main motive to work for Kanoon. The structure of
Kanoon is like a private institution, and its survival depends on its survival
in the competition, and should provide high quality services and produces,
otherwise, its charitable causes will be ruined.
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4. IS KANOON A CASE OF SOCIAL ENTERPRISE IN IRAN?

This study assumes that Kanoon is a successful example of a private organization, turned to a sustainable social enterprise in Middle East and Iran. The initiating reasons for this preposition is because in 2005 its purpose changed from merely profit maximizing company of its shareholders, to solving the problem of knowledge inequality. Profit of Kanoon is devoted for alleviating knowledge inequality in Iran, through building school in under-developed regions of Iran, and financially funding around 3,000 talent but poor Iranian students. Secondly, Kanoon is still a profit-making institution, and its employees are not charity workers, but professional workers who achieve reasonable income. The founder of Kanoon is a successful entrepreneur, whose new ideas in education revolutionized private educational sector from 1993 in Iran. In 2005 he devoted Kanoon's whole ravenous to solve the problem of knowledge inequality in Iran. Thus Kanoon is organized as a regular enterprise, but its aim is solving a social problem. Some argue that in Iran, the economy is depended on government budget to solve the country's problems on the way of development (Salehi-Isfahani, 2008), but examples like Kanoon shows a different trend. In Middle Eastern countries, the process of development is possible within the existing environment and resources, with a different perspective towards the obsolete theories and models of business and social structures. Kanoo founded by Mr, Kazem Ghalamchi, and Grameen Bank founded by Muhammad Yunus are just two example of this different, positive, and empowering perspective towards the society and business structure.

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SMALL AND MEDIUM SIZED ENTERPRISES AS SUSTAINABLE FOREIGN DIRECT INVESTORS

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KEYNOTE

The practical and theoretical history of Foreign Direct Investment (FDI) has always been directly linked to the international activities of Multinational Corporations (MNC). European companies such as Virginia Company owned by King James I and East India Company were among the oldest corporation with international trade structures set up by FDI in the beginning of 17th century. Seeking natural recourses, better trade infrastructure, cheap labor and effective entry into new markets, the MNCs were involved in different economic sectors with projects in railways, mining, tramways, water, gas, electricity, banking, insurance, finance, land plantations and agriculture. Although very complex and cost intensive, most of the FDI projects (predominantly in mining and manufacture sector) were extremely profitable for the MNCs. However, the scientific research and literature has always been critical about the benefits of FDI activities of MNCs for the host countries. Many case studies from the second part of 20th century show the negative consequences of MNCs activities from the economical and ecological point of view. Being powerful enough to change the legal and commercial framework in the host country to their advantage, the MNCs have a very controversial image in the FDI research history.

Despite these negative aspects, the majority of the latest economic literature is in favor of FDI and convinced of its positive effects on the overall economic development for the host country. Thus, an extreme competition has formed itself among developing and developed countries to attract FDI. Investment Promotion Agencies (IPA) and trade organizations are formed to communicate the advantages of the host countries to the international FDI community. Trade and investment policies are being liberalized and incentives are being put in place to be attractive and competitive in this battle for foreign investors. A closer look at this measures shows, that they are mainly concentrated on the needs of MNCs. However, the globalization development of the last 3 centuries forces also the Small and Medium Sized Enterprises (SMEs) to internationalize their business and also become members of the FDI community.

In most developed and developing countries, SMEs are the beating heart of the economy. They have the biggest share of employment in the country, are the most innovative and in many cases even market leaders in their economic sector. All these factors make SMEs economically sustainable and perfect candidates for host countries of FDI. In fact, the development in many free trade zones in UAE shows, SMEs are getting increasingly active in the FDI field. However, the needs and interests of SMEs in the host country are different from those of MNCs. This aspect is still not being paid attention to by most of the host countries of FDI in the world.

In my presentation I would like to outline the aspects, which characterize SMEs as sustainable FD Investors and discuss a few simple ideas of attracting them from the host country point of view.

KEYWORDS

Foreign Direct Investment, economic development, SME

SUSTAINABILITY IN HIGHER EDUCATION: A COMPARATIVE STUDY BETWEEN EUROPEAN UNION AND MIDDLE EASTERN UNIVERSITIES

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ABSTRACT

This study presents an international survey that studied university students' attitudes towards learning to live together sustainably. The sample was 3,757 students from 11 universities, 6 were from EU and 5 from Egypt, Lebanon and Jordan. A Cronbach reliability test for the research instrument indicated a measure of 0.87, which implies that the constructed instrument was highly reliable. Summing up, the results of this survey show that the progress towards the goals established in Rio has been slower than it was hoped, despite that almost half of students surveyed had some experience with courses dealing with issues directly and/or indirectly related to sustainability.

KEYWORDS

Sustainability, Middle East, learning to live together sustainably, higher education

1. INTRODUCTION

We are increasingly confronted with complex, interconnected social, economic and environmental problems locally and globally. Humanity is living a crisis of sustainability that includes not only environmental issues such as climate change, ozone depletion, biodiversity loss, but also economic and social issues, such as poverty, social inequalities, violation of human rights, gender inequalities, loss of indigenous knowledge, etc.
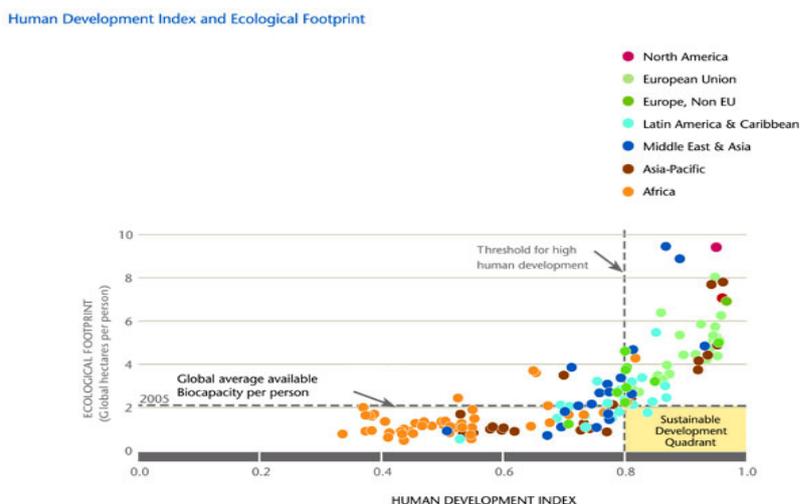

Figure 1: Human development index and ecological footprint worldwide. Source: Alliance for Global Sustainability and the Global Footprint Network. Cited in http://www.europeanbusinessreview.com/?p=1302

As depicted in Figure 1, that sums up at a glance these sustainability challenges, countries to the left of the vertical line are marking a score of 0.8 on the Human Development Index, which implies that people are not sufficiently meeting their basic needs. In countries above the horizontal dotted line and to the right of the vertical line, people are meeting their needs, but in ways that destroy ecosystems.

A large portion of these local/global problems arise from the disparity in wealth and the seemingly oppressive nature of neo-liberal economic systems. As revealed by the UN's Human Development Index, economic development has been highly uneven and unjust across the planet. In general, in the globalisation era an enormous economic wealth has been accumulated almost exclusively in the developed world, while the world's poorest nations have grown even poorer (The Economist, 2012; UNDP, 2000). The increasing gap between rich and poor, between the affluent and non-affluent countries, between the current and futures generations, is widening. It seems that the whole concept of sustainability may not be compatible with capitalist social relations (Huckle, 2008:1993). The neo-liberal economic hegemony, despite its late interest in "green economics", it still prioritizes capital accumulation, at the expense of the ecological recovery, social equity and people's well-being. Despite claims of compatibility between economic globalization and sustainable development (Byrne & Glover, 2002; Panayotou, 2000), economic globalisation driven by hegemonic forces oriented to profit maximization are threatening environmental values and ecological health (Sachs, 2000; Sachs et al. 1998; Castells, 1998; 1996). Summing up, this crisis is largely based on the (Makrakis, 2012):

1. Unsustainable modes of production and consumption
2. Increased proliferation of military expenses and unsustainable use of technology
3. Generation of growing gaps of social, economic and political inequality
4. Globalization of the market economy driven by greediness of capital accumulation.

Education systems, at all levels, and especially Higher Education bear their own responsibility for this crisis, as through the education system all sorts of professionals and leaders who take decisions at all levels in public and private sectors, are products of the education system. There is need to review and critically question as to how much our universities are responsible and committed to an education that acts as a force for personal and social change towards sustainability. There is need for a shift of consciousness that alters: our way of being in the world (learning to be), our way for discovering others by discovering ourselves (learning to live together), our way of learning how to learn as well as appreciating all sorts of knowing (learning to know) and our way of putting knowledge into action (learning to do). It is above all learning to "transform problematic frames of references – sets of fixed assumptions and expectations – to make them more inclusive, open reflective and emotionally able to change" (Mezirow, 2003: 57-58). Reorienting existing education at all levels to address sustainable development is very urgent and necessary, so that all can gain knowledge, skills, perspectives and values conducive to creating a sustainable future and lifestyle. ESD, as a cross-curricula theme, is often marginalised in curricula, which in turn reproduces and perpetuates academic divisions of knowledge that separate the natural and social sciences and the humanities, and fails to acknowledge lay and tacit knowledge (Huckle, 2008). Without major transformative changes in what we learn, the understanding of the interests of knowledge behind learning and the methods applied to learning, education will play an instrumental role in the hands of those who want to manipulate and perpetuate an unsustainable society.

2. A RESPONSE TO THE SUSTAINABILITY CHALLENGES

The UNESCO Chair ICT in ESD along with the RCE Crete through its leading HEI, the University of Crete, has taken the initiative to establish a consortium of 12 universities and three NGOs, with the overarching goal to help partner HEIs to reorient their university curricula to address sustainability through capacity building of university staff, for curriculum revision and implementation. The RUCAS project was funded by the European Commission Tempus Programme for a three-year period (2010-13). More specifically, the project aims to:

1. Support the development of Education for Sustainable Development (ESD) in the Higher Education sector in Egypt, Jordan and Lebanon.
2. Build capacity amongst university staff to embed ESD in curricula and pedagogy.
3. Review and revise undergraduate curricula to address ESD in line with Bologna and Lisbon processes.
4. Assist the coordination and dissemination of ESD policy, research, curriculum reform and practice relating to ESD in the partner institutions that are expected to function as role models in the region.

The focus of this paper is one of the specific aims that was, to develop a framework of ESD competences for university students contextualized to the European Union and Arab region to be used to assess students' competences in the participating Higher Education Institutions (HEIs). The results of the ESD student competence framework are used for guiding the process of curriculum revision and implementation to embed sustainability.

The process of developing the ESD student competence framework started with an expert panel review, with the participation of 37 experts from various disciplines and vocations, to develop the first corpus of generic ESD competences. The first run was followed-up by a second review process through which panellists attempted to reach a consensus-based corpus of generic and disciplinary ESD competences. The third and last review process attempted the final refinement of competences before validation through piloting it in one of the partners' institutions (Makrakis et al., 2012). Through this process, the clusters adopted for the generic competences were based on the Jacques Delors' UNESCO report *'Learning: the treasure within'* (UNESCO, 1996), which recognizes four pillars for education of 21st Century: 1) learning to know, 2) learning to do, 3) learning to live together and 4) learning to be. We also added the fifth cluster of 'learning to transform oneself and society' that has been later introduced by UNESCO as the 5th pillar.

For the piloting of the generic and disciplinary competences, we have chosen one partner Institution, the Notre Dame University in Lebanon. The descriptors of each ESD competence cluster were measured through a six-type Likert scale. *Cronbach a* reliability analysis was performed to assess internal reliability for all the five ESD competence clusters. In each, the *Cronbach's alpha* score for the five clusters of ESD competences ranged from 0.80 to 0.95, while the *Cronbach's alpha* score for the attitudinal scale of learning to live together sustainably was 0.66.

Although this study is an explorative one, a number of hypotheses were formulated supported by previous studies to be explored through a survey that is targeted to final year students in six academic disciplines, namely: educational sciences, social sciences, applied sciences, business/economics sciences, technical sciences and health sciences. One of the hypotheses relevant to the present paper is that "Learning to live together sustainably is expected to be affected by learning to be, learning to do and learning to transform oneself and society.

A structured questionnaire based on the ESD student competence framework was developed, that besides the five clusters of ESD competences, a number of other variables, treated either as independent and/or dependent, were designed to explore students' generic and disciplinary ESD competences. The survey instrument, which was piloted before, was administered in the 11 out of the 12 Universities of the RUCAS consortium. The only University excluded was the Heliopolis University for Sustainable Development due to the fact that during the administration of the survey, there were not students admitted yet in its academic programmes. The study population was all final year students in the courses of the six disciplines that were taught by the university staff involved in the RUCAS project. In total, 3757 replies were collected among the 11 university partners.

3. BACKGROUND STATISTICAL RESULTS

A survey was designed and carried out in 11 universities that participate in the RUCAS (Reorient University Curricula to Address Sustainability) project (Makrakis et al., 2012). Among the 3757 students participated in the RUCAS study, 30% declared that have taken courses directly related to sustainable development, 50% have taken courses including some aspects of sustainable development and 21% have done a course assignment or project that concerns sustainable development. Comparing European and Arab students, the

corresponding results for Arab students are 20%, 48% and 12%, while for European students are 23%, 50% and 19% respectively. When students were asked to rank the key sources of information about sustainable development, Table 1 indicates that the Internet has been ranked first by 37% among EU students and 63% among Arab students and even higher than university courses (20% for EU students and 16% for Arab students). Surprisingly, Radio scored much higher (33%) than university courses (16%) and TV (16%) among Middle Eastern students.

Table 1: Sources of information and knowledge regarding sustainable development issues

Sources of information	Rank 1		Rank 2		Rank 3	
	EU	ME	EU	ME	EU	ME
Internet	37	**63**	21	14	15	9
University courses	20	16	14	15	15	**32**
TV	19	16	18	21	16	26
Newspapers	17	25	21	**23**	17	21
Publications/brochures, etc.	13	26	17	21	14	20
Events (conferences, etc.)	8	14	10	15	11	27
Peers, friends, family, etc.	11	21	16	21	14	22
Special interest groups, etc.	8	25	6	19	13	17
Radio	6	**33**	8	21	13	16

Students' attitudes addressing learning to live together sustainably was assessed through a series of 10 items listed in Table 3 with the percentages of responses. Initially, the Likert-type items running from 'strongly disagree' (=1) through 'are unsure' (=3) to 'strongly agree' (=6) were set. In Table 3, however, we compressed the 6=point scale into 4 measuring scales, from strongly disagree' to 'strongly agree'. The internal consistency through a *Cronbach a* reliability test showed a 0.66 value. Respect for nature, solidarity, equality, empathy and co-responsibility are the key values expressed through these items, which cut across the environmental, economic and social dimensions of sustainable development.

Examining the percentages of respondents reporting attitudes towards learning to live together sustainably reveals statistically significant difference between the European and Middle Eastern students at the $p < 0.001$ probability level (Table 2). More specifically, European students' attitudes are more favourable towards learning to live together sustainably than Middle Eastern students indicated by the percentage of students expressing disagreement with the negative statements that denote less respect to nature, solidarity, co-responsibility and empathy. Among the most contrasted items is the one stated that "The third world or less developed countries should deal with their own problems and not look to the world for help" where 70 per cent of European students disagreed compared to 29 per cent of Middle Eastern students. Another stated that "There is little connection between the protection of the environment and people's quality of life", 66 per cent of European students expressing strong disagreement compared to 43 per cent of Middle Eastern students. Similarly, in the item "Economic growth and increased employment are more important than protecting the environment", 62 per cent of European students express strong disagreement compared to 40 per cent of Middle Eastern students. In another item stated that "The governments' priority should be to improve the quality of life for people in this country rather than other countries", only 11 per cent of European students expressed strong agreement compared to 49 per cent of Middle Eastern students. In a similar vein, but with a more balanced difference, 24 per cent of European students and 20 per cent of Middle

Eastern students strongly disagreed that "Everyone should look after themselves rather than rely on the government for help". Totally, the average mean is a bit more than the average, (3.3 on the original 6-point scale and 2.3 for the compressed 4-point scale)**,** which indicates that despite sustainable development (SD) has been gathering momentum for the last two decades, little progress is now being made to change from unsustainable to sustainable pathways.

Table 2. Students' attitudes towards learning to live together sustainably

Attitudinal Statements	Strongly Disagree		Disagree		Agree		Strongly Agree	
(Mean=3.3 (6-point scale)/ (2.3- 4-point point scale); St. deviation=0.80; alpha= 0.66)	EU	ME	EU	ME	EU	ME	EU	ME
People should be prepared to make sacrifices to improve the quality of life for others	7	22	11	8	**56**	**38**	**26**	**32**
Everyone should look after themselves rather than rely on the government for help	24	20	20	13	41	36	15	31
There is little connection between the protection of the environment and people's quality of life	**66**	**43**	9	10	19	25	6	22
Economic growth and increased employment are more important than protecting the environment	62	40	19	18	15	28	4	14
There is very little someone like me can do to protect the local environment	60	51	17	14	18	24	5	11
What I do in this country has little effect on the quality of life for people in other countries	49	35	19	16	26	32	6	17
What other countries do to improve or destroy the environment is none of our business	87	66	5	8	5	15	3	11
The third world or less developed countries should deal with their own problems and not look to the world for help	**70**	**29**	13	10	13	27	4	34
There is very little someone like me can do to protect the global environment	50	44	19	15	25	25	6	16
The governments' priority should be to improve the quality of life for people in this country rather than other countries	27	15	25	9	**37**	27	**11**	**49**

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The RUCAS survey has also studied Sterling's (2001) four main functions of education: 1) To replicate society and culture and promote citizenship- the socialization function; 2) To train people for future employment- the vocational function.; 3) To help people develop their potential- the liberal function and 4) To encourage change towards a fairer society and better world- the transformative function. The last function is seen by Sterling as central to achieve a more sustainable educational system. Assessing the students' preferences towards these functions shows what values are dominant and what directions are needed to be taken as well as how to better understand the extent to which sustainability issues have become incorporated in the university's function. Examining Table 3 it has been revealed that, in total, there is a clear trend towards the transformative function that sees a university as an agent of change towards a fairer society and better world. More specifically, 42 per cent of students indicated that function compared to 6 per cent that perceived the university's function to replicate society and culture and promote citizenship. When taking into consideration the country of students, perceptions are spread between the liberal and the transformative function. Italian and Irish students indicated a clear preference to the liberal function, in contrast to the Greek (56%) and Jordanian (46%) students who were oriented towards the transformative function. It is interesting to note, that the Egyptian students' preferences are situated between the socialisation (28%) and the transformative (37%) function. A more balanced preference between the liberal and transformative function was revealed among French, Swedish and Lebanese students, while a more balanced preference is revealed between the vocational, liberal and transformative function among Lebanese students.

Table 3. Students' attitudes towards learning to live together sustainably

Perceived functions for HEIs	Total	GR	IT	IR	FR	SW	EG	JOR	LEB
To replicate society and culture and promote citizenship- **the socialization function.**	6 %	1%	1%	0	1%	1%	28%	8%	1%
To train people for future employment- **the vocational function**.	21	17	24	15	14	9	17	22	30
To help people develop their potential- **the liberal function.**	31	26	46	50	42	46	18	24	37
To encourage change towards a fairer society and better world- **the transformative function**.	42	56	29	35	43	44	37	46	32

These findings suggest there is need for curriculum revision across all academic disciplines included in this study by applying transformative learning perspectives. It seems that university curricula are decontextualised and ESD is not prioritised. Higher education is generally organized into highly specialized areas of knowledge and traditional disciplines without giving due emphasis to interdisciplinarity. This problem is tackled by the RUCAS project which has initiated curriculum revision across all the participating institutions through applying the following model (Figure 2).

In designing or revising a course, instructors are usually faced with at least three crucial decisions: 1) what to teach and how to teach it; 2) how to design and implement a course and 3) how to ensure that students are learning what is being expected. We have worked out a model of seven interactive and cyclical processes to respond to these three critical questions. The RUCAS model provided the guiding instrument in the revision, implementation and evaluation process.

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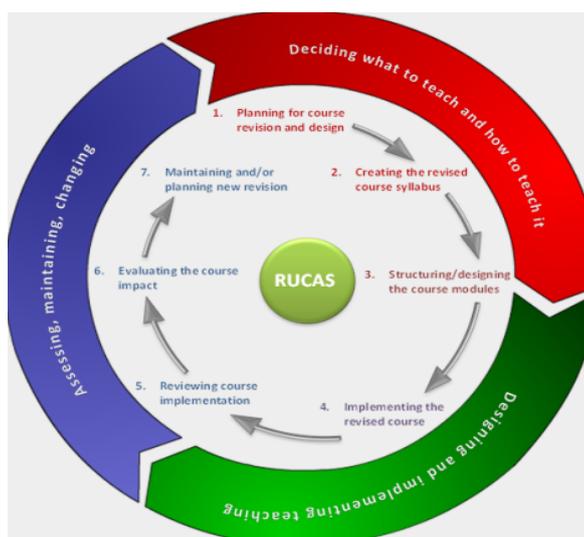
Figure 2: The RUCAS model

4. CONCLUDING REMARKS

This study presents an international survey that examined university students' attitudes towards learning to live together sustainably. Examining the percentages of respondents reporting attitudes towards learning to live together sustainably reveals statistically significant difference between the European and Middle Eastern students at the $p < 0.001$ probability level. More specifically, European students' attitudes are more favourable towards learning to live together sustainably than Middle Eastern students indicated by the percentage of students expressing disagreement with the negative statements that denote less respect to nature, solidarity, co-responsibility and empathy. This study revealed that Higher Education Systems in the Arab Region are facing a number of common challenges that are negatively influencing their capacity to achieve the desired ESD goals and objectives. Among these challenges are the following: - the failure to provide the necessary resources for education development plans and, more particularly, human resources necessary for the implementation of these plans; - The irrelevance of methods used for the preparation, production and provision of appropriate educational materials. These challenges call that university curricula and teaching methods should be innovated and improved upon in order to infuse ESD and sensitize students and other stakeholders towards sustainable development.

Reorienting existing higher education curricula to address sustainability is very urgent and necessary to equip graduates with knowledge, skills, perspectives and values of sustainability so as to assume responsibility for creating a sustainable future and lifestyle. The RUCAS research results show that significant changes are needed in the curriculum of every discipline and the pedagogy used to implement that curriculum as well as the role of educators and education. The methodological approach adopted by the RUCAS project reveals a number of processes through which we can infuse sustainability into our courses and curricula or study programmes. Within the first two years of the RUCAS initiative, we have transferred expertise from European universities through the organization of three regional workshops in Beirut, Cairo and Amman, where more than 150 university staff coming from six disciplines have been trained on revising course curricula to embed sustainability. Up to now, more than 200 courses have been revised, implemented and contextualized according to their local priorities. An Online Community of Practice (OCoP) developed is being used as a resource, repository and forum (http://community.cc.uoc.gr/).

A pilot initiative for student placement and practicum has been carried out, through which more than 3000 students have been involved in producing collaborative projects dealing with local sustainability projects. Replication and up-scaling are fundamental objectives of the RUCAS project as it provides the opportunity to build on best practices and lessons learned and expand the reach and impact not only within partner institutions, but within partner countries and regions. The issue of up-scaling is inherent in the project

itself as the RUCAS project provides a viable avenue for "whole institution" curriculum reform, research and teaching across all HEIs in the Arab region. The Virtual Training Centers established in each Arab partner university (N=6) are expected to be used as resources for reorienting university curricula to address sustainability. The revised student courses and the institutional ESD framework policies and practices that are being developed are also expected to be the drivers of change within and among institutions in the partner countries and regions.

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ARAB SPRING AS A NEW SOCIAL MOVEMENT AND THE EFFECT OF SOCIAL MEDIA

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ABSTRACT

The year 2011 witnessed events which are rarely coincided in the Middle East and a relatively brand new middle east started to be formed. There are lots of situations emerged to be discussed with these particular events. Most people and academicians called these events arab spring. In this study there are some questions to be answered in the context of new social movements. Are these events experienced in the Middle East longing for representative democracy? Are these events result of being center of attraction for particular countries? Can the reasons be natural resources and the place of lots of civilizations in the past? Or is this a natural consequence? The civilizations who produced and managed the knowledge dominated the authority during the history. However everything related to power and knowledge is out of control with developing, liberal and individualized social media nowadays. The media are beyond of being communication tools now the yare platform for socialization for individuals. In the particular events mentioned above social media is believed to be a very important determinant. Briefly social media is no longer intevening to social and political movements in today's world. Arab Spring is one of the fresh and brand new social movement and an example for this situation. The events which provided action in a proactive way affected whole middle east with the help of social media. In this study the effect of social media was observed on Arab Spring in the context of new social movements. While doing this, the 8 features (one of them is the integral of other 7) of new social movement will be focused on.

KEYWORDS

Economic, Social, Political, Policy

1. INTRODUCTION

The year 2011 witnessed events which are rarely coincided in the Middle East and a relatively brand new middle east started to be formed. There are lots of situations emerged to be discussed with these particular events. Most people and academicians called these events arab spring. The civilizations who produced and managed the knowledge dominated the authority during the history. However everything related to power and knowledge is out of control with developing, liberal and individualized social media nowadays. The media are beyond of being communication tools now the yare platform for socialization for individuals. In the particular events mentioned above social media is believed to be a very important determinant. Briefly social media is no longer intevening to social and political movements in today's world. Arab Spring is one of the fresh and brand new social movement and an example for this situation.

The events which provided action in a proactive way affected whole middle east with the help of social media. In this study the effect of social media was observed on Arab Spring in the context of new social movements. While doing this observation, the 8 features (one of them is the integral of other 7) of new social movement will be focused on. In this study there are some questions to be answered in the context of new social movements also. Are these events experienced in the Middle East longing for representative democracy? Are these events result of being center of attraction for particular countries? Can the reasons be natural resources and the place of lots of civilizations in the past? Or is this a natural consequence?

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2. THE EFFECT OF SOCIAL MEDIA AND FEATURES OF NEW SOCIAL MOVEMENTS

"In a recent elaborative and comprehensive research about the usage of internet, Caroline Haythornthwaite and Barry Wellman present a general overview regarding the social impact (Haythornthwaite and Wellman, 1998):

> "Even before the emergence of the internet, there is a transition from socially controlling communities to individualized and fragmented communities. Many friends and relatives, with whom we have close social relationships, are not physically close. These bonds generally cross countries or the oceans. Post, telephone, cars, air planes, and today electronic mail and the internet keep these bonds going. Many people do not live lives that are limited to a single community. Instead, they move in a specialized fractional society and are attached to each limitedly. Their lives' are "globalized" by bringing ongoing relations in the house, neighborhoods, and work places together through long distance bonds."

These observations show how much new means of communication are adopted in new social movements. The most effective way to explain the meaning of new social movements is to reveal the features exactly distinguishing them from the old social movements. In addition, it is also possible to mention different paradigms (set of values) suggested for new social movements.

It is of vital importance to splendidly analyze change and transformation in social movements that were previously referred between the lines. The reason is that globalization and globalization of civil society are very important in new social movements. "The dominant movements during the first period of modernity focused on economic benefits, and were generally organized centrically by the members, whom were composed from a single social class, so as to get the political power." Labor movement, which was associated with the idea of revolution and almost shaped in the shade of a political party or political movement, is one of the best examples of such movements. Workers in that movement are figures, rather than actors, trying to fulfill a historical obligation (Touraine, 1992). These types of movements are called, "old social movements", in the meaning of being belonged to the old (industrial) society type. Like the old ones, "new social movements as well are not independent from the society, from which they emerge (Çayır, 1999)".

For C. Tilly, there are some distinctive characteristics of social movements (Tilly, 2008): First of all, continuous campaigns for collective demands; second, demonstrations, walks, public statements, and establishment of goal oriented association, networks and coordination. Third one is the inclusion of the exhibit of activists, voters and/or mass Worthiness, Unity, Numbers and Commitment (WUNC, in which all are united). In a field filled with exaggerations, a related and unusually painstaking and balanced study by Lance Bennett argues that digital means of communication are changed through various important international ways (Bennett, 2008):

"Regarding communication networks, which are of vital importance in terms of providing communication and coordination between the activists, by forming denser communication networks compared to previous social movements

- By creating a wider space for introducing problems within the discourse of movement, and weakening the way activists unify themselves with the movement as a whole.
- By reducing the effect of ideology on personal relationships established through social movements.
- By de-emphasizing the relative importance of national and international organizations, which form the basis of movement activism and are strong, continuous and resourceful.
- By increasing strategic advantages of resource-poor organizations within social movements
- By constantly initiating campaigns (for example, anti globalization campaigns or campaigns to protect the environment) through quickly changing current targets.
- By combining previous in-person activities and virtual activities (Tilly, 2008)."

Considering all these, it is hard to conceptualize new social movements as past's ideological movements or rationally organized pressure groups (Johnstone, Larana and Gusfield, 1999). According to the joint study by Hank Johnston, Enrique Larana, and Joseph R. Gusfield, the features of new social movements can be listed as follows:

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- These movements do not have an open relationship with the social roles of participants. Regarding the social base, new social movements tend to exceed the class structure.

- Second, ideological framework of new social movements is contrary to the Marxist ideology, which is an integrating and homogenizing element for labor movements and collective movement.

- Third, new social movements reflect the process of the emergence of an identity dimension, which is either new or weak in previous periods.

- Fourth, the relationship between individual and collective became blurred. Most of the modern movements express themselves through individual movements, rather than group movements. Hippie movement is the most striking example.

- Fifth, new social movements reflect personal aspects of the human being. All movements like rights of gay and movements focusing on abortion; health movements like alternative medicine and anti smoking movements; New Age and movements of self-transformation; and women movements, aim to change sexual and physical behavior.

- Sixth, new social movements use radical tactics different from labor movements. New social movements, which oppose to dominant behavior norms based on strategies influenced by Gandhi, Thoreau, and Kropotkin through dramatic positioning, use new mobilization models characterized by anti-violence and civil disorder.

- Seventh, the organization and reproduction of new social movements are related to reliability crisis of participation channels in Western democracies. This is the case in terms of traditional mass parties.

- Having these in mind, new social movements tend to "exist as they are" (Johstone, et.al., 1999).

The above mentioned differences of new social movements are enough to distinguish them from previous social movements. Also it is very important to state that the third feature is integral feature among all eight features.

3. CONCLUSION

In the world of 21st century it is seen that transcendent state is disappeared from people's mind; and, the understanding of nation-state has weakened. The destruction of the Berlin Wall and the collapse of Soviet Socialist Russia are strongest examples of this fact. On the other hand, the concept of globalization emerged at international level. In today's world it is seen that the fates of countries and communities are interconnected. Any development emerges in the United States or Europe has repercussions in Africa or remote parts on Asia.

Along with the global world, the awareness of being civil, for which people have fought for centuries, has rapidly accelerated. Civil societies create big changes at global level. These movements, which focus on new topics and have a heterogenic structure in terms of individuality, can be called as new social movements. These new social movements, different from previous social movements in terms of content and participation, have already been up for taking the place of strong powers of the past with the help of civil societies. New social movements include all the benefits of science and technology; they rapidly spread the awareness of civil culture and slowly come to the fore within the new world order.

The most important two concepts that today's individual will fight for, should be democracy and civil culture. In this sense, in order to be successful they should act in harmony with the character of the new social movements. Each individual, who knows that his ultimate goal should be to elude from humanity and be a human being, should include the characteristics of civil society to his personality.

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IN SEARCH OF COEXISTECE IN EASTERN SOCIETIES: MULTICULTURALISM OR A NEW MODEL?

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ABSTRACT

The primary issue that today's societies face with is "the realization of living together with differences based on equity and peace". It will easily be seen that this situation has a universal scale when the truth of the ethnic, religious and sectarian heterogeneity of existing territories is considered today. "Multiculturalism" as a model in the subject of living together can be considered having critical discourses and experiences in the scope of finding solution for several problems. However the countries, in which multiculturalsim is applied, have different features according to social, cultural, historical, geographical conditions and backgrounds when they are compared with East societies. Canada, which has a significant progress in the context of living together, is one of the most assertive country and is shown as an important example in this scale. It can be mentioned that Canada has lots of historical and social factors that put forward the multiculturalism; for instance, religion did not take place as a constitutive element in Canada. Canada was formed in the context of multiculturalist nations among nation state models. "State ideology" delayed in formation and particular citizenship prototype did not occur because of having huge numbers of migration. In this condition, it is seen that East society countries, which have different characteristics as basic dynamics, need new models, which will solve the problem of living together. It seems that a new model, which will take the today's states such as Canada and particularly Middle East including experiences of different societies and civilizations into consideration, is needed. In this study, an evaluation for a new model, which will solve the living together issue in East societies, will be done.

KEYWORDS

Multiculturalism, living together, East societies

1. INTRODUCTION

One of the most important problems societies face nowadays is "the realization of a coexistence of diversities in an equal and peaceful atmosphere". When considered that almost all states are heterogeneous in terms of ethnicity, religion and denomination, it can be seen that this reality is a universal matter. As it is the case in many Western societies, Eastern societies, too, face serious problems in living together. "Multiculturalism" is a model of coexistence considered having significant claims and experience in finding solutions. However, if we take the countries applying multiculturalism into consideration, we can see that they are quite different from Eastern societies in social, cultural, historical, geographical etc. terms.

These issues have always been present and reached serious dimensions, and will continue to have even more problems. The aim of this presentation is to understand if "multiculturalism" has a chance of being applied in Eastern societies and if a "new model" is required to make the coexistence of diversities possible in Eastern societies. First of all, when discussing the issue, the way of solutions multiculturalism offers will briefly be discussed. The next step will be handling the Canadian multiculturalism, which has gained prominence. Finally, it will be questioned whether multiculturalism based on the Canadian model can be applied to Eastern societies and whether a new model is required.

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2. MULTICULTURALISM AS A CONCEPT

When evaluated in general, multiculturalism can be divided into two main complex structures. The first is related to the value level, the other to the political response to this complex situation (Bağlı-Özensel; 2005, 35). Therefore, the situation reflected on the value level and the response to it on the political application level present an answer to how the diversities will live together.

If we consider the development of multiculturalism as a concept, we can see that it started with colonialism. The radical change in the original forms of social structures and the rapid development of cultural interaction can also be observed during that period. This can be understood better especially when looked at the enlargement process of Western colonialism. During a colonial period, not only are there an interaction and intercultural relationship between the culture of the colonized society and the colonial society, but also among other cultures due to economic relations set up worldwide as a consequence of colonialism. This economic relations network encouraged people to migrate in order to work in recently founded industries or take part in other commercial activities (Balı; 2001, 189). Nevertheless, despite all these it can be claimed that problems around multiculturalism are caused by dilemmas of nationality.

Societies construct their own identity based on their judgements of value and mode of behaviour and thus adopt them. The constructed and chosen identity first presents itself on the 'diversity' base. 'Diversity', which is based on the choice of identity, has its own unique value system. Multiculturalism, usually discussed in that context, is actually created on a social value level. This situation, evoking a post-modernist discourse (Caws; 1994, 379), asserts an understanding which actually anchors diversities; since the anchoring of diversities will exclude the basic fact that presents its existence and the matter will turn to a metaphysical claim. Hence, over the past century identity debates intensify; and generating policies based on identity were shaped as a result of the new policy and conditions.

In order to understand multiculturalism and see in which context it is being discussed, we need to analyse it in a conceptual framework. Although the term multiculturalism was first used in Switzerland in 1957, it gained its general meaning in Canada in the 1960's. The term spread to and was discussed in other English speaking countries (Sengstock; 2009, 239). Thus, multiculturalism in the modern sense is a concept that has its roots in Northern America. People speaking a different language and living in Canada and the USA, and claiming to live on their own lands demand the recognition of their cultural identities. Multiculturalism appeared as a response to this demand of recognition.

Multiculturalism is the name of a design aiming to make the coexistence of various ethnic and religious groups possible. In a way it reflects the coexistence of religions, languages, ethnicities, histories, ideals and other differences. However, the concept of multiculturalism is a design going beyond nationalism; nationalism aimed to create a unity in gathering these aspects in one axis and homogenise the present togetherness. Today, multiculturalism refers to the variety and necessity of considering diversities as normality (Aydın; 2003, 41). Thus, multiculturalism is a state above or beyond national unity.

The fact that a society is multicultural does not necessarily mean it is different in terms of traditions, customs, values etc. among the members of that society. It means that there is also a difference in the sense of justice, which is consistent with the values they are connected to, adopt, feel themselves bound to and obliged to comply to. In such a society it is not expected that one of the competing justice values is dominant on its own. Should one of the present justice values be dominant, one of the "good" will be imposed on society, and this would be inconsistent with the main principle of multiculturalism.

The attempt to put one of the basic parameters of social structure in a central position is the most threatening issue on multiculturalism. In fact, different cultural values or structures represent multiculturalism. In that sense, multiculturalism may lead to the determination that modern society is not homogenous in cultural terms and to the judgement that it is not a hindrance to a peaceful coexistence of this diversity (Ensaroğlu; 2001, 86).

On the other hand, the concept of multiculturalism encompasses different cultural pluralistic forms, each of which asserting their own challenging position. One of the reasons for cultural pluralism is the fact that many nations coexist in one specific state. Here nation can be defined as a historical community sharing the same land, speaking a common language and sharing a common culture, and having more or less developed institutions. Whereas ethnic groups are immigrants having left their own national communities and entered another society (Kymlica; 1998, 33-51). In any event it should be stated that the search for a background for all these differences and the efforts for their justification is based on the aim to find a common ground.

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That multiculturalism as a political approach should be one of the main characteristics of governments is mainly the issue of liberal theories. Some liberals assert that lacks in legal orders and democracy based on ethnic-cultural conflicts present themselves in the form of ethnic-cultural conflicts. Other liberals claim that the reason for ethnic-cultural conflict is modernity and economic insufficiencies. Others state that national minorities are the result of ignorance, prejudice and stereotypes related to the 'other'. And finally some liberals argue that it was caused by the interference of foreigners in internal affairs related to national minorities, and by agent provocateurs making up lies in order to encourage contented minorities to complain about their position. However, despite the fact that all these Western democracies have not been able to to put forth any proof that democracies, economic wealth and personal tolerance reduces the effects of national minorities. On the contrary, when reached the planned goals, national minorities did not decrease but increase (Kymlicka; 1988, 22). Therefore, multiculturalism should be handled in the context of definition and perception and not as a phenomenon legitimizing the existence of differences.

3. MULTICULTURALISM AS A MODEL

Although multiculturalism as a modern concept is often discussed in Commonwealth countries, Canada is considered one of the best samples in the application of multiculturalism.

One of the main reasons making Canada a sample in the area of multiculturalism is the fact that two different nations (Britain, France) were the founding parties. Therefore, when establishing the state, it was based on a two-nations and one-state policy. The second aspect making Canada a significant model is the approach and policies towards diversities from its foundation on (Özensel;2012, 63). Though this way of approach leads to some discussion caused by differentness, it is widely accepted that major steps have been taken towards solutions.

That Canada has such a reputation is without doubt related to the role of the former prime minister Pierre Trudeau. During the government of the Liberal Party leader Trudeau, prime minister for four periods between 1968-1984, the welfare level was increased and along with it immigrations liberalised, and multiculturalism was encouraged and became official policy. The most remarkable achievement of Trudeau is undoubtedly the Charter of Rights and Freedoms, which set the foundations for multiculturalism in Canada.

Canada has been a country compromising various communities since its foundation; therefore, aspects providing a peaceful coexistence of people of different ethnic, religious and linguistic origins have always been a matter of discussion. In a way, formulae holding together these diversities have always been looked for. We can see that today this issue was systemized with the "multicultural single state" approach. Canada took four principle resolutions in 1971 and this made Canada popular in terms of multiculturalism. Canada a. Allows and supports each group which wants to maintain its identity and differences, b. Supports each group in developing their culture and becoming a part of the Canadian society, c. Shows creativity by keeping society together d. Supports immigrants in the acquiring of languages spoken in Canada (Mahtani, 2004, 2).

Canada tries to apply a policy to include each individual in terms of "equality", "participation" and "appraisal". What is tried too underline here with equality is to provide each individual rights and practice of law, with participation the maintenance of their own culture and with appraisal continuity by appreciating their own language and culture (Wardhaugh, 1983, 202). As a reflection of these policies one may often come across the slogan "Our strength; Diversity, 169 countries, 500 ethnic groups" in many parts of Canada.

It can be said that cultural policies in Canada are quite different from Europe and even America (Isajiw, 1999, 14). In fact, in the related literature, cultural policies of America are referred to as "the melting pot", whereas cultural policies in Canada are called "the salad bowl". What is stressed here is that individuals participating in the American society obtain a different cultural form by entering the melting pot; in Canada, however, it means that each community can maintain its own culture as in the salad (as each vegetable is present in its own colour and taste).

It can be claimed that today Canada made multiculturalism a commodity product. Furthermore, it would not be exaggerated to say the most sold product of Canada is "multiculturalism". Thus, in many parts of the world, becoming a Canadian citizen is encouraged and it is stressed the possibility of becoming a citizen with a deposit of 150-250 dollars in a Canadian Bank. As mentioned before, the aspect placing Canada into the foreground is that it launched multiculturalism as a commodity in the market. While speaking to a senior

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official in the Bureau of Immigration in Toronto, I asked what they were selling that the per capita income increased that much? He smiled and replied that they had been exporting multiculturalism. This is a significant example to show that exporting multiculturalism is a part of official policy in Canada.

Canada has achieved significant steps in the application of multicultural policies and has become a country in which interesting samples of maintaining cultural diversities can be observed. Recently native Americans demanded the right for their traditional whale hunting and although it was normally forbidden, they obtained this right based on respect to cultural diversities. However, this has been heavily criticized by environmentalists and animal rights activists (Aktay, 2003, 73). Courts in some states occasionally refer to related communities especially in the fields of civil law or consider traditional values of the community in deciding on a specific case. It is possible to increase the number of examples. As can be seen today Canada has become a country taking all kinds of traditional applications serious not only in the theoretical but also practical sense.

Multiculturalism in Canada can be analysed in detail considering many historical and social characteristics, and also regarding its unique social-cultural attributes. This paper does not enable me to go into detail due to its limitations in the matter.

This paper aims to find answers to whether a new "Model of Living Together" is necessary for Eastern societies in a comparative analysis based on the Canadian multiculturalism model and prioritising its basic principles.

4. THE PROBLEM OF COEXISTENCE IN EASTERN SOCIETIES AND THE SEARCH OF A NEW MODEL

The term Eastern society is used as a basic criterion of a classic East-West separation. This separation is not only grounded on a geographical borderline and countries such as Israel, which is outside the region, are considered to be a Western society. The main aspect, enforcing this separation, is without doubt the cultural difference. Often religion is referred to as the main criteria in determining the difference. In fact, religion is just one of the aspects of separation. The Chinese civilization, for instance, is an Eastern civilization; its religion, however, differs from other Eastern societies. Throughout history the terms Eastern and Western Civilizations have been concepts best describing the difference between these societies in the general sense. The Eastern civilization is quite different from the Western civilization in its content and the way it presents its arguments. First of all, the Eastern civilization emphasises the human being, whereas the Western civilization based its foundations on matter. In the Eastern civilization, living in harmony with nature has priority; the Western civilizations seek to dominate nature.

We will try to limit our evaluation and analysis of the model for coexistence in Eastern societies on Middle-Eastern and Muslim societies, as a part of Eastern societies. Multiculturalism is above all a model applied in some of the Commonwealth countries. Certainly, it is possible to speak of multiculturalism of countries not part of the Commonwealth, such as the USA (although the US had been a colony of Britain, it is not a member of the Commonwealth); however, it is striking that the concept is usually mentioned along with these countries. The principle characteristic of these countries is that they all used to be British colonies. The termination of the colonial relationship in these countries or the attempts to found a new state, as in Canada, had great impact on the shaping of multiculturalism both in the conceptual sense and the political order. The search for new order of these countries in the post-colonial period revealed the problem of coexistence of diversities and multiculturalism was put forth as a solution to the issue.

Whereas within the Middle-East, there are no member states of the Commonwealth; and the shaping and appearance of the countries went through different political processes. Therefore, the creation and transformation processes of the states were realized in their unique forms.

Commonwealth countries are mainly governed with a federal system. The region, we are speaking of, has states based on "national unity" instead of a federal system. Although from time to time a federal system is proposed as a solution to overcome issues related to different ethnic, cultural and religious matters, the fact that it will harm the unity of the countries leads to criticism towards the concept of multiculturalism. Besides, in countries like Turkey multiculturalism is left out in many discussions due its collocation of a federal system and the anxiety of disrupting national unity; and those speaking of multiculturalism might be characterized as "separatist or segregationist". This is why, it seems necessary to create a new model or

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models which improves the possibilities of coexistence without disrupting the unity in countries of the Middle-East. Especially if taken into consideration the ethnic, religious and denominational conflicts, it seems inevitable to think of such a model.

Canada was able to establish a state enabling a two-nation (British and French) system, which makes it distinctive from other modern nation-states. In fact, the issue of multiculturalism developed parallel to the establishment of this two-nation state. When considered that many problems are experienced in reality, it can be expected that a two-nation state has also its problems. Quebec, the French speaking region in Canada, has always been demanding a separate state. In this context a referendum was held in Quebec in 1995 to decide whether it should secede from Canada and found an independent state. The rate of voters for it was 49,42%, whereas the rate of those against it 50,58% (http://en.wikipedia.org/wiki/quebec). Thus, a state with two-nations continued its existence. Since this is another matter of discussion, it is not necessary to look further into it.

When we look at the states established in the region of the Middle-East, we can observe within the context of nation-states that a significant number of them had been founded on the history, culture, literature of a specific race In other cases, even if they are not nation-states, we witness that the bodies forming the state are usually of a specific group. Certainly, this reality leads to serious problems for the peaceful coexistence of diversities. The Kurdish problem in Turkey is one of the best examples for this. While Turkey as a nation-state was shaping around a "Turkish Identity", other identities were either ignored or believed to be integrated in course of time in the Turkish identity, which was considered the main culture. At certain times even assimilation policies were implemented. Today especially race factors have become the source of conflict and segregation.

Among the founding aspects of Canada religion is not an issue and the state is not shaped around it. Therefore, a shaping of the state according to religion and forming with the parameters of religion was not the case in Canada. Each religion is treated equally. Whereas in all countries of the Middle-East religion played a major role. Almost in all states a "religion" is clearly put forth, with Turkey stating the official religion of the state as Islam and thus ignoring other religions. In addition, while the founders of the Republic of Turkey were trying to construct a secular (laic) social order, paradoxically they made one religion official although they were aiming at excluding religion from life. The shaping of the Middle-East on religious basis goes back to a long historical process. When considered that almost all monotheistic religions appeared in the region and the struggle of dominance of religions, it can be understood what reality religion represents. Due the fact that many locations considered sacred by various religions are in the region, the organization of all religions on the same basis of rights can be considered a priority for the establishment of peace.

Another aspect separating Canada from other countries is that none of the communities constituting the Canadian society is native to the region (although the Indian tribes can be considered the exception, they faced great ethnic cleansing and thus have no social power). Thus no community has the right to consider themselves more Canadian. In many Asian and European countries, on the other hand, diversities are so long-present that it is not possible to prioritise one over the other. Each year an average of 70 thousand immigrants and refugees come to Canada. In Toronto, for instance, there are more than 109 ethnic associations and more that 100 languages spoken (Doucet, 2004, 2). Furthermore, more that a third of the population in Toronto speak a language other that English (Ceris, 2001, 33).

When doing an evaluation in the sense of being a fundamental part in peoples of Middle-Eastern countries, the difference will be obvious. Since great civilizations that had shaped human history had dominated the region and migrations lasted for many centuries, the clear distinction between societies disappeared to a great extent. In addition, it is impossible to consider one culture prior to another. From the point of religions we can see that Islam has deep roots in the region with a history of 15 centuries. Thus, it can be said that it is a realistic approach for the proper analysis of the Middle-Eastern social reality to recognize all societies living in the region as an essential part and accept the necessity of setting up a model comprising all of them.

Furthermore, since Canada has received immigrants since the 1700's and due to the conditions mentioned above, a dominance over the regions was realized comparatively late and a creation of "state ideology" developed slowly; thus, there was no a specific citizen prototype. In this context the only thing the state demands from its citizens is the obedience to laws.

On the other hand, many states in this region have rooted state traditions and ideologies although they officially declare that they did not inherit the legacy of previous states. When looked again at Turkey in the

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context, the impact of the Ottoman state can be seen in almost all institutional operations and political traditions of the Turkish Republic, although it tried to form itself as a new state and a new ideology.

The issue of citizenship can be evaluated as one of the most fundamental aspects of multiculturalism in Canada today. Canada pursuits policies putting "social citizenship" in the foreground without setting any demands on identity definitions other than to be a "Canadian citizen". In fact, the concept supporting multiculturalism is "citizenship consciousness". Maybe it is this social citizenship that determines the magic of multiculturalism. The Canadian Citizenship Form has aspects revealing this consciousness. Hereby, the main values keeping Canadians together are as follows: 1. Belief in equality and justice. 2. Belief in consultation and dialogue. 3. Reconciliation and tolerance. 4. Support of diversity. 5. Compassion and generosity. 6. Passion to natural environment. 7. Freedom, peace and non-violent change (Kymlicka, 1998, 283).

When evaluated carefully, Canadian multiculturalism is a process going hand in hand with social citizenship; that is, citizenship consciousness. In fact, Canadian identity maintains its existence with this aspect. With social citizenship and the possibilities this citizenship provides, individuals of different origins feel proud to be Canadians. Therefore, Canadian multiculturalism has been transformed to an ideal by shaping it with the idea of social citizenship, which can be said to bear great opportunities. In a sense the multiculturalism in Canada is "the topping on the cake". Consequently, the fundamental aspect (cake) creating multiculturalism is the opportunities provided for its citizens with fundamental rights and freedoms. Theoretically, as these opportunities and freedoms are provided, a more tolerant atmosphere will be created. When considered in this context, multiculturalism, in a sense, is nothing else but the phenomenon decorating this cake (fundamental rights, freedom, opportunities) in various ways and making it sweeter and more attractive.

On the other hand almost all states in the Middle-East demand a citizenship based on ethnicity, on which it grounds itself, from its members, and even imposed/ imposes it. Implementing a new citizenship type in the practical sense will remove the disintegration among diversities and at the same time increase the ties to the state in terms of citizenship. It is probable that a new definition or approach to citizenship will give way to the creation of a new "supra-identity" for the diverse aspects within the country. Although "citizenship" is often criticised as an abstract term, it is seen as one of the main issues holding diversities together in countries of the modern world. Thus, in Canada whomever you ask his/her country of origin, he/she will reply without hesitation by saying he/she is from Canada. The fact that all these people of diverse ethnic and linguistic origins, comprising the country, center around the Canadian citizenship, represents how important citizenship as a conceptual reality is.

In the Middle-Eastern region, on the other hand, it can be observed that there is a cohesion and coexistence among the people despite differences in ethnic origin, language, religion etc. Reasons like wars or natural disasters and a long historical togetherness led to a sharing of common fate. Many traditions and customs can be seen in social rituals and resulted in significant resemblances. In this context it can be spoken of a historical unity and cultural togetherness covering many areas.

This being the case, there is the need for new definitions of culture next to present definitions for cultures in the region. It can be spoken of the existence of a cultural composition, influencing each other, one bound to the other but not interfering each other and different from each other. This cultural composition does not resemble the "melting pot", a term to express the American model, or the "salad bowl", explaining the Canadian model. I prefer to name this cultural composition as "twiner-culture" used in Britain to refer to an intertwined composition. I use this definition since it is intertwined but nevertheless it represents a strong aspect with all this intertwinement and still representing their own cultures. Without doubt, the content and various interpretations of the term can be handled in detail. Certainly an analysis and evaluation of this concept (twiner-culture) can be a matter to be dealt in another presentation. I believe that not providing a comprehensive conceptualization regarding the cultures in the Middle-East is the reason for many problems faced today. In fact, an approach that will determine the cultural structure in a proper way in the Middle-East leads me to believe that it is the fundamental aspect to create a basis in search of a new model making a peaceful coexistence of diversities in the region possible.

I believe that the comparison above based on the Canadian multiculturalism, considered the best model of multiculturalism, proves that there is a need for a model other than multiculturalism for the solution of problems in Middle-Eastern societies. This attempt is neither an intellectual concern nor the result of an extravagant effort. This attempt is the result of a necessity.

Another reality is that we have strong experiences in order to create a model appropriate for this region and social realities. It is a well known fact that this is a geography in which no racial, religious, linguistic and cultural base had been favoured over the other. I certainly do no mean that the long history of the reason was unproblematic; but if we consider the situation of the last one or two centuries, I think such an evaluation is quite reasonable. Therefore these lands have strong experiences and traditions in living together. This experience and tradition is our greatest advantage. The creation of a new model or a conceptualization taking into consideration the political and social facts of the modern world and at the same time the parameters of the strong past is a belated attempt in order to maintain social peace, justice and state integrity.

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SUGGESTED EDUCATIONAL OBJECTIVES DOMAIN FOR ARCHITECTURE CURRICULA IN THE LIGHT OF SUSTAINABLE DEVELOPMENT

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ABSTRACT

This study explores a new educational objectives domain added to the Bloom's taxonomy & related to sustainable development for architecture education curricula and the extent to which (ESD) is currently addressed in curriculum components in Egypt. This analysis offers a considerable change in architecture education for the curricula designer. The analysis evokes the relation between the dimensions for sustainable development & their areas in education and the areas of construction related to SD levels. The study produced architecture curricula matrixes (specific objectives related to the new domain), which will be helpful for industrial curricula designer. The study discusses the levels for educational objectives of SD domain and construction areas.

KEYWORDS

Education for Sustainable Development (ESD), Sustainable Development Dimensions & their Areas, Architecture Education, Architecture Education in Egypt

1. ADMINISTRATION POLICIES

What is your image of a good and valuable life? Sustainable Development is the solution. Can we establish an accepted definition of sustainable development?

Sustainable Development contains within it two key concepts: the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. All publication reports about sustainable development lead to the unification of the three dimensions: (1) Ecology (2) Economy (3) Society. Which forced for inter- und intergenerational equity as well as global awareness.

Creative education and research leads to innovation and innovation is a basic requirement for sustainable development. In a broader sense education describes the means through which the habits of a group of people are handed from generation to generation (workshop of the Educamp project on Education for SD, 2012, Graz). Education is a formal process by which society transmits its knowledge, skills, and values from generation to generation. This happens in institutions like schools, universities. (UNESCO) identified four areas of action for education in achieving sustainable development including:

- Improving the quality of basic education;
- Reorienting existing education programmes to address sustainable development;
- Develop public awareness and understanding; and
- Provide training for all sectors of private and civil society.

The education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. As a result ESD is moving centre stage as a key priority in many education systems. (Oliver McGarr, 2009). When we developing a strategy for ESD it must includes areas such as:

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poverty reduction, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, production and consumption patterns, corporate responsibility, environmental protection, natural resource management and biological and landscape diversity. (W.S. The Educamp project on Education for Sustainable Development, 2012, Ireland).

We believe that the preservation of biological diversity, ecosystems, and natural places is critically important to the survival of us all. It should respond to the notion that good health includes not just sound clinical practice but lifestyle and behaviors - strong relationships, nutrition, education, a supportive community and a hopeful outlook on our lives. (Interview with Susan Dix Lyons of Clinica Verde, a Model for Eco-Oriented Community Health Care, 2008). When people understand that their quality of life is reliant upon the health of their natural environment and that they have a direct hand in identifying and creating ways to protect and sustainably use their natural resources, both nature and people are served. (Ecologic Development Fund,2012).

Most of the Egyptian society lives under the poverty extreme line which leading to the abnormal behavior & wrong attitudes, that it affects the environment and its resources also leads to pollution in all its forms and the inability to take the benefits from the waste which affects all society scopes. Especially the industrial high school alumnus, when they are going to the field as construction workers. So they used to pollute the environment, used not to deal with natural resources & used to damage the nature and resources, because their curriculum didn`t give them the opportunity to deal with the sustainable development.

The ESD should; equip people with not only knowledge and skills but how to deal with sustainable development. Which making them more competent and confident and increasing their opportunities for acting for a healthy and productive life in harmony with nature and with concern for social values, gender equity and cultural diversity. (The National Strategy on Education for Sustainable Development,2007, Ireland) The need to integrate Education for Sustainable Development (ESD) into all levels of the education system has taken on a new priority in recent years. All governments are challenged with the task of embedding ESD at the community, so why the curricula designers (programmers) do not take this in consideration at school-wide and subject level. Recommendations to the policymakers that; school system need to develop the curriculum; in the light of sustainable development domain.

2. DISCUSSION

This study aims to embed ESD across the curricula of Industrial high schools (architecture department) through adding for the Bloom`s taxonomy of the educational objectives a new domain, and take it in consideration while designing the curricula. Through it the creative learning and the sustainable development needs can be followed. So we must consider the dimensions of sustainable development & their areas; table number 1 shows the dimensions of sustainable development & their areas. (Education for Sustainable Development Lens: A Policy and Practice Review Tool. UNESCO, Paris, 2010). Also we must take in consideration the approaches for ESD learning ;(Competences gained by students in Education for Sustainable Development) (Michelsen, Rieckmann, 2008) & (UNECE, Steering Committee on ESD, Sixth meeting: Geneva, April 2011).

Table 1 The dimensions of sustainable development & their areas

Dimensions of SD	SOCIETY	ENVIRONMENT	ECONOMY
& their areas	Good governance Social discrimination Inclusion Gender equity Building communities Health HIV & AIDS and Reproductive health Human rights Peace Culture	Biodiversity Climate change Deforestation Desertification Energy Natural resource conservation Fresh water Natural disasters Pollution	Overconsumption Sustainable consumption Poverty and equity Rural development Urbanization Migration

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Competences of learners in ESD

1-Holistic approach;	2- Envisioning change: past, present and future;
• Integrative thinking	• Learning from the past
• Inclusivity	• Inspiring engagement in the present
• Dealing with complexities	• Exploring alternative futures

And also we must identify the pillars of learning for sustainable development; table number 2 shows the pillars of learning for sustainable development. (Delors, UNESCO).

Table 2: Pillars of learning for sustainable development

Pillars of Learning	Develop indicators for monitoring and evaluation that will show if these quality learning outcomes are being achieved
Learning to know	e.g. Curriculum allows for a balance of content and context coverage
Learning to do	e.g. Curriculum includes learner participation in local sustainability practices informed by local and global knowledge e.g. Curriculum includes intra- and intergenerational equity
Learning to live together	e.g. Curriculum includes opportunities for community participation
Learning to be	e.g. Curriculum includes opportunities for learners to review their understandings of sustainability in different contexts.
Learning to transform oneself and society	e.g. Curriculum includes opportunities for developing reflection skills

From previous we can concludes that learning for sustainable development needs skills from the curricula designer. Therefore, education should not be considered for the sustainable development of just a topic or another aspect added to the industrial high school education. And command respect in this regard that curricula makers must take care from goals and objectives .This is because education for sustainable development start with designing through the objectives which appear in the process of extensive teaching and learning which encourage the use of multi-disciplinary approach, comprehensive and promote critical and creative thinking in the educational process.

At Egypt curricula designer take in consideration while designing curriculum three domains to improve; the knowledge, skills & attitude for students, not taking into consideration the domain which let students deal with the sustainable development dimensions & their areas. From this point, the study tried to solve these problems through answering some questions.

2.1 Questions of the study

1- What educational objectives are available at industrial high school, for architectural department books?
2- What suggested general educational objectives at industrial high school, for architectural department books in the light of sustainable development?
3- What levels for educational objectives in the light of sustainable development domain?
4- What levels for architectural educational objectives in the light of sustainable development domain?
5- What suggested specific educational objectives at industrial high school, for architectural department books in the light of sustainable development?

2.2 Tools of the study

1- Content analysis cards.
2- Checklist for all dimensions & areas of sustainable development to ask expertise which are the most related to architecture department at industrial high schools.

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3- Checklist for suggested general objectives of architectural books in the light of sustainable development; related to SD dimensions & areas chosen by expertise.
4- Design for suggested levels of objectives in the light of sustainable development domain.
5- Design for suggested levels of architectural objectives in the light of sustainable development domain.
6- Checklist for suggested specific objectives of architectural books in the light of sustainable development; related to architecture department divisions.

2.3 Importance of the study

1- The study may be helpful for the architectural curricula designer, to take sustainable development domain & their levels into consideration while they are designing the curricula.
2- The study may be helpful for any subject curricula designer.

2.4 Methodology of the study

The study used the descriptive approach.

2.5 Limitation of the study

The study concentrated on the architectural department in which there are 4 divisions;
Construction and finishing - architectural structure - water systems and sanitary works - architectural sculpture.

2.6 Procedures of the study

1- To answer question number one.
   a-   Build a content analysis cards to get out the available objectives in architectural department books.
2- To answer question number two.
   a- Read the previous studies in sustainable development & their relation to the education, the creative learning & any document related to the industrial high school curricula development.
   b- Construct checklist for all dimensions & areas of sustainable development to ask expertise which are the most related to architecture department at industrial high schools.
   c- Create suggested general objectives for the architectural books in the light of sustainable development.
   d- Review the suggested general objectives for the architectural books in the light of sustainable development. Then put it in the final version.
3- To answer question number three.
   a- Construct checklist for the suggested levels of objectives in the light of sustainable development domain.
   b- Review the checklist for the suggested levels of objectives in the light of sustainable development domain.
4- To answer question number four.
   a- Identify the relation between construction areas & levels of objectives in the light of sustainable development domain.
   b- Construct checklist for the suggested levels of architectural objectives in the light of sustainable development domain.
   c- Review the checklist for the suggested levels of architectural objectives in the light of sustainable development domain.
5- To answer question number five.
   a- Construct four maps for the four divisions at architectural department, taking the shape of table it`s header; is the levels of architectural objectives in the light of sustainable development

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domain & the column of comparison; is the final dimensions & areas of sustainable development related to architectural department in the industrial high school (which choose by expertise).

b- Create suggested specific educational objectives for architectural books in the light of sustainable development.

c- Review the suggested specific educational objectives for the architectural books in the light of sustainable development. To put it in the final version.

2. CONCLUSION

The curriculum is the message between the educator and the learner. Therefore curricula designer prefer to evaluate & develop curriculum in the light of the requirements of the individuals and their society, and as we know that the curriculum components as follows: goals - content - teaching strategies - teaching aids – learning activities - assessment.

Curriculum makers care of goals & educational objectives because not only it considered as an element of curriculum components, but it is considered as the foundation of the curriculum & and also each element of the curriculum component effected by and affect the others.

After analyzing the architectural books, it was found that many curricula designer set the goals of the curriculum under multiple studies & researches then finally they reached that the objectives of the curriculum must be characterized by Bloom's Taxonomy of Educational Objectives which classifies objectives into domains: cognitive - psychomotor - attitude and behaviors. Because curricula designer looks for the duty of the educators to the learners that it is not limited to casting only knowledge but must include providing & creating skills and attitudes, which in turn reflected on the educational content, which includes knowledge - variety kinds of skills - different kinds of values. (Look appendix number 1).

The idea of this current study is to add to Bloom's taxonomy & create other educational objectives in new domain; (sustainable development) which lead the industrial high school students to deal with it.

And as we know before that sustainable development aims to reconcile three issues: economic performance-social consequences-environmental affairs: in any balance shape between the activities of individuals and environmental regulations. So the current study established checklist in it all dimensions & areas of sustainable development & review it with architecture expertise to let them choose the areas which are related to the architecture department at industrial high schools. (Look appendix number 2).

ESD is more than a knowledge base related to environment, economy, and society. So the current study created general objectives for architectural books taking in consideration the areas of sustainable development domain related to the architecture department at industrial high schools. That happened after the expertise revised the suggested general objectives. (Look appendix number 3).

And also the idea of this current study is on how the curriculum makers taking into account sustainable development as targets, not concepts. The study suggested levels for educational objectives of sustainable development domain. Look Figure 1; the suggested levels of educational objectives in the light of SD domain.
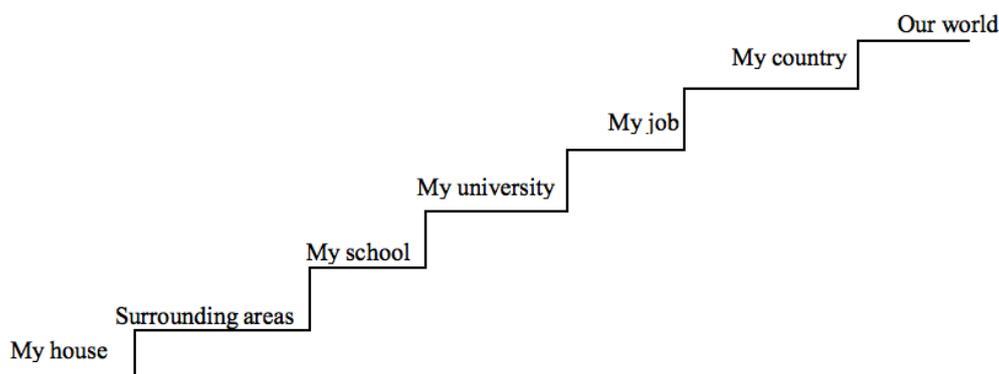
Figure 1: Suggested levels of educational objectives in the light of sustainable development domain

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So upon this new domain & its levels the current study created for the curricula designers of any subject three matrixes, which push them to take in consideration the sustainable development dimensions; Society - Environment - Economic & all their areas involved with levels of educational objectives in the light of SD domain while they are designing the curriculum. Look table number; 3-4-5.

At Egypt the industrial high schools includes 10 departments, for each department there are some specialty divisions. The paper concentrated on the architectural department in which there are 4 divisions; construction and finishing - architectural structure - water systems and sanitary works - architectural sculpture.

And upon the previous three matrixes (tables number 3,4,5) the current study created for the architecture curricula designer an unique matrix taking in consideration; SD dimensions & their areas related to the architecture department at industrial high schools & levels of educational objectives in the light of sustainable development domain ,which the study produced it .It must taken in consideration while they are designing the architecture curriculum. Look table number 6.

Table 3: Society objective matrix

levels / Areas of society	My house	Surrounding areas	My school	My university	My job	My country	Our world
Good governance							
Social discrimination							
Building communities							
Inclusion							
Health							
Gender equity							
HIV & AIDS and reproductive health							
Human rights							
Peace							
Culture							

Table 4: Environment objective matrix

levels / Areas of environment	My house	Surrounding areas	My school	My university	My job	My country	Our world
- Biodiversity							
- Climate change							
- Deforestation							
- Desertification							
- Energy							
- Natural resource conservation							
- Fresh water							
- Natural disasters							
- Pollution							

Table 5: Economic objective matrix

levels / economic	My house	Surrounding areas	My school	My university	My job	My country	Our world
- Overconsumption							
- Sustainable consumption							
- Poverty and equity							
- Rural development							
- Urbanization							
- Migration							

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Educational objectives hold enormous potential to perceive elements of ESD within its syllabi. The priority study of architecture (construction) and sustainable development must be identified as a key aspect of this study. Architecture curricula and sustainable development must enables the student to explore the complex relation between construction and sustainable development and that can be done by introduce the student to the relations between sustainable development dimensions and the construction areas .So the study created levels for architectural educational objectives in the light of S.D. domain.; my building - the surrounding buildings for my building - school buildings - university buildings - job buildings - country buildings - the world buildings, in which all related to ESD.

Due to the previous levels, the study created four maps for the four divisions of architectural department as suggested specific educational objectives for industrial high school, especially architectural department books in the light of sustainable development. (Look appendix number 4).

Table 6: Architecture curricula matrix

construction areas &levels of SD Areas of SD dimensions	My building	Surrounding buildings	School buildings	University buildings	Job buildings	Country buildings	World buildings
Health							
HIV & AIDS and reproductive health							
Human rights							
Culture							
Climate change							
Energy							
Natural resource conservation							
Fresh water							
Natural disasters							
Pollution							
Overconsumption							
Sustainable consumption							

3. RESULTS

Look:

Appendix 1; content analysis for general objectives for each division at the architectural department (National authority for quality assurance & accreditation for schools, academic standards for industrial schools, 2012).

Appendix 2; checklist for all dimensions & areas of sustainable development to ask expertises which are the most related to architecture department at industrial high schools.

Appendix 3; suggested general objectives in the light of sustainable development for each division at the architectural department on its final version.

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Appendix 4; maps of suggested specific objectives in the light of sustainable development for each division at the architectural department.(construction & finishing - architectural structure - water systems and sanitary works - architectural sculpture) on its final version .And it was created in the shape of map to facilitate showing the levels & the relations between specific objectives.

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Appendix

Appendix 1; content analysis for general objectives for each division at the architectural department.

Appendix 2; checklist for all dimensions & areas of sustainable development to ask expertises which are the most related to architecture department at industrial high schools.

Appendix 3; suggested general objectives for each division at the architectural department in its final version.

Appendix 4; maps for suggested specific objectives for each division at the architectural department in its final version.

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SUSTAINABLE ARCHITECTURE THROUGH ISLAMIC PERSPECTIVE: A CASE STUDY IN OLD MOSUL RESIDENCE AREA

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ABSTRACT

Sustainable development may be defined, from an Islamic point of view, as a multi-dimensional process that seeks to strike a balance between economic and social development on one side, and the environment on the other. It seeks for humans to use resources in the best possible way. There are numerous citations from the Qur'an and the hadiths (sayings of the Prophet Mohammad) that mentioned the wise utilization of natural resources. They all lead to the conviction that all elements, species, habitats and ecosystems are part of the perfect universe created by GOD. Hence, respecting the law of nature and all its components is an obligation of every Muslim, who by definition has "submitted" himself, body and soul, to the Creator. Depending on the main Islamic concept in the Qur'an "And remember when He made you successors after the 'Aad and settled you in the land, [and] you take for yourselves palaces from its plains and carve from the mountains, homes. Then remember the favors of Allah and do not commit abuse on the earth, spreading corruption." (Al-'A`rāf, 7:74), this paper tried to discuss the main principles of Islamic roles that deal with nature as a main resource to architecture and built up area and human as a wise and rational consumer for these resources. The paper aims to increase awareness to the importance of the theme of sustainability in architecture by expounding the core of the conceptual basis for the same. It also presents some general principles and ideas around which a comprehensive theory on sustainability in Islamic architecture, in line with the requirements of the Islamic worldview while fully conforming to the dictates of different circumstances, environments and cultures, can be developed today. To deal with such an issue , the paper will try to project the built environment and architecture of the old resident area of Mosul city within the Islamic principles of living to investigate how Islam deals with such an environment and its resources sustainably.

KEYWORDS

Sustainable architecture, Islamic principles of sustainability, Islamic regulations, Built environment

1. ENVIRONMENTAL ETHICS IN ISLAM

The ethical base of Islam, which is derived from the imperatives laid down in the *Qur'an* and expressed in the practice of the Prophet, comes under numerous headings. They can however be distilled into just three categories bearing in mind public good to be the ultimate objective. They are to do what is right, forbid what is wrong and act with moderation at all times: "*Let there be a community among you who call to the good, and enjoin the right and forbid the wrong. They are the ones who have success*" (*Al 'Imrân, 3:104*).

As Abed Al-Rahim (2010: 2-13) refers, the Qur'an uses an environmental theme in exhorting humankind to be moderate, "it is He who produces gardens, both cultivated and wild, and palm trees and crops of diverse kinds and olives and pomegranates both similar and dissimilar. Eat of their fruits when they bear fruit and pay their dues on the day of their harvest, and do not be profligate. He does not love the profligate" (Al An'âm, 6:141).

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The *Qur'an* refers to creation or the natural world as the signs (*ayat*) of Allah, the Creator. *Ayat* means signs, symbols or proofs of the divine. As the *Qur'an i*s proof of Allah so likewise is His creation. Islamic unique perception of man and his position on earth necessitated the formation of a compelling and comprehensive view of the natural environment as well (Nasr, 1993: 130-131). This is so because man totally depends on nature for his survival. Also, nature is a ground for man's realization of his spiritual purpose on earth. Simply put, man is an integral part of the total natural setting. Man is nature himself, sustaining nature means sustaining his self, damaging nature means damaging his self and his prospects of a civilization achievement. Owing to all this, Islam attaches so much importance to the subject of environment clearly expounding man's rights over it and his responsibilities towards it. Islam teaches that environment is part of the universal web of creation. Its role is two-fold: to worship its Creator (in ways suitable to it), and to be subjected to serve the exigencies of man, so that God's vicegerent can smoothly carry out his honorable task of managing earth. (Omer, 2009: 115-116).

1.1 Basic Roles of Sustainability in the Quran

1. The *Qur'an* highlighted some principles and guidelines on sustainability, which include (Matali, 2012: 35-38):
2. Adl (Justice) - governing human relationships and other living creatures;
3. Mizan (Balance) - governing not only human social and economic relationships but also the environment, especially in ensuring the equilibrium of nature, the use of resources and life cycle of all species;
4. Wasat (Middleness) - choosing the middle path in economic planning, social conduct, scientific pursuits, ideological views, material, water and energy consumption;
5. Rahmah (Mercy) - governing all aspects of human relationships and treatment of all living animals, plants and insects including micro-organisms;
6. Amanah (Trustworthiness and custodianship) - Humankind is considered to be a trustee appointed by the Creator, for all earth's assets;
7. Taharah (Spiritual purity and Physical cleanliness) - generating contented individuals through spiritual purity, conscious of the presence of his/her Creator, that would result in a balanced society, living in harmony with the environment; cleanliness that would generate a healthy society devoid of air and water pollution, as well as generating a clean economy devoid of usury and deceitful marketing techniques and business transactions;
8. Haq (Truthfulness and Rights) - Truthfulness in all dealings that recognizes the respective rights of others (humans, animals and plants);
9. Ilm Nafi' (Usefulness of knowledge and science) - Knowledge, whether theological, scientific or technological, must be beneficial to others (individuals and society) including future generations.

1.2 Sustainable Architecture

Environmental sustainability is a concept coined at the Johannesburg Summit on Sustainable Environment (2002) where the concept of Sustainable Development was redefined to mean that all development must stand on three pillars (Figure 1): economic development, social development and environmental protection. If any of the three pillars is overlooked in our development strategies and work plans, such developments cannot be called sustainable development. Environmental sustainability ensures that the harmonization of the three concepts is applied by planners and developers in practice.

Sustainable architecture is a general term that describes environmentally conscious design techniques in the field of architecture. It is framed by the larger discussion of sustainability and the pressing economic and political issues of our world. According to LEED rating systems, sustainable architecture seeks to minimize the negative environmental impact of buildings by enhancing efficiency and moderation in the use of materials, energy, and development space (USGBC, 2005: 4). The idea of sustainability, or ecological design, is to ensure that our actions and decisions today do not inhibit the opportunities of future

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generations. The term can be used to describe an energy and ecologically conscious approach to the design of the built environment.
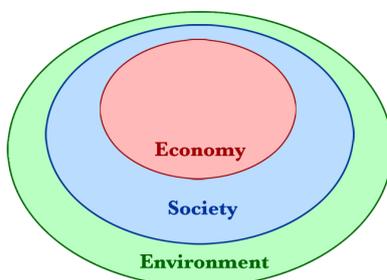

Figure 1: An indication between the three pillars of sustainability (Scott, 2009, p. 36)

On the other hand, architecture, in general, should always be in service to people. It is never to be the other way round, that is to say that architecture should evolve into a hobby or an adventure in the process imposing itself on society while forsaking, or taking lightly, people's identities, cultures and the demands of their daily struggles. Architecture, first and foremost, should remain associated with functionality. It should not deviate from its authentic character and stray into the world of excessive invention and abstraction. (Bianca, 2000: 40)

Central to Islamic architecture is function with all of its dimensions: corporeal, cerebral and spiritual. Form divorced from function is inconsequential (Omer, 2009: 112) . This, however, by no means implies that form plays no role in Islamic architecture. It does play a prominent role, but its relevance is a supportive one supplementing and enhancing function. Form is important, but in terms of value and substance it always comes second to function and its wide scope. There must be the closest relationship between the ideals that support the form of buildings and the ideals that support their function, with which the users of buildings must be at ease. A conflict between the two is bound to lead to a conflict of some far-reaching psychological proportions in buildings users. This way, the roles of form become equivalent to the roles of function.

1.3 The Islamic Built Laws

The built laws or principles as mentioned in *Fiqh* books illustrate the responsibilities of both individuals and authority in Islamic law (Hammad 1997: 54-60). Hakim (1986: 6) defines *Fiqh* of building processes as: "*the mechanism of interpreting and applying the value system of the shari'a (Islamic divine law) within the processes of building and urban development... its primary sources, the Qur'an and the Sunna (or traditions of the Prophet) are crucial for the transfer of the value system to design and urban form.*" Islamic built laws were used to define the rights, responsibilities of people and how to respond to one's needs as outlined above without conflicting other people's interests (Al-Ibrahim 2003: 63-80). In this sense, Akbar (1988: 20) pointed out that Ahmed (2003: 12) suggested that the Islamic built laws (driven from Islamic principles) can be listed as the following:

1.3.1 No-Harm principle:

No-Harm principle means that residents' initiated action, which is considered harmful to others, should be prevented when affected people ask so (Hakim 1983: 32).

1.3.2. Openings and projections:

Akbar (1989: 28-35) stated that any individual could project part of his upper floor, such as Mashrabiyahs or cantilevers, on to a through street as long as no damage is caused to the public. Projecting cantilevers over main roads are permissible because the roads are the remains of `dead' lands that could have been `revived' in the past. He/ she can also open windows and doors on to these roads providing they do not cause harm to their neighbors.

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1.3.3. Right of appropriation of open spaces

As long as this causes no harm, residents should be free to appropriate open spaces in their residential settlements for a wide range of social and economic activities determined and permitted by the residents themselves without outside intervention (Akbar 1989: 29, and Hakim 1986: 9).

1.3.4. Right of easement (servitude) (Irtifak)

Right of easement (servitude) is an exclusive benefit of a property over another adjacent to it, where the two are owned by different owners. This benefit belongs to the first property, even if its owner changes, unless this benefit has been relinquished through a conventional transaction (Akbar 1988: 28).

1.3.5. Right of pre-emption (Shufah)

The right of pre-emption (Shufah) is the right of a neighbor or a partner to substitute himself/ herself for the buyer of an adjacent property or structure when offered for sale by another neighbor or partner (Akbar 1988: 29).

The above principals have defined the user's rights in terms of how to build, alter or extend his/ her property. They also provide a flexible framework to the property user/owner that enables him/ her to change his property without harming his neighbors and violating their rights.

1.4. Sustainable Issues in Islamic Architecture

1.4.1. The Use of Resources

Central to the understanding of Islamic architecture, as both a concept and sensory reality, is the understanding of the Islamic concepts of man and the environment. This is so because it is man who perceives, creates and uses architecture. It is man who produces or destroys architecture. It is man who enjoys or suffers from architecture. Furthermore, architecture and natural environment are inseparable, at both the conceptual and practical planes. The environment holds enormous potential and diversified resources meant only for man, God's vicegerent on earth. They are to be seen as the facilities which facilitate each and every aspect of man's fleeting stay on earth. The environment is further to be seen by man as an "ally" or a "partner", so to speak, in the execution of his earthly mission. After all, in order to create an architecture, man borrows diverse natural ingredients, such as space, water, clay, timber, stone and other minerals, placing the newly created or built elements back into the existing natural contexts. In other words, the built environment is in so many ways the natural environment that has been borrowed, utilized, manipulated and processed. Man himself constitutes a part of the universal natural setting. It goes without saying that some of the most prominent features of Islamic architecture must always be as follows: it is heavily loaded with the Islamic spirituality; it is economic and safe; it is users friendly; it is environment friendly; and, it is sustainable.

1.4.2. Complementary with Context

It is the nature of Islam that provides humanity with basic rules of morality and guidelines of proper conduct in those spheres of life which are not related to prescribed ritual worship, such as the spheres of building, planning and general development, for example. Upon such general principles and guidelines, people can establish systems, regulations, views and attitudes in order to comprehend. and regulate their worldly life in accordance with their time, region and needs. Since every age and geographic location have their own problems and challenges, the solutions and perceptions deduced from the fundamental principles and permanent values of life have got to be, to some extent, different. Their substance, however, due to the uniformity and consistency of the divinely given foundation and sources from which they stem, will always be the same. Islam is based on essential human nature, which is constant and not subject to change according to time and space. In addition, Islam ensured the right of natural resources exploitation (sun, air and water) for all, without abusing the individual rights on others.

1.4.3. Diversity with Unity

Muslim architects tend to, firstly, identify the general Islamic guidelines and principles pertaining to the enterprise of sustainable building, on top of which are those related to the notions of man and the environment in Islam. Next, they must be aware of the implications of the challenges of regions diversity in which they live entail. If something was the norm during a period and in a particular ecological setting, such by no means can be the same in every subsequent period and in different ecological settings. Technological advancements rapidly change; demands of different eras fluctuate, even under the same ecological conditions; climate exigencies must be painstakingly heeded; and, lastly, human psychology also changes with the change of time and space posing a number of exigencies of its own. No architectural plan and design which served as a solution for an age and place can be simply copied to another age and place without properly modulating it to its environmental and socio-cultural requirements. To do that is to betray the dynamic spirit of both the common sense and the perpetual message of Islam. Blind and ignorant imitations, even in sheer religious matters, are categorically rebuked by Islam. By taking hold of the general Islamic guidelines and principles with reference to creating a sustainable architecture, on the one hand, and by studying the needs of different times and situations so that the former can be accurately understood and applied, on the other, Muslim architects in reality perform a degree of *ijtihad*,. In doing so, in no way can a serious, enlightened, accountable and willing person be a loser as far as the execution of matters ordained by God is concerned. He can never be wrong. Verily, this divine assurance should serve to the Muslim architects and designers as a starting point to look carefully and critically at the state of architecture and how buildings in the Muslim world are planned and designed, as well as to start contemplating the prospects of finding much better sustainability solutions which will be inspired by and infused with the values of Islam, and will be responsive to the exigencies of different times and regions.

2. THE RESEARCH OBJECTIVES AND METHODOLOGY

The objectives of the research are to study how far Islamic values and sustainable architecture have been applied to residence area in old Mosul city (MOC) in Iraq country. The research main question is lay under the investigation of how much Islamic architecture and sustainable architecture principles are synchronized. The research objectives are carried out through a pilot study in a selected area on the inner city, data is obtained with survey as a purposive sample, building sketches and photographs.

2.1. The Case Study: Mosul Old City

In the Mosul Old City in Iraq, urban tradition is greatly presented as demonstrated by the traditional alleys, houses doorways, the old Islamic public buildings. For testing the theoretical framework (Islamic roles and principles mentioned above), a part of the historic fabric of (MOC) has been selected, (Figure 2). The case study has been elected due to the variety of its building types and their ages; purposes and types. It includes several houses in Mosul, a number of public buildings like public baths, schools, and some significant religious building (mosques).

2.2 Sustainable Architecture within (MOC)

The form of Mosul urban fabric returns wholly to Arabic, and Islamic in fluencies. It does not generally differ from any other Arabic–Islamic city. It is, however, considered the production of this great cultural tradition.

   The table below (Table 1) indicates manifestation of architectural sustainability, which have been obtained during survey, such appearances dealt with the concept of sustainability spontaneously, due to the (conscious) involvement of designer and architect within Islamic principles and roles.

   The survey also indicates that the use of these concepts were at macro and micro levels of the architecture and the urban design of the built environment, and muslin architect dealt with such environment with various degrees of awareness, to establish safety and humanity, with wise and various use of natural resource.

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Figure 2: Layout of Mosul old city within whole fabric of Mosul (Directorate of Municipality of Mosul city)

Table 1: Indicates some of architectural sustainability appearances corresponding to Islamic principles in old Mosul city.

Example	Sustainable appearance	Sustainable issue	Islamic role & Built law	*Related Qur'anic verses or prophetic* **hadiths**
	The compact grain with organic fabric and space hierarchy	The wise Use of space Resources	Wasat (Middleness) Openings and projections	*"That home of the Hereafter We assign to those who do not desire exaltedness upon the earth or corruption. And the [best] outcome is for the righteous". Al-Qaşaş(28:83)*
	Solidity of external façade and internal opining to sky	The use of available recourses for environmental comfort	Mizan (Balance) and Right of appropriation of open spaces	*" .... , We would have opened upon them blessings from the heaven and the earth; ..." Al-'A`rāf (2:29)*

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Example	**Sustainable appearance**	**Sustainable issue**	**Islamic role & Built law**	***Related Qur'anic verses or prophetic hadiths***
	The efficient use of local space within appropriate function	The wise use of plot Resources	Mizan (Balance) with no wasteful, and No-Harm principle	*"Indeed, the wasteful are brothers of the devils, and ever has Satan been to his Lord ungrateful." Al-'Isrā,(17:27)*
	The use of built tunnels for natural ventilation	The use of available recourses for environmental comfort	Mizan (Balance) with no wasteful, and Right of appropriation of open spaces	*" ...., And Allah has made for you, from that which He has created, shadows and has made for you from the mountains, shelters and has made for you garments which protect you from the heat and garments which protect you from your battle. ... " An-Naĥl (16:81)*
	The efficient use of local materials in construction (stone , gypsum, local marble and wood,) all material are recycled	The wise use of local material Resources	Ilm Nafi' (usefulness) and No-Harm principle	*"It is He who created for you all of that which is on the earth. ...". Al-Baqarah (7:96)*
	The inner well for water, the use of natural ventilation	The optimum use of natural Resources	Ilm Nafi' (usefulness)	*"It is He who sends down rain from the sky; from it is drink and from it is foliage in which you pasture " An-Naĥl (16:10)*
	Respecting the privacy between residence in the neighborhood with right of pre-emption	The use of building shade to protect allay	Rahmah (Mercy) and the right of easement (Irtifak)	*The believers are but brothers, so make settlement between your brothers. And fear Allah that you may receive mercy. Al-Ĥujurāt (49:10)*

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Example	Sustainable appearance	Sustainable issue	Islamic role & Built law	*Related Qur'anic verses or prophetic hadiths*
	The use of old building materials to reconstruct buildings	Recycling materials	Amanah (custodianship) in generations rights in nature and recourses	*"Indeed, we offered the Trust to the heavens and the earth and the mountains, and they declined to bear it and feared it; but man bear it.." Al-'Aḥzāb(33:72)*
	Taking benefit of the space above allay without harm	Pragmatic design to accomplish benefit to man and society	Ilm Nafi' (usefulness) and No-Harm principle	None of you truly believes until he loves for his brother what he loves for himself, said: The prophet
	Diversity with Unity	The use of recourses variety to formulate harmony with context	Ilm Nafi' (usefulness) without incongruity to culture	*"..., and We produce thereby fruits of varying colors? And in the mountains are tracts, white and red of varying shades and extremely black'' Fāṭir (35:27)*
	The right of all individuals to get benefit of natural resources	Sustaining natural resources for all	Rahmah (Mercy) and the right of easement (Irtifak)	Who built a building above his need he will carry his building on his shoulder at the Day of Judgment

3. CONCLUSIONS

The Islamic world has enriched human history with its scientific and artistic achievements, and contributed both within and outside of Islamic borders to the advent of the modern era. The field of Islamic Architecture is a key example of this rich legacy. This can be witnessed in the timeless and unprecedented buildings throughout Islamic civilization, among them.

The unity of Islamic architecture is related of course not only to the unity of cosmos and beyond that realm to the unity of the divine principle itself, but also to the unity of life of the individual and the community which the divine law makes possible. By refusing to distinguish between the sacred and profane, by integrating religion into all facets of life and life itself into the rhythm of rites and patterns of values determined by religion, Islam creates a wholeness, which is reflected in its architecture.

It was clear from the survey held in Mosul city which represents one of the cities established by Muslim architects and designers that there is a great awareness to issues of sustainability with their three pillars. That

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awareness is reflected in both macro and micro levels so that we can find this wise usage of resources in the space and fabric, in the material and construction, in the single building and its inner and constructed elements , and in the whole urban grains,

These sustainable pillars were also reflected sharply in the optimum collaboration between man and his environment, which is one of the most obligation in Islamic faith. It is also clear that by depending on Islamic principles (No- Harm, Mezan, Ilm Nafi'….etc.) architects created built environment with a high responsibility to the natural and local resources, without refuting the richness (saying diversity and variety) of such environment, and by using these local resources they also could save to the environment its health and strength. Given the way Islam looks at development, we can also seek Islamic solutions to global issues which threaten environment, so that we can keep our universe clean and healthy with enough resources to the future generations.

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INTERNET USE BEHAVIOR OF ELDERS IN TURKEY: FINDINGS FROM A SURVEY

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ABSTRACT

Elders are one of the important categories in societies. Understanding and doing researches on elders is very important for social sciences literature. They have lots of free time and the way that they spend their time affects their daily lives. It can be seen that media use (television specifically) takes a major place in spending their free time. In this context, finding out the media viewing habits of the elders will contribute to understanding the daily social lives of the elders and what the media is doing (can do) for the elders. Internet which is the first of the brand new communication media is used common way in daily life. Although the elders' usage of internet rate is low, it is seen that the rate is increasing. In this study, it was tried to determine the place of the internet in the framework of elders' media usage behaviors. Findings show that elders use internet in order to follow news and developments and to gather information and to make research mostly. There are significant differences in internet usage behaviors and aims according to gender.

KEYWORDS

Elders, Internet use, media, gender

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IMPACT OF HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS ON THE QUALITY OF HUMAN RESOURCE ACTIVITIES (CONCENTRATED ON RECRUITMENT AND SELECTION PROCESS)

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ABSTRACT

The recent development of information systems and their impact on human resource activities is one of the main debates in many large organizations these days. On the one hand, most of the managers argue that bringing technology to the HR activities could improve the quality of management. Alternatively, there are big companies which are not applying any specific type of technology in their HR activities. The purpose of this paper is to identify impacts of an HRIS on the quality of the HR activities. The literature review was conducted with the aim of providing proper understanding of Human Resource Information Systems (HRIS) and Human Resource Management (HRM). According to the literature review my expectation was, "HRIS is increasing the quality of the activities in the HR department." All the data for this part were collected through desk- based research and I tried to consider different points of view about the potential and impact of HRIS on HR activities. The concept of the impact of HRIS on HR activities was applied to the case of the Johnson Matthey (JM) Catalysts Company. In conclusion it could be seen that, although the result of the research showed improvement in the quality of the activities in HR department, the quality growth was not as much as was expected. It was assumed that the reason behind this limited impact or no impact on some activities could be because the system was very new and needs some more time to implement potential efficiency gains.

1. INTRODUCTION

The purpose of this study is to examine the impact of the new HRIS in HR department with the specific focus on HR department of Johnson-Matthey Catalyst Company. The reason to choose this company is their recent HRIS update as they only apply new system for one part of the organization placed in (Billingham, UK). The result of the research could be interesting for their organization or any other Company in the same sector. To be able to find how organization faced with the new HRIS several interviews conducted with HR team. The form of the questions in the interviews was provided in a way to approach to the purpose of study which is the identification of the impact of HRIS on the quality of the activities in the HR department. To identify the impact of the system on the HR activities it is important to have enough understanding of human resource management (HRM), information system and technologies and human resource management information system (HRIS).

There are intentions to improve the quality and speed of HR activities which also encourages an organization to implement the new HRIS. Applying any new system in an organization could have its own advantages and disadvantages. This fact also is discussed for this particular topic in JM regarding their new system.

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Different surveys were carried out previously in this area which all mostly approved the use of a dedicated HRIS and predicted that they could have positive impacts on the organization. HRIS was brought to the HR activities with the aim of improving the activities for this specific organization. They started to apply technology in their HR activities sixteen years ago but implementation of the HRIS began only six years ago. However to improve the system they just replaced their old HRIS with a new system, rather than incrementally upgrading and extending their existing systems.

Saving cost, time and improving the quality of HR activities usually motivates organizations to use an HRIS in their HR activities. The aim of this study was to identify the key impacts of the HRIS on different aspects of HR activities. This research investigated the positive and negative impacts of the HRIS on the human resource activities in three different stages: transaction and operational stage, Management stage, and Strategic stage. The study was firstly used desk-based method to collect secondary data among the academic books and articles and secondly conduct interviews to collect the primary data to examine the notions within a real case (JM). Overall the rest of the paper is included review of the literature and are followed by the data analysis; and details of methodology. Finally there are conclusions, recommendations and a summary of the discussion at the end.

2. LITERATURE REVIEW

To have a good understanding of the impact of the HRIS on the HR activities it is necessary to have an acceptable understanding of Information Technology (IT), Management Information System (MIS), and Human Resource Management.

Due to fast change in technology, IT can play an important role in success or failure of a business. Hence I would like to analyse the impact of IT as far as HRM is considered, particularly in relation to management of the information requirements for effective HR, as JM is the example of the large company they have to apply HRIS in the second stage. Their recent improvement on their HRIS looks like a forward movement from stage one to stage two.

The important thing about HRIS is how strong it is to collect data about people, jobs and organization and sort them in a way to be helpful for the workflow in the organization (HR Managers Guide Book, 1995).The idea that all the IT used in HR is part of HRIS might be very common among the people but it is not correct (HR Managers Guide Book, 1995). For example the technology which is used by the payroll system is part of the IT in the HR department but is not part of the HRIS. HRIS is only about the activities for managing the personnel and operations concerning staffing other than pay and reward.

Although the system sounds like a tool which makes data processing faster and makes a lot of shortcuts in the procedures, it may also have a downside. The system could be very complicated and difficult to understand for the user (HR Managers Guide Book, 1995). In addition, managing the changes required for managerial staff to use the systems effectively can reduce efficiency, and be disruptive for a considerable time after implementation.

The integration of MIS into HRM and networked sharing and communication of HR-related information is known as a Human Resources Information System (HRIS), which considers the implementation of technology in the different stages of decision-making and administration required for payroll management, recruiting, training, and performance analysis. HRMIS (human resource MIS) maintains all the personnel issues for the present, future and past of the organization. HRMIS play a considerable role in any medium to large organization. Staff planning and analysis, training, job analysis, hiring and many more other activities fall within the scope of an integrated HRMIS (Ralph et al, 2008).

According to all the above-mentioned benefits, it is important to consider availability of HRIS in relation to costs (Hussain and Prowse, 2004). My investigation is not primarily concerned with cost/benefit analysis of HRIS systems; but it is clearly important to implement HRIS in such a way as to be more efficient, and thereby reduce cost.

Overall, it can be said that an information system is used in three different levels of activities which there are three different types of systems for each particular level, first operation and administration, TPS: Transactions Processing Systems, second management of day-to-day activities, MIS: Management Information Systems, and third management of long-term decisions, SIS: Strategic Information Systems (Hussain and Prowse, 2004).

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Later on in next chapter it can be seen that the new HRIS in JM apply the new system in different levels for HR activities and it examined the impacts of the new system for each level. As it was mentioned earlier, to be able to have a good overview of the impact of MIS on HRM it is important to identify all the HRM activities in details. Then later on it is possible to recognize how MIS influenced HRM activities. According to the time limits for this research, there was no possibility to considering all the HRM activities. Therefore it tried to consider Recruitment and selection category.

The main point in hiring process is getting the right person in a right position but it is important to know how it can be happen. And as it said by Mehmood et al., 2008, it is a hard job to find a person who is qualified for the job. HRM identifies the requirements for the job and as a result the characteristics of the suitable person for that position to fulfill the most requirements (Mehmood et al., 2008). HRM also should evaluate the skills and abilities of the candidates for the proper selection. For instance conducting the interview is the one of the methods which can be applied to HRM system to find the potential people. One of the main points in this process is that there are some rules and principles which should be followed in the entire process of recruitment and selection. This procedure is the same when technology is going to apply in the process, for example using the website for recruitment (filling the online application form). In this form for instance mandatory parts of the application form are chosen according to the rules of the recruitment in that organization (Mehmood et al., 2008). Using the technology in HRM activities is improved recently, as far in developing countries near 50% of the organizations using internet technology. One of the considerable points in recruitment and selection process is wrong data which is provided by applicants in their resume (Mehmood et al., 2008).

3. METHODOLOGY

3.1 Research questions

How HRIS impacts on different level of activities in HR department?
Does HRIS is efficient to be apply in HR department?

3.1 Hypotheses

The hypotheses of this research paper are examined for Recruitment and selection.

1.	Uses of dedicated HRIS increase the quality of all the HR activities at different levels.
2.	Uses of dedicated HRIS decrease the quality of all the HR activities at different levels.
3.	Uses of dedicated HRIS have no effect on the quality of all the HR activities at different levels.
4.	Uses of dedicated HRIS increase the quality of part of the HR activities at different levels.

This study conducted several interviews with the employees of the team from different level of personnel including three HR managers and three HR advisors. They asked several question in the form of structured interviews separately for each HR subject activities. All the interviews were recorded. The interviews questions were sent via email in advance to the all interviewees and it was including a statement about the purpose of the research. The questions and situation were the same for all the interviewees.

All the interviews conducted within an hour each person in one full day. Co-operate of the HR personnel shows their interest to participate in the research and the result of the study. In addition this category of HR team has the key role to apply the HRIS for both launching and implementation the new system. More over the responded interviewees were from both sexes. Some of the interviewees were part of JM even before any proper HRIS in the company and some of them just joined at the same time which the company applied new HRIS about 6 years ago.

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Data for this research was divided into two main parts: primary data and secondary data. The secondary data for this research collect through structured interviews. The interviews were all recorded and keep confidential. The personal information of the interviewees is not revealed anywhere in th is paper. The interview was record by sound recorder software. The recorded data from the all interviewees transformed to the transcript. Then according to the approach of the paper for each section the data (answers) were sorted in different groups. The final step was to identify the key words. Finally the final draft of transcript in the form of categorized data with distinguished key words used to write the analysing chapter.

4. ANALYSIS

One of the main categories of HR activities is Recruitment and selection. For this specific section the role of HRIS is revealed for: SIS, MIS, and TPS. The results of the interviews for the main activities in recruitment and selection category are illustrated in the table below for three different levels of activities.

Table 1: recruitment and selection activities, which are influenced or created by HRIS in JM

RECRUITMENT AND SELECTION		
TPS	**MIS**	**SIS**
Advertising via internet	Application tracking system (ATS)	Gold candidates
Executive conference	Mid-level decision making	Gold candidates
paper works	Contact candidates afterwards	Less discrimination
occupational responsibility questionnaire (ORQ)	Control of the process	Less discrimination
occupational responsibility questionnaire (ORQ)	Validation of the information	Create more time for managers
LOTUS NOTES system	CV ranking	Create more time for managers
Short listing via scanned CVs	Access to the information	Create more time for managers
Short listing via scanned CVs	Cost of the process	Upfront selection
Recording data	Unique source of the information	Upfront selection

4.1 TPS

Operational level of activities is about collecting and recording data by personnel and their jobs and responsibilities in the organization. This system prepares the possibility of tracking the candidates by managers. Therefore it will improve the manager's control over the whole process of Recruitment and Selection. According to one of the HR advisors ATS (application tracking system) applies in two different sorts of HR activities.

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1."when the candidate applies for the job"( APPENDIX 1, Interview 5)

2."When the candidates are handed over the job."( APPENDIX 1, Interview 5)
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To sum up briefly it can be said that HRIS impacts positively on most different transaction and operational activities in Recruitment and selection stage in JM manufacturing part. In few activities which HRIS is not using yet there is a need to start using HRIS in those parts.

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4.2 MIS

As it can be seen from Table 1 there are notable number of activities in recruitment and selection process which had been improved or transformed because of the new system. As one of the HR advisors mentioned, some mid-level decisions are influenced by new system.

New HRIS also has a significant impact on the evaluation of the candidates in recruitment and selection process as it reduces number of candidates as much as it can therefore it is easier job for managers to select from smaller and more suitable group of candidates instead of confusing in a pool of applications.

To conclude in a few words, it can be said that HRIS is very helpful in managerial level activities. Although there are some notable advantages of new system in recruitment and selection process, more time is needed to identify everything clearly.

4.3 SIS

Strategic information system is one part of the HRIS which is usually applied less than the other two levels. SIS usually is used by strategic managers and it involves strategic decisions (most of the time long term decisions).most of the interviewees agree that HRIS is mainly used in operational level and partly in mid-level day to day decisions but rarely for strategic level. The main strategic impact of the system in recruitment and selection is collecting lots of questions from the personnel and give them the feeling of more security about discrimination. To wrap up briefly it can be said that new HRIS is not in use specifically as a SIS but it impacts some strategic decisions in recruitment and selection.

5. FINDINGS, CONCLUSION AND DISCUSSION

This chapter provides summary of findings, according to the analysis part the conclusion of the study regarding the purpose of the research is presented. In addition all the limitations of the research are considered and finally the recommendations for future research or any suggestion to the company are discussed.

5.1 Discussion

As it discussed in the analysis chapter HRIS for recruitment and selection activities is in use mainly for all different levels of information systems and it improved the quality of the activities in the operational level. The result of the primary data completely supported by other studies shows that there was expectations for improvement in the day to day operational activities level especially in the large companies.

Although there was no specific reason to say that HRIS was as positive as it was in the transaction and operational level to increase the quality, there were some considerable results which show it is going to be very essential tool for managerial level. The reasons why we have great expectations for positive result and as a result of this HRIS studies proves this certainty.

Finally in the strategic state unlike what was expected from the literature review the result of analysis for JM shows that SIS was not in use except in some few points of decision making but the interest of the organization shows it is going to improve in the near future. We expected the result of the new system to have a larger impact on the quality of activities by the opposite of this has been demonstrated in the analysis.

5.2 Middle East

As JM is an international company and it is operating in different countries, I would like to consider the place of HRIS in Middle East region. Because of the difference between the nature of HR activities in Billingham (manufactoring) and Middle East (office), the comparison should be very carefully.

Because of limitations in conducting research in Middle East, there is not any appropriate literature related to HRIS. However, the region is welcome to apply IS technology in their HRM. According to

different culture and locations, there are different HRIS models in different countries in Middle East (Budhwar and Mellahi, 2007).

One of the most important points in HRIS field in Middle East is HRIS strategies, are different from country to country. It is mostly because of the level of industrialization, economic situation, and government policies in the country (Koldewijn, 2009). Another considerable factor when we study HRM and IT in Middle East is gender of the workforce (Al-Hamadi et al., 2007).

After considering all above factors, and according to the current literature review, it seems there is no significant impact on the quality of HR activities, by implementation of western HRIS strategies in the Middle East. Therefore, it is essential to conduct more research in this field in Middle East region. However, the importance of Middle East is increasing among the world, especially for international companies, and it creates a need of more consideration of the region.

5.3 Conclusion

HRIS is not a new system but the impact of the implementing the new system in the quality of the HR activities could be different from activity to activity. It also could be different in the same pattern from organization to organization. In the conclusion it can be said that new HRIS impacts positively on the HR activities quality and in some cases where the result was uncertain the HR team expects success rather than failure.

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IMPACT OF INSTITUTIONAL AND CULTURAL FACTORS ON THE INTERACTION BETWEEN HR AND LINE- MANAGERS AND ITS IMPACT ON IMPLEMENTATION OF HPWS PRACTICES IN THE SAUDI BANKING SECTOR

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ABSTRACT

The purpose of this research is to investigate how normative and institutional factors affect the implementation of strategic human resource management (SHRM) practices. This contextualization is essential to develop practical and effective human resource management (HRM) practices. The research adopts an interpretivist approach. Using concepts of normative pressures and institutional pressures this research aims to explain how the interaction between HR and line-managers can affect the effectiveness of high performance work systems (HPWS). A cross case analysis is conducted in this research using the Saudi banking sector as a case study. Data is collected using document analysis, semi-structured interviews and focus groups. The research finds that both normative and institutional factors exert significant levels of influence on interaction of HR and line-managers and on implementation of HPWS policies and practices. The impact on different banks is not, however, consistent thereby resulting in different outcomes for different banks. The study is important as the knowledge of the impact of normative and institutional pressures on line-managers and HR managers and on implementation of HPWS will help in developing practices that will reduce the gap in intended and actual HPWS practices.

KEYWORDS

Strategic human resource management, high performance work practices, institutional theory, social interaction, Saudi Arabia

1. INTRODUCTION

The impact of human resource (HR) practices on organizational performance is well conceived (Paauwe, 2009) but the role of line-managers in enacting these practices plays an equally important role (Yu-Ping, et al., 2011). The difference in the perception of each other's role, however, leads to a gap in the approach of HR and line - managers (Purcell and Hutchinson, 2007) leading to an overall ineffectiveness of HR practices in delivering the desired results. This has been researched by social capital researchers (e.g., Youndt and Snell, 2004), who recommend an improved social interaction and shared cognition between the two in order to fill this gap (Kase, et al., 2009; Yu-Ping, et al., 2011). The biggest drawback regarding the existing literature is the ignorance of the role of line-managers in delivering HR services (Purcell and Kinnie, 2007; Yu-Ping, et al., 2011). Very few researchers (e.g., Yu-Ping, et al., 2011) have empirically tested the impact of the HR manager/line-manager relationship on organizational performance.

The purpose of this study is to investigate the impact of institutional and normative factors on the interaction between line-managers and HR managers and its consequential impact on the implementation of HPWS practices in the Saudi banking sector. HPWS is based on the assumption that firms which rely on human capital as a source of competitive advantage ultimately require the productive behaviours necessary to implement their strategies. The practice of HPWS vary from firm to firm but the core concept of HPWS remains the same, that is, to increase empowerment of the employees, enhance their skills, arranging

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appropriate incentives, inventing ways to keep them motivated and eventually create a powerful, dedicated workforce that would keep on matching with organizational, market and social requirements (Ferreira et. al., 2011: 2).

While there are several aspects of HPWS, this research focuses primarily on performance appraisal and compensation. Subramony (2009:747) suggests that system-level effects are created through complementarities among the components of a system — that is, when the components make different contributions toward the attainment of a common outcome or influence the same outcome through different and non-conflicting routes. He exemplifies performance appraisal as being used to evaluate employees' performance while compensation systems are useful in motivating and reinforcing desired performance. Thus, rewards and performance appraisal systems are complementary and are useless unless implemented together. Furthermore, the banking sector of Saudi Arabia is heavily transaction focused and thus the strongest linkage is expected between these factors and employee satisfaction. The high reward recognition aspect of Saudi culture has driven the choice of these factors as the two most significant HPWS factors playing a role in the Saudi banking sector.

2. INSTITUTIONAL FACTORS

The relationship between organizational actors is key for knowledge creation, exchange and utilization (Neves and Caetano, 2006; Berninghaus, et al., 2008). These relationships are, however, themselves influenced by several endogenous and exogenous factors.

Firms differ in the manner by which they adopt SHRM practices and culture and institutional factors are two reasons for this differential approach (Hallett, et al., 2009). The cultural focus indicates that SHRM practitioners must include cultural factors as key mediating factors while planning to implement SHRM practices, such as HPWS. Contextualization of HRM practices has long been advocated and culture and institutional factors are the two most influential factors which determine the context of an organization (Fu and Kamenou, 2011). Firms which ignore the link between context and HRM practices often fail to achieve the desired outcomes (Tayeb, 2005).

Institutional theory deals with how organizations are affected by exogenous forces (Hoffman, 1999) and is built on the notion that institutional environments are socially constructed (DiMaggio and Powell, 1983). Accordingly, the institutional environment and its participants play key roles in shaping organizational systems, structures and behaviours. According to Scott (1998:12) every organisation exists in a specific physical, technological, cultural and social environment to which it must adapt. No organisation is self-sufficient and all firm depend for survival on types of relations they establish with larger systems of which they are a part.

Organizations tend to conform to institutional pressure to achieve legitimacy. Firms tend to conform to three types of institutional legitimacy — cognitive, normative and legal (Björkman, et al., 2013). Institutional theory overlaps with the environment and resource dependence theory. There is some degree of differentiation in approach adopted by organizations but overall organizations tend to isomorph with each other (Wailes, Bamber and Lansbury, 2011).

According to DiMaggio and Powell (1983) institutional isomorphism occurs through three mechanisms — coercive, mimetic and normative. Coercive isomorphism occurs in response to the formal and informal pressures experienced by the firm from its partners and from its society. This is mainly aimed to secure economic resources and legitimacy. Mimetic isomorphism occurs in response to a firm's motivation to reduce uncertainty. By mimicking successful firms, other firms can reduce the level of uncertainty they face. Normative isomorphism occurs at the professional level and involves conforming to professional pressures. Professionals conform to the set of norms, values and rules developed by occupational and professional bodies (Abernethy and Chua, 1996).

This paper investigates how the institutional factors (cognitive, normative and legal) affect the interaction of middle managers and their approach to implement SHRM practice such as HPWS.

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3. HRM IN SAUDI ARABIA

Traditionally Saudis are more attracted to government jobs due to job security reasons and due to excellent benefits that public sector provided. However; deregulation of some key sectors has allowed entry of some well- known companies in Saudi Arabia attracting the young generation of Saudis who want to utilise their skills earned through foreign education. Still job security remains one of the key concerns embedded within the job choice of Saudis. In addition they seek aspects such as predefined career progression, certainty in earnings etc. In government sector jobs, career progression is often on the basis of experience but in the private sector it is more based on merit and skill (Budhwar and Mellahi, 2007). There is thus a conflict in the HRM policies adopted within the private and public sector and it affects the career choice of many Saudis. This is also clear from the cultural dimensions of Saudi Arabia which is characterised by high power distance, uncertainty avoidance and reward recognition. Saudi employees exhibit collectivism within the in-group and individualism with the out-group (Bjerke and Al-Meer, 1993; Al-Gahtani, Hubona and Wang, 2007). Ramlall, Maimani and Diab (2011) linked low-risk and low change–tolerant culture of Saudi Arabia with preferred compensation system and found that that most Saudi employees prefer to have high base salaries and lower part of the compensation linked to performance. They also cite the need to have a transparent and effective system to evaluate performance to reduce the level of perception of uncertainty. Ramlall, Al-Amri and Abdulghaffar (2012) also found that pay or performance is not a common aspect of the compensation strategy adopted by Saudi firms. Furthermore they found that "culture and religion provide strong explanation and guide for many of the workforce practices" (p. 1159).

According to Budhwar and Mellahi (2007) extensive changes to the HRM framework has led to increased employee participation in decision making. Private sector firms are moving towards Shura, the Islamic principle of consultation based decision making. While Budhwar and Debrah (2001) reported that Human Resource Development (HRD) is not widely practiced in Saudi firms recent studies (e.g. Budhwar and Mellahi, 2007) indicate that an increasing number of private sector firms are adopting HRD policies. However, HRD in Saudi firms is mainly about skills development specific for the job.

The new HRM framework introduced by Saudi government in early 2000s has changed the hire and fire culture prevalent till late 1990s. The pressure from the international organisations such as the International Labour Organization (ILO) and World Trade Organization (WTO) has forced the Saudi government to alter its HRM framework to include international labour practices such as "social protection of workers, labour rights and work standards in the private sector" (Mellahi, 2007: 86). Thus, institutional factors have led to significant shift in the HRM policies of Saudi private sector in the last decade.

4. RESEARCH METHODS

Data was collected from 2 Saudi Banks. These banks were selected because they differ in terms of their size, age and geographical expansion. Collecting data from different banks assists in reducing any bias in the data.

The study aimed to select three banks for the study but it was extremely difficult to contact the respondents from one of the banks and hence only two banks were included in the study. The purpose of this study is to investigate the impact of institutional and normative factors on the interaction between line-managers and HR managers and its consequential impact on the implementation of HPWS practices in the Saudi banking sector.

Document analysis, focus groups and interviews were used to collect the data. Document analysis was used to collect information about the business performance, industry analysis, industry level and firm level HRM trends. This information, combined with the literature review, helped in forming the questions for the interviews. In all 37 interviews were conducted in the two organizations over two months. Some of the interviews were conducted in two stages. The set of respondents primarily consisted of HR managers and line-managers but also included some senior executives (please refer to table 1 below). Multiple respondents were selected from the same organization in order to cross check the information obtained (Gerhart, et al., 2000). All the interviews conducted were semi structured and face-to-face. Interviews covered normative and institutional factors, interactions between HR and line-managers and the implementation of HPWS practices.

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Table 1: Number of respondents by job function

Profile	Bank_A	Bank_B
HR manager	7	6
Line manager	9	7
Senior manager	4	4
Total	**20**	**17**

Example questions were what is the role of HR manager in strategy formulation and implementation?, how do HR and line-manager interact in recruitment and selection of candidates?, how do HR and line-managers interact in the evaluation of employees' performance? Further follow up questions were asked to probe the responses given. All interviews were recorded and transcribed.

Eight focus groups (4 from each of the two organizations) of 6 individuals each were conducted to obtain data on employees' perceptions of the effectiveness of HPWS.

Cross-case analysis was used for analysing the data. Quotes and facts based on documentation and confirmed in the interviews were put in a contrast matrix, categorized according to the themes of this research. Following this, the matrix was analysed using a case orientated approach, especially focussing on similarities and differences in the cases.

5. CASE DESCRIPTIONS

Bank A is a significantly large bank with over 300 branches. In the past, Bank A has focused mainly on the retail banking business. But, in last few years, they have started to grow their business by diversifying their attention to other banking sectors such as mortgages, lending and corporate finance business. In terms of HR, Bank A has a very strong market reputation for its high class training but also suffers from a high employee turnover rate.

Bank B is a relatively new bank with fewer branches. It is, however, one of the fastest growing banks in the Kingdom. It suffered major setback at the time of the crisis but has recovered well in the last few years. It has adopted progressive HR policies and the management has also altered its approach from the conventional centralized approach to a rather controlled but decentralized approach. Bank B is primarily focused on high end clientele such as affluent customers and rich corporations. As such, its customers demand an extremely high quality of service and this is what the bank has been trying to achieve for the last few years.

6. FINDINGS

The resource based view (RBV) of an organization suggests that firms can generate competitive advantage from unique resources (Kraaijenbrink, et al., 2010). In the banking sector the most valuable resources are the human work force and the tacit knowledge that these human resources hold (Abdalkrim, 2012). This means having access to bright, smart and skilled human resources should bring competitive success to the banks. But this is not enough. The HR manager at Bank B clarifies that acquisition of best talent is not sufficient; we must manage this talent as well. Thus, we have to have correct practices for employing, allocating tasks, developing and motivating them. This emphasizes the need to manage these human resources as optimally as possible in order to draw competitive advantage.

In last decade or so Saudi government has started to deregulate the banking sector which is leading to increased cross border business. This is also leading to a cross border diffusion of organisational culture leading to a rise in adoption of best practices from the western banking system. Consequently, several Saudi banking sector firms are adapting western attributes such as decentralisation, independent goal setting, employee satisfaction survey etc. However; the cultural and institutional environment of Saudi Arabia is still very different from western nations and it is evident in their application of HRM practices.

6.1 Strategy

Following and participating in the corporate strategy is one significant aspect of any modern HR system. The culture of the banking industry is, however, based on objectivity, while HRM is a subjective activity. Thus, even though HRM can play a vital role in the success of the banking industry it is often ignored as a strategic force (Boselie, Dietz, and Boon, 2005). In fact, in most industry sectors, HR lacks the strategic significance that it requires (Yu-Ping, et al., 2011).

In the surveyed banks, the HR department's role is mainly that of an enabler and in that respect too, it is limited to providing human resources and organizing training programmes. Head of the HR department in Bank A states we are enablers for other departments in order to achieve the bank's goals. Bank B has started to raise the HR department's participation in corporate strategy. According to a HR manager at Bank B under the new strategy we are partners with the business to enable them to achieve success. We anticipate business needs and try to come up with programmes, initiatives and procedures that organize for them the tools of success. Even in Bank B, however, the HR division plays a strategic role at the division level only and not at the corporate level. In Bank A and Bank B, relationship managers act as representatives of the HR division and participate in department meetings. While Bank B, however, has 1 relationship manager for every four branches, Bank A has one for every 24 branches, indicating a significant difference in the focus on HR issues.

Researchers strongly argue that the shared ownership of line and HR managers in delivering HR and strategic priorities is useful for the firm (Vere and Butler, 2007). The HR sector in the Saudi banking sector is often ignored as a strategic force and consequently there is insufficient meaningful interaction between HR managers and line-managers. In Bank B, however, management's keenness on decentralization and employee retention is leading to the active involvement of HR. This shows that HR/line-managers' interaction may be shaped by the professional norms in the case of the Saudi banking sector.

HR Line manager interaction is quite essential to gain cross functional expertise which helps them in delivering their own functions more effectively. For example, Kim and Ryu (2011) suggest that HR managers who have knowledge of other business functions can support the line managers. However; it has been difficult to achieve in Saudi banking sector primarily because individuals demand clarity of roles and are very task oriented. This high task orientation reduces the desire to interact and cooperate in managing functions which are beyond the scope of role. In other words, there is an overall lack of social capital when such interaction does not exi st and this affects the overall performance of the team even though all individuals fulfil their individual roles adequately.

6.2 Performance appraisal

Performance appraisal is one of the most significant aspects of HPWS, at least in the context of the banking sector. Alfaqih (2011) investigate the link between performance appraisal and employee performance in Saudi Arabian firms and found that found that performance appraisal has a significant relationship with employee satisfaction and performance. In a similar research conducted in the Saudi banking sector, Abdalkrim (2012) concluded that performance appraisal has a significant impact on employee satisfaction and performance.

Saudi banks use balanced scorecards to evaluate the performance of the employees. The manner in which it is implemented is, however, leading to some level of dissatisfaction among the line-managers. They are particularly concerned that strict limits set for high performers and underperformers undermine the fact that achievement of goals is a team effort. However the HR managers indicate that using balanced scorecards allow standardisation which eliminates any bias and consequently any feeling of injustice. However; any employees expressed dissatisfaction with their view.

Performance appraisal at Bank A is automated and automation allows managers to fast track the targets. Automation and standardization of the system quenches the desire for uncertainty avoidance, a characteristic of Saudi culture, but it also ignores the contribution of subjective efforts such as teamwork. The performance of the individual is rewarded with bonuses; bonus distribution is essential aspect of the compensation package because reward recognition is a characteristic of Saudi culture. Bonuses are distributed to the line-managers in proportion to the performance of the team and they then distribute it among the team members in proportion of their efforts. There is a high level of collectivism in performance appraisal at

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organizational division level along with individualism at employee level. Collectivism is a characteristic of Saudi culture while individualism is a characteristic of banking culture. According to a line-manager, the responsibility of performance evaluation and bonus allocation rests solely with the line-manager and there is little interaction between the HR and line- manager except when the employee raises a dispute over his performance evaluation.

Evidence indicates that there is a high power-distance when it comes to performance appraisal and bonus distribution in Bank A while Bank B is looking to reduce this power-distance. High power distance is a characteristic of Saudi culture but global banking sector is largely based in low-power distance model. This indicates that some Saudi banks are transforming from local to global models of governance. Saudi culture of uncertainty avoidance also demands clarity. In both Bank A and Bank B, however, there is a lack of clarity on how line-managers estimate bonuses and this can lead to employee dissatisfaction. For example, one of the respondents from Bank_A suggested sometimes my performance is average and I get some bonus and sometimes my performance is excellent but I get no bonus. I don't know if I need to work hard to get bonus or is that dependent on other factors. This lack of clarity does affect the morale of the individuals as one HR manager at Bank A reported: most of the individuals who leave us do so after bonuses are paid. The Saudi culture of uncertainty avoidance demands clarity. Lack of clarity dissatisfies individuals who then feel a lack of control over their rewards. Most of the Bank A employees contacted expressed dissatisfaction over the clarity of performance evaluation and bonus calculation.

On the contrary, in Bank B, employees are aware at the beginning of the year what they need to achieve to get into the bonus zone. According to one of the respondents from Bank B: each branch has its CPI seasonally and according to the market zone. Also the employees and managers are aware right from the beginning of the year how they will be evaluated. This clarity allows the line-managers to plan accordingly and even the employees are aware of what they need to do in order to get to a certain level of bonus. There is, however, some lack of clarity on the evaluation of soft aspects of managerial performance. Bank B is trying to resolve this through questionnaire surveys and employee claim analysis. 360 feedback is not common in Saudi banking sector and Bank_B is the first bank looking to implement it.

Employees can raise a dispute if they are dissatisfied with their appraisal. Although Bank A and Bank B have dispute resolution services this service is limited to resolving disputes about performance evaluation and is brought in only after an employee has raised a dispute. Employee responses indicate that interaction between HR and line-manager should occur prior to the point of dispute: HR and line-managers should interact at the time of performance evaluation.

Lack of clarity on bonus calculation and distribution is a direct consequence of a lack of co-operation between HR managers and line-managers in performance evaluation. One of the key drawbacks of the performance evaluation system is excessive focus on the front line. The banking sector in Saudi Arabia is still struggling to develop a fair and agreeable system to evaluate the performance of back office employees as most of the back office employees expressed dissatisfaction over performance evaluation and bonus distribution.

In Bank A, line-managers are very task orientated and use a transactional approach towards leadership even though the banking sector itself (around the world) adopts a more transformational approach. Bank B instead takes both, objectivity and subjectivity, into consideration depending on the job profile. For example, one line - manager from Bank B suggested: performance evaluation comprises of both subjective and objective elements and the extent of subjectivity and objectivity depends on the job. If an individual is in the retail/sales department the performance evaluation is mainly objective while for back office employees such as IT the performance evaluation will be largely subjective. For Bank B, performance evaluation is designed at the time of job designing in consultation with the line-manager. The performance evaluation itself is, however, carried out by the line-manager.

Line-managers are solely responsible for performance evaluations of their teams. Consequently, they do not focus their efforts on managing employee performance. When asked about this, the line -manager from Bank B reported that managing performance is considered more of an HR function and the pressure of work in the banking sector is so intense that line-managers have to remain focused on targets. But even without the pressure, line-managers often fail to give due attention to HR issues because they fail to acknowledge the role of HR issues as a strategic priority (Purcell and Hutchinson, 2007). Thus, line-managers fail to implement HR practices in an intended fashion. Line-managers face dual pressures from managing their operational and HR responsibilities and this can often lead to conflict. The pressure to meet targets would almost always drive the line-manager to give precedence to operational issues (McConville, 2006; Watson et

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al., 2007). In fact, the limitations of HR functions in the banking sector places an even greater responsibility on line-managers to manage employee performance. Interviews did not provide any evidence of line-managers' efforts to manage employee performance in cases when an employee has been underperforming.

A closer interaction between HR and line-managers and the delegation of HR functions from HR to line-managers could provide several benefits such as value-for-money (Holt, et al., 2003) and better integration of HR strategy from the operational perspective (Ulrich, 1998). Extreme task orientation, influenced by both institutional and cultural factors, does, however, restrict this interaction among line and HR managers.

Overall it seems that the interaction between line and HR managers in the context of performance evaluation is influenced by cultural and professional factors. The rewards recognition and uncertainty avoidance aspect of Saudi culture is easily evident on the standardized performance appraisal model adopted by Saudi banks. And the influence of professional factors means that employees are mainly evaluated on hard skills which are known only by the line-managers. There is also an influence of professional factors with employees having a significant role in setting their goals.

6.3 Compensation

Compensation is the most significant aspect of HPWS in the banking sector. Compensation plays a vital role in SHRM. Research conducted in Saudi telecom (Alfaqih, 2011) and banking sectors (Abdalkrim, 2012) found that compensation has a significant impact on the employee satisfaction and performance. Indeed reward recognition is an important aspect of Saudi culture. Several studies (e.g. Ramlall et al. 2011; 2012) have shown that Saudi employees prefer higher base salaries and smaller component of their pay packages to be linked with their performance because of the perceived level of uncertainty in performance evaluation.

Compensation acts as an investment which makes the employees feel valuable and empathetic and motivates them to react with attitudes and behaviour that benefits the employer (Paré and Tremblay, 2007; Gould- Williams, 2007). Most banks look to provide their employees with competitive salaries in order to retain them. Respondents suggested that irrespective of the salary paid to the employees, there will always be some level of dissatisfaction among employees. Bank B's HR manager agreed that in the banking sector there is an excessive focus on the sales force with the largest proportion of compensation going to them.

Emphasis on monetary compensation is probably high because of the high rewards recognition aspect of Sa udi culture. As far as interaction over the compensation system is concerned, HR managers play a very limited role in the process in Bank A while in Bank B HR managers play a vital role in deciding both monetary and non- monetary aspects of the compensation and benefits packages for each employee. In Bank B, HR managers determine the grades and corresponding pay packages. The pay packages are based on the data collected from the industry. Commenting on the discrepancy in pay packages for different roles, the HR manager at Bank B suggested that In the banking sector the front line employees have a greater role to play than any other division in the overall performance and hence their compensation is highest.

This can be put down to management and professional factors. An effective compensation system is quite crucial for firms. As suggested by the norm of reciprocity under the social exchange theory (Blau, 1967). According to this norm, when the organization does a favour for its employees, the employees will feel a sense of obligation to reciprocate by putting in extra effort. In the banking sector there is a possibility of achieving overall high performance by motivating the front line employees to perform well and hence the compensation system is focused on regulating the efforts of the front line employees. The back office employees have a role to play but have no significant bearing on the end results (as long as they are putting in their minimum acceptable level of effort) and hence their compensation is more standardized (i.e., less related to performance). This also confirms the high power-distance value that characterizes the Saudi culture whereby people in control of outcomes are given greater importance. This is evident in the relationship between HR and line-managers over compensation as well. Since line-managers have a clear and direct impact on outcomes, they are allocated greater decision-making power over the line managers. In Bank B, however, this power is distributed which signifies moving towards a more professional model.

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Table 2: Summary of factors influence key actors relationship in implementation

HPWS	Influencing factors (Bank_A)	Influencing factors (Bank_B)
Corporate strategy	High power distance- Cultural Objectivity- Professional	Low power distance- professional Objectivity- Professional
Performance appraisal	High power distance- Cultural Goal setting- Professional Dispute resolution- professional Objectivity- Professional	Standardisation/ Uncertainty avoidance (cultural) Dispute resolution- professional Hierarchical- professional
Compensation	High power distance- Cultural Reward recognition- Cultural Objectivity- Professional Collectivism- Cultural Individualism – Professional Masculinity – Cultural	Reward recognition- Cultural Objectivity- Professional Masculinity – Cultural Standardisation/uncertainty avoidance – cultural

7. CONCLUSION

This study aims to raise the significance of institutional and cultural issues in SHRM research. Using institutional theory and case studies from the Saudi banking sector, this paper highlights how SHRM practices in certain countries/industry sectors are influenced by cultural and institutional pressures. In parallel to this, this study also highlights how interaction between HR and line-managers affects the effectiveness of SHRM practices.

The key aspects which influenced the SHRM practices in the analysed cases are the high power-distance and reward recognition (cultural factors) and cognitive and normative institutional factors. What is interesting to note is that analysed firms have a different approach towards implementation of HPWS and according to the research, this is governed by two factors: firstly, the type of management approach and the size. Out of the two case studies, the smaller bank adopts a more co-operative interaction between HR and line-managers while the larger bank lacks this interaction. The larger bank, on the other hand, adopts a more structured approach in order to reduce uncertainty.

The smaller sample size means only two banks could be included in the study. A larger sample size would have given better clarity on whether the implementation of SHRM and interaction between HR and line -manager is actually influenced by the size of the organization. Readers should be aware, however, of the limited sample size while reading the findings of this study. This study does not aim to generalize the findings and instead seeks to compare two case studies to illustrate how different firms could be influenced differently by institutional and cultural factors. Thus, a study conducted with a different set of organizations would yield different results. This research seeks to emphasize the role of middle managers and consideration of institutional factors and cultural factors while implementing SHRM practices.

Often, firms fail to convert their intended strategy into action and this failure can be attributed to poor operationalization of the intended strategy. This operationalization, in turn, can be attributed to poor implementation of HRM strategies and tools. This research aims to cover this issue in the context of HPWS in the Saudi banking sector. Organization's actors, cultural beliefs, institutional factors and human resource practices of HPWS are the focus of this study. This research was driven by the need for understanding regional or country-specific phenomena that would help to generate a theory for globally relevant issues. It is also expected to help to evaluate region-specific constructs to study local and global issues (Budhwar and Mellahi, 2006; Budhwar, Sparrow, 2002; Khan, 2009).This research will also contribute to and enrich the literature of HPWS and organization performance, in a contextual approach to strategic HRM. The findings of this research have several implications for the policy makers and practitioners. Some of these are as follows:

- There should be transparency in estimation of compensation and bonuses. This would reduce the level of uncertainty and consequently dissatisfaction. This would improve alignment between employee efforts and organisational objectives.

- There should be shared meaning approach towards implementation of HPWS practices with both line manager and HR manager contributing to the implementation of HPWS practices. The functional overlap in this regard should be incorporated in role definitions.
- HPWS implementation should be a shared exercise with both line managers and HR managers sharing responsibility for implementing HPWs practices.
- New performance appraisal models should be developed which incorporate both subjective and objective performance. These new models should be standardised but should be somewhat flexible to incorporate role/organisation specific aspects.
- Formal and informal meetings between HR managers and line managers should be promoted to improve cross function knowledge exchange.

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INFLUENCE OF OPERATIONAL COMPLEXITIES AND HSE ISSUES ON THE PERCEIVED BENEFITS AND EASE OF USE OF ERP IN AN OIL AND GAS COMPANY

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ABSTRACT

The oil and gas industry significantly impacts the economy of the Middle East region. To understand the core business of this industry and its potential development, the true role of IT/IS within its facilities should be investigated, to help integrate/streamline business processes for the apparent economic imperativeness of those facilities. Due its rareness, Middle East countries (being developing countries) are in need of studies that shed light over the role of IT/IS in oil and gas industry by identifying the problems and proposing suitable solutions. ERP provides a good example of IT in the industry, for being a solution for many requirements primarily standardizing the business processes. However, ERP implementation in the industry depends on how its perceived usefulness (PU) and perceived ease of use (PEoU) are possibly influenced by complexity of operations/processes and/or HSE considerations, being unique qualities of the industry. This work contributes primarily by summarizes the literature over the subject concept, presents as a result a research model, and highlights the possible benefits to the middle east region countries in general.

KEYWORDS

ERP, complexity, HSE, oil and gas, Middle East, perceived usefulness, perceived ease of use

1. INTRODUCTION

1.1 Relevancy to the Middle East Region

The Economy of the Middle East is very diverse ranging from hydrocarbon exporting rentier economies to government led socialist economies to free market economies. However, the region is collectively best known for producing and exporting oil. The oil and gas industry significantly impacts the entire region, both through the wealth that it generates and/or through the movement and employment of labor. Four and five out of the top ten countries in natural gas and oil production are from the Middle East region with 13.5% and 27% share of the world production respectively. From those figures it can be said that oil and gas industry is very crucial to the economy of the Middle East region countries. In that regard, the endeavor to understand the core business of oil and gas industry and how it can be developed by understanding the tools, systems, processes, software and applications that help maintain reliable and efficient (economic) production would be beneficial and reflect into the overall added value to developing the industry in the region. The aforesaid should be accompanied with (or in more accurate expression: broken down to) the understanding of the true role of IT/IS within the operation of the most important economic activity in the region and whether the facilities/systems/equipment/business processes are developed/integrated in the most optimal way using cutting edge technologies of IS/IT. It is argued that this understanding helps developing and preserving the important natural resources/assets/facilities of oil and gas industry of the relevant countries of the region that should improve standard of living of the society. Therefore, the Government/Authorities (inclusive of the

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legislators/politicians) in the Middle East oil and gas producing countries should be serious and honest presenting a plan to develop existing facilities.

But, as it would be explained in the literature review, IT/IS studies are very rare in oil and gas sector in general despite its importance to the industry and hence to the economy. Middle East oil and gas producing countries are in need of studies that shed light over the role of IT/IS in oil and gas industry by identifying the problems and proposing suitable solutions. One of the most important IT utilization examples in the oil and gas industry is the Enterprise Resource Planning application (ERP), which has been taken as an example of a noticeable business processes integration by IT/IS.

1.2 Importance of oil and gas and IT/IS (e.g. ERP)

Oil and gas industry is far different and important than any other industry in the world today. According to Harry Longwell director and executive vice president in Exxon Mobil Corp, oil and gas demand is expected to rise at a rate of 3% annually (world energy, 2002). Oil and gas production has been increasing to meet the industrialized world's economy and energy demands (world energy, 2002; Library of Congress, 2010; Oil and Gas UK, 2012). Oil and gas is projected to remain a leading energy source for some time to come (world energy, 2002; Library of Congress, 2010; IBM global business services, 2010; Oil and Gas UK, 2012). Oil and gas facilities (including oil refining) comprise of great risks for the dangerous handling of poisonous/combustible liquids and gases. In that regard it is important to note that Oil and gas operations are complex (Chiranjeevi, 2012; Szucs and Hassen, 2012; Oil and Gas UK, 2012; Library of Congress, 2010) and use unconventional processes to extract hydrocarbons (IDC Energy Insights, 2011). Complex operations generate numerous amount of transactions which in turn creates a high flow of information (oil and gas journal June 2001; Chiranjeevi, 2012). In that sense, Oil and gas complex operations indicate that IT, data and knowledge management is as important as the core business of the industry (Chiranjeevi, 2012). Today, Oil and gas industry's professionals voice their ambition to convert more data into really valuable knowledge for the organization (oil and gas journal, 2001); (Szucs and Hassen, 2012). Also, many practitioners think that managing data in a manner that ensures efficiency and security is extremely important to most businesses, and exceptionally important to the oil and gas industry where information is an asset which drives competitiveness in case of effective management (oil review, 2011; Szucs and Hassen, 2012). The development of careful and efficient data management strategy rises as one of most daunting challenges in oil and gas industry, to confront strategic operational/resource management problems (oil and gas journal, 2001; IDC Energy Insights, 2011). Efficient data management, for example, helps handle loss of workforce as they fast approach retirement age which leads to a state of losing a vital institutional knowledge and hence diminishes intellectual capital (oil and gas journal, 2001) let alone the direct impact on managing of operations (IDC Energy Insights, 2011). Equally challenging is the health, safety and environment (HSE) issues which remain to be critical concerns (Deloitte, 2009; Chiranjeevi, 2012).

With the oil and gas industry infrastructure continues to age and cost, pressures rise on the companies to continue to grow the investment to meet highest HSE standards (Deloitte, 2009). More than 45% of the industry highly prioritizes the investment in HSE (IDC Energy Insights, 2011). This would drive oil and gas companies to use technology in general (Chiranjeevi, 2012) and particularly strengthening and integrating internal processes such as Enterprise Resource Planning (ERP), primarily to serve HSE issues (Deloitte, 2009; IDC Energy Insights, 2011; IBM global business services, 2010) which provides a good example of information technology in oil and gas industry. In a collective view, the implementation of ERP systems has been seen as a solution for many requirements in oil and gas companies, for example handle effectively complex operations, mitigate risks, overcome data Management challenges (Anderson et al., 2011; Szucs and Hassen, 2012), play a significant role in standardizing business processes, link different operations together (Anderson et al., 2011), and ensure their resources are utilized effectively (Mishra and Mishra, 2011). Moreover, ERP solutions also aid oil and gas companies track equipment maintenance and keep proper records on employee's certification and training (Mishra and Mishra, 2011). However, it has been indicated that ERP (technology) implementation in oil and gas ind ustry depends on how its usefulness is perceived by the users (Calisir and Calisir, 2004), and subsequently whether perceived usefulness (PU) and perceived ease of use (PEoU) [which are significant technology acceptance model (TAM) determinants of the intention (behavior) to use the technology (Amoako-Gyampah, 2005)] are possibly influenced by complexity of operations and/or HSE considerations.

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2. LITERATURE REVIEW

In general, literature lacks studies on IT adoption in oil and gas industry, as cited by Wei et al. (2009): "despite its importance, scientific studies on adoption of information technology (IT) in the oil industry are still lacking in the literature". Mishra and Mishra (2011) supported that statement (particularly for ERP): "very few real-life ERP implementations in the oil and gas sector are documented in the literature". Also this finding can be elicited from the perceived two opinions firstly Oil and gas industry is complex (Chiranjeevi, 2012; Szucs and Hassen, 2012; Oil and Gas UK, 2012; Library of Congress, 2010) and secondly neither ERP nor technology Acceptance Model (TAM) for example were investigated in complex business environment as cited by Legris et al (2001) [Meta study on TAM implementation], Amoako-Gyampah and Salam (2003) [for ERP], Amoako-Gyampah (2005) [for ERP] and Yu and Tao (2009) [Meta study on TAM implementation]. However, there have been few studies that focused on ERP in oil and gas industry. For example, Parr and Shanks (2000) selected 2 Australian oil and gas companies to investigate ERP implementation critical success factors (CSF) based on project phase model (PPM). The selection of the two (affiliated) oil and gas companies was based on their experiences with ERP implementation, as first one was unsuccessful, while the other one (with a later ERP implementation) was successful. This study revealed the similarities and differences between the two cases in implementing ERP as a project, highlighting purely management issues. However the study did not cover the impact of the core business complex operations of both companies on the success of ERP implementation. The study also lacked an emphasis on the HSE issues, which ERP should supposedly be implemented for, in oil and gas industry (Deloitte, 2009; IDC Energy Insights, 2011; IBM global business services, 2010).

In another study, the determinants of ERP implementation knowledge transfer were investigated over seven different industries (cross-sectional) inclusive of oil and gas and chemical industries (Xu and Ma, 2008). Oil and gas industry qualities (uniqueness) have not been witnessed in this study. It investigated the factors of knowledge transfer of ERP system from one side and the business process from the other side, between implementation consultants (ICs) and key users (KUs) (respectively) across organizations and at individual level (Xu And Ma, 2008). Another research by Romero et al. (2010) tried to understand ERP implementation in relation to firm's financial performance in oil and gas sector. Oil and gas industry was selected because ERP plays a major role in standardizing business processes in that industry (Romero et al., 2010). The study looked at the strategic performance measures (SPM) that can only be utilized based on numerous data that is not found in the financial statements (Romero et al., 2010). This is the first study that shows the sources of profitability after an ERP implementation, which should help managers understand the strategic and managerial implications of ERP implementations (Romero et al., 2010). The authors claimed that their work is exclusive (focusing on a specific industry: that is Oil and Gas) as previous work has been limited to individual case studies or cross sectional analyses (Romero et al., 2010). This statement supports the earlier findings that the literature has not been concentrating on oil and gas industry, however like previous studies, oil and gas industry's core business has not been emphasized in Romero et al's study. Though the researcher agrees that information about the association between profitability and ERP enables managers and senior executives to recognize the potential contribution of ERP, its strategic and managerial value (Romero et al., 2010), however the researcher thinks that issues such as complexity of operations or HSE issues relate to ERP implementation and would therefore implicate the overall performance of the organization. Mishra and Mishra (2011) studied the challenges and opportunities in implementing ERP in oil and gas Exploration Company based on the fact that very few real-life ERP implementations in the oil and gas sector are documented in the literature (Mishra and Mishra, 2011).

Amongst many factors highlighted as hurdles for successful ERP implementation, Mishra and Mishra (2011) indicated that oil and gas company has many complex processes that would have been difficultly integrated under one ERP system (Mishra and Mishra, 2011), proposing that standard ERP system be aligned with company's business process(s) (Mishra and Mishra, 2011). The study did not cover the role of perceived usefulness or ease of use of ERP system as a deterring factor for ERP implementation, particularly in oil and gas sector. The latter contention is based on the literature that PU and PEoU influence the behavioral intention to use the technology (King and He, 2006; Alzubaidi and Alansari, 2010). In another study on ERP implementation in Oil and gas sector, Anderson et al. (2011) cited that their study introduces logical arguments on how the duration and speed of implementation affect the financial performance of the organization during and after ERP implementation (Anderson et al., 2011), and provided a methodological

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contribution that can be applied in future studies of performance changes resulting not only from an implementation of ERP but also from IT adoption in general (Anderson et al., 2011). They term oil and gas operations diversified processes, and emphasized that it needs to be standardized by virtue of utilizing an ERP (Anderson et al., 2011). This would lead to elicit that controlling complexity of oil and gas operations is interrelated to how successful an ERP implementation is (being a technology), which should actually relate to its usefulness and ease of use (Rouibah et al., 2011).

In relation to the significant role of IT in the industry, Chiranjeevi (2012) highlighted that oil and gas sector today faces a big challenge in managing enormous data that results from complex operational business processes, which makes technology usage a very crucial controlling factor for the organization for streamlining disparate processes, knowledge management and data storage (Chiranjeevi, 2012). They stressed that ERP has an optimum solution for oil and gas companies, as they prepare for a surge in worldwide consumption, to cost effectively increase supply while maintaining high health, safety and environmental standards (Chiranjeevi, 2012). ERP (like IBM Enterprise Asset Management application for oil and gas) enables collaboration across organization's main functional units like operations, maintenance and engineering (Chiranjeevi, 2012). Organizations have seen an increased focus on business responsiveness for health, safety and environment (Chiranjeevi, 2012). An ERP system (such as SAP – EHS application) provides capabilities to locate critical assets and people, monitor operations and guide safety protocols in case of evacuations (Chiranjeevi, 2012).

In a complex industry such as Oil and gas, the need to collaborate masses of dispersed data from different sources is a significant challenge (Chiranjeevi, 2012). The authors' findings suggest a high correlation potentiality between complexity of oil and gas operations, its HSE, and ERP successful implementation based on its perceived peculiars. The literature emphasized the importance of the complex operations of oil and gas industry, the challenges that the industry faces on the dimensions of health safety and environment aspects and the significant role of ERP in meeting their demands. Various relevant literature researches conducted case studies for oil and gas companies or include oil and gas industry in a cross functional study that encompassed other manufacturing sectors. However having known imperativeness of ERP system to Oil and gas industry operations/processes, it is still vague what would the impact of operation complexity or HSE requirements be on the perceived usefulness and perceived ease of use of ERP system in oil and gas firm(s)? It is imperative to know and und erstand the factors that influence usefulness and ease of ERP use in oil and gas industry to apprehend an important part of the successfulness of ERP implementation in same industry. Unfortunately literature does not provide an answer to that particular question, perhaps for the noticeable lack of literature for IT adoption studies in Oil and gas (Wei et al., 2009; Mishra and Mishra, 2011). This suggests that we have an area that still needs to be investigated, to shed a light over the importance of oil and gas complex operations, safety health and environment considerations, and the significance role of ERP (being a technology) in meeting these oil and gas industry's unique characteristics. Accordingly, this study aims to examine and identify the Influence of operational complexities and HSE factors on the perceived usefulness and ease of use of ERP in oil Refineries. Therefore, it is important, for the aim to be achieved, to understand firstly the qualities of these factors and secondly their impact (being antecedents) on the constructs of TAM (namely PU and PEoU).

3. SUMMARY

In the Middle East region, oil and gas production has been recognized as the most important economic activity. The importance of ERP system comes from the importance of the context within which it is being utilized. The ERP system implementation in oil and gas industry should attract more and proper attention. The literature has only few studies that focused on ERP in oil and gas industry highlighting primarily management issues and completely ignoring the impact of the nature of operations of the industry or its unique qualities (such as HSE) over the perception of the usage of the ERP system. When the literature attempted the identification of the deterring factors of optimal utilization of the ERP it did not highlight how would the perception of its usefulness and ease of use (for ERP being a technology and according to TAM theory) influence ERP's implementation The aim of this study is not to investigate TAM model in a complex context like oil and gas but rather to use it as a proxy to represent the possible implementation of the ERP system in an oil and gas context, in a sense by not looking into the actual implementation but instead to the

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perceived usefulness and ease of use of the system as indicators of the likely success of the implementation. The following paradigm depicts the possible factors that impact the perception of the people whom are using the ERP in an oil and gas complex domain. The main presumed factors are the HSE and the complexity of operations and processes.
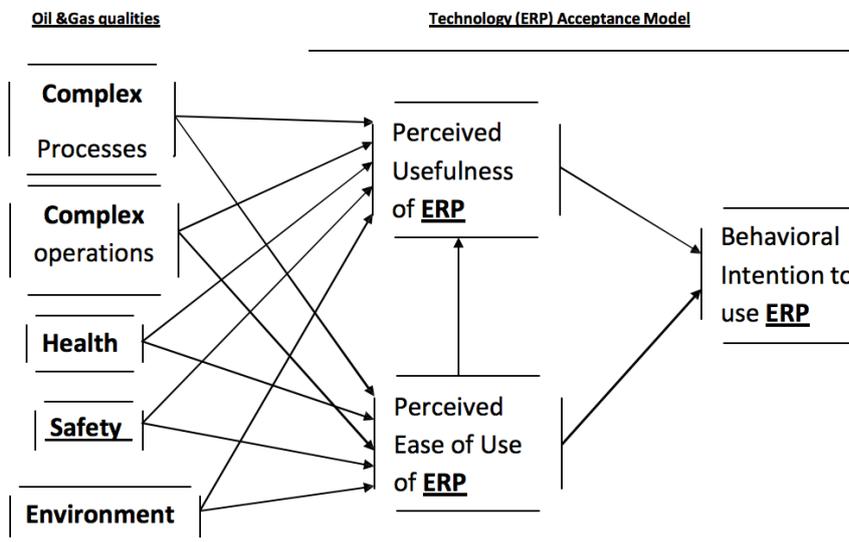

Figure 1: Research model

4. CONCLUSION

The major role played by the ERP in standardizing business processes within oil and gas industry (Romero et al., 2010) should motivate to conduct an investigation over the influence of complexity of operations and HSE issues, being unique qualities of the industry, on PU and PEoU of the ERP system. This effort is expected to help practitioners gain valuable insights into the perceived benefits/usefulness of ERP in complex Oil and gas context, therefore enhance their appreciation towards the system and its usage, better understand how successful ERP has been intended to be implemented and eventually improves the overall potential performance of the Oil organization. This leads to the sustainability of an important economic activity in the Middle East region. The Government/Authorities (inclusive of the legislators/politicians) in the Middle East oil and gas producing countries should plan to develop existing facilities that help integrate/streamline running business processes, for the apparent economic significance of those facilities in the short and long runs for the people of the region. Such a plan should be part of the corporate social responsibility towards the entire population in the distribution of the welfare and prosperity that would result from the intended facilities development, taking into consideration the direct benefits (employment of indigenous labor in oil and gas organizations) and the indirect benefits (such as investment in diversified society developing programs in education, health care and SMEs initiatives). However, we should consider more depth in defining complexity in general and the different elements of complex operations and processes and look into a specific factors (elements) that make a domain complex, and then try to investigate those elements rather than handle "complexity" as a block generic unit.

Apart from that, we have to look into the impact of HSE factors as a separate project and try to understand what are its characteristics that would have an effect on perceived usefulness and ease of use of the ERP system in relation to complexity factors. At the moment the plausibility of HSE factors as a relevant research project has not been decided yet. Other external factors that might influence the perceived usefulness and ease of use beside the previous factors might be explored as well.

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EMBODIED VERSUS OPERATIONAL ENVIRONMENTAL IMPACT TRADEOFFS OF BUILDING DESIGN DECISIONS

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ABSTRACT

The building design process involves decisions that may have significant environmental impact implications, particularly in regions with extreme climates such as the Middle East. Designers should pay particular attention to decisions affecting both embodied and operational impacts. These decisions require careful calibration, since improving the operational performance of a building may have significant negative impacts on embodied performance. Similarly, decisions weighted towards embodied energy reduction may greatly increase operational energy. This paper presents an automated optimization method that employs a multi-objective genetic algorithm to analyze trade-offs between embodied and operational environmental impacts for a range of building designs minimized for environmental impact. Design decisions considered include glazing thickness, window-to-wall ratio, and presence of shading devices. A mid-rise residential building complex in the Middle East is used as a case study to evaluate the impact tradeoffs for these decisions. The method identified design solutions offering significant reductions in the building's carbon footprint. Results also show the likelihood of each design choice being found among the best designs, thereby enabling designers to make decisions leading to less energy intensive and more sustainable buildings

KEYWORDS

Sustainable building design, embodied energy, operational energy, environmental impact, optimization

1. INTRODUCTION

The building industry is a primary consumer of energy and natural resources, as building energy consumption has reached between 20% and 40% of total energy use among all industry sectors in developed countries (Perez-Lombard et al. 2008). In the Middle East, energy consumption has risen dramatically in recent decades due in large part to the increase in building construction (Aboulnaga 2006). High rise buildings from Dubai to Doha have contributed to carbon emissions per capita in the Middle East rising to twice those of western developed countries in the past two decades (Kazim 2007). In Saudi Arabia, Qatar, and the United Arab Emirates, where $4.3 trillion of construction projects are planned over the next decade (Alabbar 2013), sustainable design and construction practices can play a significant role in reducing ecological footprints.

Buildings' life-cycle environmental impacts are determined by embodied and operational energy use (Ding 2004, Crowther 1999). Embodied energy (EE) is energy sequestered in building materials during production processes, on-site construction, maintenance, repair, replacement, and end-of-life scenarios. Operational energy (OE) is energy expended during the life of the building, and this includes energy for heating and cooling, lighting, water use, and operation of appliances (Dixit 2010).

Operational energy typically dominates the energy profile of buildings, contributing 80% or more of the life cycle energy consumption of buildings in the Middle East and throughout the world (RAIA 2004). Research has primarily focused on ways to reduce OE by improving the thermal efficiency of the building envelope (Der-Petrossian 2000, Scheuer and Keolian 2002). One problem with this approach is that building

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design strategies aimed at improving the OE efficiency of buildings may use materials with high EE (Huberman and Pearlmutter 2008). Such strategies increase the energy requirements of the material production phase, which may ultimately increase the life cycle environmental impact. The role of EE becomes increasingly more important and has been found to contribute up to 60% of a building's life cycle energy use (Langston and Ding 2001, Thormark 2002). This is especially apparent as strategies for reducing OE become more prominent in building design (RAIA 2004, Cole and Kernan 1996, Mumma 1995).

Figure 1 illustrates several EE versus OE tradeoff decisions typically faced by building designers. The elements depicted are all part of the building envelope, since components here have been found to account for the majority of buildings' EE (Atkinson et al. 1996). Here, EE and OE typically have an inverse relationship with each other. For example, increasing glazing thickness will improve a window's thermal resistance, thereby decreasing the energy use needed to heat and cool a building. This increased thickness comes at the expense of increase EE, since a greater amount of glazing material is needed. Similarly, a reduction in a building's window-to-wall ratio (WWR) may improve a façade's thermal performance, but the increased amount of cladding material and its greater EE per kg compared with the glazing material may lead to a higher total impact for the building. Such tradeoffs have particular relevance in the Middle East, where by the end of the century cities on the Arabian Peninsula are likely to face summer mean temperatures often exceeding 40° C (Jentsch, James et al. 2010). In regions with such harsh climatic conditions, the cooling needs of poorly designed buildings may be considerable (Al-Homoud 2005). Highlighting the energy tradeoffs associated with building envelope decisions can avert this problem by allowing designers to make design decisions optimized for building energy reductions, thereby leading to lower carbon emissions.

Designers also need a systematic method of exploring the large number of design possibilities associated with these energy tradeoffs. Design teams typically explore building design alternatives using an iterative, trial and error process that is performed manually. Exploring the design space in this way can be difficult, given the large number of alternatives and the complicated interactions between many design variables. Designers also often reason backwards using a deductive approach to make large problems more manageable (Ahmed, Wallace, et al. 2003). This approach can leave large areas of the design space unexplored. Automated procedures to optimize aspects of building design can reduce the effort needed to systematically search the complete design space for high-performing design solutions (Flager, Basbagill, et al. 2012).

This paper introduces an optimization method to provide designers with information on the embodied versus operational energy tradeoffs of building design decisions for a range of design alternatives. Section 2 reviews related studies. The proposed environmental impact assessment method is presented in Section 3. A case study application of the method involving the optimization of a residential building complex is presented in Section 4, and the results are discussed.
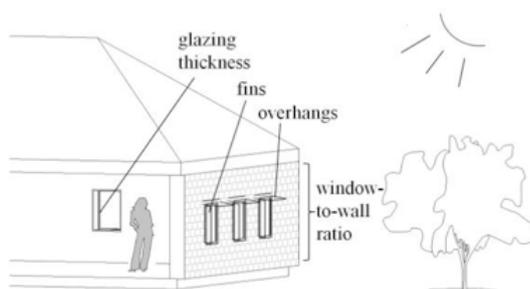

Figure 1: Schematic of building design decisions with embodied versus operational energy tradeoffs

2. RELATED STUDIES

A number of studies have looked at methods for evaluating energy considerations in building design decisions. Radford and Gero's (1980) research, while not specifically addressing embodied versus

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operational energy tradeoffs, introduced the idea of tradeoff diagrams using a Pareto optimality approach. By moving beyond trial and error methods and quantitatively relating the performance of design variables to each other, the research offered a prescriptive method for improving building performance. This approach was used to show tradeoffs between daylighting and peak summer temperature as well as associated values for a set of design variables, including glass type, window size, and sun shade projection (Gero et al. 1983).

Recent studies have applied this research to the embodied versus operational energy tradeoffs of building design decisions (Hacker et al. 2008, Thormark 2006, Rai et al. 2011, Ardente et al. 2008). Huberman and Pearlmutter (2008) looked at embodied and operational energy consumption of a building in a desert region in Israel when optimizing building materials according to minimum life cycle energy requirements. Tuhus-Dubrow and Krarti (2010) included building shape variation in using a genetic algorithm to optimize a building envelope for minimized energy use. Pierquet et al. (1998) looked at wall system tradeoffs for buildings in cold climates in the United States and found that systems made from non-renewable materials often performed more poorly than systems made with natural materials. Radhi (2010) applied sensitivity analysis to the economic, operational, and embodied energy performance tradeoffs of wall system variables. The research concluded that tradeoffs are not straightforward and that a careful approach should be taken when choosing building materials to reduce carbon emissions.

Although many of the studies used a prescriptive approach to evaluate building design decisions, none of the studies explicitly optimized embodied versus operational energy impacts for a broad set of design variables. The research fills this gap by using an automated Pareto optimization approach to consider a comprehensive set of variables exhibiting this tradeoff. The method evaluates a range of building shapes, in order to increase the utility of the method and generalize the findings across a range of building prototypes. Probability distributions are used to show the likelihood of a given design choice associated with a tradeoff variable being found among designs optimized for environmental impacts. Such a method allows designers to quickly determine how strongly a design choice yielding either an embodied or operational impact reduction correlates with a reduction in the building's overall impact. The research intends to help designers understand the complicated energy tradeoffs of design choices, thereby lending intuition to conceptual design decision- making in a way that will minimize buildings' life cycle environmental impacts.

3. METHODOLOGY

3.1 Scope

The goal of the proposed methodology is to enable designers to accurately assess tradeoffs between embodied and operational impacts for a predefined range of building design alternatives. To illustrate the potential to optimize for environmental performance across a large number of building systems, the building's substructure, façade, interior, and service equipment are included in the analysis.

The shaded area in Figure 2 shows the phases of the building life-cycle that are considered in the research. Evidence from previous research suggests the included phases, namely raw material acquisition, building material production, on-site construction, maintenance, repair, and replacement, and operation account for over 95% of a conventional building's life- cycle environmental impact (Cole and Kernan 1996). Demolition has not been included since impacts associated with this phase have been shown to be difficult to calculate (Pushkar, Becker et al. 2005; Schoch, Prakasvudhisarn et al. 2011) and small when compared with other phases (Scheuer, Keoleian et al. 2003).

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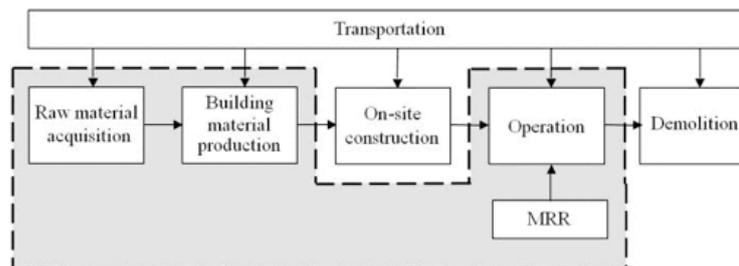
Figure 2: Building life-cycle phases included in proposed life- cycle environmental impact assessment method

Researchers have identified several impact categories that are useful in measuring the environmental impact of buildings, including global warming potential, human toxicity, and acidification, among others (Jolliet, Margni et al. 2003). Although the authors recognize the importance of all of these categories in assessing the life cycle environmental impact of buildings, the proposed method considers only global warming potential. The metric used for this indicator is carbon dioxide equivalents (CO2e), which measures the total amount of greenhouse gas emissions of the building.

3.2 Analysis process

The general steps involved in the proposed building environmental impact assessment method are shown in Figure 3. The arrows in the figure represent data dependencies between process steps. The analysis process begins with a Building Information Model (BIM) representing a given design configuration. The BIM model describes the building's geometry and materials as well as the project's geographic location and orientation.
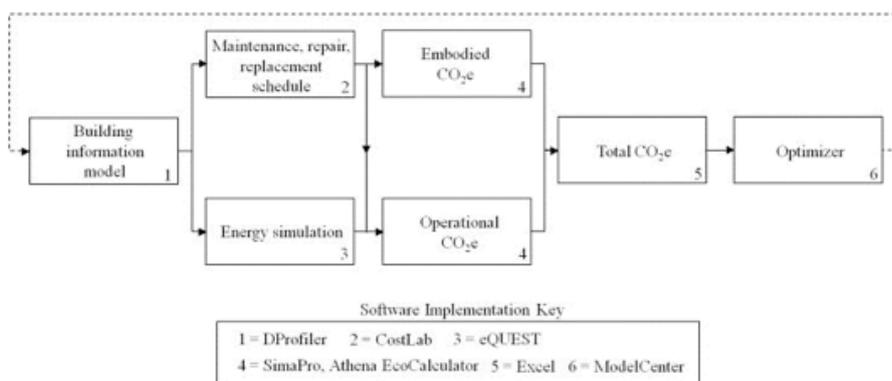
Figure 3. Automated method for calculating buildings' life cycle environmental impacts

The embodied carbon footprint is calculated based on the building component material quantities extracted from the BIM. Each quantity is multiplied by a unit impact (kg CO2e) to determine the carbon footprint.

An energy simulation model is used to calculate the annual energy consumption of the building in terms of electricity (kWh) and natural gas (kBtu). The energy simulation model is created based on the geometry and building material information contained in the BIM. Thermal zones are also defined in the model as well as standard assumptions regarding building occupancy and HVAC system controls (ASHRAE 2009).

A maintenance, repair and replacement (MRR) schedule is used to determine the impacts associated with service equipment during the operational phase of the building. The MRR schedule is determined by the gross floor area, building type, location, and structural and mechanical details defined in the BIM model, which are entered into an online facility operations reference database (CostLab 2011). Operational carbon footprint calculations have two components. The first depends on the building's electricity and natural gas consumption as calculated by the energy simulation model. These quantities are multiplied by a unit impact

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to calculate carbon footprint. The second component is associated with the MRR of the service equipment. The carbon impact of the MEP equipment is determined by looking up a typical material, material quantity, and cost for each MEP component using equipment supplier documentation. Each quantity is then multiplied by a unit impact in a similar fashion to the pre-operational impact calculations. Total environmental impact is calculated by summing embodied and operational CO2e totals. An optimization algorithm is applied to automatically iterate the carbon footprint analyses described above across a defined range of design variables. The objective of the optimization process is to minimize both the embodied and operational carbon footprint.

## 3.3 Implementation

Seven software components were used to implement the proposed method illustrated in Figure 3. DProfiler was used for the BIM tool (DProfiler 2012). SimaPro and the Athena Ecocalculator were used for environmental impact data and for calculating the building's carbon footprint (SimaPro 2010, Athena 2011). The energy simulation software eQuest was used to calculate operational energy (eQUEST 2010), and CostLab was used to estimate the service schedules (CostLab 2011). Excel was used to calculate the carbon footprint metrics based on the data provided by the previous components (Excel 2007). The optimization process was implemented using ModelCenter (ModelCenter 2008), a program that allows users to bring commercial software tools into a common environment using software "wrappers" to facilitate the application of automated design space exploration techniques.

4. CASE STUDY

A residential complex of four eight-story buildings located in the Middle East is used as a case study to evaluate the embodied versus operational impact tradeoffs of common building design decisions. The buildings are of identical size, shape, and building materials. At the time this paper was submitted, the initial design scheme for the buildings had been determined. The case study thus provided an opportunity to show how retrospective changes in design could reduce the environmental impact of the buildings. The case study building has a total floor area of 50,468 m2, and the service life of the building was assumed to be 30 years. The floor-to-floor height is 3.6 m. The building envelope consists of a uniform cladding pattern consisting of steel and a translucent glazing material. The mechanical system is a variable air volume forced air system with direct-expansion coils for cooling and a central furnace for heating. Internal loads and the weekly operating schedule were determined for a residential building using the 2009 ASHRAE Fundamentals (ASHRAE 2009).

Table 1. Optimization problem setup with objectives and variables

Objectives	
Minimize total impact (kg CO_2e)	
Minimize embodied impact (kg CO_2e)	
Minimize operational impact (kg CO_2e)	
Variables	**Possible values**
Window-to-wall ratio	15%, 20%, 25%, 30%, 35%, 40%, 45%, 50%
Glazing thickness (m)	0.0032, 0.0064, 0.0095, 0.0127, 0.0159, 0.0191
Has fins?	true, false
Has overhangs?	true, false
Building shape	a: 10, 15, 20, 25, 30
	b: 10, 15, 20, 25, 30
	c: 0, 5, 10, 15, 20, 25, 30
	d: 10, 15, 20, 25, 30, 35, 40, 45, 50
	e: 0, 5, 10, 15, 20, 25, 30
	f: 15, 20, 25, 30
Number of buildings	3, 4
Number of floors	5, 6, 7, 8

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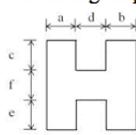
The objectives and variables used in the optimization study are summarized in Table 1. Carbon footprint was calculated in terms of CO2e as described in Section 3.1. The following energy conversions were used to perform the analysis: electricity impact: 0.664 kg CO2e/kWh, natural gas: 0.251 kg CO2e/kBtu. Twelve design variables could be manipulated to minimize the environmental impact of the building complex: (1) amount of glazing on the façade as a percentage of total façade area, (2) glazing thickness, (3) presence of absence of fins and overhangs, (4) building "H" shape determined by six shape parameters, (5) number of buildings, and (6) number of floors. Total square footage remained constant.

Table 2. Assumptions for variables associated with environmental impact tradeoffs

Variable	Material	Embodied Impact (kg CO_2e/kg)
Glazing thickness	VNE 1-63	1.06
Window-to-wall ratio	cladding: steel	1.89
	glazing: VNE 1-63	1.06
Has fins?	steel	1.89
Has overhangs?	steel	1.89

4.2 Results

Figure 4 shows the distribution of design configurations generated by the proposed optimization process in the performance space. The graph represents 5,682 designs that were generated in 71 hours. The baseline design in the figure represents the existing design of the building complex. Operational energy dominates the life cycle energy consumption and ranges from 88% to 96% of the total impact. Seventy-eight percent of the design configurations generated by the proposed optimization process exhibit improved performance with respect to total environmental impact compared to the baseline design. The lowest total, embodied, and operational impact designs are compared to the baseline design configuration in Table 3. The best design reduced the baseline design's total impact by 33%.
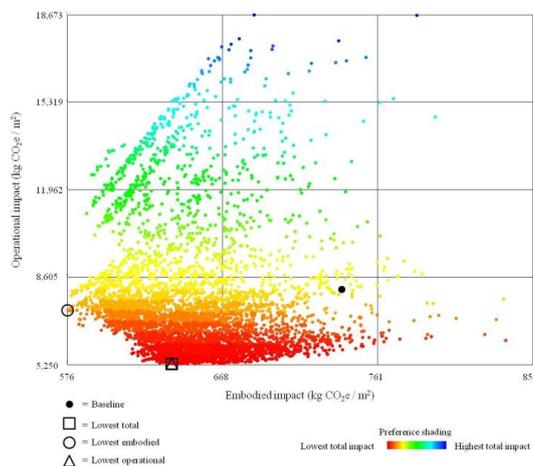
Figure 4. Distribution of design configurations generated by the proposed optimization process in the performance space

The design with lowest operational energy is the same design as the one with lowest total energy, highlighting the relative unimportance of embodied impacts for this case study. This is reiterated by the fact that for all three optimization scenarios, values for several of the variables are less than optimal in terms of embodied impact minimization. However, the total impact for the design with lowest embodied impact is

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10% less than the total impact for the baseline design, suggesting minimizing only embodied energy can yield improved designs over the baseline design.

Table 3: Comparison of tradeoff variable values and carbon impacts for four designs

		Selected design configurations		
	● Baseline	□ Lowest total impact	Lowest embodied impact	— Lowest operational impact
Variables				
Glazing thickness (m)	0.0127	0.0095	0.0032	0.0095
Window-to-wall ratio	30%	15%	50%	15%
Has fins?	true	false	false	false
Has overhangs?	true	false	false	false
Outputs				
Total impact (kg CO_2e/m^2)	8,783	5,889	7,903	5,889
Relative difference	--	-33%	-10%	-33%
Embodied impact	741	640	576	640
Operational impact	8,042	5,250	7,327	5,250

Figures 5 and 6 represent probability distribution functions for two variables associated with impact tradeoffs: glazing thickness and WWR. The figures show the likelihood of each variable value appearing in the top 10% of designs optimized for either minimized embodied impact, operational impact, or total impact. The graphs clarify which variable values are likely to be found in high-performing designs and which are less likely. Figure 5 shows that the probabilities for glazing thickness are fairly consistent across the three design scenarios for all values. This suggests that variable values found in top-performing designs optimized for embodied and operational impact correlate equally as strongly with total impact values. All six glazing thicknesses are present fairly equally, suggesting that for this tradeoff variable neither embodied nor operational impact dominates the other to produce the best designs. Figure 6 shows that the best designs are those with a low WWR. This represents a clear tradeoff favoring minimizing operational over embodied impact. WWR values for designs optimized for operational impact correlate more strongly with total impact values. Future work will consider alternate cladding materials to determine the extent to which this tradeoff is specific to steel cladding.
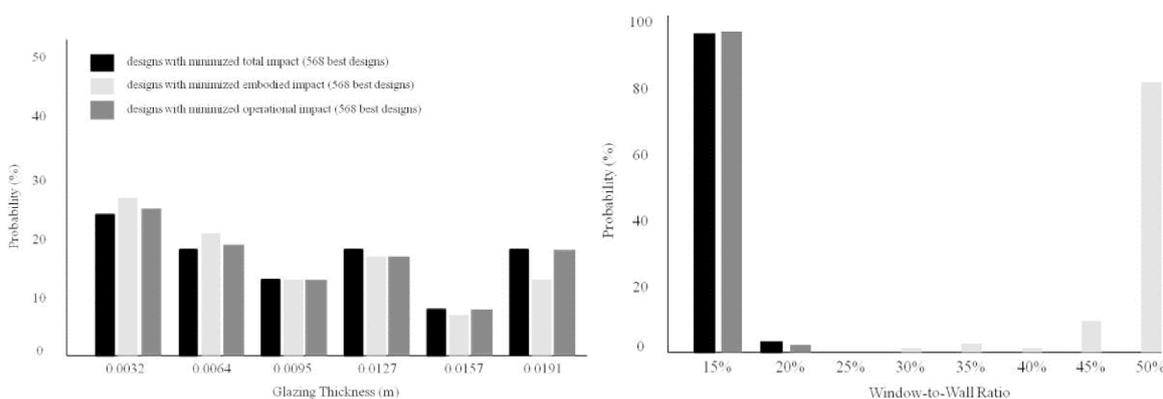
Figures 5 and 6. Probability distribution functions showing designs with minimal total impact have no clear preferences for glazing thickness and prefer a low window-to-wall ratio

Finally, the presence of either fins or overhangs (or both) has little effect on reducing the operational or total energy for this case study. However, the presence of either shading device greatly increases the embodied impact. This can be attributed to the high embodied impact of steel used in the fins and overhangs. The best designs therefore lacked shading devices. Future studies will consider alternative materials with lower

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embodied energy and alternative climate zones in order to determine under what conditions the presence of shading devices may yield building designs with lower environmental impacts.

5. CONCLUSIONS

Evaluating the embodied versus operational impact tradeoffs of building design decisions can play an important part in creating a sustainable built environment, and this is especially important in regions such as the Middle East where the building construction industry will play an important role in the 21st century. The proposed optimization method allows designers to evaluate these tradeoffs over a range of design alternatives for a specified set of design variables, and variation in building shape and massing extends the method's utility to a broad range of geometric forms. The method also shows the likelihood of variable choices achieving high-performing designs, thereby allowing designers to understand the relative importance of minimizing embodied versus operational impacts during the building design process.

Results from the case study show the method's ability to significantly improve a baseline design's environmental impact, with the top-performing design reducing the impact by 33%. Glazing thickness values were spread fairly uniformly among the best designs, and both embodied and operational impact minimization for this tradeoff variable correlated strongly with total impact minimization. Designers should therefore pay careful attention to glazing thickness when designing buildings for minimal environmental impact. WWR showed a clear preference for low values, suggesting that under the parameters of this study, designers should choose low WWR values in order to minimize life cycle environmental impacts. The results also showed a clear preference for absence of shading devices in order to minimize environmental impacts.

The scope of this method is limited to four embodied versus operational impact tradeoff variables and one material for each variable. Future work will evaluate additional tradeoff variables, such as R-values of wall assemblies and roof slabs, cladding materials and thicknesses, and depths of shading devices. These variables can be optimized by façade to increase the method's utility, and a range of materials can be compared. Finally, additional case studies can be used to comment more generally on the utility of the method.

Acknowledgements

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THE RELATIONSHIP BETWEEN STRATEGIC PLANNING AND SUITABLE GROWTH: A CASE STUDY IN LUXURY AIRLINE INDUSTRY

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ABSTRACT

The relationship between airport and airline is goal oriented. If there is high interdependency between the airline, airport and the government, all entities can maximise profits. Airport facilities have to meet the requirements of airline companies and both entities should be more proactive and should formulate their strategies and implement it well ahead of time. By taking such initiatives the airline, airport and the government can strengthen their relationships and more importantly sustain their growth. Qualitative interviews and focus groups as well as secondary data were used to elicit responses from key stakeholders within the case study organisation Etihad Airline and Abu Dhabi airport. The themes that emerged after an analysis of the data suggest that strategic planning facilitates airport- airline interaction and co-ordination.

KEYWORDS

Strategic planning, Suitable growth, Airline, Airport, Interaction, Organisational resources, Co-ordination

1. INTRODUCTION

In order to identify the major elements of the airport-airline-government interaction a Resource-Based View (Wernerfelt, 1984; Barney, 1996) approach is adopted to analyse Etihad Airways. This approach is used as the theoretical base for examining the challenges faced by the airline while planning and implementing strategies as well as exploiting its organisational resources.

Airline industry has always been very different from other industries, in all markets and in all times. The airline industry is considered among the top of the high capital intensive industries. Airline industry also has high fixed costs as compared to revenues. This puts the industry to higher risk because in case it is not able to attain an economy of scale or if there is a downturn in sales the high fixed cost can't be covered and the business becomes unprofitable. The airline industry has always been an integral part of the economy as it is a major economic force for transportation. In fact, it is heavily dependent on the national and global economic scenario. This factor makes it a unique industry.

2. PROBLEM DEFINITION

Airline companies and airports are important exchange partners (Goetsch and Albers, 2007) who have significant effects on national and regional economies. In uncertain conditions airlines and airports transform themselves to meet the social, economic, operational, and environmental requirements. The airline and airport industries face interaction challenges which require long-term strategic planning (Goetsch and Albers, 2007). Moreover, the strategic planning process has not been widely embraced in the airline and airport industries (Airport Cooperative Research Program, 2009). There is the need to examine the complex exchange relationship between Etihad Airways and Abu Dhabi airport and to thereby provide solutions for

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facilitating airport-airline interactions. This research is also expected to contribute to strategic planning process research.

Etihad Airways will be the primary case study organisation for this research project. The airline was established by royal decree in July 2003, commencing commercial operations in November 2003 and has gone on to become one of the fastest growing airlines in the history of commercial aviation (Etihad Airways, 2012). Abu Dhabi Airports Company (ADAC) was created on the 4th March 2006 to spearhead the redevelopment of the Emirate's aviation infrastructure. Wholly owned by the Abu Dhabi Government, the company is headquartered at its principal asset, Abu Dhabi International Airport (ADAC, 2012). Abu Dhabi International Airport owned and managed by ADAC is the base and hub of Etihad, the national carrier of the U.A.E. Etihad Airways and Abu Dhabi Airport were established as government entities under the umbrella of Abu Dhabi government. Those three layers have an impact on the strategic planning of the Airline and the Airport infrastructure in different levels.

The economic challenges facing airlines and airports in an era of global financial instability are diverse and complex and have given Etihad Airways, Abu Dhabi Airport and the Abu Dhabi government the opportunity to revaluate their core business and strategies. These entities are now forced to follow new strategic paths in order to face the new competitive arena. Etihad Airways is focusing on gaining increasing attention and is using a strategy of interaction, which the airline wants to create in order to reduce uncertainty, sharing risks and costs.

3. THE STRATEGIC PLANNING CONCEPT

3.1 Strategy

Strategy as an area of enquiry was developed to understand why organisations succeed or fail. Strategy can be defined as a contingent plan of action designed to achieve the goals of the organisation. Strategy is defined by Porter (1996) as "the creation of a unique and valuable position, involving a different set of activities" (p68). Initially strategy was developed at the top and executed at the bottom (Chandler, 1962). Top down planning is not participative. Bottom- up approach provides valuable information to the management on the performance of the organisation (Roseman, 2006). Organisations are now using a strategic management model that integrates top-down and bottoms-up approaches while planning, formulating and implementing strategies.

3.2 Strategic Planning

The concept for this study is based upon the assumption of managers that strategic planning is an important part of the management function. According to Donnelly, Gibson, and Ivancevich (1998, p. 140), planning consists of managerial activities that determine organisational goals and or the future and the suitable manner in which the objectives can be achieved. Strategic planning typically involves a process of planning which results in the organisation's strategic plan. Strategic planning as a concept made its beginnings in the mid 1950s and most practitioners of strategic planning identify the value of the process as a means of disciplining their planning actions and involving critical thinking to their business (Webster, 1989).

Chandler (1962) was one of the pioneers who introduced strategic planning from the point of view of improving organisational performance (Ansoff, 1965). According to Bryson (2004) strategic planning is "a disciplined effort to produce fundamental decisions and actions that shape and guide what an organisation is, what it does, and why it does it" (p. 6). Strategic planning is defined as 'the process by which an organisation (or a community) envisions its future and develops the necessary procedures and operations to achieve that future' (Goldstein, 1986). It is understood from these definitions that strategic planning is a cause and effect outcome of managerial decisions over a period of time. Strategic planning relates to fulfilling objectives and help imporve organisational performance.

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3.3 Strategy formulation

Strategy formulation is the manner in which different parts of a strategy are expressed in systematic terms and concepts. It is a long term planning effort (Wallace, 2001). According to Mintzberg & Lampel (1999) strategies are formed if there is "judgmental designing, intuitive visioning and emergent learning" (p 27). Schendel and Hofer (1979) defined strategic formulation as "a process by which an organisation develops a strategy to achieve its objectives" (p 95). Strategic formulation allows organisations to re-direct resources from area of low or diminishing returns toward area of higher or increasing returns.

4. OPERATIONAL RESOURCES AND SUITABLE GROWTH

Growth is an important performance element and success measure for an oragnisation. Strategic planning is vital for growth and sustainability. However, it should be sustainable and balanced – economically and environmentally (Department of Business Innovation and Skills, 2010). Sustainable growth is possible if there is a dynamic relationship among all key stakeholders related to any industry. This relationship can prove significant in designing sustainable strategies for growth. Governments can play the role of leaders and that of enablers of sustainable growth (Department of Business Innovation and Skills, 2010).

Strategic planning is an imperative for sustainable growth. There is a positive relationship between the existence of a more or less formal strategic planning system and the organisation's growth (Bamberger, 1980; Richardson, 1986; Stewart, 2002). Organisations should have the right resources in place to manage growth. Organisational resources are strategic assets that are related to the position the company has in the market. By using strategic planning, organisations can understand their core competence and accordingly allocate the resources (Barney, 1996). Strategy therefore is the most important determinant of firm growth (Weinzimmer, 2000).

Figure 1: Interaction Dynamics in Strategic Planning

5. AIRLINE-AIRPORT- GOVERNMENT RELATIONS AND INTERACTION

The most important contribution of airports is the provision of connectivity and the essential infrastructure to support regional social and economic growth; moreover, they are commercial entities that generate

returns on investment to the benefit of shareholders and to the society as a whole (Cristureanu and Bobirca, 2007). Airport strategic planning focuses on the strategy to accommodate future air traffic and integrating air operations in the environment in a sustainable way. Airports can no longer see their role simply as providers of infrastructure but, instead, as providing facilities to meet the needs of their users (Graham, 2008).

Airports bring together a wide range of facilities and services to fulfil their role within the air transport industry (Graham, 2008). These services include air navigation services (air traffic control), meteorological services, security, fire and rescue services, police and custom services, maintenance services, handling facilities, fuel services and commercial facilities (shops, restaurants, hotels, conference services).

Government policy and regulations shape the development and operation of airline companies (Rose, 2008) and airports. However, airlines and airports currently operating in an increasingly uncertain environment are finding it difficult to meet the government and environmental requirements. This poses problems for making immediate changes to network structures.

Traditionally, airports used to depend governmental funding and revenue from airlines. The revenue from airlines was realised by charging for the use of their services (Humphreys et al., 2006). It is therefore important that government and airport authorities to focus on the development of strategic planning for the medium to long-term development of an airport (Kwakkel, Walker and Marchau, 2010) in collaboration with airline companies. Airports and airlines have to enter into long-term relationship with the government.

An airline's hub airport evolves into a position of strength with the growth of the airline. This growth is due to their interactions and the dependency relationships between them. This high interdependency, however, can lead to a mutually supportive relationship or may result in tensions and pose difficulties for both actors strategic and operational development (Goetsch and Albers, 2007).

In recent years, airlines and airports have developed various forms of vertical relations in order to reduce risk, internalise demand externalities and gain competitive advantages over other airlines/airports. Co-operation between an airport and an airline, however, may harm competition. The effects of these these vertical relations are two-sided, which warrants further investigation. The governments play a role here. However, stringent regulations would hinder efficiency of airports and airlines. Therefore, government regulators should only intervene if there are clear evidence of negative effects. Governments should ask airlines and airports to be more transparent. They should also publicly scrutinise their activities which would be more cost-effective. (OECD, 2009)

The relationship between airport and airline is goal oriented. The two parties enter into relationship for their own benefit, mainly for offering better services and maximising profits. Goetsch and Albers (2007) proposed an airport – airline relationship interaction model which presents the pertinent elements of the relationship. Their model includes the following dimensions: Environment (uncertainty), Actor Characteristics (airports and airlines, are size, structure and strategy), Atmosphere (dimensions of interdependence, relationship history, commitment and trust), Interaction Process (dimensions of coordination, control and communication) and Strategic Outcome (profits that result from the dyadic collaboration) (Goetsch and Albers, 2007).

It can be argued that the airport -airlines interaction is mainly transactional in nature (Goetsch and Albers, 2007). However, the relationship can be used to obtain additional, strategic benefits for both parties.

6. METHODOLOGY

This research is an intrinsic case study that consists of a situation where a researcher learns about a particular case. Qualitative case study methodology provides tools for researchers to study complex phenomena within their contexts. This research utilised multiple data collection techniques: (1) face to face in-depth interviews, (2) focus groups groups in the form of feedback meetings; (3) and secondary data from literature reviews, meetings, forums, magazines etc.

The primary data was collected from 20 indiviuals using face to face in-depth interviews. This data offered flexibility in probing interaction challenges in the strategic planning of the case study organisation in greater depth. By eliciting open-ended responses to interviews the researcher was able to collect

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qualitative data with the aim of obtaining information about the experiences of the respondents.The face to face interviews were semi-structured.

In addition to the interviews, feedback meetings were organised with focus groups comprising of the management and the interviewees. Six individuals from various backgrounds were selected for the interview. The feedback meetings were used as a reconciliation and reconfirmation process in order to validate data accuracy and to reflect on the participants' perceptions.

Table 1. Themes and related elements

Strategic planning	Components of strategic planning processes within the organisation/department
Strategy formulation	The conduct of strategic planning process- developing and implementing strategies;
Sustainable growth	Integration and alignment; Resources and infrastructure
Operational resources	Infrasrtucture provision by airport and government
Co-ordination	Interaction between the airline, airport and the government

Secondary data was collected from background information concerning the airlines. The sources of data comprised of prior airline research, company reports, newspaper articles, internet resources, industry journals, magazines, airline press releases, ADAC press releases and legislations of Abu Dhabi government. The secondary materials enhanced the primary sources of data.

The interviewees were asked questions on stratgic planning processes, their involvement in planning strategies, their interactions with airport and the government, etc. Following are the themes that emerged from the interview transcripts.

The themes that emerged after content analysis were strategic planning and alignment, strategy formulation, operational resources and infrastructure, sustainable growth, and co- ordination (interaction). It is evident from the responses to the questions that:

- Strategic planning facilitates airport- airline interaction/coordination
- From the point of view of interaction/coordination, airlines and airport will have to work much more closely to maximise revenue and sustain growth.
- Airline operations are affected by policies imposed by governments at all levels --- local, national and international. However, from the interviews it is also evident that airlines (and airports) can shape government policy if it (they) contribute to the success of the economy.
- If airlines and airports are part of the same group (in this case Etihad and ADAC are owned and operated by Abu Dhabi government) they will be able to support each other for the sake of the countries' (U.A.E/Abu Dhabi government) competitiveness and economic development.
- Effective collaboration can increase profit performance leading to competitive advantage.
- Etihad Airways's hub airport (Abu Dhabi)has evolved into a competitive position with the growth of the airline, and so have their interactions, reflecting that the dependency relation between them has become increasingly distinct. However, the airport has to provide more facilities to the airline.
- Interdependence reduces risk, enhnaces coordination and encourages cooperation.
- High interdependency can lead to a mutually supportive relationship.

7. CONCLUSION

The findings suggest that the intensity of collaboration and interaction will enhance the relationship between the airline, airport and government actors. If airlines have the necessary support and preferential treatments from airports, aided by government policies, they will become dominant carriers who have the key resources for operation, and to gain a competitive advantage over other carriers. The main contribution of

this paper is to create a better understanding of the relationship between airlines and airports as research of this nature is virtually absent in the Middle East.

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NON-DISPOSABLE SOLID WASTE AS ALTERNATIVE SOURCE FOR POWER GENERATION

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ABSTRACT

The paper presents solutions for biodegradable solid waste neutralization and mass reduction based on thermal treatment with energy potential valorization. The research focused on meat processing industry waste management problems generated by the specific particularities of the residues. This subject represents a priority within food industry sector due to significant increase of meat consumption. The paper integrates the results of experimental research study conducted on pilot scale treatment units and real waste samples. Using the direct measured data both of physical-chemical characteristics and product behavior during thermal-chemical transformations a series of waste to energy conversion chains are analyzed with respect to global energy efficiency. The research offers solution for small scale power units from 20 kW up to 5 MW adapted to industrial facility waste flow. The study aimed for the assessment of possible waste to energy conversion solutions that will fit the in-site specific conditions. This will decrease the industrial facility dependence of power grid system and solve the waste management problems.

KEYWORDS

Waste, gasification, power generation, thermal-chemical processes

1. INTRODUCTION

The human society development requires increasing food resources and advanced processing of the raw products for efficient and sustainable management of food industry sector. The fast developing branch within this industry is represented by chicken based products due to market demand for healthy meat and also for economic reasons. Consequently important residues from chicken slaughter houses must be managed by industrial facilities owners. These organic residues are formed by feathers, bones, blood and offal (Ramalho, 2012). Depending on poultry processing line the residues may exit separated or as mixtures. Whatever the waste content is, it generates major management problems due to biodegradable properties and health risk potential. Despite the low mass fraction of the body weight of poultry, that does not exceed 7% the feathers represent an important waste flow due to high specific volume, water content, difficult manipulation and different biodegradable properties compared to the rest of the residues (Martinez-Hernandez 2007). The meat processing industry waste must be neutralized before final disposal. It could represent a pathogen source if the disposal is not made properly. Two major disposal procedures are currently used worldwide: the incineration and sterilization. Both methods aim for residues stabilization with respect to product biodegradability. The sterilization by processing at temperature of 120 ºC for 20 minutes and bone meal production represented for a long period of time an option for residues valorization as feed product for animal farm but the laws in force banned this practice due to diseases transmission (Cascarosa 2012). Consequently the bone meal ceased to be a waste valorization solution and the product has to be disposed to landfill. Being composed in proportion of up to 92% of keratin protein, the chicken feathers produce by anaerobic digestion some by-products such as unionized ammonia, floating scum and accumulated log chain fatty acids inhibitory to anaerobic microorganisms. Therefore this waste does not represent proper substrates for anaerobic digestion process (Salminen& Rintala 2002).

The thermal neutralization through incineration process requires important energy consumption due to high water content of the residues, especially the feathers. During the chicken processing the hot water is

used for pealing. Chicken feathers have high hygroscopic properties and the average water content is about 70% in mass (Jeffrey 2006). Partial dewatering also requires significant electric energy consumption. There are dewatering press producers that guaranty the water content reduction down to 50% in mass. Even at this level the incineration process requires additional fuel support. The waste physical structure and mechanical properties make impossible preparation (grinding) for combustion process. Consequently the incineration process efficiency is very low and the amount of required support fuel high. These aspects lead to important costs of the disposing processes and the necessity of incineration unit in the proximity of the slaughterhouse (the transport costs are high due to important quantities and the sealed transport conditions to prevent leakage). Moreover, with respect to process energy efficiency and environmental impact the use of fossil fuels and carbon dioxide production, this current practice should be replaced by alternative, friendlier methods. This research field is relatively new and fewer research laboratories are exploring it. Nevertheless the current pilot applications are designed for fuel production that can be used for heat generation (Dudynski 2012).

The combined thermal neutralization and power generation concept using as feed-in flow the chicken feathers represents a new and promising waste management solution advanced by the Renewable Energy Source Laboratory from Polytechnic University of Bucharest, Romania based on experimental research and results published in previous works (Marculescu&Stan 2011, 2012). The researches focused on high quality derived fuels production and use for power generation in small units suitable for in-site application. The target of the research team is to find the optimum thermal treatment process and operating parameters for higher global energy efficiency of the waste – power conversion chain.

2. MATERIALS AND METHODS

2.1 Product

The product used in our studies consisted in chicken feathers sampled directly from the poultry processing line as raw material. To preserve the real industrial conditions the product was not clean of other traces such as: blood and viscera. Nevertheless these additional components are not significant in the mixture. Product humidity determined experimentally at first temperature level of 105°C is about 70% in mass. Previous researches of (Marculescu&Stan 2011, 2012) carried out on this product with respect to proximate, ultimate and calorimetric analysis revealed similarities with biomass waste in terms of elemental composition and calorific value. The main differences consist in higher volatile matter and presence of nitrogen 8.7% and chlorine 2.6 % (assumed to come from feeding products) and sulphur S – 4.8% (from blood and viscera). The low heating value about 26123 kJ/kg (dry basis) recommends this product as high energy potential alternative fuel. Nevertheless the massive presence of water decreases this value to 7082 kJ/kg (Marculescu & Stan 2011). Even at this level energy content the product is similar to low quality brown coal but proper combustion conditions can not be achieved due to water content. For product ignition and process self sustenance the humidity has to be reduced bellow 50% (Marculescu 2012).

2.2 Methods

A series of experimental configurations were used both at laboratory and pilot scale using tubular batch reactor, rotary kiln and, tubular continuous reactor. The configurations enabled the study of different thermal-chemical processes for waste to derived fuels conversion: air gasification, vapor-gasification, pyro-gasification applied to analyzed product. Due to high water and volatile content an interesting option was the sequential pyro-gasification. In this case the pyrolysis conditions have a strong influence on pyrolysis products distribution and characteristics. The in-depth study of pyrolysis stage applied to this product revealed non-linear evolution of these variables with process temperature and period (Marculescu&Stan 2011). Consequently the operation parameters of pyrolysis and gasification stage must be correlated in order to rich the maximum global energy efficiency of the process. For instance a higher fraction of char is required by the gasification stage to deliver higher quantity of syngas. This target can be achieved at lower pyrolysis temperature when tar and gas fractions are lower. The gas fraction produced in pyrolysis stage is

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used for thermal energy generation by burning to supply both treatment stages. Therefore a decrease of pyrolysis gas quantity will induce the heat reduction that will affect the entire treatment.

3. RESULTS AND DISCUSSIONS

3.1 Direct air gasification

The current gasification applications that utilize fossil fuels or quality biomass (wood industry residues, agriculture residues, packaging waste, RDF) mainly characterized by high calorific value and low humidity (usually under 15%) function with air / oxygen gasification agent. For the studied product with 70% water content this process as well as the combustion is impossible to asses in practice. Nevertheless to compare the effect of humidity and fuel type on syngas composition a simulation of the air gasification process was performed using a mathematical model for our product and agriculture biomass. The results are presented in figure 1 and figure 2.
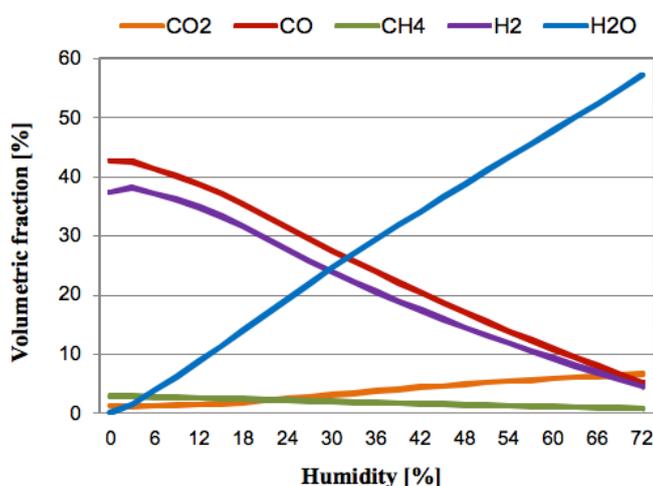
Figure 1. Syngas composition from food industry waste air gasification

The difference to 100% in volume is represented by nitrogen. We may notice the similar evolution of syngas major components due to similar elemental composition of the two products, as mentioned above. At highest humidity the combustible gas components in the syngas does not exceed 15% in both cases.

The water vapors fraction in the syngas increases from 6% for the dried product up to 42% for the raw product. Even for the low humidity situations the water vapor fraction is important due to high hydrogen component in the waste. Consequently only a fraction reacts with the carbon for hydrogen gas generation. As expected the water vapors increase from 6% to 42%.The hydrogen content varies from 15% in volume, for the complete dry product to 5% for the raw one. CO varies between 22% and 5 % in volume.

For the biomass gasification we may notice that water vapors concentration is zero when the product is completely dried but exceeds 55% for the same humidity as the feathers. The carbon monoxide and hydrogen have similar variations. For both products the methane is quasi constant in the base line. Its concentration varies from 1.7% to 0.9% in volume. The low heating value of the syngas produced from chicken feathers by direct air gasification is about 2100 kJ/Nm3. For the waste to electric energy conversion this value should by compared to the gas quality required by internal combustion engines. A very low heating value, even if the quantity of syngas is important, will not fit the minimum quality standard of the engine gas fuel.

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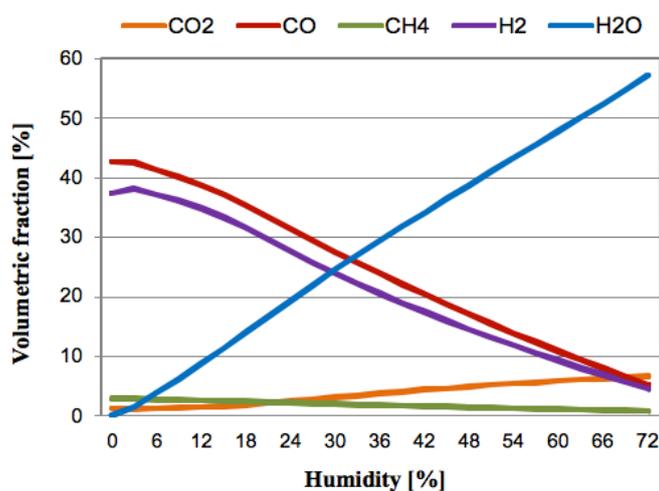
Figure 2. Syngas composition from biomass air gasification

3.2 Pyro-gasification

As solution two-stage pyro-gasification process was studied. The char produced by product pyrolysis was gasified using steam. The syngas volumetric composition was: H2 – (39 - 48)%, CO – (24 – 21)%, CO2 (28 – 23)%, CH4 – (2.5 – 4.2)%, H2O – (4.5 - 3)% (Stan 2012). As it can be noticed the hydrogen represents an important fraction in the syngas. Even if the methane presence is reduced the combustible components represent about 66% in volume. It is well known that using steam as gasification agent maximizes the hydrogen content. The major problem consists in higher temperature required by the process (over 800°C). Another problem is given by the small amount of fuel to be gasified. As the volatile matter of the waste is burned for heat generation, only the pyrolysis char is submitted to gasification. The syngas produced by this process has a calorific value about 9500 kJ/Nm3 but the quantity is sensitive inferior to air gasification. As mentioned above, for power generation applications the quality of syngas is crucial according to specific requirements of the internal combustion engines.

An energy balance should be achieved between the energy content of pyrolysis products in order to ensure the pyro-gasification process run. Consequently the energy content of the pyrolysis gas was measured based on its composition and yield. The net energy produced by the combustion of pyrolysis gas varies from 4600 kJ/Nm3 for the gas obtained at 350°C to 12600 kJ/Nm3 for the gas produced at 800°C. The maximum gas yield is obtained also at 800°C. That can be explained by partial gasification of product even under pyrolysis conditions at temperatures above 600°C due to oxygen presence. Even under non-oxidant atmosphere, specific to pyrolysis conditions, the oxygen component present in waste product initiates gasification of the carbon.

3.3 Solutions

The analysis of process energy consumption revealed the importance of water content. It is obvious that higher water content will require higher energy for thermal or mechanical drying. With respect to pyrolysis process a product with lower humidity will require higher thermal energy for its devolatilization directly related to its activation energy (Ea) and dried product. Similar effect will be encountered in gasification stage. Consequently the water content in a fuel will set an inflexion point with respect to net available energy produced by an endothermic process. It should be find a balance between product humidity, activation energy for pyrolysis and gasification stage, minimum devolatilization temperature and gasification type.

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The data processing leaded to following conclusions:

- For the pyrolysis stage low temperatures should be utilized, slightly superior to minimum temperature for volatile release (280°C - 450°C). This will ensure a higher char fraction and lower energy consumption.
- High temperature vapor-gasification (800°C - 1000°C). This will maximize the hydrogen content in the syngas up to 45% in volume.
- Superior air gasification temperature (625°C-750°C) for product with less than 30% humidity.

If combustion is used the waste humidity should be reduced down to 50%. This should be done mechanically to avoid high thermal energy consumption. The waste to energy conversion solutions should be analyzed with respect to appropriate thermodynamic cycles. Because the feed-in waste flows are generally reduced, small scale applications are required. Consequently the scale factor influence on thermodynamic cycle efficiency should be considered. Different from steam turbines cycles, Otto-Diesel and Brayton cycles offer good conversion efficiencies for the low and medium power range. The internal combustion engines can be used starting with 20 kW up to 2 MW, power level for which gas turbines also offer very good efficiencies. In our analysis the efficiencies of the thermal-mechanical equipments were chosen according to the power level. For products with water content less than 24% the direct air gasification offers the best energy conversion rate. To compare we con considered a feed-in flow of waste equal to 1 kg/s. Using the direct air gasification the electric output was: at 0% humidity – 6.7 MW, at 20% - 4.3 MW and at 30% humidity - 1.7 MW. At 30% humidity the syngas low heating value decreases and can no longer be used in internal combustion engines. Therefore the power level of 1.7 MW is only theoretically. For products with water content between 30% and 70% (our case) the best option is the pyro-gasification. At 30% humidity this technology could produce about 2.2 MW for the considered feed-in waste flow, while at 70% humidity it can still deliver approximately 1 MW.

To maximize the global energy efficiency of the waste conversion line different solutions for process residual thermal energy can be used. Due to the complexity of the phenomenon and the strong influence of waste physical-chemical characteristics on processes kinetics experimental studies are required for best solution assessment.

4. CONCLUSIONS

The combined experimental research and system engineering enabled the analysis of the possibilities to use food industry non-disposable residues as renewable energy source for power generation. The paper offers solutions for waste neutralization and mass reduction with energy potential recovery. With respect to waste management these solutions based on thermal-chemical processes represent clean waste disposing technologies required by waste characteristics. As alternative to costly incineration processing of waste, imposed by heath risk potential, gasification and pyro-gasification processes can be used. Consequently the costs required for waste incineration can be replaced by incomes from power generation. The analysis showed that f0or products with up to 30% humidity the direct air gasification can be used. Above this value, the pyro-gasification process can still deliver net electric output. The syngas components distribution and variation with feed-in product are similar to biomass products. Based on syngas composition its low heating value was determined both for direct air gasification (4700 kJ/kg) and pyro-gasification with steam injection (9500 kJ/kg). Despite the complexity of two stage gasification process and higher investment costs, the high quality syngas is more suitable for internal combustion engines. The air gasification presents the advantage of high rate syngas production but its low quality may cause carburetion problem. Based on achieved data the power generation was estimated.

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DECISION-MAKING FOR SUSTAINABLE CITIES

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ABSTRACT

Throughout academic, the concept of 'sustainability' has been loosely addressed and manipulated in order to reflect the conditions and priorities of the dominant epistemology; however, as more practical justification recognized as a socio-environmental imperative, the value of case study evidence and exemplary models has radicalized. Masdar City is likely to serve as a visionary foundation for modernization of sustainability, pursuing multifaceted targets, which include renewable energy, sustainable industry/economy, and broad scale social value. Based upon a six-tier developmental strategy, the principles of sustainability within Masdar City are directly tied to effective management and maintenance of resources which include core factors such as waste streams, development, transportation, and energy consumption (Masdar City, 2013). More importantly, however, the city itself serves as a conceptual, value-based test of the GCC sustainability agenda, pursuing an output-driven framework which is conceptually tied to the Hutchins and Sutherland (2008) triple model of sustainability (environment, economy, society), yet also serves as a transformative example for other cities within the region and throughout the world. This paper seeks to critically evaluate the justification of and motivation towards companies that relocated in a sustainable city. The question associated with this study asks what motivation drive companies to move to Masdar City; what they are trying to achieve from being in Masdar City. This article will fill a significant gap in the literature, providing a revised perspective of sustainability in the context of organizational values. By deciphering the direction and influence of forces associated with relocating companies in sustainable cities, it will be possible to identify those characteristics in sustainability motivations that most directly contribute to the achievement of complementary outcomes in the triple model of sustainability: economic, environmental, social. Instrument, closed, quantitative prompts will be used to reveal particular values and objectives that may be tied to either business or sustainability agenda.

KEYWORDS

Sustainable development, Sustainable cities, Decision making

1. SUSTAINABILITY OBJECTIVES

A decision for Sustainable development requires the integration of the triple aspects of the classical model of sustainability; Environmental, Economical, and Social. However, this is also applies to the assessment of the impact of sustainability initiatives and projects. Some investigators indicated that the main objective of the sustainability is to enhance the quality of life and preserve natural resources (Mezher, 2011, p.137). Lateral pressure theory states that all states can be characterized by the master variables, (population, resources, and technology) in different combinations.

These combinations yield different state profiles and different impacts on environmental conditions (Choucri and North, 1993, p.102).The quest for sustainability is a distinctive feature of contemporary thought in both scholarly and policy circles. Global industrialization featuring prevailing conventional economic model has led to environmental degradation that threatened natural and social systems. Dependence on fossil energy contributed lots to environmental degradation as well as other factors like increase in population, poverty and urbanization (Moavenzadeh et al., 2002,p.4). Building new cities may be a good option to meet population increase and for application of sustainability objectives. The development of sustainability

decisions and procedures in new cities require active involvement of stakeholders in all the stages of building (Majdalani et al., 2006, p.33), and to be implemented gradually to a specific well-organized location. To contribute to on-going efforts, this paper is designed to investigate motivations that drive companies to move to Masdar city and business goals trying to achieve therein.

2. ORGANIZATION VALUES

The notion of organization values is best explained if examined from a variety of important theoretical perspectives. Transaction cost economics (TCE) theory stresses on whether a firm should make a product within the confines of its organizational boundaries or purchases it from an outside provider (Williamson, 1975). The overarching goal is to maximize performance by minimizing transaction costs within organizations. Agency theory describes occasions wherein one entity (the principal) delegates authority to a second (the agent) to act on its behalf (Eisenhardt, 1989, p.57). Problems arise in these relationships because agents often behave in ways that benefit them, no principals. Resource dependence theory is about situations when some firms become reliant on others for needed inputs such as goods and materials, and how firms can manage such relationships (Pfeffer and Salancik, 1978). Institutional theory emphasizes the role of environmental pressures, many of them subtle and evolving, on firm activities (DiMaggio and Powell, 1983, p.147). Game theory uses mathematics and hypothetical formulations to draw conclusions about the likelihood of decisions and actions. Trying to predict other organizations' actions is a key element in this theory (Axelrod, 1984). Network theory explains relations among linked entities (Thorelli, 1986, p.37). Strong and weak ties are key concepts within network theory. Strong ties involve firms that are tightly coupled and loose ties involve firms with more tenuous links. Social capital theory recognizes that the interpersonal skills and relationships among personnel shape organization activities and outcomes. Strategic choice theory contends that managers' decisions play a tremendous role in organizational success or failure; a central issue is strategic renewal (Child, 1972, p.1). The resource-based theory examines how certain assets and capabilities lay a foundation for competitive advantage and superior performance (Barney, 1991, p.99).

3. REASONS FOR MOVING TO MASDAR CITY (MOTIVATION)

There are a number of theories on how to motivate workers. Motivation is simply the driving force behind all people actions. Evidence is accumulating that motivated workers are more productive and work diligently than unmotivated workers. Understanding these theories is vital for trials to apply in an organization. The theory of Scientific Management was developed by Frederick Taylor in the 1880s and 1890s.It states that workers need close supervision as they naturally do not enjoy work (Taylor, 1911). He introduced the concept (time-piece-rate pay) for workers to be paid on the number of pieces they produce in specific time. In this context, hard workers increase productivity and their income. Businesses adopted this method as there was increased productivity and lower unit cost. However, workers were unsatisfied with the boring repetitive tasks and to be treated like human machines leading to unstable work environment. The Human Relation School of thought, which recommended managers to take more interest in the workers in treating as people with worthwhile opinions, was introduced. It was concluded that motivation is best achieved by better communication between managers and workers, manager involvement in workers lives and working in teams. This is a paternalistic type of management with merits in modern industry settings. The Neo-Human Relations School was introduced in the 1950's and which centered on the psychological needs of employees. The theory states that there are five levels of human needs for employees to be met at work. Needs are listed in a hierarchy: physiological, security, social, esteem needs and self actualization. A two-factor theory of motivation was introduced. The first factor suggests motivators, which are concerned with the nature of the job itself, how interesting and whether opportunities for promotion exist. Hygiene factors defined as the factors that surround the job such as a reasonable level of pay and safe working conditions.

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4. REALIZED BENEFITS FROM MOVE TO MASDAR CITY

Traditionally, the shareholders or stockholders are actually the owners of a company and hence their needs must come first. But the stakeholder theory argues that, beside shareholders, other parties as regulatory bodies, trade associations, bankers, communities, employees, suppliers, customers and competitors are involved. However, the nature of what is a stakeholder is highly contested (Miles, 2012, p.285). Therefore a compromising approach is vital to address the interests of all the parties in a decision to move to Masdar city. Thorough evaluation of the merits and demerits of the move should be done. In the business world, Incentive theory states that a company owners should calculate employee's compensation in such a way that employees' aims come into agreement with the owners' aims. Uncertainty has qualitatively different implications than risk in studying manager incentives. The relationship between uncertainty of profitability, where profitability is multiplicative with the managerial effort, and moral hazard was studied (Zhiguo et al., 2012). The study demonstrated a 'learning-by-doing' effect where investors who face uncertainty tried offering higher incentives to managers to induce great efforts from them. It was concluded that there was a positive relation between profitability uncertainty and incentives. As for sustainability, the business community is beginning to appreciate corporate social responsibility in search of sustainability. Furthermore, in the last decade, there was an expansion of the e-economy as a result of explosion of the information technology with its impacts on the traditional economy. Environmental degradation has been a feature of the traditional economy; hence, sustainability as an alternative economic growth model should be based on relevant knowledge and innovative technologies. Available infra-structure and additional facilities in Masdar city are appealing incentives to move in.

5. DATA ANALYSIS/ DISCUSSION

The present study was conducted to critically evaluate the justification and motivation of companies for relocation in Masdar city. Information was collected by a questionnaire which was completed by officials of the companies that selected to relocate in the city.

Analysis of results shows that regarding Sustainability Objectives as perceived by companies in Masdar city, there is agreement that health and safety (3.57/5) and employee rights (3.43/5) are priority objectives for human resources; while training and development and equal opportunities (3/5) are as well important. In an example of sustainable cities such as Masdar's, training, research and development are pivotal duties for employees. Seeking innovative solutions for sustainability problems rather than mimicry is a promising approach. The institutional theory advised industrial firms to avoid just duplication of activities of successful firms or to follow industry recipes and best practices blindly but to appreciate environmental pressures (DiMaggio and Powell, 1983, p.147). Objectives should provide observable and measurable results that need to be achieved within a timeframe. While sustainability objectives should be designed for benefit of the organisation, it is important that they include elements that assist in resolving some community problems and environmental issues. Innovation is a key to driving new sustainable products which serve sustainability objectives. This must be considered seriously when drawing short term and long term objectives.

For environment, energy conservation and renewable resources (4.29/ 5) are priority objectives while carbon reduction and capture and management of natural resource consumption are important issues. This indicates a high perception of the issues of energy conservation and environmental degradation which are essential for sustainability. Exploring and utilizing other sources of energy may play a role in preventing environmental pollution and change of people consensus towards an environment-friendly way of living. For community areas, participation in education programmes (4.14/ 5) and support for local community groups (3.57/ 5) are priority objectives.

Furthermore, in light of Organisation Values results illustrated that maximizing profits is a critical aspect of organization's long-term plans for growth and development, have the highest average rating with (2.29/5). Involvement of the organisation in environmental sustainability obligations comes second with (2.00/5). It was believed that maintaining the original values and beliefs of the organisation shapes the choices to be made about future activities, has the lowest average rating with (1.33/5).

The most important value aspects, as the companies believe, are cultural and ecological with ratings (4.29/6) and (4.14/6) respectively, while the employees are the least important value for them. This comes in

contrast to motivation theories which recommend trial of different ways to motivate employees to increase productivity.

In perception of the companies as which department should be responsible for sustainability initiative, the sales department comes first with rating of (4.71/6), then, with the same rating (3.71/6), come the human resources, finance and marketing departments. Profit for a company is vital as the fuel for machines; hence as the survey indicates, financial departments are the driving force for the sustainability initiative.

As for the part of the most important reason that affected the decision to move to Masdar city, the influence of other residents in the city gained the highest rating of (4.00/5). Other influential reasons for moving with high ratings are the tax benefits which are better than other areas, rents and other operating expenses and the location of the city that facilitate easier links to other parts of the country.

A highly-rated motivation reason for companies to move to Masdar city was offered financial incentives (3.40/5). The second-rated reason was the belief that working and living in the city is in the best interest of the employees with (3.00/5), whereas the facilitation of companies objectives toward CSR and Sustainability by moving to Masdar, were seen as the least motivation that drive the company to make a decision of locating in Masdar with average rating (1.50/5). At this stage of the development of Masdar city towards a sustainable city, the response is not contrary to expectations, as time and experience will improve appreciation of sustainability objectives.

Other reasons for locating in Masdar city were stated by two respondents. First, "for long time, Masdar was the only general free zone to do business in Abu Dhabi; it is a reason to settle there for many companies". Secondly, the company "Gulf Green Environmental"in a belief to assist Masdar City with energy-saving and water recycling/ water treatment technologies and brings the benefit of some of previous experiences gathered from other projects in other countries where success in reducing energy and water consumption has been reached.

Response of the companies to the realized benefits from relocation in the city gave, more or less, similar rates for a number of benefits. The result do stress the fact that the companies acknowledged a number of realized benefits after relocation or it may be due to the large number of choices offered for this statement. The highly-rated realized benefits with a rating of (3.40/5) were improvement of profitability from working within the city, closer ties with the local community than elsewhere and learning how to profit from the social and sustainability activities. Then follows three realized benefits with a rating of (3.20/5) which is close to the above rating indicating that these benefits were important as well. These were improvement of organisations' relationship with local authorities which led to satisfaction of their requirements more easily, inclination of employees to be more knowledgeable about social responsibilities after relocation, and the increase of interest from ethical investors. It has been stressed by the Network theory that strong and weak ties are key concepts in organisations' relationship. Strong ties are essential for productivity and fulfillment of organisation objectives (Thorelli, 1986, p.37). Analysis of the survey also showed that it was not clear how companies managed to align their business strategy and sustainability objectives, with the lowest rating of (2.33/5).This finding may cause some concern as by working in a sustainable city, companies should align their business strategy and sustainability objectives. Sometimes, sustainability objectives may be covered with ambiguities unless clearly defined and identified. In this context, more surveys and studies are needed to collect more data about existing practice and sound avenues to fulfill sustainability objectives of the city.

More realized benefits from moving in the city have been described by the companies participating in the present survey. Association with Masdar city and social performance enabled the companies to recruit high quality candidates to important positions in the organisation, which was the highest rating benefit (3.20/5). The next rating benefits with (3.00/5) were creation of policies to satisfy expectation of employees with regard to diversity and equality, and gaining financial benefits from supporting programmes that contribute to the improvement of society and the environment. Next to these benefits in ratings come others that mainly explore administrative issues with average ratings between (2.80 – 2.83/5). To satisfy demands from regulatory bodies, organisations have adopted reporting and dissemination practices, is the first in the group. Then improvement in accountability practices made them more transparent and readily accessible by stakeholders, beside revision of management structures to enable clearer accounting of the organisation's social performance. This improvement of administrative performance is a very important acquired benefit after relocation that adds to the virtues of Masdar city. The response that has received the lowest rating of (2.20/5) was the organisation has differentiated itself from competitors through its association with the Masdar City initiative. It indicates that association with the Masdar City initiative has not turned a company to advantage over competitors, which is fair to keep a healthy competitive atmosphere. Other realized

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benefits from operating within Masdar was reported by one respondent who indicated that "GGE has started working with Masdar City on various energy saving initiatives and have found the people within Masdar to be helpful and have a good understanding of the sustainable agenda we wish to promote".

General observations after completion of the questionnaire, 100% of respondents requested to be informed of the survey results. Furthermore, 50% of respondents agreed to participate further in the present study while the rest were not interested. This is encouraging as such surveys are always needed to collect data on different aspects in the building and development of the city.

It appears that relocation in Masdar City offered the companies a platform that is motivating and rich in aspiration and opportunities to face the challenge of adopting the right sustainability strategy. To put the matter in a business perspective, this will reveal how commitment to sustainability can be truly sustainable over the long term.

5. CONCLUSION

The study was designed to collect data by a questionnaire to critically evaluate justification and motivation of companies for relocation in Masdar City. Sustainability Objectives in the human resources area pointed out that health and safety and employees rights were priority objectives. For environment area, energy conservation and renewable resources were priority objectives. Participation in education programmes and support for local community groups were priority objectives for community issues. Organisation values indicated that maximizing profit was priority objective for companies with the cultural and ecological obligations as the most important value aspects. The most important reason that affected the decision to relocate in the city was the influence of other city residents. The companies suggested the sales department as the most suitable to be responsible of sustainability initiative. Financial incentive offered to companies was the most motivating reason to relocate. The benefits from relocation were reported to be improvement of profitability, close ties with local community, learning how to profit from social and sustainability activities, to recruit high quality candidates and improvement of administrative performance. In general, the cumulative effect of the acquired benefits in the city fulfilled a priority objective for companies, which was maximizing profit.

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A PRACTICE ORIENTED PERSPECTIVE: DESIGNING EMERGENT BUSINESS PROCESSES FOR THE FOREIGN PROCUREMENT DIVISION OF THE KUWAIT MINISTRY OF DEFENCE

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ABSTRACT

This paper is a practice oriented perspective on business process management in public service organisations (PSO) to design emergent business processes (EBP). The public sector in the Gulf Countries is challenged to improve performance and reduce internal process complexity, to prepare for an alternative economy not based solely on oil and gas. This action research (AR) applied the theory of deferred action to design new EBP for a PSO to reflect emergence and improve cost reduction and reduce the time taken to sign procurement contracts. AR involves problem identification/framing, design of initial process model and its application, review and refinement and evaluation, and building a theory based on evidence from the study. A systematic framework was used to improve performance that includes detailed prescription of business process to provide high level of capabilities for continuous improvement.

KEYWORDS

Business processes, emergence, well-being

1. INTRODUCTION

McCrudden (2004) argues that public procurement can be used to improve social outcomes. This paper provides a practice oriented perspective on procurement process management in public service organisations (PSO). Westell (2011) shows managers can be designers; they can design for sustainable future (Irwin, 2011) and sustainability in PSO (Kalubanga, 2012). The culture of Gulf countries is not as formal, following rules. Management practice in PSO is a combination of local culture and the culture of following rules imported from other countries that focus on organisational efficiency and effectiveness (Benbya, 2005). Finding a way to combine the local culture of the Gulf countries with formal rules is a challenge to improve PSO performance. In this action research (AR), the theory of deferred action was used to combine local or informal ways with formal rules to design emergent business processes (EBP).

Kuwait Government wants efficiency improvement in public service organisations (PSO). Here we explain how managers can make decisions in uncertain conditions to save time and costs by redesigning business processes. The driving force for applying process thinking is to produce better outcomes for citizens (Hartley et al., 2008:3).

2. BUSINESS PROCESS MANAGEMENT

The literature is mainly about techniques and methodologies for designing business processes. Hammer (1990) and Hammer and Champey's (1993) original work was aimed at businesses to be more competitive. However, assumptions about the nature of organizations made by business process methodologies can be questioned. They assume organization is stable and predictable. Methodologies assumes structure,

procedures and policies of organizations can be predicted and remain stable once designed. There is evidence that organizational structure and procedures are not predictable or stable (Feldman, 2000). Organisations can be emergent, meaning unexpected events can happen to upset designed business processes. This suggests implemented business process need to change. Current process design approaches also assume that the organisation's environment has no effect on the designed business processes. They assume, once implemented the process will work as designed unaffected by its changing environment. Also, methodologies assume there is a cause-effect relationship. Methodology is the cause that can produce predictably the way the organisation's process can be carried out, the effect.

The rational design approach used in business process design methodologies can also be questioned (Simon, 2006). Rational design assumes that all process requirements, its events and information, can be specified by managers in advance, to enable business process designers to design business processes. But the evidence of emergent organization (Feldman 2000; 2004; Maguire and Mckelvey 1999) means that there will be unexpected and unpredictable events and emergent information that cannot be pre-specified for the purpose of designing. This AR focused on how to design EBP for this type of emergent organization.

These assumptions of cause-effect, stability, predictability and environment are questionable. They can be better explained by the ideas of emergence and self-organisation in complexity theory (Gell-Mann, 1994; Pavard & Dugdale 2006). Complexity theory has been applied to organization design (Stacey, 2000a; 2000b; 2003) and management (Maguire and Mckelvey, 1999). These ideas of emergence and self-organisation are relevant to EBP design approaches. Patel (2007) applied the idea of emergence to explain unpredictable events in designed business processes. He explained processes do not behave as designed because of emergence, and developed the deferred model of reality (DMR) to manage emergence. This theory of deferred action is used in this action research.

3. EMERGENT BUSINESS PROCESSES

Emergent organization is uncertainty and unexpected events (Truex et al. 1999; Markus, 2002; Patel, 2005). Organisational routines lead to continuous change (Feldman, 2000) and the structure of organisation is emergent (Feldman, 2004). Grobler (2006) explain how uncertainty affects decision making. Business processes activities have emergent properties, with implications for decision making and business process design. How can we design EBP? Cavallo (2000) suggests 'emergent design' but offers few practical methods. Marjanovic (2005) proposed a framework for coordinating information systems with EBP and Patel (2007) proposed the theory of deferred action.

3.1 Theory of Deferred Action

We used the deferred theory to conceptualise and redesign EBP in the Kuwait Ministry of Defence's Foreign Procurement Division (KMOD/FPD). Emergence cannot be predicted, so the design problem becomes how to give design capability to managers to design locally, make decisions in uncertain conditions. Patel (2006; 2010, 2012) suggests practical design principles, in which rational design can be combined with emergence to reflect uncertainty to design emergent systems.

Changing environment forces designed systems to change, making them 'deferred systems.' Figure 1 shows planned action as the square object 'Structure'. Structure is created by agency (people) purposefully to achieve goals and it requires rational design to achieve a goal. Institutions are created by interaction of people's actions and structure. Actions and institutions affect each other (Barley and Tobert, 1997). Another effect on structure is emergence, so structure is purposeful and emergent and determines the types of rational behaviour possible. Emergence is shown as the octagon object 'Emergence'. Emergence defines and drives agency and agency acts on structure. Agency is affected by emergence and responds accordingly. Agency or deferred action is shown as the circle. Agency is simply the actions of actors.

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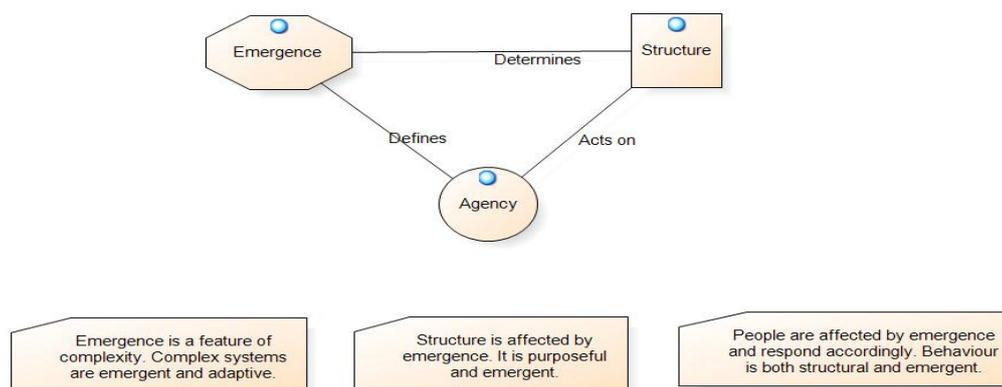
Figure 1: Deferred Model of Reality

4. FOREIGN PROCUREMENT DIVISION

Foreign Procurement Division (FPD) Director and Eng. Shamayel have good experience of completing procurement projects but the Small Ammunition Factory (SAF) project was different. Unexpected events were occurring in SAF, which prevented the Guidelines from being carried out, including international currency inflation, new end user requirements, splitting of project into Construction and Installation and Design Services, Audit Bureau inspection, new contract negotiations and delays between CDs. The organisational emergence fused the predictable with unpredictable. This was being confused by all the military and civilian employees for being a standard process.

Management Learning Research on learning can be traced to single-loop learning and double-loop learning (Argyris & Schon, 1978; Arygris, 1990). Senge stressed the importance of systems thinking in management (1992; 2006). Learning from action is recognised in the literature (Burnes et al., 2003; Borredon et al, 2011) and from management experience (Kolb, 2011).

Senior management wanted to improve the process to save time and cut costs. Obtaining approvals from departments can take three to six months, resulting in several years to sign contract. Eng Shamayel thought about inexperience of new employees and length of time taken to learn the FPD Guidelines. She wanted to understand the causes and to learn how to redesign the business process based on the model of emergent organization. She decided to undertake action research (AR). When she discussed the problem with the FPD Director, she too became interested in learning the causes and was interested in learning how to make the procurement process efficient. She agreed that the SAF process should be researched to find a solution.

5. ACTION RESEARCH METHODOLOGY

Action Research (AR) is done in practice. Eng. Shamayel framed the problem, designed the solution to contribute to practice, and contributed to theory development. Emergence had an impact on individual activities of the SAF procurement process. Whereas other research methodologies seek to determine an explanation of the observed phenomenon, the explicit aim of this AR was to determine what should be the improved procurement process and to develop theory. Action Researcher learnt practical and theoretical knowledge by applying AR to the actual experience of managing the SAF procurement project. She sought to understand the problem and improve it by developing empirical knowledge through scientific methodology.

AR is applied research, where 'research informs practice and practice informs research synergistically'; its particular value is in 'explaining what goes on in organisations' (Avison et al., 1999:94). It 'sets out both to make scientific discoveries and to solve practical problems. It does this by acquiring, testing and using knowledge as part of a single process' (Clarke, 1980:152). This AR study applied the theory of deferred action to the procurement process problem, by exploring, describing, analysing and improving the ongoing SAF procurement project and redesigning the FPD procurement process.

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Action Researcher developed and applied process knowledge, which was used by management to improve BPM. It involved understanding the needs of the Ministry of Defence, functions of FPD, and collecting data on actual experiences of process owner, process workers and stakeholders. It resulted in understanding conditions to support redesign of the procurement process. The AR methodology used was a process of specific research that informed the structure of the research and contributed to management practice and theory development.

Process Issues: the problem, overview and background

Process is time-consuming because of many formalities. All the individual activities to complete the procurement process normally take three years to complete.

5.1 Data Collection and Analysis Methods

Data was collected by interviews and research diary. Concepts from the deferred theoretical framework were set-up in NVivo as 'nodes' and the causative and associative relationships between the nodes defined.

5.2 Data Interpretation

In Action Research Cycle (ARC) One, structure within which the FPD operates and the planned action it attempts to execute were revealed. Stakeholders, process owner and process workers focused on compliance with the Guidelines, but actual process activities differed from the Guideline activities. Data suggests the procurement process was both planned and emergent, shown in Figure 2. Resources, Changing Supplier Conditions and New Requirements show the changing environment, which is characterised as 'Emergence in SAF PP'. Emergence required additional procurement steps than stipulated in the Guidelines, 'PA as Implemented in SAF'. Data suggests a characterisation of the SAF project as composing 'Planned Action FPD Guidelines', 'PA as Implemented in SAF' and 'Emergence in SAF PP'. Eng. Shamayel observed that the FPD Guidelines were problematical to implement in the actual context of the SAF procurement because of 'events' that occurred unexpectedly and which resulted in action being taken in the new context – different from the assumed context of the FPD Guidelines.
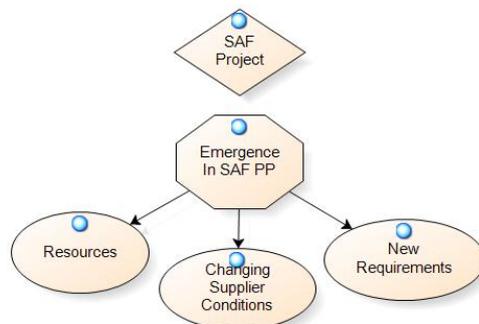
Figure 2: The SAF Project and Emergence

Interviewees mentioned 'uncertainty', 'when things change', 'sudden' and unpredictable. The subjects of these terms include suppliers, contract, Guidelines and managing. The Director of FPD and process workers tired to overcome unexpected events, but requirement to adhere strictly to the Guidelines was a constraint.
In ARC Two, the aim was to redesign the procurement process as an emergent business process (EBP), to reflect emergence observed in ARC One. This was facilitated by the FPD Director and by gaining approval of Minister of Defence, working closely with his Undersecretary. Redesign of business process was based on

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the DMR. Newly designed emergent process was put in place to provide high capacity for continuous improvement. As an outcome, it is expected to reduce money costs and make time savings.

The FPD Guidelines and procurement process were redesigned as a deferred system. Redesign included: procurement process Quality Group, procurement process Design, EBP Trails, Evaluation of New EBP and Learning Outcomes. The redesign of the EBP focused on structure, emergence, and agency established in ARC One.

5.2 Procurement Process Quality Group

FPD Director got Ministerial approval for the research and Procurement Process Quality Group (PPQG) was setup to redesign the process. It included the author, FPD Director, Undersecretary. In the twelve meetings the redesign process was well organised, each meeting had a purpose and was driven by process design concepts. Discussions involved structural issues like seeking approval and planned action like adjusting the FPD Guidelines. Both structure and planned action needed to change. Action taken by the PPQG is shown in Text 1.

5.2.1 Text 1 Action Taken

Reference 2 - 3.98% Coverage

Action to be taken: Letters are prepared by the secretary of the director of the contract department and signed from her and the assistant undersecretary to all concerned departments 'legal, financial, logistic and supply, and end users) are set and sent for their action to provide us with 2 members from each department that are involved directly in the pp and influenced in it.

6. CONTRIBUTION TO MANAGEMENT PRACTICE

Research should 'provide insight and support to practitioners' (Smart et. al., 2009). This AR gave management new concepts to account for emergence in the procurement process. Managers learnt while working on real problems. Deferred theoretical framework was used to develop better evidence based practice. A beneficial outcome of the collaboration between Eng Shamayel and her colleagues is her initiative to form positive work experience groups, supported by the Director of FPD. Eng. Shamayel is accepted by her line manager and colleagues for her humanism.
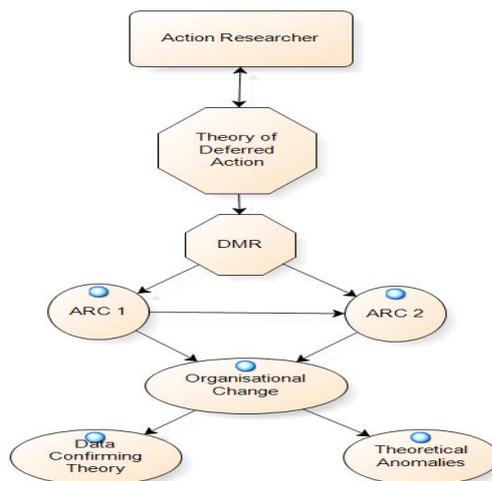

Figure 3: Contribution to Theory Development

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7. CONTRIBUTION TO THEORY DEVELOPMENT

One, DMR was applied to design the FPD procurement business process. Two, deferred action was observed in the SAF procurement project, verifying the phenomenon of emergence and deferred action. Three, deferment points were identified and verified empirically for the first time since the theory was published. Figure 3 shows theoretical contribution to understanding emergent aspects of the process. Deferred action was observed in the SAF procurement process. This was action taken by the FPD Director and Directors of CDs with approvals from the Minister of KMOD. A new contribution to the theory by this AR is the first empirical identification and verification of deferment points.

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HAUNTED BY CAPITAL INFLOWS: HOW "HOT MONEY" FROM ABROAD FUELLED UAE'S FINANCIAL CRISIS

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ABSTRACT

To understand UAE's financial crisis, it is necessary to trace the foreign capital flows in and out of the economy. During the boom years of 2003-2008, foreign investors provided UAE's commercial banks and Government Related Entities (GREs) such as Dubai World with ample short-term loans. This inflow of foreign loans led to a dramatic rise in domestic credit, fuelling a property bubble in Dubai as a result. Subsequently, this bubble burst with the fall of Lehman Brothers in 2008 as global credit markets froze and UAE's commercial banks and GREs lost their access to foreign short-term credit. This boom-bust cycle highlights the destabilising effects of short-term capital flows, casting further doubts on the supposed merits of opening up capital markets to foreign investment.

KEYWORDS

Financial crisis, Middle East, economy

1. INTRODUCTION

The outbreak of the 2008 financial explosion has in many ways discredited the supposed merits of capital-account liberalisation. Even the IMF, the zealot advocate of this policy during the 1990s and 2000s, has recently started to support capital controls (IMF, 2012a). For the past two decades, many heterodox economists, notably Joseph Stiglitz, have argued that capital-account liberalisation has been extremely destabilising for developing countries, making their economies vulnerable to large foreign capital inflows and outflows (Ocampo & Stiglitz, 2008). Stiglitz (2003, 2000) has shown that almost every financial crisis in emerging economies since the 1990s- the period when capital market liberalisation was spearheaded by the IMF in the South- has been preceded by a large inflow of foreign "hot money", namely short-term loans. This paper claims that the recent financial crisis in United Arab Emirates (UAE) provides *another* case for the destabilising effects of foreign capital inflows. It demonstrates that the cycle of boom and bust in Dubai's property market between 2003 and 2009 can be explained by the inflows and outflows of foreign "hot money".

Section one of this paper discusses the theoretical disputes between orthodox and heterodox economists regarding the policy of capital account liberalisation. Section two shows that UAE's property bubble and financial crisis fits neatly into the theoretical predictions of heterodox view. Section three briefly engages with the political economy of the crisis, especially with the critical role of oil and the state-business relationship in UAE. Finally, section four concludes by proposing several policy reforms.

2. CAPITAL MARKET LIBERALISATION: THE THEORETICAL DISPUTES

Since the 1990s, capital market liberalisation has been championed by the IMF and the World Bank. According to these institutions, this reform leads to efficient allocation of capital at the global level as capital flows from rich-countries, where return on capital is low due to its abundance, to developing countries, where

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return on capital is high (Eichengreen *et al*, 1999). In this way, developing countries can obtain access to a large supply of foreign capital and improve their growth potentials by opening their economy to inflows of loans, bonds, equity and foreign direct investment. Following this rationale, many countries in Latin America and East Asia gradually opened their capital accounts during the 1990s.

These reforms, however, have been heavily criticised by Keynesian economists, notably Joseph Stiglitz, and even many mainstream economists such as Jagdish Bhagwati (1999) and John Williamson (2000), who generally believe in the efficiency of free markets. According to them, almost any developing country that has opened its capital markets has experienced a financial crisis as a result. Notable examples of this claim are Japan, South Korea, Indonesia, Philippines, Thailand, Mexico, Argentina, Russia and Turkey (Ocampo & Stiglitz, 2008). In this perspective, capital account liberalisation creates macroeconomic instability as it makes the economy vulnerable to large inflows and outflows of "hot money", namely short-term speculative capital. Importantly, capital flows give rise to boom-bust-cycles; they flow in when the economy is booming and create asset bubbles and suddenly flow out when those bubbles eventually burst.

The detailed mechanism of this boom-bust cycle is as follows: when the economy is experiencing a period of growth, foreign investors pour money into the economy through loans, bonds, equity investment or foreign direct investment. This large inflow of capital results in a dramatic growth in domestic credit supply, fuelling asset bubbles and inflation[1]. This process makes the economy vulnerable to a liquidity mismatch as firms borrow short-term funds and invest them in illiquid long-term assets such as housing. Importantly, this process is self-reinforcing: the emergence of asset bubbles lifts economic growth and further encourages foreign capital inflows. Eventually, however, this self-reinforcing process reverses when the asset bubbles burst due to either an external shock such as a global financial meltdown or an internal shock such as a sudden increase in the supply of the relevant assets. Consequently, the financial sector explodes because of its exposure to the bubble and, at the same time, foreign capital flows out of the economy, triggering a currency crisis if the exchange rate is fixed. Stilgitz (2006) and Stiglitz and Furman (1998) show that 1994 Tequila Crisis, 1997 East Asian crisis and 1998 Russian crisis were all caused by the same mechanism. Interestingly, as will be shown, the recent crisis in UAE followed a similar path.

The heterodox view outlined above is rooted in ideas of Keynes. He believed that financial markers are not efficient at allocation of capital as they deal with an uncertain future (Skidelsky, 2010). This uncertainty motivates herding behaviour among investors, creating large swings in financial markets (ibid).

3. DIAGNOSIS OF UAE'S FINANCIAL CRISIS

The Dubai World's default on its foreign debt in November 2009 triggered the UAE's financial crisis, sending shock waves to global financial markets (Chailloux & Hakura, 2009). In order to contain this crisis, the Government of Dubai and Abu Dhabi were forced to provide guarantees and bail-outs to their domestic banks to calm financial markets down (ibid). Dubai's property bubble was at the heart of this crisis. Between January 2003 and July 2008, the house prices in Dubai rose by 140% (figure 2-1) and ignited a constructing boom in the economy. This boom, however, was followed by a sudden collapse in the house prices in mid-2008, generating a financial panic as property developers lost their ability to repay their heavy debts, which were mostly raised from foreign investors in short-term maturities. This section shows that foreign "hot money" played a major role in creating the rise and fall of Dubai's housing sector.

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[1] *Large capital inflows, also, lead to drastic appreciation of domestic currency and hurt the development of tradable sector (the Dutch diseases).*

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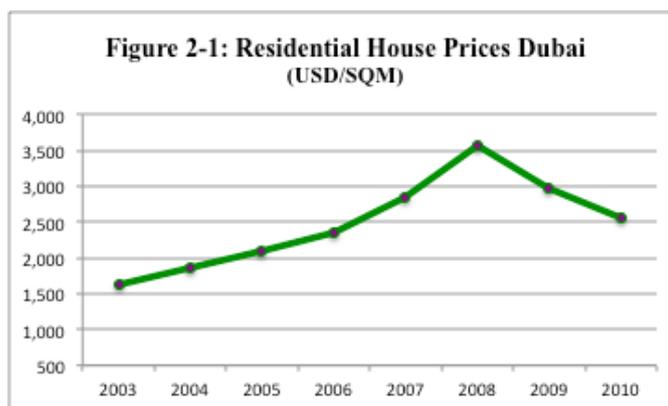
Figure 2.1: Source: Reidin.com

4. THE BOOM YEARS

UAE is a small economy that is extremely rich in oil and gas. During the recent three decades, the development strategy of UAE has been focused on diversification of the economy away from oil towards service sector, primarily construction and financial sectors (Hvidt, 2009). An open door policy towards foreign investment has been an integral part of this strategy. As a result, the policymakers have been following an open capital account policy to create a liberal environment for foreign capital (ibid). They have also pegged dirham to dollar to reduce the exchange rate risks associated with foreign investments. Importantly, the main engines of growth in UAE are Government-Related Entities (GREs) that are comprised of a web of commercial corporations, financial institutions and investment arms that are directly owned by Government of Dubai, Government of Abu Dhabi or the ruling family under the umbrella of major holding companies (IMF, 2011).

These entities were behind UAE's economic boom between 2003 and 2008 (ibid). This boom started with a surge in the price of oil that brought windfall revenues for UAE (table 2-1). This oil bonanza translated into large current account surpluses and build up of vast foreign exchange reserves. UAE's government, however, followed a prudent fiscal policy in response to this boom as signified by its budget surpluses.

Commercial and residential property development was the key element behind UAE's high economic growth as indicated by the rapid expansion of the construction sector after 2003. This construction boom, in turn, encouraged an influx of immigrant labour into the country; UAE's population increased from 3.3 million in 2002 to 5.06 million in 2009.

Critically, this property boom was, to a major extent, funded by a drastic increase in the foreign borrowing. UAE's commercial banks borrowed heavily from abroad, mainly in short-term maturities. As figure 2-2 shows, their foreign liabilities soared from 35,059 dirhams in 2003 to 320,970 dirhams in 2007. Comparing to UAE's economy, this inflow of foreign capital was very large; for example, the banks' foreign liabilities reached 33% of GDP in 2007. In addition to this source, the banks also received ample deposit inflows from foreigners; the foreign currency deposits rose from 47 billion dirhams to 123 billion dirhams in 2007 (IMF, 2012b). Notably, the main driver behind these deposit inflows was the speculation that dirham might be revaluated against the dollar due to UAE's spectacular economic growth (Chailloux & Hakura, 2009, IMF, 2012b).

UAE banks, in turn, used these funds to shower domestic private firms, primarily GREs, with credit. As demonstrated in table 2-2, domestic credit expanded at a rapid pace from 2003 onwards. Unsurprisingly, this credit boom dramatically increased liquidity and inflation. Most crucially, the policymakers were unable to tame this credit growth through tightening of monetary policy as they were following the policy of an open capital account with a pegged exchange rate to the dollar, hence, effectively losing their independence in monetary policymaking (Espinoza & Ananthakrishnan, 2012). As a result, during the boom period, the interest rates set by UAE's Central Bank traced the Federal Fund's rate very closely (ibid). This translated into negative real interest rates due to the high rate of domestic inflation (figure 2-3). Moreover, the lack of a

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developed domestic bond market greatly diminished the ability of UAE's Central Bank to conduct sterilisation (Chailloux & Hakura, 2009).

Table 2-1:

	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Oil Revenues (Millions of dirhams)	93,705	114,781	158,087	227,231	304,762	320,439	427,666	287,206	349,932
Real GDP Growth	-7%	16.4%	10.1%	8.6%	8.8%	6.5%	5.3%	-4.8%	1.3%
Growth in Construction	11%	16%	11%	18%	25%	30%	29%	-4%	8%
Current Account Balance (% of GDP)	2.5%	5.2%	5.6%	11.6%	15.3%	6.0%	7.4%	3.0%	7.7%
Central Bank Reserves ($ billions)	15.3	15.1	18.7	21.3	28.0	77.9	30.9	24.7	32.0
Budget Balance (% of GDP)	-2.1%	1.7%	5.5%	13.9%	18.1%	15.4%	16.5%	-12.6%	-1.3%

Source: IMF, UAE: Selected Issues & Statistical Appendix (2012b, 2007)
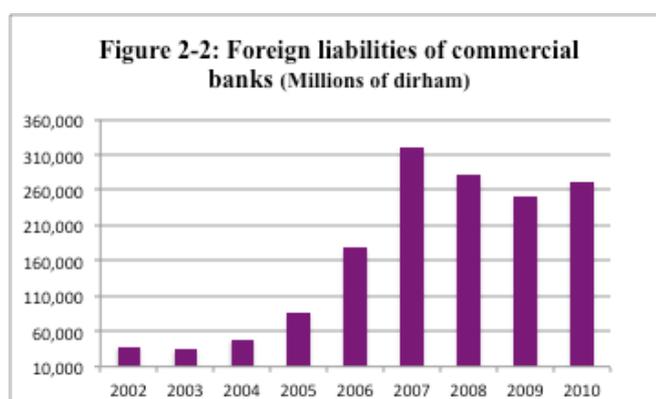
Figure 2.2: Source: IMF, UAE: Selected Issues & Statistical Appendix (2012b, 2007)

Table 2-2:

	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Credit growth	14%	18%	25%	42%	35%	36%	42%	3%	1%
Liquidity growth	16%	19%	23%	33%	23%	41%	19%	9%	6%
Inflation	2.9%	3.1%	5%	6.2%	9.3%	11.1%	12.3%	1.6%	0.9%

Source: IMF, UAE: Selected Issues & Statistical Appendix (2012b, 2007)

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Dubai's property sector was the prime beneficiary of the massive increase in credit. The commercial banks provided both the suppliers and buyers of property with vast credit, hence increasing the house prices and the supply of property at the same time. Credit to the construction sector shot up dramatically between 2003 and 2008[2] (table 2-3). The IMF estimates that the commercial banks' overall exposure to the real estate sector accounted for 29% of their assets in 2010 (IMF, 2011).

Table 2-3:

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Credit to Construction (% change)	14%	18%	25%	42%	35%	36%	42%	3%	1%

Source: IMF, UAE: Selected Issues & Statistical Appendix (2012b, 2007)
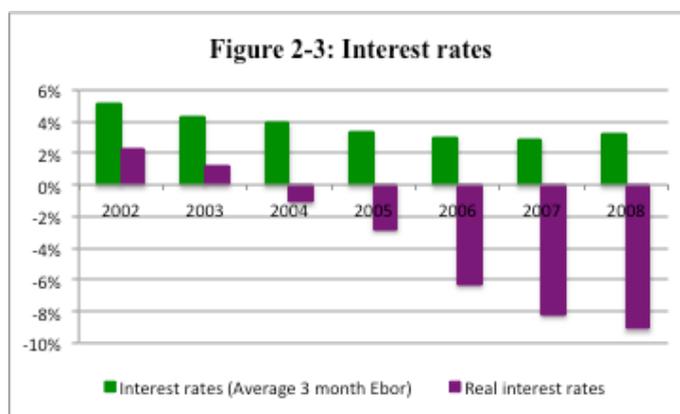
Figure 2.3: Source: Chiallboux &Hakura (2009)

The property development in Dubai was mainly dominated by Government Related Entities (GREs), most notably Dubai World, which owns various real estate firms such as Nakheel, Limitless and Economic Zones World (IMF, 2011). Other than borrowing from the local banks, these GREs have also raised sizable funds from foreign investors in the form of syndicate loans, bonds and Islamic sukuks (ibid). There is no reliable data on the foreign liabilities of GREs, however, the aggregate data on the liabilities of UAE corporates reveals the borrowing binge by the GREs (figure 2-4).

Naturally, the heavy foreign borrowing made by the commercial banks and the GREs greatly increased the financial vulnerability of UAE' economy; at its peak, the external debt of the banks and the GREs amounted to 74% of GDP (IMF, 2012b).

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[2] *The increase in credit to the construction sector in 2009 reflects the government bail-outs provided to the property developers, namely GREs.*
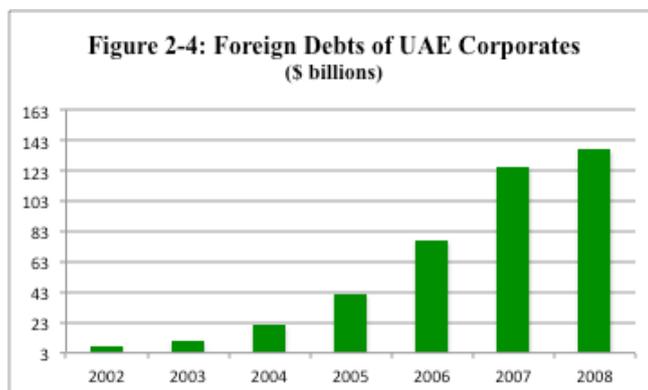
Figure 2.4: Source: IMF, UAE: Selected Issues & Statistical Appendix (2012b, 2007)

4. THE BUST

The fall of Lehman Brothers in September 2008 triggered a panic in the global financial markets, pushing stock markets into a free fall and freezing credit markets. This shock adversely affected the UAE's commercial banks and GREs as they lost their access to global credit markets and could not roll-over their short-term debts. As a result, they faced a liquidity crisis because they had borrowed mainly in short-term maturities and had invested in long-term assets. Subsequently, the GREs decided to halt their construction projects in order to save their cash through reducing their operating costs. For example, Nakheel, the property development arm of Dubai World, announced its plan to layoff 500 employees to "accommodate the current global environment" (Ulrich, 2009). Similarly, the Trump Tower project on Palm Jumeirah was suspended on the following day. These events singled the end of Dubai's construction boom and reversed the market sentiment; investors that had bet on the rising house prices started to sell their properties, sending the market into a sharp downfall (figure 2-1). Naturally, the declining house prices deteriorated the liquidity crisis of the GREs and the commercial banks as their assets lost their value. Therefore, more construction projects were put on hold and additional redundancies were announced. The stock market suffered accordingly due to its high exposure to the housing sector (ibid). Unsurprisingly, a wave of capital outflows followed, especially in the form of deposit outflows (IMF, 2011).

Ultimately, this growing crisis resulted in Dubai World's default on its debt on November 2009 and triggered a new round of panics and capital outflows (figure 2-2). This default pushed the oil-rich Emirate of Abu Dhabi to provide a bailout for Dubai World via Government of Dubai. Also, fresh capital was injected into the banking sector and a three-year blanket guarantee on bank liabilities were introduced to protect this sector from the property bust. Moreover, benefiting from large petrodollar savings, Abu Dhabi introduced a stimulus packaged to lift the aggregate demand (IMF, 2011). In addition, UAE's Central Bank devised swap arrangement with other central banks to ensure the resilience of the economy against the capital outflows (ibid). Thanks to its massive foreign reserves, the UAE was able to easily defend its fixed exchange rate with the dollar.

The above narrative highlights that the boom-bust cycle in Dubai's property market and UAE's financial crisis at large was entangled with the flow of foreign capital, notably short-term loans and deposits. The property bubble was financed mainly out of foreign short-term loans, making the economy vulnerable to external shocks. In the end, this bubble burst with the fall of Lehman Brothers as the commercial banks and the GREs lost their access to global credit markets.

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4. THE ROLE OF OIL AND CRONY CAPITALISM

The link between oil and financial crisis is well-documented in the resource curse literature (Manzano & Rigobon, 2001). Oil booms make it easier for resource-rich states to borrow in international markets because petrodollars are viewed by foreign investors as an implicit, or often explicit, collateral for loans. For instance, in the aftermath of the 1973 oil shock, many oil-rich countries of the South embarked on a borrowing binge that ultimately ended up in severe financial imbalances in the 1980s.

Similarly, UAE's financial crisis can be related to the oil boom of the mid-2000s. As mentioned, this boom lifted economic growth and invited capital inflows. But more importantly, it led to accumulation of immense foreign exchange reserves by Abu Dhabi, ensuring the foreign investors that this Emirate had enough financial power to bail-out other Emirates in case they experienced a crisis. At that time, Abu Dhabi had the second richest sovereign wealth fund in the world after Norway with $627 billion (Sovereign Wealth Fund Institute, 2013). It can be argued that this large oil saving facilitated the subsequent debt overhang.

Other than oil, the nature of state-business relationship in UAE played a major role in the emergence of the debt overhang. As pointed out, the business sector in UAE is mainly comprised of a complicated network of Government Related Entities such as Dubai Holding, Dubai World and Abu Dhabi Investment Council, which are owned by the government or the ruling family. These entities enjoy high political influence due to their close links with the political elite. They often use this special tie to gain access to economic rents distributed by the government. Thus, the state-business relationship in UAE is usually characterised as "crony capitalism" (Hertog *et al*, 2013). Arguably, in the view of foreign investors, this system of "crony capitalism" amounted to an implicit government guarantee for the GREs, creating a belief that these entities would definitely be bailed out by Emirates if their investments fail. Thus, the foreign investors felt safe to shower the GREs with short-term loans- a classic case of moral hazard.

However, the GREs reckless borrowing cannot be entirely attributed to the moral hazard created out of oil and the crony capitalism. After all, there was a genuine bullish sentiment about Dubai's property development. Dubai's bright history of rapid economic growth in the past had generated a confidence among foreign investors about the sustainability of its property boom. This is evident in the high credit ratings of Dubai's government and GREs. In other words, the unsustainable property bubble was justified through the past success of Dubai in creating wealth as well as its strong economic fundamentals, echoing "this time is different" narrative that has been integral in every financial crisis throughout history (Reinhart & Rogoff, 2009).

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

To understand UAE's financial crisis, it is necessary to trace the foreign capital flows in and out of the economy. During the boom years of 2003-2008, foreign investors provided UAE's commercial banks and GREs with ample short-term loans, fuelling a credit and a housing bubble in Dubai. Arguably, the growing oil revenues and the GRE's implicit guarantee from the government encouraged this inflow of foreign "hot money". Subsequently, this bubble burst and triggered a financial panic when the foreign credit dried up after the collapse of Lehman Brothers in 2008. This boom- bust cycle can be seen as another supporting case for the destabilising effects of short-term capital flows, casting further doubts on the supposed merits of capital market liberalisation.

Importantly, the UAE case offers several policy lessons for Middle East countries, in particular Gulf economies. Firstly, these countries should consider using capital controls as a policy tool for discouraging sudden inflows and outflows of "hot money" (equity, bonds and short-term loans) with the aim of preventing future episodes of financial crises. This reform is more urgent now as the quantitative easing in the US, UK and Europe is revitalising large foreign capital flows from North to South, especially into emerging markets and Gulf economies, hence jeopardising their macroeconomic stability. These fresh inflows have pushed many developing countries, notably Brazil, to devise capital controls. But, given the long-term commitment of many Gulf countries towards creating a hospitable environment for foreign investment, capital controls can be introduced in a very limited fashion in this sub-region.

Secondly, prudential measures should be imposed on banking sector to curb the emergence of credit bubbles. For instance, policymakers can reduce the systemic risk in financial sector by monitoring banks'

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capital adequacy ratios and overexposure to a particular economic sector. To be sure, in the case of the UAE, these instruments were effectively deployed in the aftermath of the 2009 crisis to decrease the vulnerability of the banking sector. However, the point is to use these instruments during the periods of economic boom to block the emergence of asset bubbles in the first place.

Thirdly, in terms of exchange rate policy, the UAE and other Gulf economies can peg their currencies to a basket of currencies instead of only dollar. This reform creates a policy space for these countries to detach their monetary policymaking from the Federal Reserve; for instance, Kuwait has moved towards this direction lately. Finally, transparency of the private sector needs to be improved in the UAE and rest of the Gulf countries. The private sector in these countries is dominated by Government Related Entities that have close ties with the ruling families. Currently, most of these institutions do not publish annual reports and, therefore, little information is available on their financial health. More transparency in these institutions can certainly increase the quality of foreign investment and macroeconomic policymaking in Gulf countries. Needless to say, this reform entails a change in the political economy of the state-business relationship in these countries.

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DIVERSITY/RECRUITMENT & PROMOTION POLICIES PROMOTING GENDER, AGE AND ETHNICITY EQUALITY

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ABSTRACT

The recruitment is the lifeblood in any organisation, and attracting the suitable candidates is the key to its global success, and by this conference our main goal is to ensure the sustainability and human Development in our society as well as the business organization of the same country. Humans are the main assets of development without their effort and support any industry will not reach its goals. Therefore, the role of human resource management where multinational organizations are focusing is making the organization more productive, cost-effective, and customer service oriented. Recognizing that an organization's employees are the key to its global success; many organizations are re-evaluating their methods of appraising and motivating employees. As a result, the annual employee evaluations, which have been a staple of human resource managers in many industrialized nations for decades, have been widely criticized in recent years. Opponents of traditional evaluations argue that they are too costly - both in terms of quantifiable hard costs and unquantifiable soft costs. Recognizing the errors in our Human Resource system; either for the current employees (Promotion system) or for the future employees through (Recruiting) is considered as the first step to effective transformation to meet the future goals of sustainability and to the concept and discipline of human development. And one of the reasons behind the errors in the Human Resource is not including diversity in their future strategy. Or not considering diversity as an essential component of the modern HR practices. In this study, I decided to focus on diversity in three different aspects, Gender, Ethnic and Age.

1. INTRODUCTION

Any business organization is obligated to deliver their promises made to customers. One of the key factors of organization sustainability and development of its own people will increase in its own performances, as well as its revenues. The International Public Management Association for Human Resources (IPMA-HR) has conducted several studies on HR transformation and according to them the key enablers of a successful HR transformation are as follows:

1. Strong management support.
2. Strong Internal skills
3. Appropriate funding levels.
4. Highly integrated IT system
5. Shared Services.
6. Outsourcing.
7. Union support.

The strong management is having the great role within this process for flexible transformation into the desired outcomes, measuring the current culture and identifying actions to close the gaps between the current and the ideal. In addition, the smooth transition to the best HR practices requires the emphasis on the strong internal skills which scored high right after the strong management support. World class organizations are seeking to make optimum use of these new capabilities (Human) as part of their HR Transformation journey. In the Middle East we are trying to make the best HR practices in order to meet the need of our society as well as our nation. And part of these practices is valuing the human part of any organization and making the best practices in order to deliver optimal solutions for our society. As HR employee I have learned that HR operations are aiming to be more efficient and effective through human source development into creating business value through the HR services that address a company most pressing strategic challenges. Moreover current research indicates that the HR has three key focus area of strength where each one of these area play a major role:

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- People Skills (the main interest of the HR is the PEOPLE, employees relationship matters)
- Interviewing and Assessment (Assessing applicants and conducting applicable assessment for needed jobs)
- Functional Services (Hire to retire group of activities)
- Record keeping (generally good manual recording system).

As you can see that Human element is considered as the main concern in any organization success, and in the HR team in any organization tend to provide the applicable practices to support the current and future employees' needs. Human resource is committed to maintain an inclusive climate that is free of unlawful discrimination, harassment and retaliation. In addition, HR believes that the pluralism of beliefs, opinions and life experiences enhances the learning environment and the workplace.

Diversity promotes a respectful, accessible and inclusive community. And managing growth in workforce diversity and increasing the representation of women and minorities throughout the organization is a critical strategic human resource management issue for most organizations (Thomas and Ely, 1996). In order to manage demographic change in the economic and labor markets, a common HR change strategy is to increase the diversity of the work force through hiring. After realizing the importance of the diversity for any organization, it is the time for most of the organization to start working on their future strategies and involve a well-structured system that will promote diversity in the workplace.

As I mentioned earlier diversity is very essential tool, and based on the organization support to this tool, it will benefit from what this tool holds into the relationship of a successful economic development. An important issue which generate widespread interest and degree of controversy in the worlds and which has a great link to diversity and what I think it's the most essential part of diversity which is Gender diversity. You may not agree with me by choosing the gender diversity over the other types of diversity such as the (Ethnicity or age). Well because ethnic groups are not generalized across all countries; which are the reason why women play a very important role in this sense: for example, the Higgs Report (2003) stresses the importance of incorporating women onto boards of directors, especially when there is little or no female representation. Gender diversity is very important nowadays especially after most of the cultural barriers have been removed in our country. For example in Saudi Arabia, if you take a look of the female situation in five years ago and compared it to their current situation you will find huge differences. In addition females are becoming business holders and playing a major role in the country's economic, where they can entitle a great market share and be part of the market segments. Therefore, a lot of companies have changed their market strategies to meet the needs of the female market segments such as FORD. Moreover, there is an increasing number of the female workforce comparing to the previous years, female are now equipped with knowledge and prepared to enter the workforce, and they have already reached management position where they can play an important part of leadership.

In Saudi Arabia, HP was the first international information technology company to hire female employees. HP started its Saudi operations more than 30 years ago, and it employs hundreds of people in the Kingdom, mostly in the enterprise and service divisions and in the personal systems and imaging and printing groups. Historically, Saudi women were allowed to work only in healthcare and education, and were not allowed to work for private companies. Up until 2005, HP's entire Saudi workforce had to be male. In 2006, the government implemented new regulations to allow females to work in the private sector, and HP hired its first female employee then. Today approximately 15% of the company's employees in Saudi Arabia are women, and they work across multiple functions. In compliance with the local laws and with respect to the country's traditions, the company provides a separate section in the office for women. HP tripled the size of the women's section to make room for more female employees. Apart from the separate workspace, female employees get exactly the same benefits as men. There are still certain roles women cannot perform, such as making sales visits in person to customers, but nothing prevents women from making sales calls on the phone. "For the young, it's a dream to work for a private company that spurs innovation and respects the local culture. So far, female employees have done very well for HP Saudi Arabia. Turnover is less than 1%, versus the industry average of 10% to 20%, and there are so many qualified female candidates where their biggest challenge is to pick the best of the best.

Although the number of female in management in the whole world is less than I expected but just give it a time and the female number will increase in the workforce and this will asset to increase the opportunities for them to be in higher position as well. Although we have noticed great changes in the women being part of the organization and part of the diversity, they are facing some sorts of obstacles such as:

- Negative assumptions in executive ranks about women, their abilities, and their commitment to careers.
- Lack of career development and succession planning for women resulting in limited experience in line positions that lead to top management.
- Failure to hold managers accountable for advancing women.
- Assumption that women will not relocate for career advancement.
- Lack of mentoring for women and exclusion from informal career networks where men learn the unwritten rules of success.
- Perceptions that women's management and leadership styles do not fit with the corporate culture
- Appraisal and compensation systems those are not uniform for men and women.

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Benefits systems and productivity measures that do not take into account new policies such as flexible work arrangements; discrimination and sexual harassment (Catalyst, 1998).

A well-studied strategy should be taken within the country to make sure of the equality based system between males and females, Although, we will find some people thinking about the females being employee or business holders which is that females are not qualified such as males in performing their job or the prevailing assumption that work life is less centered to women than men. We are here against stereotyping and our aim is to promote equality in the business, so such statement will not be considered as a barrier for the females' advancement.

Moving into another dimension of Diversity that sense the humanity in the people and the way they interact with each other which is the ethnic diversity. Promoting ethnic diversity in the workplace is an issue that is facing many companies regardless of how small or large it may be.   In today's world where corporations are merging and relocating overseas, diversity is very crucial to a company's survival.   A working environment that is ethnically diverse gives employees an opportunity to work with all kinds of people, and learn to appreciate different cultures, customs, and traditions. Promoting ethnic diversity is not an easy task, but it can be achieved with proper Commitment, Recruitment, and Communication. Moreover, Managers and staff often need help in fully realizing these advantages and the Office of Ethnic Affairs works in becoming more responsive to the needs of their diverse workforce, customers and stakeholders.

In addition, ethnic diversity concerned with the differences of the following; (Nationality; Country or area of origin, Race, Color, Language, and religion) appreciation of such diversity will promote Competitive and effective workforce, through each idea and thought contributed by people that are from different background, experience, and culture. Saudi Arabia's free market economy has undergone remarkable changes in a relatively short period of time. It has evolved from a basic agricultural society into a regional and global economic power with a modern infrastructure. Petroleum is an integral part of the Saudi economy comprising 45 percent of the country's GDP. Saudi Arabia is the world's largest producer and exporter of oil, accounting for 20 percent of the world's oil reserves. In recent decades the Kingdom has increasingly diversified its economy and today produces and exports a variety of industrial goods all over the globe. The government has played an essential role in industrial and economic development through the implementation of mega-projects expanding the country's industrial offering. The private sector is playing an increasingly larger role in the Saudi economy –accounting for 48 percent of the gross domestic product (GDP). The sector is expected to continue growing, especially as Saudi Arabia opens its doors further to foreign investment. All these previous statements of Saudi Arabia will only promote a perfect place ethnic diversity, the demographic changes, the expansion of the business and foreign investments all will help into create an ethnic diversity. And this for the business is essential where considering every possible solution or idea assist to help and support the current business situation for the future development.

A different overview concerning with the inequality of ethnic diversity is by a research which has been conducted for the early career experiences of 729 Black and White MBA's. Black MBA's had significantly lower job involvement than whites (cox & Nkomo 1991). Job involvement means as the extent of psychological identification with ones work (Jans, 1985). It's closely associated with job motivation and has specifically been shown to predict expected or actual turnover (Lee & Mowday, 1987; Siegel & Ruh 1973). Therefore, this research directly links the career outcomes of non-majority-group members to the organizational outcome of employee turnover. The research shows enhancing the ethnic diversity with the organization will lead to Attracting and retaining the best available human talents, enhance marketing efforts, higher creativity and innovation, better problem solving, and more organizational flexibility (cox&blacke 1991). Let me give you a marvelous example of the ethnic diversity in real life. The country of Mauritius, The culture of Mauritius is a nice blend of culture of the Chinese, Indian, African, Creole and the Europeans. Every custom and tradition of Mauritius reflects this unique blend of potpourri of culture of the European as well as the Asian countries and civilizations. This rich diversity is found in every aspect of the Mauritian life. Churches can be found next to a mosque, Indian temples next to Chinese pagodas. Various Indian believes, Buddhist, Christian and Muslim festivals are celebrated with much fervor and devotion all year round by the different communities. Some of these celebrations can be quite spectacular like the fire-walking ceremony that is performed on the Cavadee day.

> "I know there is strength in the differences between us. I know there is comfort, where we overlap." AniFranco

Moving into an essential part of diversity that demonstrates a marvelous mixture of dynamic, multi-generational workforce with a diverse range of skill sets that is beneficial to the company, which is Age diversity. By Creating professional environment that are rich with experience and maturity as well as youthful exuberance will help in creation an inclusive organization an increasingly important part of sustainable business success. You already know that the impact of changing demographics and social and technological change makes good diversity management and the creation of an inclusive organization an increasingly important part of sustainable Business success. A workforce composed of different age demographics creates an environment where each generation brings different skills and talents to the table. For example, young employees likely have a strong grasp on the use of high-tech business mediums such as social networking, online product demonstrations and webcasting. More mature professionals often have exceptional interpersonal skills and perform well in environments where traditional in-person communication is used. This diverse range of skills sets can offer an advantage to a company that caters to a multi-generational demographic.

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In Saudi Arabia, the minister of education has provided a great support for the education of its people especially recent high school graduates, where investing in those young talents bring the competitive advantages of the country of Saudi Arabia. Moreover, Saudi Arabia has heavily invested in its educational system to prepare its citizens for life and work in a modern, global economy. A great numbers of universities have been established in the last 5 years, where these universities are being utilized with variety of majors to support the need of economic as well as the human sustainability. Not to mention King Abdullah Scholarship for the qualified students to pursue their Bachelor, Master or even PHD in several of different countries around the world. This huge development in the educational system of Saudi Arabia requires organization to be prepared to hold the mass of the qualified young graduate talents to be highly invested in the work force to meet the needs of the country as well as the society. Organization will experience a noticeable change in the variety of workforce skills after they have been supported by high education system. Saudi Arabia is preparing the workforce for the opportunities and challenges ahead as it's been the purpose of many new government programs. But the question is: are most organization prepared to utilize such diversity in the skills and prepared to invest more on these talents? Most arab organization are sticking the traditional way, they are not prepared for changes, they prefer the safe way to deal with any organization but the time and the new development of the country of Saudi Arabia will impose a new way of dealing with the staff. We are trying reach a level of sustainability and human development and such level require a great support from organization to provide for the society. Organization should provide a developed attraction method meets the new needs of those talents, upgrading the current policies into effective policies meet both organization needs and people needs, raise the awareness of innovation and new development and be prepared for the changes.

The engineer in some organization who reached an age where they can't perform as they used to, help other apprentices in their current job, for sure experience is an essential component for the job success, for the age diversity it has been shown that it has a clear link into reducing the recruitment cost, retained cooperate knowledge and increase internal investment in the staff. One of the company who took the Age as the core of their diversity plan is Centrica, an integrated energy company operating predominately in the UK and North America. It has included age as a core element of its diversity strategy and policies for a number of years. Ahead of the Employment Equality (Age) Regulations 2006, the company reviewed its policies and practices to ensure they embraced the new legislation. This led to changes, including:

- A new retirement process
- Amendments to company redundancy schemes.
- The removal of upper age limits for entrance to British Gas. Apprenticeship schemes.
- The development of an age-awareness e-learning package for managers and employees.

The company provides a clear action plan to ensure the age diversity in addition they develop an integrated communication and training program to ensure that employees and managers understood the requirements of the regulations. The awareness and training program won Centrica, some 36 percent of whose employees are over the age of 40, an Employers' Forum on Age award for helping managers and employees to understand the new legislation. Working in partnership with the London Development Agency, the company produced a video for small businesses, promoting the business benefits of employing workers of all ages. With the new economic development and the expanding of the business will make diversity highly needed and due to the new development and the business expansion as part of the economic development will impose diversity in the future. The most valuable of all capital is that invested in human beings; and of that capital the most precious part is the result of the care and influence of the mother. 20 years after Alfred Marshall wrote that sentence, human capital has become the centerpiece of knowledge-based economies where diversity in workplace has worked their way into the strategic agendas.

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PUBLIC EXPECTATIONS IN TERMS OF PUBLIC POLICY

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ABSTRACT

The three buildings that are important in a country where there is a strong and powerful with a strong role for the national and international arena can be first, economic structure can be the second. Political structure and the third social structure public policies are developed according to the condition of these structures. Therefore, after analyzing these structures can only be applied. Turkish economy is growing. Turkish economy is the second fastest growing economy after China. In contrast, there are positive developments in foreign trade relations. The great reduction in the foreign trade deficit and current account deficit has created an opportunity for Turkey to manage its foreign exchange supply without the IMF. In spite of the global recession, owing to the preparedness of Turkish banks and their effective management of the recession, the country is far from being afflicted with a financial crisis. Turkey which political stability in the last decade, became one of the few countries of the world, which was not much negatively affected by the global crisis. Turkey was the country with most rise in employment during the crisis in G-20 (developing countries) countries. Economic stability is at the forefront of many political stability

KEYWORDS

Economic, Social, Political, Policy

1. ADMINISTRATION POLICIES

The difference of opinion forms unity atmosphere in the low and upper level of administration can be an effective analysis in the event that synthesizes the understanding of modern administration. One of the important socio-economic consequences of the liberalization and globalization of Turkish economy in the aftermath of2002 has been the expansion of industrialization and central-local industrialization nodes Today, in many countries, as an important indicator of the level of economic development and social development, the size of the structure employment and unemployment is discussed. one of Turkey's most important social and economic problems is unemployment. Reductions in unemployment in the last policy was applied.

The mission of the AKP management is to build a movement for an economic system that prioritizes the well-being of people the new economic models which developed from economic and social structure on faced by our society. In response to this need, a New Economy structure is emerging, drawing together the people and the vision to meet the challenges of our time. The New Economics structure is a national leader's politics within this movement, acting at the nexus of a powerful network of organizations working collaboratively toward the same goal: to rebuild our economic system on the pillars of resilience, justice and sustainability. In order to accomplish this, it must been continued to build a professional and effective non-profit development strategy, identifying the opportunities to partner with foundation sand individual enterprising to make our vision a reality. Conscious community is increasingly aware of and supportive of new conscious ideas and programs, but there is still tremendous opportunity to engage with potential resource and build understanding of the need for an economic system that works for people welfare. The people in this position will be responsible for working closely with staff to build development strategies.

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Current Trends in administrative steps are:

- Persons and institutions tasks and responsibilities
- Privatization
- Managerial methods of public administration
- Common sense
- Participatory management (citizen-oriented)

The success of administrator in the administration can be evaluated according administrator's success and ability in the problem solving. Since, the success criterion that reveals administrator talent is ability of problem solving. The duty of administrator solves the problems appears impossible. The modernization of economic activities as a whole depends upon the use of modern technology and according to the community instead of traditional methods.

Individuals forming the society are ensured their livelihood and their common nature of public expectations are met by the political authorities are important requirements. To meet the social needs and to do a variety of services by the central administration is not enough. More rational use of resources, services the further strengthening of in terms of quality and effectiveness of the controls and coordination and adequate and resource allocation equal distribution of the layers of the society becomes necessary. The stability in the government gains societies' confidence. Administration policies are ensured confidence. Prime Minister and the AKP government tell us that we should be happy. Because Turkish economy is growing. Turkish economy is the second fastest growing economy after China.

Table 1: The Consumer Confidence Index

Monthly	N	%
February (2013)	*76.7*	*1.2*
January (2013)	*75.8*	*3.0*
December (2012)	*89.0*	*-0.2*
November(2012)	89.18	4.03
October (2012)	85.73	-3.47

2. FINDINGS

Concentration of population and economic activities in metropolis' created major and it's problems cannot be controlled . With the increase of problems and necessities, local authorizations are risen [1]. It should serve diverse groups which demand to ensure heterogeneity.

Table 2: Gender Situation

	N	%
Male	3510	65
Female	1890	35
Total	5400	100.0

2.1 Socio-Cultural Features

This research contains stratified and elective sampling method. Firstly questions forms had applied in Konya then same questions was applied in Turkey with random sampling methods. There are 3510 males and 1890 fameless in this research. The groups were chosen through the instrument of random sampling methods reveals subsistence-level and wage-price structure.

As it will be seen clearly from Table 3, participants' age level is more than 24 years old. The most intense age range is between 35 and 44.

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Table 3 Age Situation

	N	%
25-29	240	4.4
30-34	780	14.4
35-40	1290	23.9
41-44	2400	44.4
44-49	600	11.1
50+	90	1.7
Total	5400	100.0

Table 4 Satisfaction with government policies

most satisfied	N	%
satisfied	2800	51.9
less satisfied	1940	35.9
Least satisfied	660	12.2
Total	5400	100.0

Participants of 51,9% are satisfied from government policies, them of 48,1% are less satisfied. The modernization of economic activities as a whole depends upon the use of modern technology and according to the community instead of traditional methods.

Table 5 Public Expectations

	N	%
Preventing of unemployment	1230	22.8
Increasing of welfare	1480	27.4
Avoidance of conflict	1390	25.8
Ensuring the integrity in the society	1150	21.3
Others	150	2.7
Total	5400	100.0

According to the table 5 respectively participants of 22.8% , them of 27.4%, and them of 25.8 wants to respectively preventing of unemployment, increasing of welfare, avoidance of conflict.

Table 6: The opinions of the future of Turkey

	N	%
Strong	2730	50.5
Mean	1560	29
Weak	1110	20.5
Total	5400	100.0

Policy and techniques are milestones of the key concepts of public administration. It helps to understand how government acts and it aims at establishing analytical and theoretical frameworks. Among many ways of approaching public policy there is the system theory perspective.

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2.1.1 Openness

Openness policy should be applied in the decisions and actions of family members as well as an organization. The members of family know role clearly. Unless they are aware of it, they may encounter problems when they realize action. The actions have already been done and going to be happen in the future must be stated explicitly.

2.1.2 Investigate – Rest

When the one of member of family display unfair behavior against to other members the reason of this behavior should be investigated. As an illustration, irritable behavior of father causes various tensions in the institution It May be there may stand factors resulting from business life in the base of this behavior. In this case, other member of community help their father that has stress is the true path for consolation and emotional sharing. Thereby, "not add fuel the flames" results in reconciliation and integration.

2.1.3 The System of Relations

The relations system and healthy information flow must be provided for realizing an objective and camaraderie. Specially, the members of institution get on with others for unity of institution and analyze others' personal characteristics and discrepancy.
The system of relation are mostly defined as having "vertical loyalties "being patron-client based rather than developing "horizontal loyalties" New image is to be the servant of the people
It is important to harmonization between people and institutions. That is the secret of success in managerial

2.1.4 The evaluating of situation in decision making process

The decision-making framework begins with gathering data. Data is processed through the framework and transformed into useful information. Data mining is one of the tools which has a wide spread application area in public and private organization

2.1.5 The division of labor/work-sharing

Actions will be done toward role, status and purpose of member of management cut into pieces according to various criteria and everyone can be assume work in the field of talent and expertise cause to consist of rational the division of labor.

4. OTHER EXPECTATIONS PRIORITY PUBLIC SERVICES

In general terms, transport is the movement of people and goods from one point to another. The technological advances dramatically changed the means and the ways of transport. Roads and railways were constructed and the ships were modernized. With these developments, people and goods has been able to travel long distances in a shorter time period. On the other hand, the government of Turkey has given special attention and priority to railways among other transport modes since 2003, which has resulted in allocation of large amount of investment and new rail transport policy both in passenger and freight transportation. Approximately 10 billion US Dollars investment was allocated to railway infrastructure between the years 2002 and 2010.

   TCDD is also involved in international, intercity, regional and combined passenger transportation 5,5 billion passenger km was procured by transporting 22,3 million passengers in 2010. High Speed Train(HST) operation between Ankara and Eskisehir was started in 2009 as the first step of Ankara Istanbul High Speed Train project. Recently, the second HST operation started between Ankara and Konya. One of the aims of the national transport policy is to increase cooperation between the public authorities and private sector by exploring private funds in the road transport area. Regarding the physical infrastructure for the facilitation of road transport at border crossing, Turkey has been successfully implementing a Public Private Partnerships (PPP) based approach which provides the upgrade and renewal of road transport border crossing gates technological infrastructure. Since the financial means of states for making necessary investments for infrastructure projects are often limited (Country Report October 2011, Republıc Turkey).

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5. CONCLUSION

Turkish people need to trust management for the implementation of social and economic policies. The main demand of the society focuses on two issues within the framework of a fair distribution of economic justice and democracy had to be reorganized and perceived by the public as a result of these policies and the realization of power gave rise to a significant increase in votes.

Increasing the level of income of the people that are important to economic growth and prosperity are important. In this context, to respond to the expectations of the people of the great stability .To be successful in its ability to respond to these expectations indication of the political administration may increase even more. The main causes of tension and crises should be resolved with the social cooperation and integration.

Some of these steps are:

    a.   reducing tensions
    b.   prevention of corruption
    c.   Common consensus in mind
    d.   Responding to the demands of the people

In addition to these factors we have argued that in Turkey, the implementation of the neoliberal economy policies and its socio-economic, political and cultural impacts have been the most important factor for rapid rise of management's political. Turkey will be effective in all areas of the world, its three main areas (structure) depends on the strength. These: social structure, economic structure and political structure.

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DRIVING VALUE THROUGH CORPORATE SOCIAL RESPONSIBILITY (CSR): A COMPARATIVE STUDY BETWEEN NATIONAL AND MULTINATIONAL ORGANIZATIONS OF PAKISTAN

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ABSTRACT

Corporate social Responsibility (CSR), worldwide is the emerging concept and every responsible organization is striving to achieve societal expectations of social responsibility to sustain its business for the long term. Since there is no government endorsement for CSR, many companies are doing it voluntarily. The aim of this study therefore is to understand the perception and concept of CSR in the local context of organizations working in Pakistan (national and multinational) in doing so, further our understanding on what drives them to engage in CSR. This paper use qualitative inductive approach with phenomenological research design. The phenomena are identified by gathering in depth information and perceptions. Two national and multinational organizations leading in their respective sectors, were selected for the study. The data is congregated through unstructured in depth holistic and phenomenological interviews from the CSR or social investment/public affairs dealing managers and directors of selected organizations. The results indicated that most companies do not have dedicated departments for CSR and more focused on sustainable resources and positive contribution through philanthropy. However their prime focus is not to create visibility but all agreed that CSR does play a role in reputation building (directly/indirectly). Overall driving value is through minimizing risk and giving back to the environment and community. Multinational companies have broader goals from their respective regional offices but local companies are moving towards the true concept of CSR by realizing the continuously changing obligations of company as well transformation of societal mentality.

KEYWORDS

Corporate Social Responsibility (CSR), Sustainability, Driving Value

1. INTRODUCTION

The origin of corporate social responsibility has its roots with the formation of company during the industrial revolution era. Company is a combination of two Latin words *cum* and *panis* – meaning "breaking bread together" (Arndt, 2003). Hence since inception, companies were not viewed in isolation but having interdependent relationship between society, business and economic system. Kotler and Lee, in their book, mentioned that the CSR is a promise by the organizations that they would improve the community well-being through discretionary business practices and through contributing their resources. Discretionary business practices are the voluntary commitments that the organizations make for establishing and executing the best CSR activities.

Most of the companies engage themselves in CSR activities not only as contribution to the goodwill of society but also to increase it's corporate and brand image. The aim of the study is to understand the perception and concept of corporate social responsibility of national and multinational organizations working in Pakistan. Also if national and multinational organization's driving value behind the corporate social responsibilities activities is same or different

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2. TOTAL CORPORATE SOCIAL RESPONSIBILITY MODEL

Total Corporate Social Responsibility (TCSR) is the model which is designed to evaluate the organization's social performance. There are four responsibilities emerged from the CSR concept, these are ordered in the hierarchy form

2.1.1 Economic Responsibility

The first responsibility of any organization is its economic responsibility. Any of the organization is the economic unit, working in the society, produce products and services to earn and maximize profit for its owners and stockholders. It is fundamental responsibility of an organization to maximize the shareholder's wealth.

2.1.2 Legal Responsibility

Every society is bound by some rules, laws and regulations that each and every business has to follow. The organizations are bound to accomplish their economic goal with in the legal framework. Legal responsibility is what the society deems as important with respect to proper corporate behavior.

2.1.3 Ethical Responsibility

Organizations should be ethical in every manner, it is their responsibility that their decisions should be based on equity, fairness and impartiality, and everyone should respect the rights of individual. The organizations should provide different treatments to those individuals only whose goals and task's are different and relevant.

2.1.4 Discretionary Responsibility

After the economic, legal and ethical responsibilities, the discretionary responsibility is in line which is truly voluntary and conducted by the organization's desire to contribute in the society. It is not backed by any law or rule; discretionary activities are philanthropic acts which bring prosperity and self-satisfaction. It is the second face of TCSR, in which organizations truly work for the society well-being.

2.2 Initiative of Corporate Social Responsibility (Six Options for Doing Good)

According to Kotler and Lee, there are six major initiatives under the umbrella of CSR. The six major initiatives are:

2.2.1 Cause Promotion

In 2005, Kotler and Lee under this initiative described that organization provides funds, in-kind contributions or financial or other resources for enhancing awareness and concern about a social cause. In cause promotion program the organizations individually or with collaboration of other organizations, support fundraising, participation or volunteer recruitment for a cause.

2.2.2 Corporate Philanthropy

Philanthropy in simple is the act of donation, volunteering and provision of charitable aids. Profitable organizations with the intention to improve the quality of life, directly donate to the charitable organizations in the form of money, property or by endowment of institutions like hospitals or schools or by supporting other social purposes through direct donations (Kotler & Lee, 2005).

2.2.3 Cause Related Marketing

Under this initiative as suggested by Kotler and Lee (2005), the organizations contribute or donate the particular percentage of their revenues to a specific cause or problem. Organizations contribute for the specified time, cause, or product, or for the definite charity.

2.2.4 Corporate Social Marketing

According to Kotler and Lee (2005), for the public health issues, safety, for the better environment or for the society well-being, the organizations design, develop and implement the behavior change campaigns. Like some organizations run anti-smoking campaign as smoking is harmful for the human health.

2.2.5 Community Volunteering

The organizations encourage and appreciate their employees, their retail partners or franchise members to volunteer their time for the well-being of society and to support the small and local firms and cause. (Kotler & Lee 2005)

2.2.6 Socially Responsible Business Practice

The organizations establish, adopt and conduct discretionary business practices so they can provide safe and favorable working environment to their employees and also make investment for supporting the social causes to advance the community security and protect the environment. (Kotler & Lee 2005)

2.3 CSR is much more than Emissions

Lundeberg introduced the CSR theory. According to her perspective, corporate social responsibility is the way through which organizations conduct their business. CSR portrays the favorable image of the organization and assures the provision of best quality products and services. Organizations strategies and its policies should be the reflection of each other and be supportive. The organizations, with appropriate CSR framework and culture, had started their focus on low cost production, provision of safe environment, sustainability, suppliers, clients and consumers. Basically as per her concept, CSR is the combination of assurance of quality of products and services, sustainability, balancing work & life, safety and security, and code of conduct. (Lundeberg 2006)

2.4 Corporate Social Responsibility and Business Sustainability

Businesses are very essential for society and for sustainable business it is imperative to account for all stakeholders existing in a society. Famous instances of CSR success and failures such as Enron, Shell and Nestle in India prove that business sustainability goes hand in hand with CSR activities. Globalization forces coupled with technological innovation have increased awareness in which sustainable business have to operate.

2.4.1 Business and Society in an Interdependent World

The impact of businesses operation on the society is undeniable. Irresponsible business can ruin the whole society and responsible businesses can transform the social progress. Hence there is symbiotic relationship between social progress and gaining competitive advantage (Porter, Michael & Kumar, 2006)

2.4.2 Global Demands for Responsible Business

Increase demands of customers and all stakeholders have made the business environment highly uncertain and competitive. These forces constitute various factors of corporate social responsibility such as conscious stakeholders (customers, employees, shareholders, community, investors and environmental agencies) expect organizations to respond in best interest of society at large hence a major factor in success or failure of enterprise.

International consortiums such as UN, labor organizations, OECD, ISO standards have also created uniform guidelines to maintain certain standards and compliance is indispensable.

2.4.3 CSR and Business Advantages

There are distinguished gains of practicing CSR, which are not only limited to competitive benefits i.e. brand image, customer loyalty, retention but also financial i.e. increased share value depending upon the nature of business. The foremost is elevated brand image as it depends on how much customers have faith in the

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business. Many companies spend huge amounts on improving the lifestyle of poor community, conserving ecology, saving the environment for the future generations etc. All CSR efforts result in attracting the most talented human capital, bring cost advantage, innovation, managing their risk better.

2.4.4 CSR as a Strategy for Corporate Sustainability

Porras and Collins (2004) studied 18 visionary companies for six years, which were established before 1950; remain successful through thick and thin of time. The names were selected through the survey of 1000 CEO's and according to findings the key goals of these companies was not maximizing profits as expected but their ideology, values and sense of purpose beyond making money. These findings hold true for a17 companies except for one and clearly indicate that sustainable businesses primary focus is not on economic returns but focusing on CSR values at large.

Interview of Unilever's new CEO Paul Polman by HBR (2012) revealed that they plan to reduce the environment impact to half by 2020 lead in becoming socially driven and protecting the core of company. Unilever's sustainable living plan includes health and hygiene, nutrition, greenhouse gasses, water, waste, better livelihoods and sustainable living.

2.5 Corporate Social Responsibility (CSR) As Challenge For The State And Companies

Bippes (n.d.), in his research paper, elaborated that main idea is that the organizations should bear their responsibilities for the protection of environment and sustained yield of the production process. CSR is the realization of this idea into an economical reality. It is basically the contribution towards the welfare of the society, other than this he added that CSR is an emerging concept and it reflects the actions of the moral responsibilities of organization for ecological and social consequences.

According to the European CSR approach, the CSR is not considered as separate phenomena but it is the rational investment and part of business strategy of the organization. In the Europe, CSR practice is still new and the organizations are adopting it, government had followed this theme. But so many other countries are confused between what themes and method would be applied for CSR emergence, which is challenge for the organizations of that countries.

2.6 Driving Value in Corporate Social Responsibility

The interpretations of CSR are not uniform and it is very important to create a balance between core business activities. Bhattacharya and SankarSen (2012) conducted experiment about consumer's intentions to purchase computer accessories after they were educated about company's product quality and CSR activities. Consumer's intention was decreased after they learned about poor quality but active CSR efforts compare with high quality goods as they view that company should give preference to quality. This fact was further endorsed by researches about Fortune 1000 companies whose CSR efforts fetch greater financial returns comparing with less innovative competitors.

2.6.1 Corporate Social Responsibility in an Emerging Economies

Frynas (2006), select five developing countries for knowing the strength of true and new concept of CSR in these economies. The chosen countries are Malaysia, Argentina, Mexico, Nigeria and Pakistan, the basic objective of this study to find out that how deeply the true idea of CSR is rooted in these emerging economies. Due to lack of structured procedure and framework, the CSR policies are appear to be comparatively haphazard. The CSR activities are practiced in these economies but are driven because of exterior demands of developed countries, and multinational organizations are leading this agenda. Even in Islamic countries like Pakistan and Malaysia, CSR concept is not motivated by religious idea as in Islam some business practices are condemned like usury. Further, he concluded that CSR is a rising movement in these developing economies and it play key role in changing behavior of organizations in conducting business practices.

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3. RESEARCH OBJECTIVES & METHODOLOGY

Following are the research objectives

- To identify the perception of CSR in Pakistani organizations.
- To compare the concept of CSR of national and multinational organizations
- To recognize the basic motives behind the CSR activities of national and multinational organizations.
- To classify any gap exist between the CSR activities of national and multinational organizations.

3.1 Research Design

The philosophy of this research is interpretivism with inductive approach employing phenomenological research design. Phenomenological approach is use to enlighten the specific phenomena's and to study the experiences, perceptions, and convictions etc. The phenomena's are identified by gathering in depth information and perceptions of the participants. The data is congregated through unstructured in depth holistic and phenomenological interviews and memoing from the CSR or social investment/public affairs dealing managers and directors of selected organizations.

3.2 Procedure

First, an exploratory analysis was done by reading CSR reports from company(s) websites. Secondly, in order to investigate the drive behind CSR activities in depth holistic and phenomenological interviews of CSR department managers were conducted. Lastly, triangulation of research data was done through sustainability reports and companies news bulletins. All the investigations performed on the organizations, operating in Pakistani markets and involved in CSR activities

3.3 Population

For Interviews: Managerial level employees of head office staff of NOO, MOO, MFO and NF. Total population size is 13 CSR managers and chairpersons.

3.4 Sample and Sampling Method

Sample size for phenomenological interviews is more than 40% of the total population. The selected sample was based on judgement and purpose of the study, so for identifying the primary respondents the non-probability's purposive sampling had been considered.

3.5 Measurement/Instrument Selection

For in-depth interviews of CSR department managers of the respective organizations, the semi-structured questionnaire was designed through extensive literature review.

3.6 Variables and Hypothesis

The main three categories are assumed to be independent variables that are environment concerns, reputation and social obligations. Some of the independent variable reflects visibility and some are not so here visibility works as moderating variable, the value would the dependent variable.

From different research papers, it was reflected that the CSR is the emerging concept in all aspects. In this study the motivations behind why organizations commenced these voluntary actions must be fully observed. The main hypothesis is

H_0: There is different perception behind the drive of CSR activities of national and multinational companies.
H_1: There is no different perception behind the drive of CSR activities of national and multinational companies.
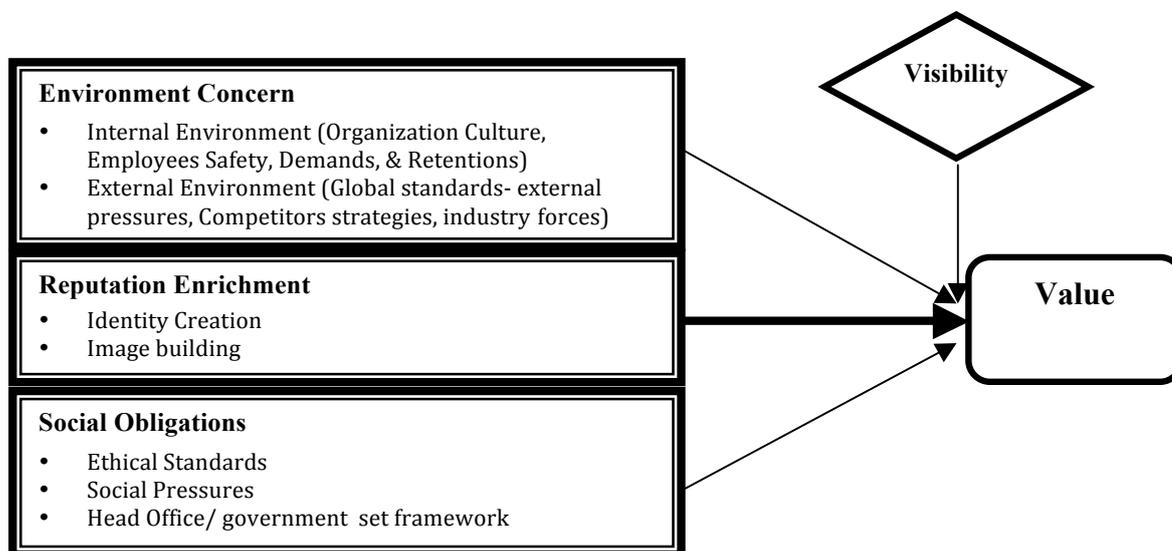

Figure 1: Suggestive theoretical framework

3.7 Plan of Explicitation of the Data

The data is analyzed through Phenomenological research approach. The word analysis is deliberately evaded as analysis means breaking the data into parts that may distract the whole phenomena. This study used explicitation of the data which means investigating the constituents of phenomena while keeping the whole context. Hycner's in 1999, illustrated the explicitation process, which is used in this study, the process starts with phenomenological reduction, proceeds with outlining the meaning units, clustering that meaning units to generate themes, then summarizing, validating and altering each of interviews would be done and finaly extorting common and unique themes from in depth discussions and interviews and creating a composite summary.

4. DISCUSSION AND ANALYSIS

Information is gathered by conducting interviews of CSR managers and chairpersons of sustainability departments. Interviews have been taken from two national organizations and multinational organizations.

4.1 Creditability Test

The questionnaire is designed on the basis of Concept Dimension & Element (CDE) analysis. Then it was sent to the research experts who reviewed it and modified some of its questions. It was also sent to peers for reviewing after modification. The questionnaire was also sent to CSR or HR departments of the organizations for approvals, from where information was collected.

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4.6 Phenomenological Analysis

Table 1: Phenomenological Analysis of qualitative data

Themes/Categories	NOO	MOO	NF	MFO
CSR Department	No	Social Investments & Communications	Separate Foundation	Corporate Affairs Head
Perception of CSR	Focused on Philanthropy	Minimize Risk & benefit Community	Consolidated Impact, cost effectiveness and sustainability	Reduce environment footprint & increase positive contribution
Employees Participation	No	Yes	Yes	Yes
Internal environment of Organization	Safe clean & friendly	Safe, clean & friendly	Safe, clean & friendly	Safe & Paper free
Visibility (CSR as Marketing Tool)	Yes, it creates publicity	No, we are not keen towards visibility	It creates visibility but it is not our marketing tool	Definitely it create visibility but it is not marketing tool
Global Market Forces	Abide by certain restrictions in some areas due to audit objections	Aware of other companies sustainability programs but design their own	Design in line with whole integrated setup	Follow their global guidelines
Competitor's Trends	Are aware but do not follow	Do not follow	Work independently	Do not follow
Government/Head Office trends	In some cases has to abide by government rules	Broadly described by regional office but can mould according to need of country	Decide on their own, keeping in view totality of operations	In line with the global guidelines and determine by the challenges of local setup
Reputation building	Yes	No	Yes	Yes
Driving Forces of CSR	Initially was purely based on publicity but now diverting towards society wellbeing.	Minimizing risk and benefitting the community not just the business	CEO's of other operating businesses in the group are the board members of foundation and they significantly contributes in implementing projects for the welfare of the society as they believe that what they gain from the society they must give back to them. Risk mitigation also influenced to do CSR practices.	Regional standards and the whole sustainability believe is implemented in the core strategy of the business. So, every decision is taken under sustainability trust.

5. CONCLUSION

The explicitation of the data shows that multinational firms are aware of CSR concept but somewhere they lack true spirit of CSR. On the other hand, the NF is dedicated towards implementing the best CSR practices and works only for the welfare of the society, they agreed that their activities creates visibility but their focus is not on image building or identity creation, their focus is on the creation of the value for every member of the society. The motive behind these practices is that their top level management is involved and believes that what they earn from the society must be given back to the community in the form of improved services, better offerings, and implementing necessary projects. Early researches reflected that only 5% of the national organizations are aware of the true concept of CSR or sustainability, this study prove that the NF is far behind active and truly understand the sustainable business practices and concept although the NOO while market leader in the oil sector is not equipped with the true concept of CSR. According to its manager, they are now implementing the CSR activities and practices and in near future, they will have CSR department also. As far as multinational concerned, they have adopted those areas, which are needed to be focused but somewhat they are bound to select from the philosophies suggested by their head offices. MOO and MFO,

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both are reluctant to provide employees views regarding CSR although they were much clear about their own perception, values, strategies, concept and understanding. For MOO and NF, other than business, minimizing risk and benefiting the society are the driving forces which lead to bring value in return and for MFO, implemented sustainability at every step of business and for NOO the community well being creates value.

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