EUROPEAN JOURNAL OF SOCIAL SCIENCES

ISSN: 1450-2267

Volume 40 No 2 October, 2013

Editorial Advisory Board
Leo V. Ryan, DePaul University
Richard J. Hunter, Seton Hall University
Said Elnashaie, Auburn University
Subrata Chowdhury, University of Rhode Island
Teresa Smith, University of South Carolina
Neil Reid, University of Toledo
Jwyang Jiawen Yang, The George Washington University
Bansi Sawhney, University of Baltimore
Hector Lozada, Seton Hall University
Jean-Luc Grosso, University of South Carolina
Ali Argun Karacabey, Ankara University
Felix Ayadi, Texas Southern University
Bansi Sawhney, University of Baltimore
David Wang, Hsuan Chuang University
Cornelis A. Los, Kazakh-British Technical University
Teresa Smith, University of South Carolina
Ranjit Biswas, Philadelphia University
Chiaku Chukwuogor-Ndu, Eastern Connecticut State University
M. Femi Ayadi, University of Houston-Clear Lake
Wassim Shahin, Lebanese American University
Katerina Lyroudi, University of Macedonia
Emmanuel Anoruo, Coppin State University
H. Young Baek, Nova Southeastern University
Jean-Luc Grosso, University of South Carolina
Yen Mei Lee, Chinese Culture University
Richard Omotoye, Virginia State University
Mahdi Hadi, Kuwait University
Maria Elena Garcia-Ruiz, University of Cantabria
Syrous Kooros, Nicholls State University

Indexing / Abstracting
European Journal of Social Sciences is indexed in ProQuest ABI/INFORM, Elsevier Bibliographic Databases, EMBASE, Ulrich, DOAJ, Cabell, Compendex, GEOBASE, and Mosby.
Aims and Scope
European Journal of Social Sciences is an international peer-reviewed academic research journal, which has a particular interest in policy-relevant questions and interdisciplinary approaches. The journal serves as a forum for review, reflection and discussion informed by the results of recent and ongoing research. It adopts a broad-ranging view of social studies, charting new questions and new research, and mapping the transformation of social studies in the years to come. The principal purpose of European Journal of Social Sciences is to publish scholarly work in the social sciences defined in the classical sense, that is in the social sciences, the humanities, and the natural sciences. The research that is published may take a theoretical or speculative model as well as statistical and mathematical. Contributions are welcome from all fields which have relevant and insightful comments to make about the social sciences.

European Journal of Social Sciences also aims at providing a unique forum for discussing the fundamental challenges for policy, politics, citizenship, culture and democracy that European integration and enlargement pose. The journal emphasizes the publication of work that engages with issues of major public interest and concern across the world, and highlights the implications of that work for policy and professional practice. It particularly welcomes articles on all aspects of European developments that contribute to the improvement of social science knowledge and to the setting of a policy-focused European research agenda. Examples of typical subject areas covered include: Policy-Making and Agenda-Setting; Multilevel Governance; The Role of Institutions Democracy and Civil Society; Social Structures and Integration; Sustainability and Ecological Modernization; Science, Research, Technology and Society; Scenarios and Strategic Planning; and Public Policy Analysis.

European Journal of Social Sciences is interdisciplinary bringing together articles from a textual, philosophical, and social scientific background, as well as from cultural studies. The journal provides a forum for disseminating and enhancing theoretical, empirical and/or pragmatic research across the social sciences and related disciplines. It engages in critical discussions concerning gender, class, sexual preference, ethnicity and other macro or micro sites of political struggle. Other major topics of emphasis are Anthropology, Business and Management, Economics, Education, Environmental Sciences, European Studies, Geography, Government Policy, Law, Philosophy, Politics, Psychology, Social Welfare, Sociology, Statistics, Women's Studies. However, research in all social science fields are welcome.

European Journal of Social Sciences realizes the meaning of fast publication to researchers, particularly to those working in competitive and dynamic fields. Hence, it offers an exceptionally fast publication schedule including prompt peer-review by the experts in the field and immediate publication upon acceptance. The editorial board aims at reviewing the submitted articles as fast as possible and promptly include them in the forthcoming issues should they pass the evaluation process. The journal is published in both print and online formats.

Submissions
All papers are subjected to a blind peer-review process. Articles for consideration are to be directed to the editor through the online submission system.
European Journal of Social Sciences
Volume 40 No 2  October, 2013

Contents

Turkey and the European Union Vis-à-Vis the Syrian Question: Parallelism with Limits .......... 165-175
Armağan Gözkaman

Hedonic Shopping Motivations of Young People: A Study on Demographic Characteristics and
Shopping Habits ............................................................................................................................ 176-184
Sevilay Uslu Divanoğlu and Hülya Bakırtaş

The Conceptual Frame Work: The Influence of Organizational Commitment to Job
Performance in the Customer Loyalty Perspective of the Hair Dressing Business in Thailand... 185-195
Khahan Na-Nan

The Information Commitments Toward Online Financial Information Among
Taiwanese Adults .......................................................................................................................... 196-204
Van-Hai Hoang

An Analysis of Monetary Shocks for the Turkish Economy: Time Series Evidence .......... 205-216
Levent Korap and Deniz Kozanoğlu

The State of Europe’s Fertility: Causes, Consequences & Future Policies ............................... 217-230
Ajay Aggarwal, Arnie Purushotham and Richard Sullivan

Psychosocial Predictors of Road Rage Among Nigerian Commercial Drivers ..................... 231-239
Philip C. Mefoh, Leonard I. Ugwu, Lawrence E. Ugwu and Laraba B. Samuel

Do Attribution Styles Moderate Influences of Safety Practices on Artisans’ Accident
Proneness?.................................................................................................................................... 240-252
Leonard I. Ugwu and Lawrence E. Ugwu

Modeling of Customer Non-Financial Valuation: Empirical Study on Loyalty
Reward Program............................................................................................................................ 253-264
Enny Kristiani, Ujang Sumarwan, Lilik Noor Yulianti and Asep Saefuddin

Sustainability of Persian Gardens: Cognition of Sustainable Features and Elements of
Persian Gardens.......................................................................................................................... 265-273
Shahab Alidoost, Mojiaba Ansari and Mohammad Reza Bemanian

Perception of Educational Experts of Challenges Imposed by the Change in Knowledge........ 274-286
Mohammad Saleem Al-Zboon, Rabaa Abdullah and Abdeslam Fahad Al Awamrah

The Influence of Patriarchical Culture on Women Leadership in North Sulawesi Indonesia ..... 287-294
Christiani Romaito Tarigan
The Challenge of Poverty in the Rural Areas in Nigeria: Implications for National Development

Anthony Abayomi Adebayo

Inequality and Gender Education in America, 1990 – 2010

José César Lenin Navarro Chávez, Antonio Favila Tello and América Ivonne Zamora Torres

Investment Opportunities in Health: Feasibility of Building an American Private Hospital in Jordan

Ibrahim Alabbadi, Azmi Mahafza, Mousa A. Al-Abbadi and Amir Bakir
Turkey and the European Union Vis-à-Vis the Syrian Question: Parallelism with Limits

Armağan Gözkaman
International Relations Department
Faculty of Economic and Administrative Sciences
Beykent University, Ayazaga Campus, Istanbul
E-mail: agozkaman@gmail.com
Tel: +90 533 686 92 33

Abstract
Syria is in a deep turmoil since March 2011. Turkey, one of the countries that are influenced the most by the situation in Syria, confronted the conflict by siding herself with her Western allies. In this study, her position is explored with that of the European Union in order to carry out the similarities of views and actions while referring to the divergences as well. With this purpose, the reaction of Ankara and Brussels against the current regime in Syria, their support to the opposition movement, their efforts to draw the conflict to a close, their humanitarian actions and their worries concerning the possible repercussions of the conflict will be discussed. Whereas the parallelism is easy to observe in political domain, operational and financial preferences of both actors do not necessarily overlap.

Introduction
Since its independence, Syria has encountered many obstacles on the way to democracy (Moubayed, 2000). The takeover of Syrian presidency by Bashar al-Assad in 2000 sparked hopes for a democratic change. He initiated the ‘Damascus Spring’, identified by the strengthening of civil society, especially through political forums. The short-lived euphoria lasted until September 2001 with the arrest of the movement’s leading activists (Ziaedh, 2011: 61-68).

The failure of the so-called spring has not come as a surprise. Already in his inaugural speech, al-Assad had signaled the impossibility to develop a Western-type democracy in his country and advocated a peculiar democracy for Syrians, able to meet their needs and the requirements of their own reality (Rubin, 2007: 136). Apparently, this unique format has not been successful in achieving the objectives set out by al-Assad. Between March 2011 and August 2013, the government’s oppression of a popular uprising left more than 100,000 dead in Syria with more devastation in sight.

The international community expressed its wish to see peace and stability restored in the region. Yet, not all the actors share the same view on to end the violence. The parallelism between Brussels and Ankara can be observed through four strands that concern the antagonism towards the regime of al-Assad and the support of the Syrian opposition (a), efforts put forth to end the conflict (b), humanitarian considerations (c), concerns related to the repercussions beyond Syrian frontiers.

a. Support Lent to the Syrian Opposition
At the beginning of the crisis in Syria, both the European Union and Turkey believed to be in a position to contribute to a viable solution. Already in 1977, the EU had established a legal and economic basis of its relationship with Syria through a cooperation agreement. In the second half of the 1990s, Syria was part of the group of countries benefiting from the European Neighborhood Policy
Although an attempt of association failed in 2000s because of an unsuitable political situation in Syria, the EU asserted its willingness to endeavor for Syria’s full participation to the ENP in the medium term. Hence, in early 2000s, the EU was rather cautiously optimistic on the future of relations with Syria. Yet, things turned out differently. European expectations of change and reforms waned following the violence applied by the regime against the rebellion. After March 2011, Syria ceased to be what it was before (Trombetta, 2011). The EU condemned the violence, called on all parties to engage in a dialogue for ending the violence and had to adopt a series of sanctions against the regime.

Turkish authorities’ immediate reaction to the conflict in Syria has been similar. They invited the current regime to stop violence against the popular movement and to enter into dialogue with the opposition. For a while, the Turkish Prime Minister believed that he could have some influence on his counterpart: Not only were they ‘good friends’, but also relations had flourished between the two neighboring countries since 2009. An unprecedented military exercise of ground forces in the bordering region, agreements concerning defense industries and a high-level strategic cooperation were the most remarkable components of the Turkish-Syrian reconciliation along with the thriving commercial links. However, Turkish authorities’ hopes to serve as a leverage in the resolution of Syrian question faded away when al-Assad unambiguously demonstrated that he did not intend to halt repression. As a corollary, the government has broken the dialogue with Syria and aligned herself with the anti-Assad block.

Then, Turkey has been home to the opposition group named Syrian National Council (SNC). Her subsequent recognition of the latter as the legitimate representative of Syrian people has been the major move that revealed the radical shift in Turkish foreign policy. The choice made by the government was useful on two counts. First, it would prove that Turkey was in line with the community of nations which believe that Bashar al-Assad had no longer the legitimacy to represent Syrian people. Both the European Union and its members had voiced the same preference. On various occasions, the EU linked the cessation of widespread and systematic violations of human rights caused by the brutal crackdown of the opposition by the regime to the departure of al-Assad. On November 19, 2012, it recognized the National Coalition of the Syrian opposition by depicting it as the legitimate representative of the Syrian people (France 24). The following month, twenty restrictive measures were already implemented by the European Union on a wide range of sectors including armament, oil, energy, finance and so forth.

The second utility of the SNC’s recognition for Turkey is that she had a valuable diplomatic instrument at her service. Foreign Minister Davutoğlu used the governmental act that bestowed Turkish diplomacy with a prestige in the eyes of western community for calling on other nations to act the same. The recognition would give a strong message to the regime of al-Assad and to the Syrian people. Ankara went even further by accepting to host the Free Syrian Army (FSA), the most significant armed group fighting government forces. It has a legitimacy in the eyes of the European Union because of its coordination with the SNC since late 2011. For more than a year, Hatay – a Turkish city in the South-East Anatolia region – was home to its headquarters (Holmes, 2012). These forces also received training support by Turkish authorities (Galpin, 2012). Turkey’s role in bringing together the two dissident formulations also merits highlighting: The leaders of the political and military wings of the opposition, Burhan Ghalioun and Riad al-Asaad met for the first time in Hatay. There, they agreed to cooperate and to coordinate their efforts (Zavis & Marrouch, 2011).

One can also observe the de facto endorsement of the FSA by the EU through lifting the arms embargo to Syrian rebels in late May 2013. It seems pertinent to note that the decision has rather resulted from a disagreement and not from an accord. The lack of consensus on protracting the ban bestowed the opposition with the opportunity to hold EU-origin weaponry. The divergence of views between British and Austrian foreign ministers is illustrative on this account. W. Hague greeted the decision by affirming that it was “important for Europe to send a clear signal to the Assad regime” while M. Spindelegger did not hide his dissatisfaction by saying that “the EU should hold the line” reminding that it is “not a war movement” (BBC, 2013a). In defense of the EU, one can invoke the
agreement on the destination of weapons. Only the moderate components of the opposition, namely the Syrian National Coalition and the FSA, would have the privilege to receive the European military materiel. (Thompson, 2013).

In a meeting with his European counterparts, Davutoğlu had delivered a speech where he accentuated the international community’s double responsibility to halt violence in Syria and to send a strong message to the regime (Anadolu Ajansı, 2013a). He also highlighted the opportunity to give an impetus to diplomatic efforts by ending the ban on supplying weapons – which had nothing to do, according to the Foreign Minister, with privileging the military solution (Ibid.). Turkish minister had thus the opportunity to reiterate his earlier objections to the European Union arms embargo. In his opinion, the world should not repeat the mistakes it made during the 1992-1995 Bosnian war (Osborn, 2013). Davutoğlu’s message reflected the willingness of Turkish government to support by all necessary means Syrian opposition forces. Since the early stages of the crisis, Turkish officials kept on underlining the need to go beyond declaratory acts and to take the necessary steps in order to stop the bloodshed in Syria. Turkish authorities were therefore satisfied with the EU member states’ inability to prolong the arms embargo. One of the illustrative reactions came from the highest level of the executive. President Abdullah Gül publicly welcomed the international community to support and to stake a claim to the opposition in Syria (CNN Türk, 2013).

Although the above-mentioned change in the EU’s policy vis-à-vis the weapon supply was hailed by Ankara, Turkish authorities have firmly repudiated any kind of involvement in military support to Syrian rebels. Yet, various media outlets reported that Turkey was involved in funneling the military equipment – originating mostly from Qatar and Saudi Arabia – to anti-government fighters (Schmitt). Some also mentioned Turkey’s substantial assistance for the quick shipment of weapons to the opposition, especially from late 2012 on (BBC, 2013c). Moreover, the main channel of weapons ran from Turkey into the north of Syria, with Turkish intelligence officers taking part in their delivery to the designated groups in the opposition-controlled parts of the country (The Economist, 2013b). At this juncture, Turkish support to the US government for arms delivery may be cited as well. In June 2013, there were talks between Washington and Ankara on how to expedite the flow of weapons to rebels from Turkish territory (UPI, 2013). At this juncture, a reporter from New York Times denoted the CIA’s covert mission of directing the course of arms from the Turkish side of the border (Schmitt, 2013).

b. Efforts for Resolving the Conflict

As mentioned above, even those international actors that support Syrian opposition against the al-Assad forces have not reached consensus on whether or not to supply weapons to the rebels. Arming one side against the other may not be the best way to bring a conflict to an end. The probability of further destabilizing the country by blazing clashes has led the actors to move away from the idea of arming the rebels.

Within this context, most foreign governments and international organizations have been inclined to prioritize political settlement of the conflict. So did Turkey and the EU, as proven by their active involvement in diplomatic efforts. Indeed, the United Nations Organization has been the main institutional framework where their cooperation reached its climax. The support they have lent to the joint UN-Arab League envoys Kofi Annan and to Lakhdar Brahimi and their concomitant activism in the UN bodies to keep the Syrian issue on the agenda demonstrate the common political approach of both parties. Moreover, parallel efforts put forth by Turkey and the EU surpassed the UN circles. For instance, the League of Arab States – where Syrian state is represented by the opposition movement – has been a valuable platform of cooperation. Again, the ‘Group of Friends of the Syrian People’, institutionalized in February 2012, served simultaneously Turkey’s and the EU’s interests as an international framework for tackling – and focusing the world’s attention on – the Syrian question.

At the latter Group’s meeting in Marrakech, where the legitimacy of the Syrian National Council has been established in the eyes of the international community, Turkish Minister of Foreign Affairs had the opportunity to draw attention to an important point: There was an increasing need and
urgency to prevent the crisis from worsening and spilling over to other geographies. The task was
difficult and the stakes were high. In the Foreign Minister’s view, it was necessary to fix a timetable
for a significant resolution of the United Nations Security Council (UNSC). In other words, a genuine
support, rather than eloquent phrases and noble promises, was vital for ending the humanitarian
tragedy in Syria. The Minister’s assertions overlapped with the EU’s repeated calls on the UNSC
members to take responsibility and to implement unified action so that more effective pressure could
be exerted against the al-Assad regime.

At first sight, the final communiqué released by the Action Group for Syria in June 2012 seems
to have established a ground for achieving Davutoğlu’s above-mentioned objective. Members of the
Group affirmed thereby that they agreed on the guidelines and the principles of a political transition
period which are in accordance with the aspirations of Syrian people. Given the composition of the
Group, the document gives the impression to be more than just another set of eloquent promises. The
Secretaries-General of the United Nations and the League of Arab States were accompanied by five
permanent members of the UNSC, the EU’s High Representative for Foreign and Security Policy,
Turkey, Qatar, Kuwait and Iraq—actors highly concerned by and implicated in the Syrian question.

Nevertheless, the agreement was far from making a significant change in Syria’s situation.
Despite the consensus on the principles of a transition in Syria, there were differences of view among
the participants regarding the way to follow in order to achieve this goal. Russian Foreign Minister
Sergei Lavrov has been defending a transition of power in Syria decided by Syrians themselves.
Similarly, his Chinese counterpart pleaded for the necessity of a Syrian-led transition plan where
outsiders would not have a say (Le Figaro, 2012b). The ongoing disagreement is especially acute on
whether or not al-Assad would keep the governing position during the transition period. The EU
documents unequivocally stress the necessity for the ousting of al-Assad as a guarantee of the
transition period, a stance that is shared by Turkey.

The consequences of the divergence on how to manage Syrian conflict deserve some attention,
although an in-depth foreign policy analysis of the states involved goes beyond the scope of this study.
More than two years have passed since March 2011, and Bashar al-Assad is thankful to foreign
backing for being still in power. For how long he will continue to be so is difficult to foresee whereas it
seems plausible to uphold that he will not step down any time soon. Many observers claim that Russia
is the key sponsor of his regime. Both Russia and China, permanent members of the UNSC, see what
happened in Libya as an operation of regime change rather than the protection of civilians. They do not
wish to see history repeat itself (Freeman, 2012: 36). It seems therefore unlikely that they will
withdraw their support from Syrian government.

The crucial question for the backers of Syrian opposition is to know how the violence may be
stopped despite the will of powerful actors who insistently endorse al-Assad. Too much diplomatic
effort has been put to convince Russian establishment without tangible results. Turkish government
officials have tried hard to convince Moscow on several occasions, including person to person
contacts, telephone conversations and the joint strategic planning group meeting. For its part, the EU
has labored in the same way by bringing up the issue before Russian authorities. C. Ashton clearly
affirmed the Union’s desire to work closely with Russia to find a way to end the violence and to see
Moscow put its weight for a political settlement (BBC, 2012). Nevertheless, deep divergences have
constantly been a barrier against cooperation. On the eve of June 2013 EU-Russia summit, European
diplomacy was even weaker vis-à-vis its eastern neighbor because the 27 member states had ended
their arms embargo.

The fact that Syrian opposition suffers from deep divisions is another obstacle for the transition
period. In fact, how the opposition groups envisage the post-conflict Syria leaves room for optimism.
As the EU Council conclusions stipulated in May 2013, the respect of human rights, the promotion of
the rule of law and the respect of international law are the pledges they made for the future of their
country. Yet, there is still a long way to go. For the supporters of the anti-Assad movement in Syria,
the unity of the dissidents is of outmost importance while being still unreachable. At present, the EU is
still in a position to imply its dissatisfaction by stating that a “stronger and more united opposition” was vital for a political way out (Europa, 2013). Turkey endeavored for a more coherent opposition during the June 2013 conference she hosted, with no avail (The Economist, 2013a).

The upcoming Geneva Conference—whose date was unknown at the time this paper was written—makes the coherence all the more important. Most international actors see it as the last chance for a viable political settlement in Syria after more than two years of bloodbath. Both Turkey and the EU urged the Syrian Coalition to join the conference without preconditions so that peace, distant as it is, may be given a chance.

c. Humanitarian Concerns

It’s a truism to say that the conflict in Syria has turned into a veritable humanitarian tragedy. In addition to the worrisome death toll that keeps rising, at least 35% of hospitals were out of order and more than two thirds of health personnel who lived in heavily affected areas had difficulties in accessing their place of work. Pharmacies were not capable of providing medicines and medical supplies while there was a huge funding gap for providing life-saving emergency medicines and medical supplies (WHO, 2013). More than four million internally displaced Syrians had to live in excessively crowded places under unhygienic conditions where drinking water, sanitation and vaccination were highly problematic. In addition, cases of communicable diseases were reported in Syria and among Syrians who settled in neighboring countries (BBC, 2013b).

At the same period, approximately two million Syrians were registered or awaiting-registration refugees according to an UNHCR document (2013a). Being among the countries directly affected by the influx of refugees, Turkey's concerns have been growing over the humanitarian situation. From the inception of the crisis, Ankara has consistently called for international support to Syrians who had to flee their country. The main reason was the expectation of incessant increase in the number of Syrians who would seek refuge in Turkey. Fortunately, despite the magnitude of the problem, Turkish government’s efforts proved highly successful. In summer 2012, the United Nations High Commissioner for Refugees depicted Turkey as one of the countries that provided “a very positive example to the world” (UNHCR, 2012).

The success has not come without a cost. The practical – and psychological – threshold was set at 100,000 people by Turkish authorities in 2011, but not more than a year has been necessary for it to be crossed. The UNHCR stipulated that the third biggest refugee group – nearing half million people – was hosted by Turkey (2013b). Turkey had to allocate 1,5 billion US dollars including governmental and non-governmental grants to meet the refugees’ needs, whereas the amount she received as an external assistance for Syria was below 120 million (Anadolu Ajansı, 2013b). Various sources – including those of the UN and the EU – cite the expected number of refugees in Turkey by the end of 2013 as one million. Thus, humanitarian efforts will continue to impose a significant burden on Turkey.

The Humanitarian Aid and Civil Protection department of the European Commission (ECHO) revealed that, by June 2013, the EU and its member states together have committed around 700 million Euros to the humanitarian cause in Syria. The same month, the Commission decided to release an additional 400 million to meet the needs in Syria and in the surrounding region (ECHO Factsheet, 2013). The Union’s humanitarian undertakings are further complemented by the cooperation with other actors in the field as it is the case for Turkey. However, it has been criticized for not helping Syria enough with regard to its economic strength. The inadequacy of international aid compels the EU to assume more responsibility.

The situation of Syrians arriving in Europe is also problematic. A European-level approach and a common policy of assistance to the refugees would make a considerable difference in the EU’s contribution to the conflict and crisis situations. UN High Commissioner for Refugees affirmed rightfully that a “more generous and consistent approach” was necessary for the asylum seekers by pointing to an asymmetry: Nearly two thirds of those seeking protection in the EU territories were
received by Germany and Sweden. The High Commissioner also referred to the salient fact that Turkey has hosted much more Syrian refugees than other European countries by affirming that the EU has exhorted Turkey “to keep its borders open to Syrians” while “controlling irregular entry at its own external frontiers” (UNHCR, 2013a). On this point, it seems legitimate to argue that Turkey’s performance in addressing the needs of Syrians who suffer from the conflict outstrip that of her European partners.

Naturally, this led Turkey to admonish Europeans. In February 2013, Turkish Foreign Minister criticized the EU member states of having spent altogether less than Turkey (Cihan Haber Ajansı, 2013). More recently, Turkish Minister of EU Affairs and Chief Negotiator Egemen Bağış was particularly critical about the meager support his government received from the EU for Syrian asylum seekers. He maintained that a rough sum of seven million US dollars transferred jointly by the EU and its member states was “thought-provoking” (Anadolu Ajansı, 2013b). EU officials had replied an earlier criticism of the same sort by stating that Turkey’s aid demand was received only in April 2012 (International Crisis Group, 2013). Obviously, this argument does not hold anymore according to Turkish authorities.

Another much-debated question concerns the establishment of a no-fly zone – to prevent Syrian air forces from bombing the population – accompanied by humanitarian corridors that would serve as a safe haven for civilians (Radio France Internationale, 2012). Turkish government advocated for long time an international military presence – preferably under the UN’s auspices. Such a construction was of supreme importance for Turkey for it would enormously ease the refugee burden on her shoulders. Nevertheless, the idea poorly seduced diplomatic milieus. France has been the only firm supporter of a humanitarian corridor, but her fervor did not suffice to obtain the EU’s support for the project. The UN would not be the place to realize such a project because the UNSC would be blocked by Russian and Chinese vetoes if a resolution were to be voted.

The prospect of blockage and the Libyan precedent led Turkish military officials consider requesting NATO’s intervention in Syria. The request was officially made by Ankara on the grounds that the task of establishing a buffer zone in Syria belongs primarily to NATO. But once again, Turkey’s hopes were doomed to fade. NATO’s hierarchy affirmed that both no-fly and a protection zones meant shouldering responsibilities, taking risks and allocating adequate resources (Çakırözer, 2012). Technical setbacks were also at stake. In the words of the French Foreign Minister, a buffer zone supported by a no-fly region entailed air and anti-aircraft means along with supportive ground forces (Le Point, 2012). Where to build the zone and how to protect it in the absence of the UNSC backing were the questions that remained unanswered (European Union External Action Service, 2013). In sum, it was very difficult to expect from the Atlantic Alliance – and even more so from the EU – to take humanitarian initiatives of the type described above in Syria.

d. Concerns Over Possible Repercussions Outside Syria

The instability caused by the crisis in Syria is profound and susceptible to have undesired ramifications. This gloomy assumption is due to the fact that several polarizations coexist simultaneously. For starters, the government and the rebels fight each other. Second, a proxy war opposing Saudi Arabia and Qatar against Iran and Hezbollah is in place (Freeman, 2012). Third, irreconcilable interests make Russia and China confront the West. Not to mention that the opposition movement is subject to profound disagreements and major quarrels.

Under these circumstances, it seems plausible to claim that the conflict will not end soon. Worst still, there is a risk that the crisis could spread beyond Syrian borders. Both Turkey and the European Union have repeatedly expressed serious concerns over this probability. As Davutoğlu suggested, there is a general understanding of the elimination of the risk of regional spill-over (Ministry of Foreign Affairs). Official statements on the EU side reflected the accuracy of this point. As one European Commissioner indicated, to help inside Syria and to support the refugee-hosting countries was not just a moral standing: The Union’s self-interest was also at stake (Georgieva, 2013).
Turkish authorities have not had any difficulty to understand how easy it was to be ‘contaminated’ by the Syrian crisis. A military confrontation with Syria loomed large on more than one occasion. Relations between Ankara and Damascus strained after the downing of a Turkish jet fighter by Syrian air defense. They worsened by the shelling of a border town by Assad-led Syrian army. The reaction of Turkey was materialized by the National Assembly’s motion which authorized the government to deploy troops abroad in the case of a threat to the security or territorial sovereignty. Moreover, Turkish Armed Forces had felt the need to dispatch military reinforcement to the area. Yet, all these measures did not suffice to end Turkey’s suffering due to her involvement in Syria. In May 2013, two car bombings – for which Turkey blamed Syrian intelligence – killed more than 50 people in another border town named Reyhanlı.

Turkey is not the only country that will potentially suffer from a spill-over of Syrian conflict. Two others particularly stand out: Lebanon and Iraq. For months, Lebanon could conduct the policy known as ‘dissociation’ set forth by the Baabda Declaration of June 2012. Nevertheless, Lebanese neutrality towards Syria has deteriorated in time. Sectarian tensions have reached alarming levels and concerns over the country’s sliding into a conflict have grown. Similarly, Iraq has been suffering from political crisis and the sectarian clashes within its frontiers have been intensified by the unrest in Syria. The violence in the country reached its highest level since 2008 (Hauslohner, 2013).

Ankara and Brussels both have an interest in preventing that Syria does not ‘contaminate’ the region – much like the rest of the international community. Indeed, the primary responsibility falls on these two states themselves. Border protection is crucial for preventing the blaze of sectarian tensions. This is the reason why Turkish Foreign Minister and the EU’s High Representative urged Iraq and Lebanon to vigorously safeguard their frontiers. They also pledged to help these states, believing that outside actors must assume responsibility and work with resolve to reduce as much as possible the negative effects of Syrian conflict over the surrounding region.

Another unease laid out by the conflict in Syria is related to the chemical and biological weapons within the government’s possession. The problem is multifold. First of all, Damascus aimed to utilize its stockpile as an instrument of deterrence against the West. It threatened to retaliate any foreign intervention by resorting to chemical weapons (Le Monde, 2012). Second, the weapons may somehow fall into the wrong hands. The probability that terrorist groups could get a hold of Syrian chemical weapons makes the matter particularly important. Warnings made by the intelligence services – such as the MI6 – on the catastrophic consequences of such a scenario are therefore taken seriously. Another worrisome situation may appear by the access of Syrian resistance to these weapons, in which case the current humanitarian tragedy would reach the extremes.

Unsurprisingly, the probability that Al-Assad will have recourse to weapons of mass destruction (WMD) has met severe reactions. The UN Secretary General said that such an action would be “reprehensible” (Le Figaro, 2012a). The US President used the phrase “red line” to expose his administration’s view on the issue (CNN, 2012). For their part, the EU Foreign Ministers suggested in a common statement that in case chemical weapons were used, those who are in charge would be held responsible (Ibid.). One can infer from these statements that the recourse to a WMD by Syrian government would eliminate the reluctance on a foreign military intervention aiming to knock the regime down.

Of note, Turkey’s stance towards the chemical question proved more antagonistic due to a peculiar challenge. Ankara was not only against the use of chemical weapons by Syrian government, but it was also menaced of becoming a target of them. The intelligence that Turkish government had acquired left no room for neglecting the problem. The issue was further complicated by the fact that Syrian arsenal contained Scud missiles which could carry chemical warheads and which were capable of hitting several Turkish cities. Furthermore, Syrian regime had already used these missiles against the opposition forces within the country more than once. Thus, Turkish authorities deemed necessary to claim air defense reinforcement as a precaution. An official demand of ground-to-air Patriot anti-
missile systems able to hunt down Scud missiles was made to NATO. With the green light of the Atlantic Alliance, Patriots were installed in Turkey from January 2013 on (Burch, 2013).

During the attacks launched against the opposition forces in March and April 2013, Syrian government used chemical agents (Human Rights Council). Yet, the highly-mediatised use of toxic material did not ‘let the genie out of the bottle’. Those states that raised objections to Syria’s recourse to WMDs have not felt the urge to intervene in the conflict. The reason why they seem to have walked their stance back is threefold. First, there have been conflicting reports for some while: It has not been possible to be certain that chemical materials have been used as a weapon. Second, both governmental and opposition forces have resorted to chemicals in their attacks. Under these circumstances, foreign governments have not had the possibility to predicate an intervention on a legitimate ground. Third, the use of chemicals has been on a small scale. As a result, the number of victims has fallen short of shocking the international community.

Months later, a positive development led to a dim optimism. An accord was reached between the administration of al-Assad and the UN chemical weapons inspectors on the investigation of three sites (BBC, 2013d). One can definitely not claim that a radical change is at stake. However, it is important to note that Syrian government agreed to cooperate with an international actor. More importantly, it was in line with Davutoğlu’s and Ashton’s demands on making researches in Syria and publicly announcing the results. Both the EU and Turkey saluted the UN mission and pledged to give their full support.

Conclusion
The common will of the international community is to see the end of Syrian conflict as soon as possible. As mentioned earlier, the humanitarian situation is intolerable within Syria. The tragedy continues unabated with no prospect of an end any time soon. The conflict has spilled into the neighboring regions and more repercussions are feared. The international community, despite its aspiration for peace and stability in Syria, is divided on the issue. Its commitment for ending the suffering in Syria is inadequate. So far, peace projects failed to obtain the agreement of the warring parties. Insurmountable divergences – both within and outside Syria – resulted in a status quo.

In this context, Turkey and the EU proved to be one of the most dynamic actors in the international platform. Besides, they have shared the same view on some key issues. One of them is related to the condition for ending the conflict. For both actors, the toppling of Bashar al-Assad and the subsequent establishment of a new regime that would take into account the needs and aspirations of the Syrian people have been a precondition for attaining the elusive peace. Since the outbreak of the conflict, this common stance has been very clear especially through the unconditional support to the political wing of the opposition movement. Another shared attitude was related to the willingness to assist the countries – especially Lebanon – that became vulnerable because of the conflict in Syria. Last, but not least, the diplomatic actions aiming to end the conflict justified that Ankara and Brussels were on the same side.

Yet, the parallelism between the two capitals has not been without limits. A major divergence between them can be put forth at the ‘operational’ level. The latter has two facets. On the one hand, Turkey’s preference of a multinational task force for a rapid ending of the conflict has not found an echo on the European side. On the other hand, Turkey and the EU had differing positions vis-à-vis the FSA: Ankara’s support was wide-ranging and intensive, whereas the EU’s policies have been subject to disagreements among its members. A further divergence touched upon the resources allotted in order to deal with the humanitarian dimension of the ongoing conflict. As revealed earlier, Turkey has engaged in too much – and too costly – burden-sharing schemes compared to her European partners.

Commonsensical approach makes it necessary to react to the atrocities in Syria regardless of political standpoint. In this event, Turkey has not hesitate to side with her Western allies. As exposed in this study, her preferences have largely overlapped with those of the European Union. Nevertheless,
divergences accompanied the parallelism of policies because of at least three reasons. First, Turkey is closer to the hotspot and she is affected by it much more than remote countries. Second, assuming responsibilities has a price, and the states are not willing to do that as long as their interests are not directly and significantly threatened. Third, the EU has 28 members since July 2013—a fact that does not always make it easy to take a common position and to launch a joint action.

References


[17] Georgieva K., 2013. “Syria: Time is running Out” (Press Release), Meeting with the Committee on Foreign Affairs (AFET) and the Committee on Development (DEVE) of the


174


Hedonic Shopping Motivations of Young People: A Study on Demographic Characteristics and Shopping Habits

Sevilay Uslu Divanoğlu
Business Administration, Aksaray University
FEAS, 68100, Aksaray-Turkiye
E-mail: sevilayuslu@yahoo.com
Tel: +90-382- 2882450

Hülya Bakırtaş
Management Information Systems
Aksaray University, FEAS, 68100, Aksaray-Turkiye
E-mail: hbakirtas@hotmail.com
Tel: +90-382- 2882472

Abstract
The purpose of this study is to examine effects on hedonic shopping motivation of demographic factors such as gender, household income and shopping habits such as spending level per month, shopping time, people going shopping together, shopping frequency. The data was collected from 406 students in classroom settings at Aksaray University in the Turkey. First, to determine sub-construct of hedonic shopping motivation, the Exploratory Factor Analysis (EFA) was conducted and then Multivariate Analysis of Variance (MANOVA) was carried out in the study. Results show that are statistically significance difference in between female and male regarding hedonic shopping motivation. The results extend the literature on shopping motivation and also can help developing marketing strategy of retailers. The study concludes with a discussion of limitations, recommendation for future research and managerial implication.

Keywords: Hedonic shopping value, utilitarian shopping value, demographic characteristics of consumer.

JEL Classification Codes: M30, M31

1. Introduction
Changes in the purchasing behavior of consumers depend on many factors such as the increase of global competition, decrease of differences in the physical characteristics of products, rapid changing technology etc. These factors, on the one hand, increase the chance of consumers to come across a greater variety of alternatives, and on the other hand, complicate for the businesses to cope with intense competition and to provide their sustainability. Therefore, the success of businesses depends on their abilities to analyze properly consumer preferences and behavior and to develop marketing strategies based on these analyses. As a result of these, businesses can both pioneer in innovation and creativity in the market, and have a stronger voice.

When purchasing activities of consumers are studied, it can be observed that consumption is realized not only on rational bases but also on emotional grounds. Thus, it would be appropriate to say that both physical characteristics of products and abstract attributes and advantages are taken into
consideration. The consumer of today usually acts unplanned and instinctively, and considers products as emotional beings (Erkmen and Yüksel, 2008; Çelik, 2009). This perspective of consumers towards the phenomenon of consumption reflects hedonism and hedonic consumption perceptions.

The concept of hedonism can be defined as the pursuit of pleasure of men. The concept includes the consideration of something pleasurable as “good” and something painful as “bad”. (Holbrook and Hirschman, 1982; Hopkinson and Pujari, 1999). Consumers want to enjoy and take delight in the process of shopping and realize their act of consumption with hedonic motivation. Such hedonic consumption is regarded important from the perspective of businesses, and is considered by consumers as personal pleasure and delight, and thus, products are evaluated not as objective assets but as subjective symbols (Ünal and Ceylan, 2008; Akturan, 2010; Altunışık and Çalli, 2004; Aydın, 2010). This perspective of consumers leads to emotional behavior during the process of purchasing and to an unplanned realization purchase.

2. Literature Review
Utilitarian and hedonic motivations form the base of the phenomenon of consumption (Westbrook and Black, 1985; Babin et al., 1994, Batra and Ahtola, 1990; Voss et al., 2003; Carpenter et al., 2005). While objective characteristics such as content of products, price and function stand out in utilitarian motivation, emotional joy, physical delight, dreams and aesthetics take a central role in hedonic motivations. From this point, it is possible classify some products as utilitarian (microwave, detergent, home security systems and personal computers etc.) and some as hedonic (accessories for clothes, music, sports cars, fancy watches, chocolate etc.) (Odabaşı and Barış, 2003; Babin et al., 1994; Erkmen and Yüksel, 2008; Köker and Maden, 2012; Holbrook and Hirschman, 1982; Khan et al., 2005). The utilitarian or hedonic expectations from a product are affected by many factors such as the rationality level (Carpenter et al., 2005), mood (Donovan et al., 1994; Rook and Gardner, 1993), feelings (Spangenberg et al., 1997), shopping habits (Bellenger et al., 1978; Arnold and Reynolds, 2003), gender (Underhill, 2009; Jackson et al., 2011), income (Allard et al., 2009), social and cultural environment (Griffin et al., 2000; Jones et al., 2010) of the consumer. The hedonic or utilitarian expectation of consumers regarding the product alters their purchasing decision process.

Changes in these two expectations of consumers depend on their demographic features. These features (gender, age, marital status, the size of town, level of income etc.) influence the motivation of purchase of consumers and leads to a change in their behavior. There are various studies related to the matter in literature. Some of the findings are that hedonic shopping bears differences based on gender, male consumers tend to purchase more on rational grounds when compared to females, the tendency towards shopping is higher in females than in males, they tend to do shopping with hedonic motivation, females depending on their age are not happy about unplanned shopping and do not realize hedonic consumption (Özdemir and Yaman, 2007; Çakmak and Çakır, 2012; Jackson et al., 2011; Çakmak and Tekinyıldız, 2013; Aydın, 2010; Özgüven, 2013; Babacan, 2001; Kim, 2006; Hemalatha and Ravichandran, 2009; Kang et al., 1996). In addition, there is also a difference in hedonic consumption of consumers depending on their marital status. Findings prove that single persons tend more to hedonic purchasing behavior and have a higher rate of adventure and idea shopping motivation (Çakmak and Tekinyıldız, 2013; İbicioğlu, 2005; Özgüven, 2011).

Hedonic consumption bears, at the same time, differences according to the region of residence and the size of the settlement. Therefore, it is possible to say that those living in big cities or town centers tend to consume more on hedonic grounds (Aydın, 2010; Ünal and Ceylan, 2008; Kim, 2006). Furthermore, hedonic consumption changes depending on education and the level of income. An increase in the level of income or education (Çakmak and Tekinyıldız, 2013; Aydın, 2010; Mert, 2012; İbicioğlu, 2005; Özgüven, 2011; Çakmak and Çakır, 2012; Kang et al., 1996) leads to act more on hedonic motivations. Especially, there is a significant relationship between educational qualification and hedonic shopping motivation of consumer such as role and gratification. However, other studies
revealed insignificant effects on shopping motivations of demographic factors like income, education, gender, marital status, occupation, age (Dhurup, 2008; Srivastava, 2012). Besides, there is a significant relationship between the amount spent by the consumers and hedonic shopping motivations such as value, idea and social shopping motivation. The study found a significant relationship between frequency of visit and hedonic shopping motivations such as gratification and value shopping motivation (Hemalatha and Ravichandran, 2009).

Hedonic shopping influences a great number of consumers, and is mostly effective on the new generation. Especially the clothing sector is pioneering in the matter. Though clothing meets the need of covering and thus creates a utilitarian requirement, it also fulfills hedonic demands (Kim et al., 2002). As in the joke “Ye kırküm ye” (meaning “clothes make the man”) of Nasreddin Hodja, it also represents characteristics of the individual like social status, individual image and differenceness, being appreciated etc. Therefore, this study analyzes what hedonic motivations of young consumers stand out and whether there are differences in terms of their demographic characteristic. Based on the above literature, the hypotheses propose that

\[ H_1: \] There will be no difference in demographic factors (gender and household income) and hedonic shopping motivation of consumer

\[ H_2: \] There will be no difference in shopping habits (spending level per month, shopping time, people going shopping together, shopping frequency) and hedonic shopping motivation of consumer.

### 3. Research Method

The data of the study have been collected from university students in classroom settings by survey between the dates of March and June 2013. The measure about shopping motivations was based on the works of Arnolds and Reynolds (2003) and Babin et al. (1994). Respondents used a five-point Likert scale (ranging from strongly disagree to strongly agree).

Surveys were completed by 406 students, but some of them were empty or not correctly answered. Thus, all analyzes were made according to 372 data. This sample was 64% female, approximately 67% of sample was between 15 and 20 age and 37% of respondents have income between 1001 and 2000 TL. Majority of respondents (97%) comprised of undergraduate students. Demographics of the respondents surveyed are shown in Table 1.

### Table 1: Profile of respondents

<table>
<thead>
<tr>
<th>Sample Characteristic</th>
<th>Categorical Scale</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>238</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>134</td>
<td>36</td>
</tr>
<tr>
<td>Age</td>
<td>15-20</td>
<td>100</td>
<td>26.9</td>
</tr>
<tr>
<td></td>
<td>21-25</td>
<td>248</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>26-30</td>
<td>24</td>
<td>6.5</td>
</tr>
<tr>
<td>Education</td>
<td>Undergraduate</td>
<td>359</td>
<td>96.5</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>13</td>
<td>3.5</td>
</tr>
<tr>
<td>Income</td>
<td>749 TL and under</td>
<td>31</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>750-1000 TL</td>
<td>77</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>1001-2000 TL</td>
<td>137</td>
<td>36.8</td>
</tr>
<tr>
<td></td>
<td>2001-4000 TL</td>
<td>100</td>
<td>26.9</td>
</tr>
<tr>
<td></td>
<td>4001-6000 TL</td>
<td>17</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>6001 TL and over</td>
<td>10</td>
<td>2.7</td>
</tr>
</tbody>
</table>

### 4. Analysis and Results

Exploratory factor analysis was made using the principal components and varimax rotation methods. A total of five factors were identified with eigenvalue greater than 1. Five factor solution obtained
explains approximately 62% of the total variance. According to the value (0.879) of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and sig. value of Barlett’s sphericity, the variables and data in the study were found to be appropriate for exploratory factor analysis. Besides, Cronbach’s Alphas were calculated for each of the five factors. The resulting values ranged from .63 to .90, thus were supported internal reliability of the scales.

Multivariate analysis of variance (MANOVA) was conducted to test the hypotheses and assumptions for variables were checked. Table 4 shows the results of the analysis. According to Table 4 regarding to hedonic shopping motivation constructs, Hotelling’s Trace Value is 0.034 with an associated F value of 2.51 (P= 0.030). Therefore, H1a hypothesis is rejected. This has shown that are statistically significance difference in between female and male regarding hedonic shopping motivation. As shown in Table 4, there was a statistically significance difference between female and male in terms of gratification, idea and value hedonic shopping motivation. The results reflect that female consumer (3.63; 3.21 and 3.97) has more gratification, idea and value shopping motivations than male consumer (3.42; 2.99 and 3.76). According to Table 4, there was no significant difference between household income of consumers (Wilk’s lambda = 0.934, P = 0.458). Thus, H1b hypothesis was accepted.

Table 4 shows overall result suggested there was no significant difference between spending level per month of consumer on the hedonic shopping motivation (Wilk’s lambda = 0.928, P = 0.336). Similarly, according to other MANOVA result (Wilk’s lambda = 0.951, P = 0.562 for average shopping time; Wilk’s lambda = 0.915, P = 0.367 for people going shopping together; Wilk’s lambda = 0.921, P = 0.230 for shopping frequency) revealed no difference based on hedonic shopping motivation. These results provide support to H2a-H2d. However, Table 4 shows that shopping frequency has a statistically significant effect on idea hedonic shopping motivation. Post hoc comparison was made using LSD procedure in the study. The results show that for mean scores for shopping frequency in terms of idea shopping motivation were statistically significantly different between shopping a few times per week and shopping a few times per month as regard shopping frequency.

Table 2: Results of Exploratory Factor Analysis

<table>
<thead>
<tr>
<th>Factors</th>
<th>Factor Loading</th>
<th>Variance (%)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping is a way to release stress for me</td>
<td>0.789</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I am in a bad mood, I feel better by going shopping.</td>
<td>0.779</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel free when I do shopping.</td>
<td>0.736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping makes me excited.</td>
<td>0.736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping attracts me.</td>
<td>0.725</td>
<td>22.944</td>
<td>0.90</td>
</tr>
<tr>
<td>Shopping gives me pleasure.</td>
<td>0.719</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do shopping when I want to reward myself.</td>
<td>0.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This shopping is an adventure for me.</td>
<td>0.552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When compared to other activities, shopping is more fun.</td>
<td>0.534</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I go shopping to see what is trendy.</td>
<td>0.834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do shopping to keep up with fashion.</td>
<td>0.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I go shopping to see products recently launched.</td>
<td>0.697</td>
<td>12.901</td>
<td>0.76</td>
</tr>
<tr>
<td>I take pleasure in interacting with other people while shopping.</td>
<td>0.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I go shopping with friends or family to socialize.</td>
<td>0.517</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy shopping for my friends and family.</td>
<td>0.798</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like shopping for others because I feel happy when they are happy.</td>
<td>0.772</td>
<td>10.920</td>
<td>0.76</td>
</tr>
<tr>
<td>I feel happy to research in order to get the best present.</td>
<td>0.711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel sad if I cannot buy the product I want.</td>
<td>0.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel excited when I try new products.</td>
<td>0.719</td>
<td>7.811</td>
<td>0.63</td>
</tr>
</tbody>
</table>
### Table 2: Results of Exploratory Factor Analysis - continued

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Factor Loading</th>
<th>Variance</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I usually shop at discount prices.</td>
<td>0.831</td>
<td>7.297</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel happy to find discount products during shopping.</td>
<td>0.787</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Variance Explained**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
<td>0.879</td>
</tr>
<tr>
<td>Bartlett’s Test Approx Chi-Square</td>
<td>3318.575</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>210</td>
<td>0.001</td>
</tr>
</tbody>
</table>

### Table 3: Means and Standard Deviations Results

| | Gratification | Idea | Role | Experiment | Value |
| | Gender | | | | |
| Male | 3.42 (0.89) | 2.99 (0.95) | 3.77 (0.92) | 3.66 (0.94) | 3.76 (0.91) |
| Female | 3.63 (0.83) | 3.21 (0.89) | 3.90 (0.86) | 3.69 (0.93) | 3.97 (0.86) |

| | Income | | | | |
| -749 TL | 3.69 (0.76) | 3.15 (0.86) | 3.94 (0.68) | 4.02 (0.74) | 3.86 (0.90) |
| 750-1000 TL | 3.49 (0.90) | 3.07 (0.88) | 3.78 (1.03) | 3.48 (0.95) | 3.78 (1.05) |
| 1001-2000 TL | 3.58 (0.84) | 3.09 (0.90) | 3.98 (0.77) | 3.72 (0.98) | 3.95 (0.81) |
| 2001-4000 TL | 3.56 (0.83) | 3.17 (0.99) | 3.72 (0.95) | 3.69 (0.89) | 3.95 (0.86) |
| 4001-6000 TL | 3.59 (1.11) | 3.39 (1.08) | 3.96 (0.97) | 3.62 (1.02) | 3.59 (0.82) |
| 6000 TL/+ | 3.29 (1.05) | 3.06 (0.66) | 3.70 (0.81) | 3.55 (0.69) | 4.15 (0.63) |

| | Expenditure | | | | |
| 50-150 TL | 3.48 (0.90) | 2.97 (0.92) | 3.86 (0.86) | 3.61 (0.93) | 3.88 (0.94) |
| 151-250 TL | 3.47 (0.88) | 3.10 (0.96) | 3.68 (0.95) | 3.58 (1.04) | 3.85 (0.94) |
| 251-350 TL | 3.72 (0.84) | 3.14 (0.86) | 4.06 (0.88) | 3.77 (0.96) | 4.04 (0.81) |
| 351-450 TL | 3.55 (0.85) | 3.38 (0.86) | 3.99 (0.73) | 3.75 (0.91) | 3.81 (0.74) |
| 451-750 TL | 3.81 (0.54) | 3.23 (0.89) | 3.92 (0.66) | 3.85 (0.52) | 3.92 (0.86) |
| 751/+ | 3.23 (1.01) | 3.06 (0.66) | 3.59 (1.16) | 3.77 (0.79) | 3.92 (0.95) |

| | Shopping Time | | | | |
| 0-30 min. | 3.61 (0.84) | 2.85 (0.99) | 3.72 (0.97) | 3.74 (0.90) | 3.89 (0.84) |
| 31-60 min. | 3.55 (0.88) | 3.00 (0.91) | 3.90 (0.90) | 3.62 (1.06) | 3.76 (1.00) |
| 61-90 min. | 3.54 (0.93) | 3.16 (0.98) | 3.83 (0.87) | 3.63 (0.98) | 3.84 (0.90) |
| 91-120 min. | 3.47 (0.85) | 3.19 (0.92) | 3.83 (0.85) | 3.64 (0.84) | 3.98 (0.91) |
| 121/+ | 3.61 (0.84) | 3.24 (0.85) | 3.92 (0.88) | 3.73 (0.91) | 3.95 (0.79) |

| | Person/People | | | | |
| Mother | 3.48 (0.81) | 2.98 (0.82) | 3.76 (0.98) | 3.68 (1.03) | 3.78 (1.03) |
| Father | 4.05 (0.58) | 3.58 (1.03) | 4.33 (0.63) | 4.00 (0.87) | 3.86 (0.92) |
| Mother and Father | 3.36 (0.99) | 3.17 (1.08) | 3.81 (0.84) | 3.68 (0.92) | 4.07 (0.83) |
| Friend | 3.60 (0.86) | 3.14 (0.92) | 3.91 (0.86) | 3.65 (0.95) | 3.92 (0.86) |
| Relative | 3.72 (0.52) | 3.64 (0.85) | 4.15 (0.65) | 3.94 (0.58) | 3.61 (0.99) |
| Sister or Brother | 3.35 (0.84) | 3.15 (0.71) | 3.57 (1.03) | 3.64 (0.78) | 3.66 (0.83) |

| | Frequency of shopping | | | | |
| Daily | 3.39 (0.58) | 3.25 (1.27) | 3.64 (0.59) | 3.91 (0.44) | 4.18 (0.51) |
| A few times per week | 3.69 (0.75) | 3.25 (0.91) | 3.87 (0.92) | 3.83 (0.92) | 3.89 (0.82) |
| Semimonthly | 3.59 (0.91) | 3.35 (0.87) | 3.93 (0.86) | 3.68 (1.00) | 3.99 (0.91) |
| Several times a month | 3.53 (0.89) | 3.00 (0.89) | 3.84 (0.92) | 3.60 (0.90) | 3.84 (0.92) |
| Several times a year | 3.37 (0.89) | 2.93 (0.90) | 3.95 (0.90) | 3.38 (1.03) | 3.78 (0.84) |
| Other | 3.42 (1.02) | 2.88 (0.97) | 3.63 (0.78) | 3.80 (0.93) | 3.96 (0.98) |
Table 4: MANOVA Results

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>F-stat.</th>
<th>Sig.</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Gratification</td>
<td>5.34</td>
<td>0.021</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>6.05</td>
<td>0.014</td>
<td>0.016</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>1.96</td>
<td>0.162</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>0.05</td>
<td>0.821</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>4.71</td>
<td>0.031</td>
<td>0.013</td>
</tr>
<tr>
<td>Hotelling Trace Value = 0.034; F value: 2.51, sig. 0.030; partial η² = 0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>Gratification</td>
<td>0.45</td>
<td>0.813</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>0.43</td>
<td>0.828</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>1.29</td>
<td>0.269</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>1.64</td>
<td>0.147</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>1.05</td>
<td>0.387</td>
<td>0.01</td>
</tr>
<tr>
<td>Wilk's Λ = 0.934; F = 1.00; sig. 0.458; partial η² = 0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure</td>
<td>Gratification</td>
<td>1.26</td>
<td>0.281</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>1.63</td>
<td>0.151</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>2.22</td>
<td>0.052</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>0.75</td>
<td>0.588</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>0.50</td>
<td>0.779</td>
<td>0.01</td>
</tr>
<tr>
<td>Wilk's Λ = 0.928; F = 1.10; sig. 0.336; partial η² = 0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping time</td>
<td>Gratification</td>
<td>0.37</td>
<td>0.831</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>1.97</td>
<td>0.098</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>0.50</td>
<td>0.739</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>0.29</td>
<td>0.886</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>0.70</td>
<td>0.590</td>
<td>0.01</td>
</tr>
<tr>
<td>Wilk's Λ = 0.951; F = 0.920; sig. 0.562; partial η² = 0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person/People</td>
<td>Gratification</td>
<td>1.42</td>
<td>0.207</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>1.65</td>
<td>0.133</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>1.56</td>
<td>0.159</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>0.43</td>
<td>0.859</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>0.90</td>
<td>0.498</td>
<td>0.02</td>
</tr>
<tr>
<td>Wilk's Λ = 0.915; F = 1.069; sig. 0.367; partial η² = 0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of shopping</td>
<td>Gratification</td>
<td>0.95</td>
<td>0.451</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td>2.47</td>
<td>0.033</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Role</td>
<td>0.67</td>
<td>0.648</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Experimentation</td>
<td>1.50</td>
<td>0.190</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>0.67</td>
<td>0.649</td>
<td>0.01</td>
</tr>
<tr>
<td>Wilk's Λ = 0.921; F = 1.197; sig. 0.230; partial η² = 0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Discussion

The rapid change in the purchasing process of consumers led businesses to move towards a customer oriented approach, even to consider each individual as a customer, and to realize their production according to the demands and needs of each customer. Developments especially in communication technologies changed the way of transaction of businesses with their customers. The amount of competition among businesses occasionally led to losing regular customers to competing businesses and at the same time makes difficult to gain new customers.

Today, it is not that easy to attract consumers and to build their loyalty as it was before since alternatives of brands for consumers are high in number and each brand aims to provide their customers incredible experiences. Here, it is important for businesses to analyze properly the motivation of customers and to use applications triggering these motivations.

The study has shown that there are differences in shopping motivation of young consumer in apparel shopping in terms of gender. The differences were in the expected direction. In other words, female consumers have more gratification, idea and value shopping motivations than males. However, with the exception of shopping frequency variable, other demographic variables (income) and shopping
habit variables (spending level per month, average shopping time, people going shopping together) were statistically not significant differences. This study extends previous research outcomes. When literature is studied, it can be observed that some provided outcomes with significant statistical differences in terms of demographic variables, and others results with no significant differences.

For retailers, the results are important because the success of retailers choosing the youth as a target group depends on its knowledge regarding hedonic motivations driving the youth. If retailers know what hedonic motivations orienting men and women in shopping are, they will be able to use various stimulants in their stores and organize both the interior and exterior atmosphere of the stores. Furthermore, it is possible to arrange campaigns based on these motivations in communicating with these customers and to realize brand management. Especially the achievement of retailers is dependent on their communication with customers based on life-time values and doing related investments.

Given these findings, future research should examine differences in demographic characteristics and shopping habits of consumers regarding hedonic shopping motivations across different retail environments. Besides, the study was conducted by using university student sample. Therefore, evaluation of the results can only be taken into account to university students. A potential limitation in the study is that it was conducted in a classroom setting. Therefore, future researches should be carried out in real consumption settings. Thus, the results can be generalized for young consumers. The findings may also be restricted only to one city in Turkey. Future researches can be made in different countries.

References


The Conceptual Frame Work: The Influence of Organizational Commitment to Job Performance in the Customer Loyalty Perspective of the Hair Dressing Business in Thailand

Khahan Na-Nan
Ph.D. Faculty of Business Administration
Rajamangala University of Technology Thanyaburi, Patum Thani, Thailand
E-mail: dr.khahan@yahoo.com
Tel: 66 8922 6200

Abstract
This literature review aims to study the following objectives: To investigate the level of employee commitment, customer satisfaction, service quality, and loyalty of its customers. To determine the relationship between employee commitment, customer satisfaction, service quality, and the loyalty of the customers. To create employee commitment, customer satisfaction, service quality and loyalty of customers, in the hairdressing business of Thailand.

The high performance of the hair dressing business is based widely on customer loyalty, organizational commitment, is the one factor that leads employees to deliver high service performance to their customers. The service performance can produce quality of service, customer satisfaction, and customer loyalty.

The research is a combination between quantitative research and qualitative research. For the data collection of qualitative study, an in-depth interview was done with hairdresser gurus, marketers, and customers. The study of quantitative research, surveyed 200 hairdressers to answer organizational commitment and 400 customers who use the service to answer the service quality, customer satisfaction and loyalty. The data were analyzed with structural equation modeling. Mixed method research process is created the loyalty model frame work of the study.

Keywords: Organizational commitment, service quality, customer satisfaction, loyalty

1. Introduction
Personality is very important in human life in present society, whether any genders, ages, or states want to be look good and impressive in the other person's eyes. The interest in taking care of their internal and external personality which is considered a basic need of human life in modern society. This phenomenon spread quickly all over the world (Khamanarong, Khamanarong, & Khamanarong, 2009). For the Thailand Beauty industry is one of the many businesses that have an important role to develop in economy and society. The beauty industry revenue has huge amounts that have continued growth in both small and large businesses. Therefore, this industry rose steadily and interested investors. Consistent with the survey of Economic and Business Forecasting of Thailand in 2012 found that medical and beauty business are the first rank of popular business, because people are now paying more attention to health and beauty (ASTV Manager Daily, 2011). Because of the beauty business competitiveness, they should have effective systems and have employees in organizations to produce
and deliver effective performances. Organizational performance can be measured by varieties of perspectives as such economy, effectiveness, efficiency (Brewer, 2010; Browne & Cudek, 1993) or financial, customer, internal process and learning and growth (Kaplan, 1983) in general. However in service businesses, has popularly used customer satisfaction and loyalty to be the key performance indicator in their organization. This study will focus on the hairdressing business in Thailand.

The survey of Department of Business Development (2013) found that there are 300,000 salons in Thailand and highly competitive in terms of price, products, and services, and some businesses have closed. For using the service, the customer will consider the skills of the hairdresser, price, and service that are provided by the salons (Department of Business Development, 2013). Chalachol (2012) the hairdresser guru and Hair Hero of APEC by Schwarzkopf Professional said that:

“Making the hairdressing business survive should return on the beginning of business which is the “employees” because they will become the human capital of organization. Developing and taking very good care of them will lead them to have a performance potential and happy to work with organization”

This message points out the importance of the employee to deliver the best service to the customer. The owner of hairdressing business should pay attention to their employees for this competitive advantage.

The employee is the one key of the high organizational performance especially in service businesses (Yuanquiong, Wenli, & Keung, 2011) and he/she is the main resource of the organization that drives up competitive advantages in business. Organizational commitment is very significant for performance organization (Khan et al., 2011) if they have a very strong commitment with the organization, they will deliver a high standard of performance or satisfaction and loyalty to customers (Malhotra & Mukherjee, 2004; Little & Dean, 2006; Pantouvakis & Bouranta, 2013; Schlesinger and Heskett, 1991, Rucci et al, 1998; Harter et al, 2010). So That the service business tries to invest in their staff for recruiting, training, developing, or compensation linked to performance for employees at all level (Heskett et al, 1994) to make the business survive in complex environment and society.

This study aims to achieve the following objectives as follows:
To study the level of organizational commitment, service quality, customer satisfaction and loyalty.
To determine the relationship between organizational commitment, service quality, customer satisfaction and loyalty.
To create organizational commitment, service quality, customer satisfaction and a loyalty model of the hairdressing business in Thailand.

2. Previous Research
The literature review will explore the knowledge of organizational commitment, service quality, customer satisfaction and loyalty for making empirical evident the research model and hypothesizes.

2.1. Theories about the Organizational Commitment
Malhotra and Mukherjee (2004) found that organizational commitment is the important factor that affects service quality. By the way Steers and Porter (1983) defined the meaning of organizational commitment as, the closed relationship organization of members in organization includes behavior that is harmony with the firm values and culture for showing unity, willingness, and motivating to do activities of the organization. Allen and Meyer (1990); Meryer and Aller (1991) and Meyer, Allen, and Smit (1993) introduce three commitment elements consist of (1) Affective commitment, is the feeling of a person that feels to be a part of the organization and contribute his or her full potential to the organization. (2) Continuance commitment, involves an employee’s bond to an organization based on what it would cost that person to leave the company or the employee remain to work with an organization without change or avoid the perception leaving (Becker, 1960). (3) Normative
commitment is the sense or feeling of employees’ commitment with the goals, values, culture and norms of the organization and shows in the form of loyalty.

There is little research shown that, organizational commitment has relationship and affect with customer satisfaction, service quality, and customer loyalty. Yuanqiong, Wenli, and Keung (2011) said that the organizational commitment can be beneficial to create a satisfying customer into two ways; the employees are committed to the organization will attempt to deliver the goods or services with the best quality to customer (Boshoff & Tait, 1996) and they will satisfy with their duties then transfer good service to customers (Ulrich et al., 1991). From the research of Padmakumar, Swapna, and Gantasala (2011) and Yuanqiong, Wenli, and Keung (2011) found that commitment has a positive relationship and effect with customer satisfaction. Consistent with the study of Michel and Nicholas (2010) found organizational commitment has affected high standard job performance and perceive over high service quality as well.

From the study of Eissebeerger et al. (1990) with 6 careers found that commitment has a positive relationship with service quality consist with Malhotra and Mukherjee (2004) studied with bank call center in England found commitment has significant positive influence with customer perception of service quality. More over in the research of Marie and Alison (2006) suggested that the commitment could predict 14 percent of service quality and the commitment will encourage or support the employee felt the value of their responsibilities or service their customers.

In the study of Fullerton (2009) suggested that affective and continued commitment of the employee is the primarily component of customer loyalty, if the business failed to consider the existence of both types, it leads to fail to completely understand why, consumers maintain and value a relationship, and leave given a chance. Marshall (2010) found the same commitment factors had significant affect with customer loyalty.

### 2.2. Service Quality

For decades, marketers, researchers, and academics have been interested in studying the quality of service focusing on marketing areas, operations, and the application for creating an excellent service quality to consumers. Parasuraman, Berry, and Zeithaml (1988) defined service quality is the consumer perception of service quality through assessment by comparing their expectations with the service they are received. By the way Parasuraman, Berry and Zeithaml (1991) divided five dimensions of service quality as follows:

1. **Tangibles:** The appearance of physical facilities, equipment, personnel, and communication materials.
2. **Reliability:** The ability to perform the promised service accurately and on time.
3. **Responsiveness:** The willingness to help customers and to provide prompt service.
4. **Assurance:** The knowledge and courtesy of employees and their ability to convey trust and confidence.
5. **Empathy:** The provision of caring, individualized attention to customers.

There is a lot of research that shows the significant effect of service quality to customer satisfaction (Eugene & Jamie, 2000; Festus, Maxwell, & Godwin, 2006) which quality of service is a factor that contributes before customer satisfaction (Andaleeb & Conway, 2006). Consistent with the concept of Fornell et al, (1996) reminded that service quality is the part of customer satisfaction and Bagozzi (1992) said that assessing service quality of product or service will lead to customers feeling about satisfaction and drive out some behavioral customers. In the research of Mohammad and Alhamadani (2011) found that service quality had significant effect on customer satisfaction. They suggest that quality will create customer perception about satisfaction for a consuming products or services.

In the present, there is much research that finds service quality has affected significant positive additions to customer loyalty such as Guenzi and Pelloni (2004) tested relationship structural model, found service quality had positively affected significant customer loyalty. Consistent with Antony et al.
(2004) and Prentice (2013) used SERVQUAL with varieties of sample the research finding show a strong correlation of customer loyalty. In the research of Kuang-Wen (2011) suggested that service quality will lead the customer to come back to buy or use the product again in the future. Furthermore, Dean (2002) studied with the customers of insurance companies by testing the relationship and effect of service quality and customer loyalty, the research results found a significant relationship and effect with the customer loyalty.

2.3. Customer Satisfaction

Satisfying customers is the main objective of every business for keeping current customers (Naik, Gantasala, Prabhakar, 2010) if the business can create customer satisfaction it will help the organization have a better chance to compete in their related industry (Kotler, 2000). Padmakumar, Swapna, and Gantasala (2011) stated that customer satisfaction is an affective state that the emotional reaction to an experience or a sequence of experiences with a seller through assessment process of degree to which a seller’s performance is perceived to have met or exceeded some comparison standard. Moreover Chotivanich (2012) said that Customer satisfaction is an overall attitude of consumers that is based on experience.

Customer satisfaction influences positive loyalty of customers (Dick & Basu, 1994; Chaniotakis & Lymperopoulos, 2009; Deng et al., 2009) from the study of Khristianto, Kertahadi, and Suyadi (2012) found that satisfying customers affect the perception of goods or services by repurchasing and word of mouth to their friends about the good experiences they had. Chotivanich (2012) stated that if a person has a good experience with the goods or service in the past, it will lead the customer come back to repurchase in the future. Awwad (2012) found that the level of customer satisfaction is a positive relationship with customer loyalty. On the other hand, Canming and Jianjun (2011) found customer satisfaction had not directly affected to loyalty but indirectly through customer complaints before loyalty. However customer satisfaction is the one factor that is widely recognized as the key affect for testing loyalty or the formation of consumers’ future purchase intentions (Taylor & Baker, 1994).

2.4. Customer Loyalty

Customer loyalty has been studied for many decades; loyalty is widely recognized as a valuable asset of business for competing in industry (Srivastva, Shervani, & Fahey, 2000). Copeland (1923) is the first person that mentioned loyalty in a behavioral consumer insistence to product service brands while Oliver (1999) stated that a deeply held commitment to repurchase or repatronize a preferred goods or service consistently in the future in the same brand this customer behaviors had been influenced by situational influences and marketing efforts. Caruana and Malta (2000) stated that service loyalty is the final effect on rebuying by the customers which is very import constructs in service business consistent with McMullan and Gilmore (2007) mentioned customer loyalty is the customer characteristics preference to buy a products or services from the organization consistently when their needs has been raised to purchase. Meanwhile Songsom and Traichan (2012) recommended loyalty is the commitment characteristic to products, services, or brands which expression by willingness to purchase, support, or use and recommendation or word of mouth to others for buying or using a services or products.

Measuring customer loyalty can be measured in terms of attitude, emotion, or behavior. Oliver (1999) stated that loyalty can measured by attitude with 4 dimensions; first, cognitive loyalty, is the customer understands the products or services contribute information available for indicating that one brand is preferable to its alternatives. Secondary, affective loyalty is the feeling of the customer towards a brand that has developed on the basis of cumulatively satisfying usage occasions. Thirdly, conation loyalty is the stage as motivation to rebuying and positive affect toward the brand. Finally, action loyalty is the final stage refers to as action of customers towards intent to purchase and motivate in the previous loyalty state as transformed into readiness to act.
However Zeithaml, Berry, and Parasuraman (1996) developed measurements in service business called “Behavioral Intentions Battery” and is widely known today as follows; firstly, word of mouth communications is positive communication about good or great service of providers and encourage others to experience. Secondary, purchase intentions means selecting a service that be the first option, those can be reflect on the changing. Thirdly, price sensitivity is that consumers have no problem when the service provider switches the price of products or service and the consumer would pay more if the products or service meet their satisfaction. Lastly, complaining behavior refers to the customer complaints when the problems have occurred with provider, others, or mass.

3. Hypotheses
For studying the conceptual frame work: The conceptual frame Work: the influence of organizational commitment and job performance in customer loyalty perspective of the hair dressing business in Thailand. The researcher tests the following hypotheses:

H1: Organizational commitment has a positive effect on service quality.
H2: Organizational commitment has a positive effect on customer satisfaction.
H3: Organizational commitment has a positive effect on customer loyalty.
H4: Service quality has a positive effect on customer satisfaction.
H5: Service quality has a positive effect on customer loyalty.
H6: Customer satisfaction has a positive effect customer loyalty.

4. Research Method
Literature reviewed with respect to customer loyalty, customer satisfaction, service quality, and organizational commitment of the hair dressing business will use the mixed methods of qualitative and quantitative research. Qualitative research aims to analyze the non-numeric data in order to describe and understand the concepts. Focus on the details of the key information and explain the phenomenon of knowledge and understanding about organizational commitment, customer loyalty, customer satisfaction, service quality. Quantitative research aims to explore and measure by a number. The research design, using a questionnaire collect data from a sample, to confirm the analysis component is Confirmatory Factor Analysis--CFA the customer loyalty, service quality, and organizational commitment. After that analyzed effect of organizational commitment to customer satisfaction, service quality, and customer loyalty uses structural equation model.

The mixed method can be created as follows.

Figure 1: Mixed model method research process
5. Target Group
A representative of salons in Bangkok and suburb, five gurus of hairdressers, two marketing experts, and six customers who use the services of salons for indebt interview in qualitative research.

6. Sample
For analyzing the statistic, structural Equation Model--SEM, the sample size must be at least 200 or more than 10 times of observed (Kelloway, 1998). For this research the sample are 200 hairdressers for answering the organizational commitment questionnaires and customers who use the service of hairdressers, in ratio 2 customers to 1 hairdresser, are 400 people for answering the answering the questions of service quality, customer satisfaction and loyalty. Total research samples are 600 people.

7. Conceptual Frame Work
Review of the literature on support of the concept of the relationship between organizational commitment, service quality, customer satisfaction and loyalty model can be created as the framework follows.

![Conceptual Frame Work](image)

Model of customer loyalty developed for measuring the Influence of variables or factors that affect both direct and indirect organizational commitments to loyalty of the customer by considering through attitude and behavior from employees and customers. The model includes one exogenous latent organizational commitment and three endogenous latents, service quality, customer satisfaction, and customer loyalty.

Based on the research objectives and model adopted from the previous study. The researcher makes five hypotheses in this study. From the literature review about commitment, service quality, satisfaction, and loyalty found that many scholars and researchers agree on commitment have positive correlations and effects to service quality, satisfaction, and loyalty. Moreover strong research finding shown service quality is the primary factor that affects customer satisfaction and loyalty. So the research hypothesizes of this study expressed as follows;

H1: Organizational commitment has a positive effect on service quality.

The main constructs measured organizational commitment in three dimensions as affective commitment, continuance commitment, and normative commitment in the questionnaire. It will be adapted from the organizational commitment of Na-Nan (2012) that developed and adjusted from
Meyer, Allen, and Smit (1993) to be Thai version. In this research, the research will investigate the effects of the organizational commitment dimension on service quality (Eisbeeger et al., 1990; Malhotra & Mukherjee, 2004; Marie & Alison, 2006) from the perspective of hairdresser as employees in organization.

H2: Organizational commitment has a positive effect on customer satisfaction.

From literature review on the relationship and effect between organizational commitment and customer satisfaction with many previous researchers and scholars propose that the experience of organizational commitment has a positive effect on satisfaction (Awwad, 2012; Ulrich et al., 1991). The questionnaires of customer satisfaction will be adapted from the customer satisfaction of Awwad (2012) and Anderson and Sullivan (1993) developed components of instruments that have demonstrated good psychometric properties.

H3: Organizational commitment has a positive effect on customer loyalty.

The reviewed literature shows strongly evident relationship and effect on customer loyalty from many scholars and researchers (Fullerton, 2009; Marshall, 2010). For the customer loyalty, the researcher will use the Behavioral Intentions Battery of Zeithaml, Berry, and Parasuraman (1996) for measuring customer loyalty which measures in four dimensions are Word of mouth, Purchase intention, Price sensitivity, and complaining behavior.

H4: Service quality has a positive effect on customer satisfaction.

From the discussions on the relationship and effect between service quality and customer satisfaction (Andaleeb & Conway, 2006; Bagozzi, 1992; Eugene & Jamie, 2000; Festus, Maxwell, & Godwin, 2006; Fornell et al, 1996), many scholars are widely agreed that and using the SERVQUAL items in the questionnaire will be adapted from the study created by Parasuaman et al.(1998) which measures in tangibles, reliability, assurance, empathy, and responsiveness. This study will explore the effect of the service quality dimension on customer satisfaction from the customers who use the service of Salons.

H5: Service quality has a positive effect on customer loyalty.

The previous researches showed strongly positive relationship and effect between service quality and customer loyalty and indicated the service quality would elevate customer loyalty (Antony et al., 2004; Dean, 2002; Guenzi and Pelloni, 2004; Kuang-Wen, 2011; Prentice, 2013). The SERVQUAL questionnaire of Parasuaman et al. (1998) will be used in this study for testing service quality and the Behavioral Intentions Battery of Zeithaml, Berry, and Parasuraman (1996) will employ to customer who use the service for testing the loyalty.

H6: Customer satisfaction has a positive effect on customer loyalty.

The customer satisfaction will be measured using the questionnaire of Awwad (2012) and Anderson and Sullivan (1993) for investigating customer loyalty which uses the Behavioral Intentions Battery of Zeithaml, Berry, and Parasuraman (1996). From the literature showed the loyalty of customer was influenced by customer satisfaction of the services and pointed out the customer satisfaction was a significant variable that could increase customer loyalty (Awwad, 2012; Canming & Jianjun, 2011; Chaniotakis & Lymeropoulos, Chotivanich, 2012; Deng et al., 2009; Dick & Basu, 1994; Khristianto, Kertahadi, & Suyadi, 2012; Taylor & Baker, 1994)

8. Summary and Conclusions
Organizational commitment is the most important factor that affects the firm’s performance (Vella, Caruana, & Pitt, 2012). If the organization can make the commitment of employee to organization, it will create a big chance to get a competitive advantage among businesses. The beauty business will have to pay more attention to employees, to give a greater performance to the customers. The previous research indicated strongly that the commitment has a relationship and effect to service quality, customer satisfaction and loyalty. For the quality of service, is the important factor that influences customer satisfaction and loyalty. The service quality can make the success of the business by putting
quality into the services that lead to satisfaction. To attract new customers and expand market share, the business must pay attention to the quality of service which encourages customer satisfaction and makes for return visits. Moreover service quality, has also affected to the loyalty of customers through tangibles, reliability, responsiveness, assurance, and empathy that employee’s delivers to their customers. Furthermore the satisfaction of customer is the one component which leads to building the business and customer loyalty. Satisfying customers is related to the businesses reputation, something good about business, repurchasing intention, complaining behavior, or even though switching price not the same in the past. This is the core of management and marketing and managers should use the information for decision making the human resource management plan and a marketing plan.

To conclude, the organizational commitment is the one key that makes service quality, customer satisfaction, and loyalty. The empirical research has shown that organizational commitment has a relationship and effect, to service quality, customer satisfaction and loyalty in both direct and indirect ways. Employee commitment, customer satisfaction, and loyalty are the psychology of human that relates to behavior so the business should be concerned when making business plans

References


The Information Commitments Toward Online Financial Information Among Taiwanese Adults

Van-Hai Hoang
Corresponding Author, The University of Danang, Campus in Kon Tum Vietnam, No.704 Phan Dinh Phung Street, Kon Tum City, Vietnam
E-mail: hoangvanhaidhkt@gmail.com
Tel: +84-905402867; Fax: +84-603 913 029

Abstract
This paper is to utilize the Information Commitment Survey (ICS) that proposed by Wu and Tsai (2004) for investigation of participant’s standard of judging online financial information and their search strategies on the Web. The sample included 192 participants more than 24 years old in Taiwan. The results indicated that participants in this study held advanced information commitments than less sophisticated information commitments when they sought financial information online. The results revealed that searching behavior and searching strategies of participants in this study were affected by gender; namely, the female participants often more used ‘Multiple sources’ standard for accuracy and ‘Elaboration’ searching strategies than male participants. Moreover, participants with more Internet experiences tended to use ‘Authority’ standard for accuracy information on the Web.

Keywords: Information commitments, online financial information, Taiwan

1. Introduction
Searching for information on the Web is a common activity for many hundreds of millions of people around the World. According to The International Telecommunication Union (ITU) in 2011, the percentage of people using the Internet around the world continued to grow. The International Telecommunication Union calculated that, by the end of the year, approximately 2.3 billion people were online. In addition to the obvious beneficial effects on productivity, Internet access has socio-economic effects, including acquisition of knowledge and skills that are required for jobs and education.

According to the Global Internet User Survey 2012, a majority of respondents felt strongly that the Internet plays a significant role in making improvements to business, science, and technology in areas such as: expanding the availability of goods and services (66 percent), allowing entrepreneurs to conduct business across all countries (65 percent), and advancing science and technology and creating a technologically recognized workforce (61 percent). Nearly 75 percent of users strongly agreed that access to the Internet allows them to seek any information that interests them.

The Internet is now an integral part of daily life in Taiwan, with over three-quarters of the island’s population spending more time than ever before in cyberspace, according to a survey released July 8 by Taiwan Network Information Center. The number of Internet users aged 12 and above in Taiwan reached 15.94 million in May, up 3.57 percent year on year, accounting for 77.25 percent of the island’s population. Of these, 74.18 percent use broadband devices as their primary mode of connectivity, the study found.
In today’s Web-enabled world, issues such as these are increasingly important for a wide range of purpose such as finding general and specific information, exchanging E-mails, buying products and services, and looking for work. For example, in Taiwan nearly 60 percent of web surfers shop online, with the 20-44 age groups recording the highest buying frequency. Nearly a third of purchases ranged from NT$2,001 to NT$5,000 (Taiwan Network Information Center, 2012).

To understand about the information searching behavior on the Web, researchers have identified aspects of user behavior, search tasks, system capabilities, and search outcomes as important factors in information seeking on the website (Andrew, 2007; Yuelin & Nicholas, 2008). Schmidt and Spreng’s (1996) found that age, sex, income and education affect investors' preferences when they search information on the internet.

Besides, online database search experience (novice vs. experienced searchers), and task type (known-item vs. subject search tasks) influence users’ search behavior on the Web (Kim, 2001). Furthermore, epistemological beliefs play an important role in determining performance and strategic preferences in internet-based activities (Bråten & Strømsø, 2006). The fact that investors suffer from information overload leads them to want to simplify information processing by means, such as relying on advisors (Lee & Cho, 2005; Peress, 2004). People may also employ heuristics to reduce the associated effort with information processing (Simon, 1990) since heuristics can select information according to an effort-reduction framework (Shah & Oppenheimer, 2008).

Much research has also paid attention the perceived usefulness and perceived ease of use as the determinants of the consumers’ attitude toward intention to use Internet banking (Cheng, Lam, & Yeung, 2006). However, simply focusing on user perceptions of the technology may be not enough. A diffusion of innovative technology is highly related to communication channels, individuals, organizational members, and social system except for the technology itself (Wu & Chen, 2005). Obviously, research in some studies has shown that (1) Consistency and technical convenience influence perceived ease of use; (2) decision quality, investment information and information quality effected perceived usefulness; and (3) perceived usefulness to the individual investor is affected most decision quality, while perceived ease of use is influenced equally by consistency and technical convenience (Lee, Chung, & Kang, 2008), other study found that web user priorities their coping strategies according to the importance of the search topic and their determination to fulfill the search successfully (Mansourian, 2007).

Previous studies on individual financial investment decision examine the determinants influencing individual investor behavior, based on under uncertainty, risk aversion is a major psychological determinant in individual investment decision-making (Tversky and Kahneman, 1981; Shefrin and Statman, 1985; Pennings and Smidts, 2000; Sitkin and Weingart, 1995). This greater choice leads individuals to make their investment decisions in a context of increasing complexity and uncertainty (Clark-Murphy and Soutar, 2004) due to their lack of understanding for various risky investments (Fisher and Statman, 1997; Howcroft et al., 2003). This leads investors to seek advice and education from professional advisors (Fisher and Statman, 1997), especially face-to-face contact when choosing more complex or riskier investments (Howcroft et al., 2003). Studies on financial investment demonstrate the positive association between information search from advice and risky investments (Howcroft et al., 2003; Peress, 2004; Shum and Faig, 2006). For example, Peress (2004) suggests that, costly but precise information obtained personally from experts might induce investors to hold more stocks.

To explore the issues relate to the field of financial information commitments on the website, that is, what is critical factor will affect seeking financial information behavior of investor, and how they search financial information on the website. This study adopts the concept of ‘information commitment’ as a set of evaluative standards in which Web users utilize in order to assess the accuracy and usefulness of web-based materials, and these commitments are also relevant to searching strategies. Tsai (2004) proposed a theoretical framework for describing Web users’ information commitments, including three aspects: standards for accuracy, standards for usefulness, and searching
strategy. An ‘Information Commitment Survey’ (ICS) consisting of these factors was developed by Wu and Tsai (2005), who found that learners’ evaluative standards of Web materials had a significant effect on their information searching strategies in web-based learning environments. Furthermore, Wu and Tsai also found that male students were more oriented towards using the ‘Match’ searching strategy to seek information on the Web and that graduate students may be more oriented towards utilizing multiple sources to assess the correctness of the material in web-based learning environments than undergraduate students (Wu & Tsai, 2007).

Moreover, to make this study more theoretically sound and more practically robust, other variables, which have proven academically important in influencing consumers’ intention to use information technology or internet-based information systems, were added such as investment experiences, financial products and Internet usage. In this study, the crucial objective was to use the ICS to survey the group investors in Taiwan to probe their financial information commitment toward Web information. To be more specific, this paper addressed the following research questions:

1. What are the investor’s financial information commitments toward Web financial information in Taiwan?
2. Is there significant difference between the males and females which affect financial information commitments on the website?
3. What is the role of investment experience, and Internet experience in their information commitments?

3. Method

Participating in this survey were 192 individuals (111 males and 108 females). Participants were more than 24 years old in order to make sure adult participating. The ICS developed by Wu and Tsai (2005) was used to assess participant’s standard of judging online financial information, and their search strategies on the Web.

The research framework of this study is constituted mainly by the concept of the information commitment developed by Wu and Tsai (2005). Information commitments are a set of evaluative standards in which Web users utilize so that assesses the accuracy and usefulness of web-based materials, and these commitments are also relevant to search strategies. This included three aspects: (1) standard for accuracy, (2) standard for usefulness and (3) searching strategy, which permit making the evaluation in online categories information commitments and searching strategies. Each of aspects contains two scales, that is, ‘Multiple sources’ and ‘Authority’ standard for accuracy, ‘Content’ and ‘Technical’ standard for usefulness, ‘Elaboration’ and ‘Match’ searching strategy. Tsai (2004) included that the first, the three information commitments, including ‘Multiple sources,’ ‘Content’ and ‘Elaboration’ were advanced information commitments, and the second, three others, including ‘Authority,’ ‘Technical,’ ‘Match’ were less sophisticated. Wu and Tsai (2005, 2007) have found that ICS is sufficiently reliable for assessing learners’ information commitment toward Web information. A momentary description of the six categories is exposed below:

1. **Multiple sources as correctness scale (Multiple sources):** measuring the extent to which students will validate the correctness of unknown information on Web by relating to other websites, prior knowledge, peers, or other printed materials.
2. **Authority as correctness scale (Authority):** assessing the extent to which students will examine the accuracy of unknown information in web-based learning environments by the authority of the websites or sources.
3. **Content as usefulness scale (Content):** measuring the extent to which students will assess the usefulness of the information viewed in web-based learning environments by the relevancy of its content.
4. **Technical issues as usefulness scale (Technical):** assessing the extent to which students will judge the usefulness of the information viewed in web-based learning environments by
the ease of retrieval, the ease of searching or the ease of obtaining information. Therefore, their standard for evaluating Web information is more related to some technical issues.

5. **Elaboration as searching strategy scale (Elaboration):** measuring the extent to which students will have purposeful thinking or integrate Web information from several websites to find the best fit that fulfills their purpose.

6. **Match as searching strategy scale (Match):** investigating the extent to which students will be eager to find only a few websites that contain the most fruitful and relevant information. Their strategy is oriented to match searching purposes.

The questionnaire in this study included two parts: the first that is background information, such as respondent’s gender, ages, working experiences, investment experiences, investing financial products (such as stock, bond, golden, option), online search financial information status, and Internet usage experiences). The second comprises 24 items of the ICS, based on a six point Likert-type scale, with anchors ranging from ‘strongly agree’ to ‘strongly disagree’. The questionnaire was presented in Chinese and administered by paper-and-pencil survey.

### 4. Result

#### 4.1. Participant’s Score on the ICS Scales

Table 1 shows participant’s average scores and standard deviation on the six scales of the ICS. According to Table 1, the highest score belongs to the ‘Content’ (an average of 4.87 per item), followed by ‘Elaboration’ (an average of 4.49 per item), and ‘Multiple sources’ (an average of 4.42 per item), ‘Authority’ (an average of 3.98 per item), ‘Match’ (an average of 3.96 per item) and the last is ‘Technical’ (an average of 3.75 per item). This result indicated that participants in this study, on average, did not agree that they often used the ‘Technical’ as the crucial tool to search financial information on the Web. In light of these findings, it can be explained that participants in this study had the ability and good knowledge of technologies on the website.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple sources</td>
<td>4.42</td>
<td>.67</td>
<td>3</td>
</tr>
<tr>
<td>Authority</td>
<td>3.98</td>
<td>.89</td>
<td>4</td>
</tr>
<tr>
<td>Content</td>
<td>4.87</td>
<td>.55</td>
<td>1</td>
</tr>
<tr>
<td>Technical</td>
<td>3.75</td>
<td>.70</td>
<td>6</td>
</tr>
<tr>
<td>Elaboration</td>
<td>4.49</td>
<td>.73</td>
<td>2</td>
</tr>
<tr>
<td>Match</td>
<td>3.96</td>
<td>.64</td>
<td>5</td>
</tr>
</tbody>
</table>

#### 4.2. Gender Differences on the Financial Information Commitments

Table 2 presents the data for the gender comparisons on the six scales, which identified by t-test. The result shows that the female participants in this study were more oriented towards using ‘Multiple sources’ (*t*-value = 2.10, *p* < .01) and ‘Elaboration’ (*t*-value = 2.73, *p* < .01) to look for information through the Internet.

The comparisons for the three advanced information commitments in this study, that is, ‘Multiple sources,’ ‘Content,’ ‘Elaboration’ shows that the female participants reach significantly higher score in ‘Multiple sources’ and ‘Elaboration’ scales than the male participants. However, within ‘Content’ scale, there was no significant difference, and the less sophisticated information commitment, there was no significant difference. This finding judges that female participants often use ‘Multiple sources’ to estimate amount of correctness of the information. In addition, they usually use ‘Elaboration’ searching strategy to make sure the information they get will be the best things to fit their
purpose. This behavior of female may be helping them reduce the risk which they will be taking in the future.

Table 2: Gender differences on the information commitments

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Multiple sources</td>
<td>4.53</td>
<td>.71</td>
<td>4.31</td>
<td>.62</td>
<td>2.10**</td>
</tr>
<tr>
<td>Authority</td>
<td>3.98</td>
<td>.87</td>
<td>3.98</td>
<td>.92</td>
<td>-.02</td>
</tr>
<tr>
<td>Content</td>
<td>4.90</td>
<td>.49</td>
<td>4.84</td>
<td>.59</td>
<td>.62</td>
</tr>
<tr>
<td>Technical</td>
<td>3.73</td>
<td>.73</td>
<td>3.76</td>
<td>.66</td>
<td>-.27</td>
</tr>
<tr>
<td>Elaboration</td>
<td>4.64</td>
<td>.65</td>
<td>4.34</td>
<td>.79</td>
<td>2.73**</td>
</tr>
<tr>
<td>Match</td>
<td>4.02</td>
<td>.65</td>
<td>3.90</td>
<td>.64</td>
<td>1.22</td>
</tr>
</tbody>
</table>

\( *p < .05; **p < .01 \)

4.3. The Role of Investing Behavior in Financial Information Commitments

Table 3 presents the correlations among the six scales and investing behaviors. Results reveal that investment experiences hold crucial role in their used of ‘Multiple sources’ \((r = .21, p < .01)\), ‘Elaboration’ \((r = .30, p < .01)\). With the positive correlation, the participants have more investment experiences tended to use the ‘Multiple sources’ like the best criteria to estimate online information and utilized the ‘Elaboration’ searching strategy while they were more toward collected more information of any other sources. However, these results suggest that despite the above correlation are statistically significant, they are relatively low in terms of the correlation coefficients.

Tables 3 also shows that there was a significant relationship between investing financial products and the ‘Multiple sources’ \((r = .19, p < .05)\), ‘Content’ \((r = -.18, p < .05)\). Within positive relationship with ‘Multiple sources’, it implies that the participants who invested more variety financial products, they tended to use ‘Multiple sources’ to set the standard for correctness of the data. But, to ‘Content’ scale has negative relationship with financial, it is likely that as long as they have more financial products, they were not more oriented to use ‘Content’ to evaluate the usefulness of online financial information. This relationship also has low relative in terms of the correlation coefficients.

In conclusion, these results suggest that participants more inclined to evaluate the accuracy of Web financial information by ‘Multiple sources’ and those who less inclined to judge the usefulness of Web financial information by its content. Simultaneously, they often use ‘Elaboration’ searching strategy to fulfill their needs.

Table 3: The correlations between participants’ scores on the six scales of the ICS and their investing behaviors

<table>
<thead>
<tr>
<th></th>
<th>Multiple sources</th>
<th>Authority</th>
<th>Content</th>
<th>Technical</th>
<th>Elaboration</th>
<th>Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment experiences</td>
<td>.21**</td>
<td>-.14</td>
<td>-.04</td>
<td>.01</td>
<td>.30**</td>
<td>-.04</td>
</tr>
<tr>
<td>Financial products</td>
<td>.19*</td>
<td>-.00</td>
<td>-.18*</td>
<td>-.04</td>
<td>.79</td>
<td>.07</td>
</tr>
</tbody>
</table>

\( *p < .05; **p < .01 \)

4.4. The Role of Internet Experience in Financial Information Commitments

Table 4 shows the correlations among six scales and Internet experiences. As Table 4 reveals, there was a significant relationship between online search financial information status and ‘Multiple sources’ \((r = .20, p < .05)\) standard for accuracy, and ‘Elaboration’ \((r = .23, p < .01)\) search strategy. When participants have more use information on the Web, they tended to utilize ‘Multiple sources’ to standard for correct their information.
Table 4 also illustrates that there was a significant relationship between Internet usage and ‘Multiple sources’ \((r = -0.34, p < .01)\), ‘Authority’ \((r = 0.18, p < .05)\), ‘Elaboration’ \((r = -0.21, p < .01)\) and ‘Match’ scales \((r = -0.16, p < .05)\). As can seen from the results in Table 4, within participants have more time to use internet, they less inclined use ‘Multiple sources’ standard for accuracy, ‘Elaboration’ and ‘Match’ searching strategies for Web financial information, but they tend to use ‘Authority’ standard for correctness financial information on the Web. However, this relationship has relatively low in these terms of correlative coefficients. This findings is not consistent with the result was showed by Wu and Tsai (2007). Stem from this findings, we can find that the participants spend a lot of time experience on the Internet, all most of participants believed that ‘Authority’ is the best scales to support them in making good financial decision, so they didn’t focus others scales.

**Table 4:** The correlations between participants’ scores on the six scales of the ICS and their Internet experiences

<table>
<thead>
<tr>
<th></th>
<th>Multiple sources</th>
<th>Authority</th>
<th>Content</th>
<th>Technical</th>
<th>Elaboration</th>
<th>Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search status</td>
<td>.20*</td>
<td>.02</td>
<td>-.04</td>
<td>.16</td>
<td>.23**</td>
<td>-.00</td>
</tr>
<tr>
<td>Internet usage</td>
<td>-.34**</td>
<td>.18*</td>
<td>.02</td>
<td>.01</td>
<td>-.21**</td>
<td>.16*</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01

5. Discussion and Conclusions

This study attempted to enhance our understanding of financial information commitments on the Web. In addition, the study also identified significant differences were noted in most of the domain of online financial information seeking behavior with respect to gender. The proposed model is constructed based on the ICS survey developed by Wu and Tsai (2005) to explore Taiwanese financial information commitments.

Through description statistics to six scales of the ICS, this study found that participants are more toward using advanced information commitments: ‘Multiple sources,’ ‘Content,’ ‘Elaboration’ to financial information seeking behavior. These results suggest that financial information on the Web of the financial corporation should be built wider portfolio reference information and tends to content relative. And, interestingly, these results also showed that participants might not tend to believe in the accuracy of online financial information from the famous website, office information or expert information. These findings are consistent with the perspective proposed by Nasco and Hale (2009) that mature consumers making new financial service decisions, friends and referrals were ranked as most important information source.

This study investigated the differences between female and male participants with respect to Web financial information search behavior. We found that the female participants get higher score on all the domains of information search. Significant differences are noted in ‘Multiple sources’ and ‘Elaboration’ of information seeking behavior concerning gender. Through this result indicated that the female may tend to discuss with others and judge the financial information by more website than the male when searching unknown information online. Besides, the female also more use ‘Elaboration’ search strategy to integrate Web information from several website to find the best fit that fulfilled their purpose than males. This finding is in congruence with the result is showed by Wang (2009) that there was a significant gender difference in actual risk-taking behavior favoring males. The results of others studies found that women suffered from lower self-confidence in managing technologies of information in relation to education, profession and personal life (Marcella, 2001). However, the finding is not consistent with the Liang and Tsai (2009) research, which found that for the two information commitments of ‘Multiple sources,’ ‘Elaboration,’ male medical students scored higher than female students. It may be primarily due to female’s lower risk-taking behavior and financial knowledge. Thus, more financial program should be promoted to female to help them enhance their financial knowledge and opportunities to make better financial decisions.
Next, this study tried to explicate the correlative between six commitment information and investment behavior when they seek information on the web. The findings presented here are the higher investment experiences, the more likely participants use ‘Multiple sources’ to standard of accuracy, and utilized the ‘Elaboration’ searching strategy, that is to say, participants have a large amount of investment in the financial, they tend to perceive higher value of using ‘Multiple sources’ and ‘Elaboration’. Besides, the more financial product is invested by participants, the more frequently ‘Multiple sources’ is used to evaluate of correctness. The more financial products are invested by participants, the more does not tend to ‘Content’ standard for usefulness. This means that participants hold many financial products, they tend to perceive higher value of using ‘Multiple sources’ to evaluate the correctness of information in the Web, and they will also less tend to utilize ‘Content’ to show that is a good information and really useful for them when seeking unknown information.

Furthermore, we also shed light on the observation that the relationship between Internet usage and six categories, we can find that the participants often utilized Internet to search information; they usually tend to use ‘Multiple sources’ standard for correctness and ‘Elaboration’ searching strategy. The more internet usage on the Web, the more tend to use ‘Authority’ standard for correctness, and the less to ‘Multiple sources,’ ‘Elaboration,’ and ‘Match’. Or more precisely, they will validate the correctness information on the Web by the reliability of the website or sources. These findings are not congruent with the factors previously observed by Liang and Tsai (2009) that students with more Internet experience tended to use the ‘Multiple sources,’ ‘Authority,’ ‘Content’ and ‘Technical’ standards to judge online information.

The practical implication of these findings score that financial corporations used website to support investors should pay attention to the ‘Multiple sources,’ ‘Authority,’ and ‘Elaboration,’ that is, they should try to build a wider sources reference information of many website, expert investors, and also with a good content information of website. The research findings may help Taiwan financial institutions and other interested parties to formulate appropriate marketing strategies and design effective online financial services systems and accelerate the diffusion of online financial services in the future. Besides, the findings may have implications for research and practice in psychology, especially in the subfields of educational institutions, training and performance appraisal. These findings of the present study suggest that financial institutions, especially financial school students need additional training, including learning how to critical assess the accuracy of online financial information and to develop better strategies for using Web resources to search information.

One of the limitations of this study arises from the fact that we conducted our experiment carrying out survey in small group participants. So the questionnaire survey should be extended into several sorts of participant so that the results can be explained with more generality. Future studies are encouraged to explore the influence of the financial information commitments on the website on investor’s decisions when they buy or sell financial products.

References


An Analysis of Monetary Shocks for the Turkish Economy: Time Series Evidence

Levent Korap
Gaziantep University İslahiye Faculty of Economics and Administrative Sciences
Department of Economics Hacı Ali Öztürk Mah. Mezbaha Cad. No: 3
27800, İslahiye, Gaziantep / Turkey
E-mail: lkorap@hotmail.com, Levent.Korap@gantep.edu.tr

Deniz Kozanoğlu
Université Jean Monnet GATE-LSE (Groupe d’Analyse et de Théorie Economique Lyon St-Etienne) 6, Rue Basse des Rives 42023 Saint-Etienne Cedex 02 France
Istanbul University Institute of Social Sciences Besim Ömer Paşa Cad Kaptan-ı Derya Sok. 34452, Beyazıt, İstanbul / Turkey
E-mail: mehmet.deniz.kozanoglu@univ-st-etienne.fr

Abstract
In this paper, a monetary model for the Turkish economy is tried to be tested. For this purpose, first, the stationary linkages between the data have been investigated and a multivariate cointegrating model inclusive of two long run relationships, one for a nominal money demand model and the other consisting of a relationship between two interest rates considered, is constructed in turn yielding inferences derived from a structural vector error correction modeling approach. The results reveal that there exists evidence of a liquidity effect - a negative relationship between a measure of money and an interest rate - and also that the non-existence of a price puzzle - a rise in the aggregate price level in response to a contractionary innovation to monetary policy - cannot be rejected by the Turkish data.

Keywords: Monetary Policy Shocks, Money Demand, Turkish Economy

1. Introduction
On empirical grounds, monetary policy analyses are among the mostly searched issues of interest for economists yielding applicable policy inferences. To a greater extent than the other sub-branches of the science of economics, both the theoretical frameworks supported by steady-state hypothesizes of long-run relationships and the dynamic adjustment processes come out of these policy exercises are able to provide researchers with the necessary knowledge of modeling the stylized facts of the monetary economics. The seminal papers of Sims (1972, 1980) introduce the roots of the contemporaneous estimation techniques based on vector autoregression (VAR) methodology widely used in testing various approaches of making policy as well as the policy rules to which the related stabilization attempts can be applied. In this sense, for instance, empirical studies of Sims (1992), Bernanke and Blinder (1992), Kamas (1995), and Leeper (1997) examine the monetary policy shocks on reserve aggregates or short term interest rates in affecting inflationary pressures and/or domestic output. Bank of International Settlements (2001) gives international evidence using a sequential of papers of various country cases using VAR-based monetary transmission mechanisms. As for the empirical evidence of transmission mechanisms of monetary policy and the policy reaction functions of monetary authorities
in the Turkish economy, Altuğ and Yılmaz (1998), Alper and Sağlam (2001), Şahinbeyoğlu (2001), Çavuşoğlu (2002), Us (2004) and Berument and Taşçı (2004) can be taken into account as some examples. Further, we can see that within the last decade the papers of Central Bank of Turkey (CBT) researchers such as Kadioğlu (2006) and Kasapoğlu (2007) make valuable contributions on these issues.

Following the conventional structural VAR (SVAR) approach, the recent developments in the time series analyses are also of this type, and lead the researchers to assess both the systematic and the unsystematic components of the monetary policy by considering dynamic innovation accounting methods subject to some cointegrating restrictions. This methodology enables the researcher to yield the so-called policy shocks using some key macroeconomic variables such as monetary aggregates, real output, interest rates and prices, given that the initial cointegration procedures have been used to identify a policy rule serving to carry out the latter analysis. While the papers by Gordon and Leeper (1994), Christiano et al. (1996), Leeper et al. (1996), Cushman and Zha (1997), Bagliano and Favero (1998) and Bernanke and Mihov (1998) can be dealt with for the policy innovations leading to the unsystematic part of the monetary policy, the studies of Vlaar and Schubert (1999), Jacobson et al. (2001), Juselius (2001), Brüggemann (2003) and Assenmacher-Wesche (2008) can be considered as reference to an application of some recent variants of this methodology, named structural vector error correction (SVEC) modeling allowing also to analyze the systematic reactions in monetary policy by means of identification of a monetary policy rule. McCallum (1999) is a good paper emphasizing this point of view and states that monetary policy transmission mechanisms used by economists in general tend to consider the systematic portion of policy behaviors which require structural modeling rather than the unsystematic elements represented by random shocks that account for a small fraction of policy-instrument variability and are not related to the state of the economy.

Another key issue in this strand of literature is to analyze the effects of monetary policy surprises and recurring puzzles of VAR analyses using recursive causal structures of the selected variables. Of all these, Sims (1992) is a good candidate that reveals the notion of ‘price puzzle’ which means a rise in the aggregate price level in response to a contractionary innovation to monetary policy. Indeed, many empirical studies such as Christiano et al. (1996a), Barth and Ramey (2001), Hanson (2004) and Giordani (2004) support the probability of such a case and give evidence in favor of that following an unanticipated monetary expansion the price level can be observed as initially decreasing rather than increasing. Following Sims (1992) and Christiano et al. (1996b), the main rationale leading to this puzzle is the lack of information of econometricians in forecasting future inflation when compared with the data set available to the policy makers. For instance, the researcher using econometrics will have an experience that prices tend to increase after a contractionary monetary policy shock if the interest rates taken as a policy instrument in fact show an endogenous response to signals of future inflation, and in this case, a misidentification problem occurs in testing a monetary policy shock. These papers observe that solving this puzzle requires the extension of the initial VAR model giving poor inflation forecast in a way inclusive of a commodity price index that helps the monetary authorities forecast inflation more accurately. However, this is questionable for Hanson (2004) which does not support a systematic relationship between the ability of a given indicator to forecast prices and its ability to prevent a price puzzle in standard VAR models. Thus, Sims’ suggestion in favor of extending the VAR model by including an information variable may not guarantee the correct identification of monetary policy. Barth and Ramey (2001) estimate that in case of a supply shock unanticipated monetary contractions may be followed by periods of falling output and rising price-wage ratios even after controlling for both the price puzzle and the cost effects of the shock. Searching this puzzle, Giordani (2004) explores the possibility that the price puzzle may be due to something other than the omission of a variable such as a commodity price useful in forecasting inflation and shows that the price puzzle will be (spuriously) observed if the econometrician chooses to apply the common practice of not including a measure of output gap (or potential output) in the VAR model. Back to this intuition is that omission of output gap from inflation equation leads to spurious
appearing of interest rate in that equation with a positive coefficient because the interest rate reacts positively to output gap increases and thus acts as its proxy.

Other than the prize puzzle, an interesting point arises for the liquidity effects of monetary policy shocks as a “liquidity puzzle” that draws the researcher’s attention to the possibility of rising interest rates following an expansionary monetary policy shock. Cochrane (1989), Leeper and Gordon (1992), Eichenbaum and Evans (1995), Strongin (1995), Christiano et al. (1996b), Hamilton (1997), Bernanke and Mihov (1998), Carpenter and Demiralp (2004) and Bernanke et al. (2005) are some empirical papers that explain and study to solve this puzzle. Among these, for instance, Strongin (1995) and Bernanke and Mihov (1998) point out that the failure to find a liquidity effect – a negative relationship between a measure of money and an interest rate – can be traced to a failure to account for the monetary authority’s accommodation of shifts in the demand for money or reserves, in this case, testing for a liquidity effect with ex-ante exogenous shifts in demand for monetary aggregates would be inappropriate for the researcher. Carpenter and Demiralp (2004) also state that failure to estimate a liquidity effect may be due to a misspecification or a shifting of an underlying demand function considered for monetary aggregates. Thus, Fung and Kasumovich (1998) suggest that one possible solution to this puzzle relates itself to the use of a monetary policy aggregate that is under the direct control of the monetary authority. Following these authors, one approach to solve these puzzles aims to distinguish a monetary policy shock from a central bank reaction to movements in other economic variables, and this may require the use of contemporaneous restrictions for additional e.g. world economy shocks (See Grilli and Roubini, 1995; and Kim and Roubini, 1996).

From an emerging market perspective and oppose to a conservative Monetarist point of view, Aktaş et al. (2005) emphasize upon the Turkish economy that if the economy is predominated by high risk premiums affected by domestic fundamentals, due to doubts as for the sustainability of fiscal discipline, e.g. 1980s and 1990s Turkish experience, and/or huge current account deficits that the Turkish economy has been experiencing at very recent times, applying to tight monetary policies to fight domestic inflation may lead economic agents to demand high risk premiums resulted in upward pressure on domestic real interest rates. Supporting to this cursory scenario is that if the exchange rate is mainly determined by precautionary motives of economic agents as a hard currency, increasing currency substitution in the economy considering such type uncertainties may create upward pressures on exchange rate which cause it to be one of the main reasons of inflation in the economy that highly depends upon imports on inputs for growing. Indeed, Sankaya et al. (2005) highlight us for the importance of an exchange rate cost channel on the output gap, which dominates the demand channel in the sense that appreciation of the domestic currency would lead to a significant decline in the cost of the imported capital goods and thereby result in an increase in the production that outweighs possible decrease in the net exports caused by depreciation of the Turkish lira. Blanchard (2004) and Favero and Giovazzi (2004) in NBER papers examine the prevalence of such a scenario revealing the unconventional effects of tight monetary policies of inflation for the Brazilian case.

The organization of the study can be summarized as follows. Section 2 outlines the methodology used for estimation purposes. The data descriptions are given in section 3. Section 4 is attributed to the estimation of stationary linkages in the variable space, while the structural VEC modeling issues are searched for in section 5. The last section summarizes the results to conclude the paper.

2. A Methodological Reminder
In this paper, I aim to benefit from the highly popular dynamic innovation accounting analyses of the Sims’ vector autoregression (VAR) based contemporaneous time series estimation techniques upon which some cointegrating steady state relationship(s) are allowed to be imposed leading me to constructing a structural vector error correction (SVEC) model.

Let us briefly recall the vector error correction (VEC) model with \( p \) lags in Eq. 1:
\[ \Delta Y_t = \mu + \Pi Y_{t-1} + \sum_{i=1}^{p-1} \Gamma_j \Delta Y_{t-j} + \varepsilon_t \]  

\( Y_t = [y_t, x_t] \) is defined as the variable vector in which \( y_t \) is an \( n \)-vector of non-stationary I(1) variables and \( x_t \) is a \( d \)-vector of deterministic variables. \( \mu \) is a vector of constant terms and \( \Delta = (1 - L) \) indicates the difference operator. The vector of error terms is assumed to distribute normally with mean zero and covariance matrix \( \Omega, \varepsilon_t = [\varepsilon_y, \varepsilon_x] \sim N(0, \Omega) \), and \( \Omega \) is positive definite. \( \Pi \) is the \( n \times n \) long run multiplier matrix and \( \Gamma \) is the short run reaction matrix, where 

\[ \begin{bmatrix} \phi_1 & \cdots & \phi_p \end{bmatrix} \]

\( I \) represents \( n \times n \) identity matrix and \( \phi_k \) is the vector autoregression (VAR) coefficient matrix. If the coefficient matrix \( \Pi \) has a reduced rank \( r \) such that \( 0 < r < n \), then there exist \( n \times r \) matrix of loading coefficients (\( \alpha \)) and \( n \times r \) matrix of long run coefficients (\( \beta \)) each with rank \( r \) such that \( \Pi = \alpha \beta \) and \( \beta y_t \sim I(0) \). The model can be estimated by maximum likelihood methods scrutinized in Johansen (1988, 1991) and Johansen and Juselius (1990).

Having established the reduced form model in Eq. 1, the second step involves to design a structural model which recovers dynamic interactions between the variables resulted from innovation accounting methods. This task requires identification of the economic relationships and is carried out by restricting the estimated covariance matrix in the vector autoregressive process. Thus, some restrictions need to be imposed on the \( C(1) \) matrix of long run effects of shocks and the non-singular \( B \) matrix of contemporaneous effects of shocks. The reduced form disturbances \( \varepsilon_t \) and structural innovations \( u_t \) are associated with each other such that:

\[ u_t = B \varepsilon_t \]  

The matrix of long run effects of the \( u_t \) residuals is given by:

\[ C(1) = \beta_\perp (\alpha_\perp \Psi \beta_\perp)^{-1} \alpha_\perp \beta_\perp = \beta_\perp \left( \alpha_\perp \left( I_m - \sum_{i=1}^{p-1} \Gamma_i \right) \beta_\perp \right)^{-1} \alpha_\perp \]  

Following Brüggemann (2003), \( \alpha_\perp \) and \( \beta_\perp \) are orthogonal complements of \( \alpha \) and \( \beta \), respectively: 

\[ \alpha_\perp \alpha = \beta_\perp \beta = 0 \]  

and \( \Psi \) is the mean lag matrix of the VAR representation. Easy to notice that if cointegration rank \( r = 0 \), this model specification is reduced to \( C(1) = \Psi^{-1} \), whereas if \( \Pi \) matrix is of full rank when \( r = n \), all elements in \( y_t \) endogenous variable vector would be stationary in their levels and thus \( C(1) \) is a null matrix.

Of a special importance to achieve identification of the structural model is to discern the effects of shocks from each other. Further proceeding with the analysis, thus, requires that structural innovations must be estimated as to the \( n-r \) dimensional common trend space and \( r \) dimensional cointegrating vector(s). The relationship between the variances of reduced form residuals and the structural innovations yields that \( BB = \Omega \), which imposes \( n(n+1)/2 \) independent restrictions on \( B \). The orthogonality assumption for the structural shocks requires \( n(n-1)/2 \) additional zero restrictions to the off-diagonal elements for exact identification. Similar to the identification of cointegrating vectors, these restrictions come from economic theory and it is also possible to test more than \( n(n-1)/2 \) over-identifying restrictions. Following the notation in Vlaar and Schuberth (1999), let us assume that the additional restrictions are all linear zero restrictions shown in the general implicit form below:

\[ R_{vec}(B) = 0 \]
where \( R \) denotes \((g \times n^2)\) matrix imposing \( g \) independent contemporaneous restrictions on \( B \) for \( n^2 \) unknowns, and \( \text{vec}() \) is column stacking operator. However, the long run restrictions are related to the total impact matrix \( C(1) \).

Given that rank \( C(1) = n - r \), the matrix \( C(1)B \) can have at most \( r \) columns of zeros. Thus, there can be at most \( r \) shocks with transitory effects which die out in the cointegration space in the long run, and at least \( n - r \) shocks which have a permanent effect on at least one variable in the system. Reduced rank matrix leads to that each column of zeros stands for only \( n - r \) independent restrictions, and for exact identification of the permanent shocks, \( (n - r)(n - r - 1)/2 \) additional restrictions are needed. Also, identifying the transitory shocks uses \( r(r - 1)/2 \) additional contemporaneous linear zero restrictions.

3. Data Descriptions

To test the impact of monetary shocks, I first base the analysis upon a data structure potentially informative for the monetary trends in the economy. For this purpose, a variable space mainly of a money demand form is chosen to estimate a structural cointegrated VAR model. In this way, let us assume an endogenous variable vector:

\[
y = (m, p, inc, tb, e, own)
\]

integrated of order \( d \) where \( d \leq 1 \). The variable \((M2)\) is represented by M2 monetary aggregate which is consisted of currency in circulation plus demand and time deposits denominated in the domestic currency in the Turkish banking system. Korap (2010) estimates that for broadly defined monetary balances using M2 aggregate, unit price elasticity assumption cannot be rejected for the Turkish economy, but this is not the case for narrowly defined monetary balances. However, in a more recent paper, Yıldırım and Korap (2012) are capable of estimating a stable M1 money demand function not subject to the well known Lucas critique as the main theme of the paper. The price variable \((p)\) is used for GDP deflator. The scale income variable \((inc)\) representing the extent of the maximum amount of money balances to be held in hand is the real gross domestic product (GDP) at constant 1998 prices. As alternative costs to demand for money, the variable \(tb\) represents the average-simple interest rates by securities in Treasury auctions and \(e\) is the Turkish lira per US dollar exchange rate as a proxy for the currency substitution phenomenon settled in the economy. Finally, the variable \(own\) is the own rate of return for broadly defined money balances which is the weighted averages of 12-month deposits in the Turkish banking system. The data for all the variables come from the electronic data delivery system of CBT except the Treasury interest rates which are compiled from the Republic of Turkey Ministry of Development.

The sample covers the investigation period of 1998Q1-2011Q3 with quarterly frequency data. All the data take the form of seasonally unadjusted values. The time series for the variables \(m\), \(p\), \(inc\) and \(e\) are converted to their natural logarithms, while no such a data transformation has been applied to the variables \(tb\), and \(own\). As the deterministic variables, a set of centered seasonal dummies \((d_{-q2}, d_{-q3}, d_{-q4})\) which shift the mean without contributing to the trend and an impact crisis dummy which takes a value of unity from 2001Q1 to 2001Q4 that coincides with a huge macroeconomic crisis period of the Turkish economy have been included into the system.

4. Evidence of Multivariate Cointegration

Before the estimation of long run relationships, some conventional Augmented Dickey-Fuller (ADF) tests not reported here to save space have been conducted to detect unit roots. The results strongly suggested that the variables considered have a drifting-in-time process that leads them to deviate from
a mean reverting process. These results are available from the author upon request. But note that the price variable raises some doubts and may be subject to an I(2) process, and the null hypothesis of a unit root cannot be rejected although being at the margin for the exchange rate variable using constant term. Thus, I will carry out the analysis by assuming that all the variables are first-difference stationary. Considering a maximum lag length of 4, the dynamic structure of the unrestricted VAR model is determined through the Schwarz lag selection information criteria which minimizes at lag length of 1. Then, the maximum likelihood estimation procedure of Johansen (1988) and Johansen and Juselius (1990) is used to see the details of the cointegration analysis. For the cointegrating relationships, the rank test results consider the critical values (cv) using MacKinnon et al. (1999) probability (prob.) values given under the relevant LR statistics. Based on the so-called Pantula principle, the tests include a constant and a restricted linear deterministic trend, but no deterministic trend is assumed for dynamic VEC models.

Table 1 gives the results of testing the rank of \( \Pi \) in Eq. (1). Using the conventional 0.05 \( p \)-values, the trace statistics report 3 significant vectors while the maximum eigenvalue statistics cannot reject the existence of 2 cointegrating vectors lying in the long run variable space. Notice that the first vector looks like just a money demand relationship. The unrestricted adjustment coefficient of this vector upon money balances takes a value highly different from zero. For the potential second vector, the largest loading coefficient is that of the Treasury market interest rate, that will lead me below to search for a stationary relationship between two interest rates considered in the model. From now on, thus, I will assume that there exist two stochastic common trends lying in the long run variable space.

Having determined the rank condition, I will look at the cointegrating relationships in a further detail, and normalize the coefficients to give them an economic interpretation. The resulting cointegrating scheme to which I decide to apply is given in Table 2. In the table, EC is the error correction term of the variable upon which the relevant vector is normalized to extract economic meaning from the data and prob. is the relevant probability value of the estimated LR test statistic. The price and real income homogeneity are tested by the unitary elasticity restrictions.

Table 1: Rank Tests and Unrestricted Coefficients for the Cointegrating Model

<table>
<thead>
<tr>
<th>Null hypot.</th>
<th>( r=0 )</th>
<th>( r\leq1 )</th>
<th>( r\leq2 )</th>
<th>( r\leq3 )</th>
<th>( r\leq4 )</th>
<th>( r\leq5 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigenvalue</td>
<td>0.65</td>
<td>0.54</td>
<td>0.42</td>
<td>0.32</td>
<td>0.15</td>
<td>0.11</td>
</tr>
<tr>
<td>( \lambda )-trace</td>
<td>161.79</td>
<td>104.87</td>
<td>64.13</td>
<td>34.96</td>
<td>14.80</td>
<td>6.20</td>
</tr>
<tr>
<td>5% cv</td>
<td>117.71</td>
<td>88.80</td>
<td>63.88</td>
<td>42.92</td>
<td>25.87</td>
<td>12.52</td>
</tr>
<tr>
<td>prob.</td>
<td>0.00</td>
<td>0.00</td>
<td>0.05</td>
<td>0.25</td>
<td>0.59</td>
<td>0.44</td>
</tr>
<tr>
<td>( \lambda )-max</td>
<td>56.92</td>
<td>40.73</td>
<td>29.17</td>
<td>20.16</td>
<td>8.60</td>
<td>6.20</td>
</tr>
<tr>
<td>5% cv</td>
<td>44.50</td>
<td>38.33</td>
<td>32.12</td>
<td>25.82</td>
<td>19.39</td>
<td>12.52</td>
</tr>
<tr>
<td>prob.</td>
<td>0.00</td>
<td>0.03</td>
<td>0.11</td>
<td>0.23</td>
<td>0.76</td>
<td>0.44</td>
</tr>
</tbody>
</table>

Unrestricted Cointegrating Coefficients

<table>
<thead>
<tr>
<th>( m )</th>
<th>( p )</th>
<th>( inc )</th>
<th>( tb )</th>
<th>( e )</th>
<th>( own )</th>
<th>trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>-6.82</td>
<td>4.33</td>
<td>5.77</td>
<td>-20.05</td>
<td>-0.46</td>
<td>22.63</td>
<td>0.17</td>
</tr>
<tr>
<td>2.20</td>
<td>-2.00</td>
<td>-5.76</td>
<td>18.39</td>
<td>-1.71</td>
<td>-18.71</td>
<td>-0.01</td>
</tr>
<tr>
<td>-9.72</td>
<td>1.65</td>
<td>21.47</td>
<td>13.86</td>
<td>4.11</td>
<td>-21.83</td>
<td>0.25</td>
</tr>
<tr>
<td>-5.12</td>
<td>18.99</td>
<td>-19.32</td>
<td>-3.91</td>
<td>-13.65</td>
<td>3.54</td>
<td>0.14</td>
</tr>
<tr>
<td>-10.49</td>
<td>14.91</td>
<td>3.51</td>
<td>1.99</td>
<td>-2.59</td>
<td>3.13</td>
<td>0.23</td>
</tr>
<tr>
<td>4.99</td>
<td>0.38</td>
<td>13.91</td>
<td>1.88</td>
<td>-1.90</td>
<td>7.74</td>
<td>-0.34</td>
</tr>
</tbody>
</table>

Unrestricted Adjustment Coefficients (“D” indicates the first difference operator)

| \( D(m) \) | 0.0177  | 0.0162  | 0.0006  | 0.0014  | 0.0017  | 0.0014  |
| \( D(p) \) | 0.0055  | 0.0104  | -0.0035 | -0.0072 | -0.0039 | 0.0024  |
| \( D(inc) \) | -0.0019 | 0.0012  | -0.0102 | 0.0030  | 0.0012  | -0.0093 |
| \( D(tb) \) | 0.0447  | -0.0383 | 0.0152  | 0.0036  | -0.0107 | -0.0002 |
| \( D(e) \) | -0.0068 | 0.0173  | -0.0088 | 0.0180  | -0.0169 | 0.0066  |
| \( D(own) \) | 0.0255  | -0.0063 | 0.0355  | 0.0053  | -0.0110 | -0.0058 |
Table 2: Chosen Cointegration Schemes

<table>
<thead>
<tr>
<th>Cointegrating relations when r=2</th>
<th>$\chi^2(3)=5.02$</th>
<th>prob.=0.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$</td>
<td>m</td>
<td>p</td>
</tr>
<tr>
<td>1.00</td>
<td>-0.53</td>
<td>-0.68</td>
</tr>
<tr>
<td>$H_2$</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cointegrating relations when r=2</th>
<th>$\chi^2(6)=8.83$</th>
<th>prob.=0.18</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_3$</td>
<td>m</td>
<td>p</td>
</tr>
<tr>
<td>1.00</td>
<td>-1.00</td>
<td>-1.00</td>
</tr>
<tr>
<td>$H_4$</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The results show that the cointegration space cannot reject both price and real income homogeneity for the money demand vector. Alternative cost variables have the expected minus sign and there exists a positive normalized relationship between money and own rate of return. Further, I cannot reject a one-to-one cointegrating relationship between the interest rates used in the paper. The graphs of cointegrating vectors below show that both estimated vectors are of a stationary form fluctuating around a zero mean and that the early 2000s have been subject to a more volatility as to the later periods:

![Figure 1: Graphs of the Cointegrating Relations](image)

5. SVEC Evidence of Policy Analysis

Based on the results estimated above, now, a structural analysis outlined in the former sections is tried to be implemented upon vector error correction model derived from the cointegration analysis. Let us identify the SVEC system and use common trends driving the system so that permanent and transitory shocks can be distinguished. For the permanent shocks, identification procedure applies to the long run impact matrix $C(1)$, while the transitory shocks use reduced form residuals in Eq. (2) as functions of the structural shocks, that is, the the restrictions imposed on $B$ matrix. I denote the vector of structural shocks as follows:

$$\varepsilon_t = \left( \varepsilon_t^m, \varepsilon_t^p, \varepsilon_t^{inc}, \varepsilon_t^{tb}, \varepsilon_t^e, \varepsilon_t^{own} \right)$$

Since $n=6$ and $r=2$, two of the shocks are assumed having only transitory effects and the other four shocks would have to represent independent common trends for which long run restrictions are used to identify permanent shocks. In line with the methodological discussions, for the restrictions
on long run impact matrix, I benefited from the cointegration properties of the system variables, and applied to \( r \) columns of zeros for the variables carrying the knowledge of cointegration that leads to transitory shocks dying out in a long run period. On the other side, for identification of the contemporaneous restriction matrix \( B \), I applied to some dichotomy assumptions that no effect of nominal variables \( tb, e \) and \( own \) has been expected on real income, but I let the price and real income variables affect each other to be able to see the trade-off between these variables. A second set of restrictions has been assumed on the own rate of return and sets the dynamic multiplier effect of own rate on the nominal money balances, price level, real income as mentioned above, and the exchange rate to the zero value since no robust theoretical link can be associated from own rate to these variables, or if possible, I think that can be omitted for the sake of practice. A supporting argument here is the use of the Treasury bond rate as the main market based interest rate variable within the variable system. In line with these assumptions, the multiplier of real income shock on the own rate of return is restricted to zero, too. As a last restriction, further, no effect of Treasury bond rate on the nominal exchange is warranted. These restrictions, to some extent, stemmed from the researcher’s data appliance may be seen arbitrary, but allow me to identify the variable system and are thought as justifiable in an economic sense. All in all, suffice it to say that 8 long run independent and 8 additional contemporaneous restrictions lead to an over-identified system of the variables using LR statistic \( \chi^2(1) = 1.1358 \ \text{prob.}=0.2865 \). The structural model is estimated by maximum likelihood method using Amisano and Giannini scoring algorithm. See Amisano and Giannini (1997) for further details:

**Table 3:** Estimated \( B \) matrix (Bootstrap \( t \)-values in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>( \varepsilon^m_t )</th>
<th>( \varepsilon^p_t )</th>
<th>( \varepsilon^{inc}_t )</th>
<th>( \varepsilon^{tb}_t )</th>
<th>( \varepsilon^e_t )</th>
<th>( \varepsilon^{own}_t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( M )</td>
<td>0.0134 (2.6223)</td>
<td>0.0031 (0.6367)</td>
<td>-0.0003 (-0.0797)</td>
<td>0.0159 (1.8835)</td>
<td>0.0099 (2.4454)</td>
<td>-0.0017 (-0.4761)</td>
</tr>
<tr>
<td>( P )</td>
<td>0.0071 (2.4487)</td>
<td>0.0153 (2.3660)</td>
<td>-0.0181 (-1.8756)</td>
<td>0.0046 (1.1600)</td>
<td>0.0024 (0.3940)</td>
<td>-0.0030 (-0.6795)</td>
</tr>
<tr>
<td>( \text{inc} )</td>
<td>0.0047 (1.6824)</td>
<td>-0.0070 (-0.6945)</td>
<td>0.0220 (2.4173)</td>
<td>-0.0023 (-0.8389)</td>
<td>-0.0214 (-2.5859)</td>
<td>0.0000</td>
</tr>
<tr>
<td>( tb )</td>
<td>-0.0277 (-2.4707)</td>
<td>0.0257 (2.0243)</td>
<td>0.0000</td>
<td>0.0281 (2.6332)</td>
<td>0.0000</td>
<td>0.0447 (3.2691)</td>
</tr>
<tr>
<td>( e )</td>
<td>0.0063 (0.8284)</td>
<td>0.0504 (2.1718)</td>
<td>0.0000</td>
<td>-0.0108 (-1.4933)</td>
<td>0.0434 (3.7497)</td>
<td>0.0140 (1.2326)</td>
</tr>
<tr>
<td>( \text{own} )</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0197 (2.5930)</td>
<td>0.0000</td>
<td>0.0702 (3.5094)</td>
</tr>
</tbody>
</table>

**Notes:** Statistically significant coefficients (of an absolute \( t \)-value about 2.0) are given in bold characters.

**Table 4:** Estimated long run impact matrix (Bootstrap \( t \)-values in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>( \varepsilon^m_t )</th>
<th>( \varepsilon^p_t )</th>
<th>( \varepsilon^{inc}_t )</th>
<th>( \varepsilon^{tb}_t )</th>
<th>( \varepsilon^e_t )</th>
<th>( \varepsilon^{own}_t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( M )</td>
<td>0.0000</td>
<td>-0.0012 (-0.2972)</td>
<td>0.0007 (0.2360)</td>
<td>0.0000</td>
<td>-0.0036 (-1.1237)</td>
<td>0.0205 (3.1896)</td>
</tr>
<tr>
<td>( P )</td>
<td>0.0000</td>
<td>0.0366 (2.1871)</td>
<td>-0.0184 (-1.1294)</td>
<td>0.0000</td>
<td>-0.0031 (-0.2411)</td>
<td>0.0221 (1.9669)</td>
</tr>
<tr>
<td>( \text{inc} )</td>
<td>0.0000</td>
<td>-0.0018 (-0.1572)</td>
<td>0.0228 (2.2284)</td>
<td>0.0000</td>
<td>-0.0219 (-2.5309)</td>
<td>-0.0130 (-1.7975)</td>
</tr>
<tr>
<td>( tb )</td>
<td>0.0000</td>
<td>0.0194 (1.1686)</td>
<td>-0.0009 (-0.0770)</td>
<td>0.0000</td>
<td>-0.0041 (-0.3024)</td>
<td>0.0741 (3.3579)</td>
</tr>
<tr>
<td>( e )</td>
<td>0.0000</td>
<td>0.0700 (1.8153)</td>
<td>0.0007 (0.0639)</td>
<td>0.0000</td>
<td>0.0536 (2.3013)</td>
<td>0.0615 (2.3091)</td>
</tr>
<tr>
<td>( \text{own} )</td>
<td>0.0000</td>
<td>0.0074 (0.5287)</td>
<td>-0.0051 (-0.5175)</td>
<td>0.0000</td>
<td>0.0018 (0.1559)</td>
<td>0.0724 (3.3141)</td>
</tr>
</tbody>
</table>

**Notes:** Statistically significant coefficients (of an absolute \( t \)-value about 2.0) are given in bold characters.
Findings in Table 3 reveals that the immediate effect on price level of a monetary shock ($e_{t}^{m}$) is small (of a value 0.0071) but statistically significant with a positive dynamic multiplier. This is an indicator of the non-existence of a price puzzle within the model examined. When the emphasis is upon the response of the Treasury interest rate to a positive monetary shock can easily be seen evidence of a strong liquidity effect (of a value -0.0277) in a significant way. The other dynamic multipliers also show that the response of the Treasury bond rate to the price level is in a positive direction. The impact of a price shock on real income is negative but insignificant, however, when the impact of a real income shock on price level is considered again a negative impact (of a value -0.0181) occurs now with an increasing significance level. A recent paper by Korap (2013) emphasizes similar findings but using inflation rather than the price level upon the Turkish economy. As can be expected, there exists a mutually positive significant dynamic linkage between both interest rates. I have ignored a scrutinized investigation of other multiplier effects due to the fact that they have a collateral importance for our research subjects chosen to be examined. In light of these findings, finally, the knowledge of structural impulse response functions for the price level effect of a monetary shock and the liquidity effect on the Treasury interest rate due to innovations in monetary policy are drawn below with 95% confidence intervals with 1000 replications using a 20 period of forecast horizon:

**Figure 2:** Selected SVEC Impulse → Response Functions Due to Monetary Innovations

![Figure 2](image-url)

**Notes:** Estimations use 95% confidence intervals with 1000 bootstrap replications.

We can observe that a monetary innovation affects the Treasury interest rate in a negative way and such a result again gives support to the prevalence of a liquidity effect for the sample period examined in the economy. A positive one point monetary shock results in about an immediate 2.8% decrease in the variable $e_{t}^{b}$ and then tends to die out the larger the forecast horizon. Also no support to a possible price puzzle can be given in Figure 2. The immediate effect on the price level of a one point monetary shock is positive and leads to a 0.7% increase, then takes a maximum value of 0.9% after two periods than the shock emerges. In response to an unanticipated increase in monetary aggregates, the shock, here too, tends to die out the more the estimation sample is extended. That is, the transmission of monetary policy would be much more quicker for the interest rates when compared with the price data, and this is possibly due to the fact that price level is slow to adjust to restore equilibrium values. Fung and Kasumovich (1998) touch on a similar issue in their monetary shock analysis for the G-6 countries.
6. Concluding Remarks

In this paper, a monetary model for the Turkish economy is tried to be considered. Following a methodological discussion upon the developments in contemporaneous econometrics, the paper aims to make an empirical contribution to this strand of studies by using time series analyses so that the theoretical background can be tested by leading the researcher to attain policy inferences. For this purpose, first, the stationary linkages between the data have been investigated and a multivariate cointegrating model inclusive of two long run relationships, one for a nominal money demand model and the other consisting of a relationship between two interest rates used, is constructed in turn yielding inferences derived from a structural vector error correction modeling approach. The results reveal that there exist evidence of a liquidity effect - a negative relationship between a measure of money and an interest rate - and also that the non-existence of a price puzzle - a rise in the aggregate price level in response to a contractionary innovation to monetary policy- cannot be rejected by the Turkish data. The transmission of monetary policy seems to be much more quicker for the interest rates when compared with the price data possibly due to the slow adjustment of the latter to restore equilibrium values. Of course, these results need further researches to verify them, and future empirical papers will serve to complement such a task. The usual disclaimer applies.

References


The State of Europe’s Fertility: Causes, Consequences & Future Policies

Ajay Aggarwal
Corresponding Author, Kings Institute of Cancer Policy
Department of Research Oncology, 3rd Floor Bermondsey Wing
Guys Hospital, Great Maze Pond, London, United Kingdom SE1 9RT
E-mail: ajayaggarwal@doctors.org.uk
Tel: 00 44 207 188 9882
Fax: 00 44 207 188 9986

Arnie Purushotham
Kings Institute of Cancer Policy, Research Oncology, 3rd Floor Bermondsey Wing
Guys Hospital, Great Maze Pond, London, United Kingdom SE1 9RT
Kings College London, Guys Campus, London SE1 9RT

Richard Sullivan
Kings Institute of Cancer Policy, Research Oncology, 3rd Floor Bermondsey Wing
Guys Hospital, Great Maze Pond, London, United Kingdom SE1 9RT
Kings College London, Guys Campus, London SE1 9RT

Abstract
Sub replacement fertility levels have persisted across Europe since the 1980s. This has resulted in a demographic transformation within Europe characterised by population ageing, a decline in population growth, and a subsequent rise in old age dependency ratios. European governments are increasingly concerned about their country’s prospects for future economic growth, as well as the burgeoning effect on social and health care costs, in the context of a reduced tax base. This has led to several governments adopting pronatalist policies. This article analyses the relevant theories to date to explain the conceptual basis for fertility decline and the significant variation that exists across European regions. It appraises current policies designed to reverse low fertility rates. In Northern Europe, policies which have encouraged female labour participation, gender equity, and provided benefits to reduce the opportunity cost of children have had a partial effect, but overall the evidence indicates that sustained reversal of low fertility rates throughout Europe is unfeasible as many policies are likely to be based on a misunderstanding of the aetiology of this decline. The challenge for Europe is to re-engineer its economic paradigm to embrace this demographic transition rather than continue to try and reverse it.

Keywords: Fertility decline, Europe, policy, population ageing

Introduction: The European Fertility ‘Problem’ in Context
Fertility has been at the heart of human affairs from our earliest times. We see this in pre-history through fertility figurines, in early civilisation through extant ancient commentaries and now through the modern perspectives of economics, biomedical sciences, and sociology (Polybius 1997 (2nd
Century BCE). For the last fifty years the study of fertility has been dominated by demographic transition theory, a theory whose axiom is the concept that modernization (i.e. economic development) and declining mortality lead to a decline in fertility after a lag period. Today a variety of conceptual frameworks jostle to explain the myriad of fertility patterns, both its rise and fall (Dyson and Murphy 1985). Modern demographic luminaries in this field – Charles Hirschman, John Bongaarts, John Casterline, John Caldwell, Peter McDonald, stand on fifty years of research led by pioneers such as Warren Thompson (Thompson 1929), Kingsley Davis (Davis 1945) and Frank Notestein (Notestein 1953).

Whilst lacunae in the demographic transition theory have given rise to a wide range of competing historical and contemporary views what is unarguable is the fact that there is a fertility decline. The latest figures from the United Nations Development Program (UNDP) make for stark reading (see Table 1). Currently, the top ten countries in terms of Human Development Index (HDI) have an average total fertility rate (TFR) of 1.8 (range, 1.3 – 2.1) which is well below the replacement fertility rate (2.1 births per woman for most industrialized countries). In comparison, the bottom ten countries have an average TFR of 5.6 (range, 4.6-6.20) (UN 2010).

Table 1: Analysis of Total Fertility Rate Data for all countries in 2010 (UN 2010)

<table>
<thead>
<tr>
<th>Period of Analysis</th>
<th>1970-75</th>
<th>2005-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average TFR (n=197 countries)</td>
<td>4.99</td>
<td>2.99</td>
</tr>
<tr>
<td>Number of countries below replacement rate (defined as TFR = 2.1)</td>
<td>19</td>
<td>74</td>
</tr>
</tbody>
</table>

Fertility Trends in Europe

Europe has been no exception to these global trends. As the first region to experience the demographic transition, fertility decline has been profound across Europe since the early sixties. Indeed as Hans-Peter Kohler comments, early notions that declines would stabilise at or around replacement rate, “have been shattered” (Kohler, Billari, and Ortega 2006). Currently, all countries in Europe have TFR rates below replacement level (Hoorens et al. 2011). The situation was particularly acute at the turn of the century in Southern, Central and Eastern Europe where TFR rates were at or below 1.3, termed “lowest low fertility” (Billari and Kohler 2004). However since 2000, period fertility in most low and lowest low fertility countries has been steadily rising (Goldstein, Sobotka, and Jasilioniene 2009). However, this has been at variable rates with currently over 50% of the EU-27 countries having TFR rates at or below 1.5. If this rate were to be sustained, the European population size would halve in fewer than seven decades (Hoorens et al. 2011).

The mean TFR in Europe (EU-27) currently stands at 1.57 (Eurostat 2011). However, this aggregate figure hides considerable heterogeneity in the current member state-specific TFR and trends (positive and negative) in Europe as illustrated in Figure 1. Eastern, Southern and German-speaking European countries tend to have the lowest TFRs compared to Western and Northern European countries(Frejka, Hoem, and Sobotka 2008) (Hoorens et al. 2011). Germany (TFR=1.36), Poland (1.30) and Spain (1.36) all have low TFR rates despite initiation of family policies (Eurostat 2011). Conversely, countries such as Denmark (1.87), France (2.03), Sweden (1.9) and the UK (1.98), which were amongst the first to see below replacement rate fertility in the 1960’s and 1970’s, have all increased their TFR in the last decade (Eurostat 2011). This heterogeneity is important, as we will discuss when considering the effectiveness (or otherwise) of polices designed to raise fertility in Europe.
The Demographic and Economic Impact of Low Fertility in Europe

Low and lowest low fertility has had a significant impact on the age demographics of the European population due to the onset of a negative population momentum. In 2010, Europe had its highest ever proportion of its population aged 65 or older, some 16%, which has been forecast to increase to 24% by 2030 (UN 2010). Likewise the projected old age dependency ratios (defined as the ratio of the population over the age of 65 to the population of working age (15-65)) are expected to double in Europe from the current figure of 25% to 50% by 2050 (Eurostat 2011).

Such a situation in the context of today’s systems and policies would have a profound impact on economic growth (through a reduction in the labour force, tax payers, etc), health (dependency ratios in care-giving) and social cohesion (we have no real insight on how the dominance of an aged population will impact on social dynamics). The important point here to make is that these are, however, ‘perceived’ problems viewed through the prism of today’s normative socio-cultural and socio-political systems.

As Coale and Hoover first postulated fertility decline increases the relative size of the working population thus improving the economy, a phenomenon termed the “Demographic gift” (Coale and Hoover 1958). However, to benefit from this high working age share it was imperative that governments developed appropriate economic and trade policies, invested in education and job creation as well as population health. This however, has been achieved with varying degrees of success, and once the gift has been used, ageing populations present their own particular problems. (Bloom and Sousa-Poza 2010).

A lower ratio of workers to dependents will tend to reduce per capita gross domestic product (GDP) (Bloom and Canning 2006). The ageing and early retirement of the skilled labour market also has profound effects on social security systems, and the benefits available. Again, experience has found that declining fertility coupled to this economic behaviour narrows the tax base for social security and potentially increases the tax burden on future working generations. Finally, there is evidence that an aged population has major financial impacts on healthcare, housing and social care costs (Yashiro 1996).

This threat has been acknowledged by the European Union’s economic policy committee (Part 2012) who have commented that, “The ageing of the population is becoming a growing challenge to the sustainability of public finances in the EU Member States. The increase of the ratio between the number of retirees and the number of workers will amplify expenditure on public pensions and health

Figure 1: Total Fertility Rate by European Subregion: Source:(UN 2010)
and long-term care and thus puts a burden on maintaining a sound balance between future public expenditure and tax revenues.”

Bo Malmberg has examined the relationship between low fertility and the housing market. Population ageing could result in a reduced demand for housing, when compared to younger cohorts, resulting in a slowing of the growth of house prices. This could have a significant economic impact given the importance of the housing market to the economy (Malmberg 2010; Bloom and Sousa-Poza 2010).

Furthermore, the social context in which ageing is occurring in Europe is also undergoing change. An increase in the proportion of lone parent families, individuals living alone, high rates of divorce and a weakening of family ties all result in a decrease in household size which may impact on availability of informal care for the growing elderly population, particularly for women (Grant et al. 2004; Clarke 1994).

The problem of sustained economic growth in the face of a declining population is now an acute problem but only in the context of today’s economic paradigms (Kosai, Saito, and Yashiro 1998). Thus, the reaction has been to treat fertility decline as a threat and something to be reversed.

**Causes/Models of Fertility Decline in Europe**

Much of the thinking around policies designed to increase TFR in Europe rests on the variety of causal explanations for the decline in the first place. For example, it was Regine Stix and Frank Notestein who were the first to show the importance of attitude rather than biology or contraceptive use in declining fertility (Stix, Notestein, and Fund 1940). Hot on their heels Kinglsey Davis also espoused the same causal framework but unlike Stix and Notestein (who saw fertility as culturally embedded), Davis minimized the impact of culture and religion (Davis 1955). In the footnotes one mention should also be made of Ronald Freedman’s contribution who, whilst operating in the same framework as Davis and Stix instead emphasised the central role of norms for family size (Freedman et al. 1963).

Between the mid-1970s and late eighties John Caldwell put forward a set of papers challenging the economic basis of most explanatory mechanisms of demographic theory and fertility decline. Caldwell saw declining fertility within the framework of ‘Intergenerational Wealth Flows’. In his view low fertility in modern society was a result of the reversal of wealth flow with parents contributing time, money and support to children, i.e. with few economic incentives for fertility (Caldwell 1976). But it was left to Easterlin and colleagues who melded economic theories with traditional sociological research to develop the Supply-Demand theory of fertility decline. Their model demonstrated how modernization can first lead to a rise then fall in fertility as the forces of regulation cost (money, time, psychic factors), supply (environmental factors that constrain natural fertility) and demand (standard socioeconomic factors) combine to depress fertility (Easterlin 1975).

An in-depth analysis, points to a number of factors emerging in the late 60’s and 70’s to bring about this fertility decline (Frejka, Hoem, and Sobotka 2008). The initial driver particularly in Northern and Western Europe was the “delay” in childbearing and family formation (so called tempo effects) which resulted in a fall in annual fertility rates (Sobotka 2004). This was considered to be a transient phenomenon, with fertility rates expected to recuperate in later years as women completed their families.

Demographers developed “tempo adjusted” fertility rates, which were based on the premise that current fertility rates underestimated the actual levels of fertility (Bongaarts and Feeney 1998; Kohler and Ortega 2002). However, fertility rates have remained at lowest-low and low levels, primarily as a result of delayed births not occurring as predicted. The extent to which this occurs has been very much dependent on the social and political context of a particular country (McDonald 2007).

Tempo effects were coupled with a change in the values and attitudes towards family life which has been termed the “second demographic transition” by Ron Lesethaege (Lesthaeghe 1983) and Dirk Van de Kaa (Van de Kaa 1987). There was a reduction in marriage rates, increasingly a delayed age at
marriage, higher instability of relationships, and increased cohabiting with a concomitant rise in non-marital child bearing. Individual autonomy and personal self-fulfilment were key tenets underpinning the transition. It has also been suggested that men and women were increasingly reluctant to make decisions that had long-term consequences and could limit their future freedom of choice (Lutz 2006; Goldstein, Lutz, and Scherbov 2003; Bongaarts and Feeney 1998).

Another factor to emerge in the 60’s and 70’s was a change in the socially prescribed gender roles. Women increasingly accessed educational opportunities and became part of the labour force. This improved gender equity resulted in women making informed choices regarding the timing and number of children they wished to have (McDonald 2000a).

The introduction of the oral contraceptive pill in the 1960’s and subsequent improvement in access and choice of contraception allowed women to control their reproductive options (Lutz 2006). However, as well as the voluntary aspect of fertility control, there has also been an involuntary component. This is thought to relate to the delay in childbearing towards the end of a woman’s reproductive life where higher rates of sterility and miscarriage are reported. In Eastern Europe, infertility has been linked with the high incidence of repeat abortions and the spread of sexually transmitted diseases (Botev 2006).

In a competitive labour market, investment in “human capital” becomes of increasing importance (Lee and Mason 2010). Young people not established in the labour market or who fear unemployment with the consequent loss of income and social status, display “risk averse” behaviour (Lutz 2006; McDonald 2007). Personal investment in education (higher-level education) is seen as essential to secure a stable job (Frejka, Hoem, and Sobotka 2008). Employees need to be increasingly mobile, and work long and antisocial hours which may promote delaying long-term commitments, such as having children, until sufficient human capital and labour market experience is accumulated (Sobotka, Skirbekk, and Philipov 2011). Other factors include postponed home leaving, the rising cost of housing, and delayed home ownership which are relevant in societies where home ownership is seen as a precondition to parenthood (Sobotka, Skirbekk, and Philipov 2011).

The human behavioural ecology (HBE) perspective presents additional insight in this area as theorists seek to provide adaptive hypotheses to explain fertility decline (Nettle et al. 2013). They postulate that economic factors are the key driver of low fertility trends. The costs of rearing socially and economically competitive children are increasing. Therefore parents have fewer children and invest more time and resources into individual children in order to increase the survivorship and fitness of their off-spring and consequently enhance future reproductive success. (Lawson and Mace 2011). There is also evidence to support that this approach, in combination with high socioeconomic position predicts socioeconomic success for future generations (Goodman, Koupil, and Lawson 2012).

However, in reality this investment has not enhanced the reproductive success of future generations as predicted (Boone and Kessler 1999). In fact there is no evidence to support that a higher rate of fertility negatively impacts on an individual’s fitness to have children compared to those with lower fertility (Goodman, Koupil, and Lawson 2012). Theorists therefore suggest that we are displaying maladaptive behaviours to maximise socioeconomic success at the cost of reduced fertility (Nettle et al. 2013). However, one should consider whether this in fact represents optimised adaptation, in light of the sustainability of our species due to improved public health and medical advances.

One also needs to consider the rising “opportunity cost” of children in explaining fertility decline in Europe. This is defined as the time, skills and income expended due to childcare and childrearing commitments rather than investing in human capital, consumer goods (cars, houses, holidays etc) or careers (Lutz, Skirbekk, and Testa 2006). However, as fertility levels fall, the relative opportunity costs for those having children increases. This creates a “fertility trap” where people follow the social norms and conversely decide to have fewer children or remain childless (Lutz, Skirbekk, and Testa 2006; McDonald 2007). In this regard government policy has an important role in defining the extent of the social and financial costs of having children.
There has been a decline in the traditional two child family model (Frejka 2008; Sobotka and Testa 2008). Whilst the rate of childlessness in most European countries is approximately 10% (Botev 2006), this is steadily increasing with rates of childlessness among women born in 1965 at 30% in West Germany and 25% in Italy (Frejka and Sardon 2007; McDonald 2007). In some countries, for example Germany and Austria (Billari 2005), childlessness is considered as a lifestyle choice. Such observations have not been witnessed in other parts of Europe, but still remains a possibility. In the Russian federation, for example, 37% of women only had one child by the end of their reproductive lives, although the reasons for this have not been established (Frejka and Sardon 2007).

**European Fertility Policies**

Governments were late to act on the low and lowest-low fertility rates that were a feature of the late 1990’s and turn of the century. Reasons cited include the association of pronatal policies with excessive state intervention, fascism, and antifeminism (if low fertility was seen as failure on the part of women) (Botev 2006). Politically there remained a concern that investment into child and family policy would be criticised as diverting resources from those who do not wish to have children. For example, it may be argued that those wishing to have children should be able to undertake the costs associated with this commitment (McDonald 2007).

However, following the advent of lowest low fertility, most countries have seen the fertility decline as a direct national threat and responded with a broad range of policies. These have taken a variety of forms, including financial incentives, work & family initiatives, as well as broad social change supportive of children and parenting (McDonald 2000b).

A United Nations survey in 2005, monitoring population policies worldwide noted that 32 European governments viewed their country’s fertility as too low, with 27 countries having implemented policies to increase or sustain the national fertility rate (UN 2006). The clear imperative for these policy actions has been the dominant view that very low fertility does not go away of its own accord (Goldstein, Lutz, and Testa 2003). However, some countries for example Denmark and Switzerland still report a policy of “no intervention” (Goldstein, Sobotka, and Jasilioniene 2009).

It is helpful to consider fertility policy in the context of three culturally broad European camps (adapted from McDonald 2007). This allows review of fertility patterns and the resultant policy approaches within the EU along with their relative successes.

Group 1 includes all the Nordic countries, English-speaking countries and the French and Dutch-speaking Western European countries. This group have demonstrated an increase in the total fertility rates, (due to recuperation of delayed births) over the last decade with current rates between 1.7 and 2.0 (Eurostat 2011). This rise is thought to be due to the institutional settings within these countries, which encourage female participation in the labour market, promote gender equity, and provide child care and benefits to reduce the opportunity cost of having children (Hoorens et al. 2011; McDonald 2007).

Group 2 countries include all of the Southern European countries, and German-speaking Western European countries. These countries have TFR rates at or below 1.4, which have shown no significant increase over the last decade despite implementation of fertility policies by governments. There appears to be limited recuperation of delayed births (Eurostat 2011). The persistence of the “male breadwinner model” of the family is considered to be a significant factor. This is in contrast to Nordic countries and France where a woman’s fertility and labour force participation is not directly associated with her partner’s income (Köppen 2002). Other factors, particularly in Southern European countries, include the maintenance of traditional family patterns, inflexible childcare provision, low female employment, leaving home late, high unemployment amongst young adults and the social acceptance of childlessness (Billari 2008).

The third group includes Central and Eastern European countries. The TFR rates are similar to those of Group 2 countries, although a higher proportion had “lowest-low” fertility rates at the turn of
the century (Eurostat 2011). The reasons are multifactorial but a significant factor which contributed is thought to be the economic decline in the mid 1990’s as a result of the collapse of state socialism (Frejka 2008). Other factors include the integration of Western attitudes and ideals with respect to family formation and patterns of childbearing. However, unstable employment with a lack of job security is considered to have had the most significant impact on inhibiting fertility patterns (Frejka 2008). Emigration has also influenced these low fertility rates, with a number of women of childbearing age having children in other countries such as the UK, Spain and Sweden (Hoorens et al. 2011).

The role of specific policy interventions in the recent upsurge in fertility rates over the past decade in Group 1 and 3 countries is difficult to precisely define. What does appear to be emerging however is a clear divergence between the fertility rates in north western European countries, which appear to be approaching replacement levels, and fertility rates in southern, central and eastern European countries remaining persistently at low and very low levels (Frejka, Hoem, and Sobotka 2008). We review the current evidence for policy successes in Europe.

Financial incentives are credited with stopping declining TFR in both Estonia (Goldstein, Sobotka, and Jasilioniene 2009; Laroque and Salanié 2008) and Russia (Zakharov 2008). Estonia experienced a significant increase in TFR between 1998 and 2008. This has been attributed to the introduction of family policies and in particular the “mothers salary;” a parental benefit introduced in 2004 to compensate for the income lost by staying at home with children.

Russia has a long history of introducing pro-natalist policies (Zakharov 2008). The low fertility rate has become a significant concern as a young, dynamic and growing population is considered to be a sign of political and economic power. Again a number of policies have been introduced. An example is “maternal capital” a fee paid in a mother’s lifetime to be used three years after childbirth towards education, housing and retirement. This policy was initiated in 2007 and associated with a direct rise in fertility rates, although it remains difficult to separate this from an improvement in the country’s economic situation at that time.

Explicit pro-natalist policies have been relatively rare in Europe, except for the former socialist regimes of Eastern Europe (Buttner and Lutz 1990; Andorka and Vukovich 1985), so these implicit policy measures to steer family formation decisions with financial incentives have been the general approach (Grant et al. 2004).

However, there have been notable examples where direct financial incentives have not had a discernible effect on fertility rates. In 2007 both Spain and the Czech Republic introduced generous financial incentive schemes for each newborn. In addition enhanced parental leave benefits were also introduced in the Czech Republic (Frejka, Hoem, and Sobotka 2008; Goldstein, Sobotka, and Jasilioniene 2009). However, the increases in fertility rates were relatively small, with rates rising even prior to the introduction of these incentives.

France is considered an example of a country which has implemented successful family policies. As with Nordic countries such as Sweden they have implemented a coordinated and comprehensive system of family and population policies as part of an overall long-term strategy to support parenthood (Bloom and Canning 2006) These include monthly allowances to couples with children, which increases for families with three children. In addition, they benefit from generous paid maternal and paternal leave as well as free day care at crèches for younger children (Bloom and Canning 2006; Fagnani 2002).

Have European Policies Reversed Fertility Decline?
How effective these policies have been is remarkably difficult to assess due to the multiplicity of interactions and policy approaches. Gerda Neyer’s work on family policies and fertility in Europe which has synthesised the effectiveness evidence for fertility policies at the intersection of gender politics, employment and care policies has found very mixed results with no clear pattern (Neyer 2003). What this work does expose is the complex interplay of national level policies with those...
emanating from the European Commission, e.g. The Barcelona European Council 2002, that member states should by 2010 provide substantial childcare (e.g. 33% coverage for under 3’s) (Plantenga et al. 2008) and the 1996 Directive which introduced individual parental leave rights (Directive 1996).

The RAND perspective towards European policies directed at fertility provide an interesting counterfoil (Grant et al. 2004). In their view, immigration policies could slow population ageing. National fertility policies could work but the example of France with aggressive pro-natalist policies over many decades typified how difficult these were and the need for sustained political will. Indeed, and stating the obvious, RAND concluded that no single policy was effective and the heterogeneity of Europe meant what worked in one place might not work in another.

Adkins saw “a very substantial, significant positive effect (on fertility) of the national mean child benefit level after controlling for other confounding factors” (Adkins 2003), whereas Gauthier has been much more cautious in his assessment of success. He noted only that “there appears indeed to be a positive (albeit very small) impact of cash benefits on fertility (Gauthier 2004). Even Neyer agrees that those countries which regard their family policies as part of the labour market policies have only fared marginally better at keeping fertility rates from dropping into the very low category but nevertheless TFR still remain below replacement level (Neyer 2003).

Furthermore, although child care availability may have a strong effect it seems that no country has applied a coherent set of interventions over a sustained time period (with the possible exception of France but even here we still see below replacement rate fertility). Sleebos in his review for the OECD (Sleebos 2003), surmised that whilst Europe has a broad mix of approaches their combined effect has been very weak, almost negligible.

The RAND update in 2011 (Hoorens et al. 2011) which reviewed European policies directed at fertility, considered it too early to determine whether policy interventions have played a significant role in the recent rise in EU-27 TFR rates. They concluded that on balance it is unlikely that a specific policy intervention has been the primary driver of this change especially given that the causal mechanisms for fertility decline in Europe have not been precisely defined. They comment on the complexity of childbearing decisions and that specific (narrow) policy interventions are unlikely to have a role in changing behaviours. Hoem (Hoem 2008) argues that for fertility policies to be effective, it is imperative that they are embedded in a family friendly culture. Neyer and Andersson further emphasise this point, commenting explicitly upon the importance of the societal perception and symbolism of family policies rather than specific policy detail in changing behaviours (Neyer and Andersson 2008).

The RAND report authors also suggest that the potential impact of immigration in halting demographic trends has been overstated with fertility rates of immigrants falling to that of the indigenous population within two to three years. Also the number of working age migrants required to retard ageing or promote population growth in the context of below replacement fertility is politically unfeasible and unrealistic in most European countries (Hoorens et al. 2011). Even if this were possible, it does not take into account the significantly higher number of immigrants that would be required to maintain the ratio of working age (15 to 64 years old) to retired age groups (65 years and older) at current levels in Europe (Keely 2001).

Accepting Europe’s Fertility Decline

In summary, there is no clear evidence that any specific policy intervention has succeeded in producing the desired fertility reversal across Europe. To halt the trend of population ageing the fertility rates would have to reach and remain above replacement levels for several decades, which is very unlikely. This on the backdrop of the current recession is likely to dampen fertility rate rises, as occurred in 2009 (Sobotka, Skirbekk, and Philipov 2011). The effect of the recession is most pronounced amongst young people aged below 28, who remain childless; a situation which is fuelled by high levels of unemployment, financial uncertainty, low satisfaction in life, and reduced availability of affordable housing (secondary to lower availability of mortgages and affordable loans) (Sobotka, Skirbekk, and Philipov 2011)
In many countries the series of societal and economic policies that would need to be employed to encourage fertility would not be financially sustainable and cuts to existing benefits are likely to occur. This is likely to deepen the fertility crisis and exacerbate the “fertility trap” by increasing the relative costs (opportunity costs) of childbearing (Žamac, Hallberg, and Lindh 2010; Lutz, Skirbekk, and Testa 2006).

This is of particular concern in the United Kingdom where welfare cuts as part of recent austerity measures may exacerbate fertility decline. The escalation of university tuition fees will impact on uptake of educational opportunities (Bolton 2012) and could saddle university graduates with considerable debt. Furthermore, this generation may be levied with higher taxes to compensate for the projected rise in old age dependency ratios. This financial burden could have a detrimental effect on period fertility rates, through promoting delays in childbearing and smaller family environments. However, it should be noted that the UK currently has comparatively high fertility rates within Europe despite receiving less child and maternal support compared to countries such as France and Sweden, and the impact of tuition fees on future fertility rates is still debated.

Accepting the changing demographic profile of Europe and designing policies to cope with this seems a more realistic solution than explicit pro-natalist approaches. There needs to be a change in the current perception that demographic change represents a crisis for European governments, with the fertility challenge for Europe therefore not in reversing the decline in fertility but developing policies and cultures that embrace ‘older’ societies. It is possible that globalisation of the fertility decline will actually lead to a re-setting of the economic thermostat as the global market adapts to the changing demographics of the labour force. Therefore, policies can be initiated to facilitate this future transition.

Such policies would focus on investing in “human capital” particularly the current working population and children through education. This would increase future productivity, maximise job opportunities and potentially facilitate the resource base for payment of future pensions. An educated and highly skilled labour force in the future would provide a platform for economic growth and global competitiveness if there is sufficient political will.

Governments need to avoid burdening future generations with increased tax rises to support dependents, which alludes to the concept of “intergenerational equity”. It is important to support future incomes without suppressing the net incomes of the working population and capital accumulation, (Ermisch 2008). Measures could include increasing the retirement age encouraging new entrants into the labour force (particularly those over 60 and women), and increasing social security and pension contributions of current workers. Additional measures would improve the flexibility of workforce participation by encouraging part time work and facilitating the option to leave and re-enter the workforce at different stages. Industry could offer training in new and transferable skills, as well as reallocate physically demanding tasks to younger employees, which would facilitate retention of older employees in the workforce. Change in pay structures, whereby salaries are based on performance rather than seniority would encourage active recruitment of older workers (Bloom, Canning, and Fink 2010).

Other options would involve reform of health and social care services (note recent UK commission Dilnot report 2011) (Dilnot, Warner, and Williams 2011) and facilitating private pension and personal saving schemes with tax incentives (Ermisch 2008). Current evidence suggests that social security systems within developed countries are in fact encouraging retirement between the ages of 60 and 65 (Bloom, Canning, and Fink 2010). These may include direct or indirect financial incentives which promote individuals to retire early rather than continue working (Gruber and Wise 1998) placing additional fiscal pressure on the state. This has had a direct effect on old age labour participation rates both in the US and other European countries (Bloom, Canning, Fink, et al. 2007). Changes in tax and benefit policies may therefore encourage increased labour participation amongst the elderly.

A further paradox appears to be emerging. Individuals are living longer and in better health than preceding generations as they approach their 60’s and 70’s due to compression of morbidity (i.e. the years spent in ill health is decreasing) (Fries 2002) However, the proportion of individuals over 60 continuing to be retained in the labour force is decreasing in most OECD countries over the past few
decades (Bloom, Canning, and Fink 2010), despite evidence suggesting that they wish to do so (Kulish, Smith, and Kent 2006). Some of this may be cultural with individuals preferring to spend more time in retirement on completion of their statutory working life. However, the reasons are likely to be more complex, with unpredictable labour markets, inadequate skills and training, and increased demands for leisure time providing disincentives to old age labour participation.

In the UK the retirement age is projected to increase to 67 by 2028 with similar increases in the statutory retirement age set to be achieved in the European Union by 2020. There have also been attempts to equalise the statutory retirement age in men and women (European Commission 2010). The European commission has also suggested that the retirement age should be kept under constant review and raised periodically to ensure that an individual does not spend more than one third of their adult life in retirement (European Commission 2012). However, such changes have resulted in considerable public opposition, with strikes noted in the UK and France, particularly from public sector workers and students who see the retirement age as something that should be fixed for all. Such resistance should be considered when setting the policy agenda.

There should be caution in undertaking radical form, as some commentators have argued that the demographic transition in Europe, if managed effectively, may actually contribute to economic development and long term fiscal sustainability. For example, fertility declines have resulted in an increase in female labour participation, which potentially mitigates the effects of changes in the population age structure on the working population (Bloom et al. 2009).

It has also been projected that healthier lifestyles amongst the working population and elderly would result in a relative decrease in health expenditures in later life assuming that people in developed countries are living longer in better health. They would also be able to work more productively for longer with a decreased burden on welfare resources (Bloom, Canning, and Fink 2010).

Evidence also suggests that individuals, who live longer, whilst not remaining in the labour force, tend to increase their savings over their working life to maintain a high standard of living in retirement, reducing the economic burden on the working population (Bloom, Canning, and Graham 2003). This is particularly relevant in developed countries which provide universal pension coverage (Bloom, Canning, Mansfield, et al. 2007).

As fertility rates fall, there is increased investment by parents in their children’s education, with higher levels of educational attainment noted (Lee and Mason 2010). Despite the proportion of the working age population decreasing, their relative productivity has been projected to increase, thus contributing to economic growth as a result of this investment in human capital (Lutz et al. 2007).

**Conclusion**

In conclusion, the long-term economic and societal consequences of low fertility and population ageing remain unclear. Current rates of improvement in the standard of living may slow down or potentially decline. Additionally, changes in population size and structure could change dramatically over short periods of time depending on the interplay of technological, environmental and behavioural factors. Of particular concern is the future health of the population at all ages. It has been predicted that due to the compression of morbidity, individuals will live for longer in better health. This in turn may increase the productivity of the elderly population and reduce their health burden.

However, recent evidence suggests that this morbidity compression is not occurring, and in fact the prevalence of chronic disease at older ages and the negative impact on independence and quality of life is increasing (Crimmins and Beltrán-Sánchez 2011). There also remains a concern that future generations and working populations will live in poorer health as a result of diet and lifestyle factors which have contributed to an obesity epidemic and a rise in associated diseases (Olshansky et al. 2005).

To mitigate these effects, clear defined policies that have long-term public and political support are required to address the complex processes underpinning the demographic transition in Europe. It is too late to hope that boosting fertility rates to above replacement level will have any overriding impact.
as their benefit will not be seen for decades. Instead focus should be on investing in the current and future working populations and accepting the demographic challenge ahead. Lifestyle factors play a significant role in population health and behavioural public policy will become important in defining the productivity of future generations and the capability of a country to engage their elderly populations in economic growth.

References


[53] Laroque, Guy, and Bernard Salanié. 2008. "Does fertility respond to financial incentives?".


Psychosocial Predictors of Road Rage Among Nigerian Commercial Drivers

Philip C. Mefoh
Department of Psychology, University of Nigeria, Nsukka

Leonard I. Ugwu
Corresponding Author, Department of Psychology
University of Nigeria, Nsukka
E-mail: Leonard.ugwu@unn.edu.ng

Lawrence E. Ugwu
Department of Psychology, University of Nigeria, Nsukka

Laraba B. Samuel
Department of Psychology, University of Nigeria, Nsukka

Abstract
This study examined whether personality and some demographic variables would predict road rage assessed by the Driving Anger Scale (DAS). The sample comprised 328 Igbo-speaking male commercial drivers in Nsukka, Nigeria. The drivers were incidentally selected from motor parks and some other designated parts of Nsukka town. The study employed a correlational design. Results showed that personality traits (extraversion and openness), and some demographic variables (marital status and driving experience) predicted road rage. The findings were discussed in relation to their relevance in reducing road rage (which often culminates to road accidents) on Nigerian roads. The study concluded that efforts at prevention, reduction and elimination of road rage must involve public education for the drivers, and instituting effective traffic regulation that are directed towards driving efficiency and safety on the roads.

Keywords: Aggressive driving, Driving Anger Scale, Personality, Road accident, Road rage.

Introduction
Nigeria is the most populous nation in sub-Saharan Africa. Its urban population has been growing much more rapidly than the overall population. If this trend continues unchecked, more than half of the Nigerian population will be living in cities by 2020 (Mabogunje, 1999). The high population growth rate, especially in the cities, and rapid urbanization are probably two key features of the Nigerian society that maintain an upsurge in road rage incidents. The term road rage is relatively new. Coleman (2003) defined it as a grossly disproportional outburst of aggression by a driver of a motor vehicle in response to a perceived discourtesy or transgression by another road user. A vast range of traffic crimes has been attributed to road rage. However, the present study restricts itself to a driver’s underlying predisposition for anger, such as yelling or making rude gestures, weaving a fist, shouting verbal
abuses, spitting at another driver or passenger, or blare the horn excessively in specific road situations. These acts are specifically targeted towards another road user.

Although there are no specific criminal history databases in Nigeria, findings from accident literature (e.g., Ilechukwu, 1985; Wakawa & Oyeyemi, 2003; Shenge, 2010) and insurance reports show that road rage incidence is on the increase, and that it poses significant threat to drivers and other road users. As traffic congestion increases, the potential for confrontation and retaliation also increases. A number of studies (Novaco, Stokols & Milanesi, 1990; Waters, 1999; Matthews & Norris, 2002) have argued that driving, especially in congested conditions, is exceptionally stressful, such that even people who do not normally get angry can lose control. Drivers are subject to a host of environmental stressors such as noise, pollution, crowding, congestion and uncomfortable temperatures. James and Nahl (2002) listed fifteen triggers of stress when driving, including immobility (the driver cannot release tension through movement) and lack of control over the situation (other traffic restricts what the driver can do). With an estimated population of nearly 200 million people, of which about 40% are in the workforce, roads in Nigeria are becoming increasingly clogged. The situation often peak during the rush hours. Being trapped in a traffic hold-up arouses anger, frustration, and anxiety, which bring about an intense desire to escape the stressful situation. The anxiety reduces drivers’ thresh hold for frustration tolerance for traffic delays, which prompt them to respond aggressively at the least provocation.

Road transport is the most popular means of transportation in Nigeria. It accounts for up to 95 percent of freight and passenger movement in the country (Onah, 2008). It has been recognized that people who engage in road rage and aggressive driving are at high risk of being involved in road traffic accident (Adeyemi-Doro, 2003). Thousands of road rage incidents have ended with serious injuries or even fatalities. In 2006 for instance, the Federal Road Safety Commission (FRSC) reported that there were 9114 cases of road traffic accidents in Nigeria, 4944 persons were killed and 17,390 other people were injured (Onah, 2008). Cases of people who die in road traffic accidents in Nigeria are common that if a person dies, the spontaneous question is: “is it through accident?” Much of driving in Nigeria is characterized by a readiness for aggressive posturing, and constitutes a major cause of death and loss of property in the country. Ilechukwu (1985) described a typical scene on Nigerian road as thus:

“Observation show, as anyone who has driven on Nigerian roads would have noticed, that drivers of big vehicles – trailers, luxurious buses, trucks, and fuel tankers, are notorious for not giving way to smaller vehicles. This has earned the big vehicles the Igbo phrase: ‘a si ka achaa’ (literally translated in English as: if you want us to by-pass each other safely, fine, otherwise let us collide). These drivers too, despite the sizes of their vehicles speed beyond the maximum speed limits which their vehicles are legally allowed; undertake dangerous maneuvers in unauthorized places, and indiscriminately blare their horns loud to scare other road users. At night they still speed without the use of the danger lights which warn other road users of their size. In a good number of cases, these drivers are responsible for the road accidents which involve mini-buses and cars” (pp. 190 - 191).

The relationship observed between road rage and road traffic accident has sparked public concern on the issue. The annual economic costs of traffic injuries to developing countries such as Nigeria are enormous (World Bank, 1993). Prior to the creation of Federal Road Safety Commission in 1988, Nigeria had an average of 66 casualties a day, with a minimum of 44,809 Nigerians killed, maimed or injured yearly (Onah, 2008). With the ever-increasing amount of traffic on increasingly congested roads, the study of road rage or aggressive driving has received attention as a global concern. James (1997) argued that road rage has become rampant because today driving experiences are filled with stress, anxiety, anger, antagonism, and fear. Similarly, Dixit, Raghunath, Mehto, Chouhan, Nema, Upadhyay, and Solanki, (2011) and Yu, Evans, and Perfetti (2004) asserted that road rage is a prevalent condition in today’s society due to motorists’ frustration during heavy traffic volumes. Unfortunately, most of the recent studies which examined road rage incidents (Dixit, et al.
(2011; Duke, Clayton, Jenkins, Miller, & Rodgers, 2001) failed to study the role of personality on road rage. Dixit and colleagues (2011) assessed the level of anger amongst drivers of public transport vehicles in India. But one major limitation of the study was that the researchers failed to evaluate the role of personality on road rage or driving anger. The researchers, however, recommended that there was need for future research on the role of personality variables on road rage. This study fills this gap.

Trait-based researchers (Lawton & Nutter, 2002; Parkinson, 2001; Tillman & Hobbs, 1949) suggest that people who are violent elsewhere are also likely to be violent on the roads; and that man drives as he lives. In a Type A – B classification, for example, Type A persons are “excessively competitive, aggressive, impatient, time urgent, and hostile” (Gerring & Zimbardo, 2005, p. 428). These behaviors could pose as risk factors in road rage, and may likely predispose a Type A motorist to drive recklessly, speed far more than their counterparts of opposite disposition, overtake in the wrong places, such as, bends, corners, brows of hills, and narrow roads. However, dividing people into Type A and Type B categories seems too simplistic; people may not fit neatly into these pre-defined categories. In this study, drivers were rated on a scale of five different personality traits, namely: openness, conscientiousness, extraversion, agreeableness, and neuroticism (OCEAN).

Attempts have been made by organizations and the government to identify relevant causal variables so that meaningful measures could be taken to control them. Today’s drivers cannot escape their own direct and personal responsibility for the accidents that happen on the roads, thus this study examined whether personality, age, driving experience, educational level, marital status, traffic violation, and vehicle type would predict road rage behavior. Relationships among some of these demographic variables seem to be very little studied. The present study adopted a similar design as in the Dixit and colleagues’ study to examine whether their findings would replicate among a Nigeria sample. The objectives of the present study were to determine whether there would be a significant relationship between personality and road rage, and whether there were significant relationship between road rage and some selected demographic variables.

**Method**

**Participants**

Participants for this study were 328 commercial drivers. They were categorized as follows: 165 (50.3%) were operators of commercial motorcycles; 65 (19.8%) were taxi drivers; 64 (19.5%) bus drivers; and the other 34 (10.4%) were riders’ of commercial tricycles. Other demographic characterizations indicate that there were 134 (40.9%) respondents who were married while the remaining 194 (59.1%) were not; years of driving experience ranged from “one year driving experience” (n = 127, 38.7%) to “six years and above driving experience” (n = 201, 61.3%); traffic violation from “not at all” (n =150, 45.7%) to “more than once” (n = 178, 54.3%); educational level from “no formal education” (n =84, 25.6%) to “tertiary education” (n = 244, 74.4%); and age between younger participants (16 – 35 years) (n = 282, 86.0%) to older participants (36 and above) (n = 46, 14.0%). Many of the drivers were unwilling to leave their business to respond to a “strange questionnaire”. However, the external validity of the study was strengthened by examining every transport operator who was willing to participate, irrespective of the type of vehicle operated. Completed instruments were collected from 343 commercial drivers but 15 copies of the questionnaires were discarded because of missing data.

**Instrument**

Two instruments were used in this study, namely: the Big Five Inventory (BFI) and the Driving Anger Scale (DAS). The Big Five Inventory (BFI) (John, 1990) is a 44-item inventory that measures five personality dimensions of openness (o); conscientiousness (c); extraversion (e); agreeableness (a); and neuroticism (n), identified with the acronym OCEAN. The BFI is a Likert-type questionnaire that
requires respondents to indicate the extent to which they agree or disagree with statements people often use to describe themselves (response options are: 1 = strongly disagree, 2 = disagree a little, 3 = neither disagree nor agree, 4 = agree a little, 5 = strongly agree). In scoring the BFI, a simple scoring technique in which 16 of the 44 items are scored in reverse (John, Naumann, & Soto, 2008) was adopted. Some examples of items on the BFI are: “I see myself as someone, who is talkative”, “____, who starts quarrels with others”, “____, who tend to be quiet”, “____, who remains calm in tense situations”. The validity and reliability of the BFI have been well established when used in a sample of Nigerian undergraduate students (Umeh, 2004). The researchers disregarded the reliability index obtained from the student population, and administered the 44-item scale to 150 drivers of commercial and private vehicles who plied the major roads linking Enugu to other places in the same state and beyond. Internal reliability coefficient Cronbach’s alpha for the BFI was 0.90 and construct validity of 0.72.

The Driving Anger Scale (DAS) (Daffenbacher, Oetting & Lynch, 1994) is a 33- item measure of general driving anger. Driving anger was conceptualized as a personality trait related to an individual’s underlying predisposition for anger, but specific to road situations. The DAS is a Likert-type questionnaire that requires respondents to imagine that incidents of unruly behaviors on the road are happening to them, and to indicate the extent to which that behavior would anger or provoke them. Response options are “not at all angry” scored 1; “a little angry”, scored 2; “some anger”, scored 3; “much anger”, scored 4; and “very much angry”, scored 5. Some of the items found in the DAS include: “someone is driving too slowly in the passing lane holding up traffic”, “someone speeds up when you try to pass them”, and someone yells at you about your driving”. The DAS is made up of 6 sub-scales, namely: hostile gestures (3 items), illegal driving (4 items), police presence (4 items), slow driving (6 items), and discourtesy (9 items), and traffic obstruction (7 items). To our knowledge, DAS has not been applied to a Nigerian sample. Thus, the researchers administered the 33 items to 150 drivers as described above. Internal reliability coefficient for the Driving Anger Scale was 0.93 and discriminant validity related to the original scale.

The Big Five Inventory and Driving Anger Scale were translated into Igbo language because the sample composed some illiterate drivers. A driver makes a choice in which language he wishes to respond to the test items. The committee-approach, rather than back-translation (Brislin, 1970; 1993) was adopted to establish language equivalence. The committee-approach requires bilingual informants (five people who are proficient in English and Igbo languages) to collectively translate the 2 instruments into Igbo language. The committee debate the various words and phrases in the Igbo language, comparing them with their understanding of the language of the original protocol. This process reflects a translation that is the shared consensus of a linguistically equivalent protocol across the 2 languages (Matsumoto, 2005).

Procedure

Data were collected from the motor park and some designated parts in Nsukka, Nigeria, with the assistance of 2 research assistants. These assistants were pre-trained in the procedures of this research, and were preferred for their mastery of English and Igbo languages. The Big Five Inventory and the Driving Anger Scale were presented together to each respondent; while the educated respondents completed the original protocols themselves. The research assistants guided the illiterate ones on how to respond appropriately to the translated versions, item by item. Apart from responding to the items on the BFI and DAS, each driver was required to supply demographic information on type of vehicle, marital status, driving experience, traffic violation, educational level, and age. Once a participant completes a questionnaire, the driver was debriefed, and thanked for contributing to the growth of science.
Results
Data were analyzed using hierarchical multiple regression (Enter method). The correlation matrix revealed that the predictor variables correlated with the criterion variable. The first objective that this research attempted to address was whether personality would significantly predict road rage. Personality was examined based on the 5 dimensions of openness, conscientiousness, extraversion, agreeableness, and neuroticism (OCEAN). Agreeableness and conscientiousness were negatively related to road rage, while extraversion, neuroticism and openness were positively related to it. Out of these 5 dimensions of personality, only extraversion (B=1.05, $R^2 = .14$, $p<.001$) and openness (B=.65, $R^2 = .20$, $p<.01$) were significant predictors of road rage. Road rage increased by 1.05 the more extraverted a driver is, and as openness increases by one unit, road rage increases by .65. This result is shown in Table 1 below.

Table 1: Coefficient table showing the unstandardized and standardized weights and t-values for the predictors

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>1.05 (.27)</td>
<td>.21</td>
<td>3.85***</td>
<td>.14</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-.47 (.29)</td>
<td>.12</td>
<td>-1.63</td>
<td>.16</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-.32 (.24)</td>
<td>-.09</td>
<td>-1.31</td>
<td>.16</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.46 (.26)</td>
<td>.10</td>
<td>1.74</td>
<td>.18</td>
</tr>
<tr>
<td>Openness</td>
<td>.65 (.25)</td>
<td>.18</td>
<td>2.56*</td>
<td>.20</td>
</tr>
<tr>
<td>Age</td>
<td>-3.90 (3.37)</td>
<td>-.07</td>
<td>-1.16</td>
<td>.02</td>
</tr>
<tr>
<td>Marital status</td>
<td>6.97 (2.54)</td>
<td>.16</td>
<td>2.75**</td>
<td>.06</td>
</tr>
<tr>
<td>Educational level</td>
<td>.26 (1.42)</td>
<td>.01</td>
<td>.18</td>
<td>.06</td>
</tr>
<tr>
<td>Driving experience</td>
<td>-2.87 (.68)</td>
<td>-.24</td>
<td>-4.24**</td>
<td>.10</td>
</tr>
<tr>
<td>Type of vehicle</td>
<td>1.50 (1.12)</td>
<td>.08</td>
<td>1.35</td>
<td>.06</td>
</tr>
<tr>
<td>Traffic violation</td>
<td>-.38 (1.41)</td>
<td>.02</td>
<td>-.27</td>
<td>.06</td>
</tr>
</tbody>
</table>

The values inside the bracket represent standard error

*** = $p < .001$

** = $p < .01$

*= $p < .05$

This research also attempted to determine whether some demographic factors, such as age, marital status, educational level, years of driving experience, type of vehicle, and the number of traffic violations would be significant predictors of road rage. The cumulative effects on the coefficient table (Table 1) showed that 3 of these predictor variables have negative relationships with the criterion variable, while the other 3 were positively related to it. Among the 3 predictor variables that were positively related to road rage, only marital status was found to be a significant predictor of the criterion variable, [B=6.96, $R^2 = .06$, $p<.001$], road rage increases by 6.97 if a driver of a vehicle is married rather than if he was single. Marital status was coded ‘0’ for single and ‘1’ for married in the analysis. Of the predictor variables that showed negative relationship with road rage, only year of driving experience significantly predicted road rage, [B=-2.87, $R^2 = .10$, $p<.001$]; as driving experience increases by one year, road rage decreases by 2.87. An omnibus test was conducted with the predictor variables as independent variables and the six sub-scales of DAS as dependent variables. The result showed that drivers experienced the most anger on the sub-scale of discourtesy.

Discussion
This study examined whether personality and some demographic variables like age, education, driving experience, marital status, type of vehicle and traffic violation would predict road rage in a Nigerian sample. Some personality traits and demographic factors predicted more road rage than others. That extraversion and openness are positively related to road rage is unsurprising. Individuals with these dispositions usually see driving as a contest and/or thrill and they are likely to become engaged in
potentially rapidly escalating conflict with other drivers, as their own aggressive driving leads to more hostility from other road users, which in turn feeds a tendency to react in a more aggressive way (Forward, 2004). People who view driving as an opportunity for thrill-seeking usually drive recklessly and in style, and these behaviors have been found to correlate with aggressive driving (Krahe & Fenske, 2002). Though neuroticism failed to predict road rage, that it correlated positively to it is somewhat interesting. Perhaps the trait is likely to be a risk factor in road rage. Neurotic individuals perceive everyday hassles as menacing that even trivial frustrations are problematic. They are particularly sensitive to environmental stressors and respond poorly to them.

With regard to the demographic factors, several studies (e.g., Ilechukwu, 1985; Shenge, 2010) have recommended the establishment of driving schools to inculcate good driving habits in aspiring drivers. This recommendation is advised on the grounds that good driving experience is associated with fewer accidents on the road. The finding of this research that as driving experience increases, road rage decreases is consistent with an earlier study (Lajunen, et al., 1998) which demonstrated that road rage diminishes with experience. Another demographic variable that tend to predict road rage is marital status. The result indicated that marital status has a positive relationship with road rage such that road rage increases if a driver is married than if he is single. This result is somewhat disturbing. Observations show that Nigerian commuters preferred vehicles driven by married people instead of vehicles driven by single drivers. The reason being that in the Igbo culture, children are important sign of an individual’s worth, and commuters believed that a married driver who has a wife and children to return home to would have more road sense and attitude than a bachelor driver. Bachelor drivers are reckless and speed far more than their counterparts who are married. How then can the finding on marital status be explained? One of the fundamental characteristics of traditional society in all Nigerian ethnic groups is the extended kinship unit (UNICEF, 2001). This is essentially coterminous with all persons with whom an individual has a genealogical relationship, plus those brought into the kinship unit through marriage as wives. It is possible that because married drivers have more dependents, they are impatient to make as high daily amounts of money as possible to meet with their obligations. Several married drivers out rightly refused to participate in this study when invited. Even when the issue of paying them was raised, it was scorned on the ground that whatever they would be paid was ‘chicken feed’ compared to their daily incomes.

Other demographic factors examined in this study did not substantially predict road rage; however they correlated with it in some useful manner. For example, age correlated negatively with road rage, such that the older a driver, the less the road rage. This pattern of direction was reported in studies that have investigated the contribution of age in traffic violence (e.g., Butters, Smart, Mann, & Asbridge, 2005; Hemenway, Vriniotis, & Miller, 2006; Mann, Smart, Stoduto, Adlaf & Lalomiteanu, 2004; Adlaf & Lalomiteanu, 2004). Also in support to Smart, Asbridge, Mann & Adlaf (2003), this study found educational level to be positively correlated with road rage. That is, educational level tends to be a risk factor for road rage. An omnibus test showed that all the drivers tested responded most to discourtesy. This finding converged with Dixit and Colleague’s (2011) study, which demonstrated that irrespective of nationality, drivers in Australia, India, United Kingdom and United States responded most to discourtesy.

Conclusion and Recommendations
Understanding factors that may influence the likelihood of road rage is an important step in reducing harmful outcomes associated with this behavior (Butters, et al. 2006). The present study investigated whether personality and some demographic variables would predict road rage. Results showed that two related personality traits – extraversion and openness, showed significant relationships with increased risk of road rage. Two demographic variables – marital status and driving experience, were significantly related to road rage behaviour. These results seemed to support the trait hypothesis that man drives as he lives (Tillman & Hobbs, 1949), and that road rage diminishes as driving experience.
increases (Lajunen, et al., 1998). The finding on marital status is somewhat interesting, but because of the dearth of studies relating marital status to risk of road rage on the roads, more research is needed to clarify the reason for the significant relationship it had with road rage.

The attitude to road safety in Nigeria is a product of lack of awareness in terms of road safety education, absence of good or functional transport policy, and the tendency to “bear the loss” rather than taking preventive measures (Wakawa & Oyeyemi, 2003). Government agencies, such as Federal Road Safety Commission (FRSC) should intensify efforts towards cautioning drivers to be courteous and avoid offending other drivers or road users. This may require organizing general driver education for drivers. All new drivers should be made to learn of the consequences of aggressive and inconsiderate driving before they would be allowed to obtain the driver’s license. Although government regulation may not directly affect personality dispositions, it is suggested that all new drivers be screened, and people identified as possessing traits that may predispose them to road rage, be made to take additional driver training programme to learn non-aggressive driving practices or anger management. More importantly, because a driver’s personality disposition is not known by external observation, all road users should be cautioned, perhaps by government agencies, such as FRSC, to stay focused on their driving, and to ensure that one is not the trigger that sets an aggressive driver off. Indeed, practicing defensive driving (staying 100 percent focused on the task of driving) is the best way to avoid inadvertently setting off an aggressive driver. Because road rage or aggressive driving is a choice, it is unclear how well this recommendation would be enforced.

Acknowledgements
We are grateful to Dr. John Eze and Miss Nneoma Obi for their assistance in reading the initial manuscript.

References


Do Attribution Styles Moderate Influences of Safety Practices on Artisans’ Accident Proneness?

Leonard I. Ugwu  
Ph.D, Department of Psychology University of Nigeria, Nsukka  
E-mail: leonard.ugwu@unn.edu.ng

Lawrence E. Ugwu  
Department of Psychology University of Nigeria, Nsukka  
E-mail: checkonlaw2@gmail.com

Abstract
The study tested the hypothesis that attribution styles moderate the relationships between safety practices and accident proneness among a sample of Nigerian artisans. Three instruments were used for data collection for the study. They are: the adapted 10-item safety practices and knowledge scale (SPKS) developed by Ugwu and Ugwu (2006), the adapted 10-item Accident Proneness developed by Van As (2001), and the 20-item adapted Attribution style Scale by Anderson (1999). Results showed that locus, globality, and stability dimensions of attribution style predicted accident proneness, while only locus was a significant moderator of safety practices-accident proneness relations. Controllability dimension of attribution style was neither a predictor of accident proneness nor a moderator of safety practices-accident proneness linkage.

Keywords: Safety practices, attribution style and accident proneness.

Introduction
Industrial accidents are pervasive in the world of work with every employee being a potential victim. Many of the recorded industrial accidents resulted from a mismatch between employees’ potentials/skills and the job requirements (Afuewelu, 2010), while some others are reported to have come from individual personality dispositions (Wright, 2012). World Health Organization reported that over 250 million cases of work-related injuries occur every year (WHO, 1998), with majority of the victims coming from the informal skill workers (artisans) of the developing countries of the world (Tanko & Anigbo, 2012). Work-related injuries are more frequently observed in some workers while more infrequently in others (Wright, 2012). Although many employees are aware of the hazards associated with the characteristics of the work in formal organisations in Nigeria (Ugwu & Ugwu, 2006), the number of employees that take precautionary measures to avert unsafe work conditions in the informal work sectors (artisans) are on decrease (Isah & Okojie, 2006). The reason proffered for this disparity is that employees in the informal work sectors in the developing countries are less educated as to know how harmful some substances of production could be to the body, especially when the immediate negative impacts are not felt (TNV, 2011). Consequently, many employees of the developing countries of the world are more likely to be prone to accident than their counterparts in the developed countries of the world. Evidence has revealed that not less than 200 cases of industrial accidents occur in the workplace in Nigeria daily with an equally high rate of fatalities (TNV, 2011). It...
was reported that no fewer than 400 workers have lost their lives while many others sustained serious body injuries in the Nigerian power sector between 2009 and 2010 (Olejeme, 2013).

But some researchers (e.g., Blum & Naylor, 1968) stated that industrial accidents do not distribute themselves by chance, which suggests that there are some personality variables implicated in accident prevention. Gyekye (2001) also asserts that some employees are more prone to accidents than others. Accident proneness, according to Blum and Naylor (1968), is a condition in which a person is mentally inclined, strongly disposed, attitudinally addicted or personally destined to become continually involved in an on-going and never-ending series of accidents or injuries. In the face of these assertions, several researchers (e.g., Omokhodion, Balogun & Ola-Olorun, 2009; Oyalwale, Odior and Bolanle 2007; Sivaprakash & Sakthivel, 2011) continue to argue that industrial accidents would reduce grossly in the developing countries if industrial safety practices are accurately checked by both management and employees. Results of many researchers have supported the claim that training and re-training employees would lead to accident reduction. For instance, numerous researchers (e.g., Uhumwangho, Njinaka, Edema, Dawodu & Omoti, 2010; Ajayi, Adeoye, Bekibele, Onokpoya & Omotoye, 2011; Hani, Nurud, Suhaimi & Abdull, 2012) have shown that teaching employees on how to use some preventive devices in order to avert unsafe work environments and equipping them with knowledge about the health consequences of employees’ non-compliance to safety rules have reduced industrial accidents in the formal organizational sectors. However, the frequency and the magnitude of accidents among artisans in non-formal sectors still remains inadequately explored. But even in formal organizations where many accident prevention programmes are put in place by management of various organizations, many research investigations (e.g., Sivaprakash & Sakthivel, 2011; Al-Med, Mark & Newson-Smith, 2010; Davis, Asanga, Nku & Osim, 2007) showed that accidents in the workplace environments are on the increase, with some employees recording higher frequency of accidents than others. The search for an explanation as to why some workers are more prone to accidents than others has opened up a body of literature that seeks to understand the variables that exacerbate or moderate safety practices- accident proneness linkage.

Studies have revealed that as many as the number of employees who reported adhering to safety practices also reported sustaining industrial accidents (Gyekye & Salminen, 2004; Martinko, 1995; Weiner & Allred, 1998), while Adebiyi, Jekyinfa and Charles-Owaba (2005) and Visser (2007) reported that there is no one-to-one relationship between employees’ adherence to safety rules and the level at which they experience accidents or near-accidents. Furthermore, some researchers also found that employees’ awareness of occupational hazards in many formal organizations was high, their adherence to safety practices was moderately high while the frequency of accidents did not abate (Sabitu, Iliyasu & Dauda, 2009; Ajayi, Adeoye, Bedibele, Onokpoya & Omotoye, 2011; Humwagho, Njinaka, Edema, Dawodu & Omoti, 2010; Al-Med, Mard & Newson-Smith, 2010). The weak correlations that exist between employees’ adherence to safety practices and the frequency of accidents among employees regardless of training and retraining of employees in organizations, suggest the presence of other moderating or mediating variables that influence safety practices-accident proneness linkage. A careful perusal of the descriptions of employees’ attitudes towards safety practices by earlier researchers provides a clue to the nature of a possible moderating role of causal attribution styles in safety practices-accident proneness relation. The importance of causal attributions in both social psychology and safety literature is well documented. Attribution style refers to cognitive personality variable that reflects how individuals explain bad events that befall them as measured by attribution style scale. It basically suggests the explanation people generally make regarding theirs and other people’s behaviour that facilitates the understanding of future behaviour. Anderson (1999) identified four dimensions of attribution styles namely: locus, globality, stability and controllability. Locus dimension of attribution style refers to the degree to which the cause is due to something about you, rather than to other people or circumstances; while globality is defined as the degree to which the cause is relevant to many different situations, rather than being specific to a few situations. Stability is the degree to which the cause can be expected to be present at the same level every time the same situation
arises, while controllability refers to the degree in which an individual perceives himself as totally in control of events in his work environments.

Causal attribution has been employed extensively in work environment studies (e.g. Gyekye, 2001, 2003; Gyekye & Salminen, 2004; Martinko, 1995; Weiner & Allred, 1998). For example, in workplace settings, attribution analyses have been used to predict behaviour in hazardous work environments (Hofmann & Stetzer, 1996) and have served as explanatory frameworks for management’s decisions to reprimand and/or terminate employees (Ashkanasy, 1995; Mitchell & Wood, 1980; Struthers, Colwill & Perry, 1992). Additionally, they have provided models for the analysis of behaviour in the face of danger (Hale & Glendon, 1987), as well as models for ergonomic perception of workplace accidents. From such causal analyses, measures to curtail future accident recurrence have been effectively implemented. Thus, results from these causal analyses have led industrial safety experts (e.g. DeJoy, 1994; Hofmann & Stetzer, 1996, 1998) to conclude that safety management policies derive more from causal attribution analyses than anything else. But there is dearth of literature in this area as little is known about the role of attribution styles in moderating workplace safety practices-accidents proneness relation.

The study therefore investigated the role of attribution style dimensions on moderating safety practices-accident proneness linkage. In view of this, the following hypotheses were tested:

**Hypothesis 1:** Global attribution style will buffer the relationship between safety practices and accident proneness, such that the negative impact of low adherence to safety practices will be lower among employees who are high in global attribution style.

**Hypothesis 2:** stability attribution style will buffer the relationship between safety practices and accident proneness; such that the negative impact of low adherence to safety practice will be lower among employees who are high in stability attribution style.

**Hypothesis 3:** locus attribution style will moderate the relationship between safety practices and accident proneness, such that the negative impact of employees low adherence to safety practice will be lower among employees who are high in locus attribution style.

**Hypothesis 4:** controllability attribution style will moderate the relationship between safety practices and accident proneness, such that the negative impact of employees low adherence to safety practice will be lower among employees who are high in controllability attribution style.

**Methods**

**Participants**

Two hundred and sixteen participants consisting of 164 male and 52 female artisans in Enugu participated in the study. The artisans used included, 62- welders, 87- mechanics, 41- tailors; 26-labourers who were randomly drawn. Ninety-six of them had working experience above three years while 120 had working experience below three years. All the artisans who have stayed for 1-3 years on the job but who have not completed their periods of apprenticeship were classified as inexperienced artisans while those who are on their shops as trainers were regarded as experienced artisans. The ages of the participants ranged from 18 to 60 years with a mean age of 36.83.

**Instruments**

All instruments were translated into Igbo language, which was the local language of the respondents because majority of the participants did not acquire enough formal education. The translation was done by experts in Linguistic Department of the University of Nigeria, Nsukka. In order to control for bias arising from the initial translated version of the instruments, the Igbo version was back-translated to English language. The researcher then subjected all the instruments to face and content validity by giving them to three experts in the Department of Psychology, who adjudged the instruments suitable
for use. The researcher carried out a pilot study using a sample of 80 participants from artisans in Nsukka mechanic village.

**Accident proneness scale.** One of the instruments used in gathering information in this study was the 10-item Accident Proneness Scale, which was developed by Van As (2001). The scale was designed to measure the frequency, severity of (near-) accidents, the frequency and kind of mistakes made by co-workers. The scale has two components: safety and frequency of accidents among colleagues in the organization and the involvement of the respondent. It applied 5-point Likert response options on the first seven items that measure the safety within an organization and frequency and mistakes of colleagues. The last three items measure the frequency at which accidents occur or almost occurred and applied a dichotomous response format of ‘Yes’ and ‘No’. The Cronbach alpha score of 0.75 was obtained by the developer with higher score indicating higher accident proneness. The responses from the pilot study yielded Cronbach alphas of .73 and .76, respectively, for safety and frequency of accidents among colleagues and safety and frequency of accidents of respondents.

**Attribution Style Scale.** Anderson’s (1999) Attribution Style Scale was used to measure attribution style. The scale has 20 items that were measured on a 9-point scale. Each of the items measures the four dimensions of the attribution style scale namely: locus, globality, stability and controllability. To make the responses easier, a 5-point likert responses format was used instead of the 9-point format used by the developer. The items present hypothetical situations and outcomes that might happen to anyone. For each item, the respondent was asked to imagine him/herself in that situation, and then write down the one major cause of that outcome based on the definitions of the rating scales listed below:

- **Locus:** The degree to which the cause is due to something about you, rather than to other people or circumstances.
- **Globality:** The degree to which the cause is relevant to many different situations, rather than being specific to a few situations.
- **Stability:** The degree to which the cause can be expected to be present at the same level every time the same situation arises.
- **Controllability:** The degree to which the cause is a factor that you have control over.

A cronbach alpha of .74 was found by the author. Higher scores on each indicated higher attribution on locus (external), globality, stability and controllability. A Cronbach alpha of .76, .81, .78 and .80 were found for locus, globality, stability and controllability on the four dimensions Attribution Style Scale, respectively.

**Safety practices and knowledge Scale:** Safety practices and knowledge scale developed by Ugwu and Ugwu (2006) was used to measure safety practices. This is a 10-item questionnaire developed to measure knowledge and preventive practices regarding occupational hazards. Sample item include: “I put on safety devices such as ear protector, helmet, and hand gloves when I am working in order to prevent accidents”. The items were measured on two response options of ‘yes=1’ and ‘no=0.’ Five of the items in the instruments (1, 4, 6, and 8 and 10) were negatively worded and were consequently scored on a reversed direction. A sample item is: “I do not use some of the safety devices because they inconvenience me.” A higher score entails perceptions of higher levels of safety practices while reverse was the case for a lower score. The scale has a reliability coefficient of .85 obtained from 96 employees of Emenite Nigeria Ltd, Enugu state by the developer. A Cronbach alpha of .74 was found for safety practice and knowledge scale.

**Procedure**

A total of 250 copies of questionnaire consisting of a biographic sheet, Safety Practices and Knowledge Scale, Accident Proneness Scale and Attribution of Style Scale were distributed to volunteered artisans in their respective workshops. Three research assistants helped in the distribution and collection of the questionnaires. Out of the two hundred and fifty copies of the questionnaire, 216 copies (86.4%) of the instruments were correctly filled and used for analysis.
Designs/Statistics

The study is a cross-sectional survey design and hierarchical Multiple Regressions was adopted. SPSS 16 (statistical package for the social sciences) and Interaction software were used for the data analysis.

Results

This Chapter illustrates the results of the data and uses the Multiple Linear Regression analysis with Enter Method to analyze the results. The results are however summarized and presented in the following tables:
Table 1: Zero order correlation among study variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Accident proneness</td>
<td>40.52</td>
<td>8.11</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Gender</td>
<td>1.31</td>
<td>.46</td>
<td>.13*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Age</td>
<td>28.04</td>
<td>5.16</td>
<td>-.02</td>
<td>.071</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Years of work experience @</td>
<td>1.61</td>
<td>.59</td>
<td>.04</td>
<td>-.101</td>
<td>-.04</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Work type #</td>
<td>2.25</td>
<td>1.05</td>
<td>.04</td>
<td>-.004</td>
<td>-.07</td>
<td>.09</td>
<td>.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Safety</td>
<td>20.31</td>
<td>4.61</td>
<td>.28**</td>
<td>.23</td>
<td>-.05</td>
<td>.28</td>
<td>.76</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Globality</td>
<td>18.75</td>
<td>3.98</td>
<td>.23**</td>
<td>-.16</td>
<td>-.18</td>
<td>.07</td>
<td>.01</td>
<td>.02</td>
<td>.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Locus</td>
<td>19.88</td>
<td>4.48</td>
<td>.21**</td>
<td>-.15</td>
<td>.04</td>
<td>.05</td>
<td>.10</td>
<td>.06</td>
<td>.16</td>
<td>.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Controllability</td>
<td>35.54</td>
<td>6.63</td>
<td>-.09</td>
<td>-.07</td>
<td>-.18</td>
<td>.00</td>
<td>.09</td>
<td>.07</td>
<td>.56</td>
<td>.29</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Stability</td>
<td>5.07</td>
<td>1.43</td>
<td>-.19*</td>
<td>.00</td>
<td>.03</td>
<td>.01</td>
<td>.02</td>
<td>.02</td>
<td>.44</td>
<td>.18</td>
<td>.45</td>
<td>.01</td>
<td>.10</td>
<td>.06</td>
<td>1.00</td>
</tr>
<tr>
<td>11 Globalityxsafetypractices</td>
<td>103.09</td>
<td>37.80</td>
<td>.11</td>
<td>.09</td>
<td>-.13</td>
<td>.26</td>
<td>.58</td>
<td>.79</td>
<td>.23</td>
<td>-.05</td>
<td>.28</td>
<td>.23</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Locus xsafetypractices</td>
<td>95.44</td>
<td>35.04</td>
<td>.35**</td>
<td>.09</td>
<td>.00</td>
<td>.24</td>
<td>.65</td>
<td>.82</td>
<td>.69</td>
<td>.04</td>
<td>.05</td>
<td>.10</td>
<td>.06</td>
<td>.01</td>
<td>1.00</td>
</tr>
<tr>
<td>13 Controllability xsafetypractices</td>
<td>101.19</td>
<td>38.58</td>
<td>.19*</td>
<td>.13</td>
<td>-.13</td>
<td>.22</td>
<td>.61</td>
<td>.80</td>
<td>.84</td>
<td>.74</td>
<td>.16</td>
<td>.18</td>
<td>.02</td>
<td>.04</td>
<td>1.00</td>
</tr>
<tr>
<td>14 Stability xsafetypractices</td>
<td>180.32</td>
<td>60.67</td>
<td>.15*</td>
<td>.19</td>
<td>-.01</td>
<td>.24</td>
<td>.64</td>
<td>.84</td>
<td>.81</td>
<td>.75</td>
<td>.81</td>
<td>-.18</td>
<td>.00</td>
<td>.09</td>
<td>.07</td>
</tr>
</tbody>
</table>

*= P <.05; **p<.01; ***p<.001(significant)
Gender= 1-male, 0-female
@ =1-(1-3 years) and 2-(above 3 years),
# =1-welder, 2-mechanic, 3-tailor, 4-labourer.
Table 1 represents the means, standard deviations, interrelations and reliability of all the study variables. All measurement scales were internally consistent with alpha’s ranging from .73 to .90, all above the .70 minimum established by Nunnaly and Berstein (1994). Safety practices has a significant negative correlation with accident proneness \( (r = -0.28, p<0.001) \), while globality dimension of attribution style has significant positive correlation with accident proneness \( (r = 0.23, p<0.001) \). A similar correlation pattern emerged for locus and stability dimensions of attribution style. While locus dimension has a significant positive correlation with accident proneness \( (r=0.21, p<0.001) \), stability showed a significant negative weak correlation with accident proneness \( (r = -0.19, p<0.05) \). The interactions of locus and safety practices \( (r=0.35, p<0.001) \), controllability and safety practices \( (r=0.19, p<0.05) \) and stability and safety practices \( (r = 0.15, p<0.05) \) have positive significant correlations with accident proneness.

To further test the moderating role of the four dimensions of attribution style, the researchers followed the procedure suggested by Cohen, Cohen, West, and Aiken (2003). In order to avoid multicollinearity problems, all independent variables were centered prior to their entry in regression equations. The significance of the interaction effects was assessed after controlling for all main effects. Following Aiken and West (1991), interaction terms (e.g., two-way interactions between the four dimensions of attribution style and safety practices) were coupled on the basis of the standardized component variables. Control variables were entered into step 1 of model followed by, the main effects of safety practices in step 2, the four dimensions of attribution style in step 3, and the four possible interaction terms in step 4.

Table 2: Regression Model Summary of the predictor demographics, safety practices, attribution styles and moderation (interaction of attribution style and safety practices).

<table>
<thead>
<tr>
<th>Model</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>Adjusted ( R^2 )</th>
<th>Std Error estimate</th>
<th>( R^2 ) Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.198(^a)</td>
<td>.039</td>
<td>.021</td>
<td>8.02732</td>
<td>.039</td>
<td>2.163</td>
<td>4</td>
<td>211</td>
<td>.074</td>
</tr>
<tr>
<td>2</td>
<td>.317(^b)</td>
<td>.100</td>
<td>.079</td>
<td>7.78725</td>
<td>.061</td>
<td>14.210</td>
<td>1</td>
<td>210</td>
<td>.000***</td>
</tr>
<tr>
<td>3</td>
<td>.483(^c)</td>
<td>.234</td>
<td>.200</td>
<td>7.25642</td>
<td>.133</td>
<td>8.962</td>
<td>4</td>
<td>206</td>
<td>.000***</td>
</tr>
<tr>
<td>4</td>
<td>.950(^d)</td>
<td>.452</td>
<td>.384</td>
<td>7.33137</td>
<td>.117</td>
<td>7.732</td>
<td>4</td>
<td>202</td>
<td>.000***</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), work group, gender, age, years of work experience,
b. Predictors: (Constant), work group, gender, age, years of work experience, safety practice
c. Predictors: (Constant), work group, gender, age, years of work experience, safety practice, stability, locus, globality, controllability
d. Predictors: (Constant), work group, gender, age, years of work experience, safety practices, stability, locus, globality, controllability, globality and safety practices, locus and safety practices, controllability and safety practices and stability and safety practices.

***p<.001(significant)

The multiple regression results in the above table showed that none of the demographic variables (age, gender, and years of work experience and work type) was significant predictor of accidents proneness. However, safety practices was a significant predictor of accident proneness \( (\beta=-0.28, t=-0.02, p<0.001) \), which implies that employees who do not observe safety practice are more prone to industrial accidents.

Table 3: Coefficient table of Regression Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.20</td>
<td>.07</td>
<td>1.02</td>
<td>.31</td>
</tr>
<tr>
<td>Age</td>
<td>-.09</td>
<td>.06</td>
<td>-.90</td>
<td>.37</td>
</tr>
<tr>
<td>Years of work experience*</td>
<td>-.53</td>
<td>-.04</td>
<td>-.59</td>
<td>.56</td>
</tr>
<tr>
<td>Work type*</td>
<td>-.56</td>
<td>-.07</td>
<td>-.13</td>
<td>.26</td>
</tr>
<tr>
<td>Safety practices</td>
<td>-1.56</td>
<td>-.28</td>
<td>-4.02</td>
<td>.00***</td>
</tr>
<tr>
<td>Globality attribution</td>
<td>-.35</td>
<td>-.20</td>
<td>-2.56</td>
<td>.01**</td>
</tr>
</tbody>
</table>
Table 3: Coefficient table of Regression Analysis - continued

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus attribution</td>
<td>.56</td>
<td>.28</td>
<td>4.17</td>
<td>.00***</td>
</tr>
<tr>
<td>Controllability attribution</td>
<td>-.02</td>
<td>-.01</td>
<td>-.11</td>
<td>.92</td>
</tr>
<tr>
<td>Stability attribution</td>
<td>-.19</td>
<td>-.16</td>
<td>-2.16</td>
<td>.03*</td>
</tr>
<tr>
<td>Globality X safety practices</td>
<td>-.05</td>
<td>-.21</td>
<td>-1.67</td>
<td>.10</td>
</tr>
<tr>
<td>Locus X safety practices</td>
<td>.14</td>
<td>.61</td>
<td>5.84</td>
<td>.00***</td>
</tr>
<tr>
<td>Controllability X safety practices</td>
<td>.01</td>
<td>.06</td>
<td>.47</td>
<td>.64</td>
</tr>
<tr>
<td>Stability X safety practices</td>
<td>-.03</td>
<td>-.20</td>
<td>-1.55</td>
<td>.12</td>
</tr>
</tbody>
</table>

*= P <.05; **= P <.01; ***= P <.001 (significant),
@ =1-3 years and above 3 years,
# =1- welder, 2- mechanic, 3- tailor, 4-labourer.

Regarding attribution style, three out of the four dimensions of attribution style, namely globality, locus and stability were significant predictors of accident proneness. Globality significantly predicts accident proneness ($\beta = -0.20$, $t=2.56$, $p<0.01$), while locus attribution is a more significant predictor of accident proneness than globality ($\beta = 0.28$, $t=4.17$, $p<0.001$). Summarily put, stability attribution was a weaker significant predictor of accident proneness than any of the aforementioned ($\beta = -0.16$, $t=-2.16$, $p<0.05$). The moderation of locus and safety practices was a significant predictor of accident proneness ($\beta = 0.61$, $t=5.84$, $p<0.001$), while the remaining interaction terms were not significant predictors of accident proneness.

Table 4: Illustrating the interaction effect (Simple slope levels of locus attribution).

<table>
<thead>
<tr>
<th>Levels of locus</th>
<th>B</th>
<th>SE</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High locus (external)</td>
<td>.96</td>
<td>.50</td>
<td>3.92</td>
<td>.00*</td>
</tr>
<tr>
<td>Mean</td>
<td>.50</td>
<td>.37</td>
<td>4.09</td>
<td>.00*</td>
</tr>
<tr>
<td>Low locus (internal)</td>
<td>.04</td>
<td>.55</td>
<td>1.89</td>
<td>.06</td>
</tr>
</tbody>
</table>

*p<.001 (significant).

To better explore the moderating effects, the researchers plotted the interactions using standardized regression coefficient following the method for interaction analysis by Aiken and West (1991). Result showed that external locus ($b = .14$, $SE =7.45$, $\beta = .671$, $p<0.001$) was associated with higher accident proneness. Simple slope for the association between safety practices and locus were tested for low (-ISD below the mean), moderate (mean), and high (+ SD above the mean) levels of locus. Each of the simple slope tests revealed a significant negative association between safety practices and accident proneness, but the safety practices was more strongly related to accident proneness for high (external) level of locus ($\beta = .96$, $SE = .5$, $p<0.001$) than for moderate ($\beta = .50$, $SE = .37$, $p<.001$) or lower (internal) levels of locus ($\beta = 0.04$, $SE = .55$, $p = 0.06$). Graphic representation of this interaction is shown in figure 1 below.
The moderation effect graph illustrates that employees with internal locus had lower accident proneness (M=39.51, SD=7.62) than their counterparts who are externally-oriented (M=41.39, SD=8.46). This implies that externally-oriented employees are more accident-prone than their internally-oriented employees. On the contrary, the internals showed high safety practices (M=39.30, SD=8.10) and the external showed low safety practices M=42.96, SD=7.61).

**Discussion**
The purpose of the study was to elucidate the relationship between safety practices and accident proneness by studying the possible moderating role of the four dimensions of attribution style. Our findings showed that safety practices are negatively related with accident proneness. What this means is that employees that adhere to safety practices are less prone to accident in the workplace. These findings are in line with Ugwu and Ugwu (2006), who also demonstrated negative relationship between employees' safety practices and incidences of accidents in the workplace, but in this case, with employees in the formal organization. However, globality has positive relationship with accident proneness, that is, when employees attribute the cause of accident to many different situations rather than to a few specific situations, they perceive industrial accidents as 'inevitable' mishap, which no amount of precautionary measures could avert. This, perhaps, explains why employees with high global attribution take less precautionary measure to avert industrial hazards and consequently are more prone to industrial accidents.

Locus attribution was also found to be positively related to accident proneness. This indicates that the more an employee adopts locus attribution in explaining events in the workplace, the more he/she is prone to accidents. Reverse was the case with stability dimension of attribution style. The more employees attribute the causes of accidents to be present at the same level every time the same situation arises, the more they are likely to take safety precaution and the less they are prone to accident.

In generally, our findings supported hypotheses 3 which stated that locus attribution style would moderate the relationship between safety practices and accident proneness in the direction that the negative impact of employees’ low adherence to safety practices was lower among employees who...
are high (externals) in locus attribution style. It seems that employees who are low in taking precautionary measures but attribute the causes of industrial accidents to events or circumstances beyond their control are less accident prone than employees who are internal. The explanation of this result maybe based on the premise that when individuals attribute the causes of behavior to circumstances beyond their control, they fail to look inward as to identify their possible contributions to their woes. Globality attribution did not significantly moderate safety practices- accident proneness connections. This result failed to support the first hypothesis. This implies that when employees believe in the universality of accidents in the workplace, which suggests that every employee is prone to accident, the less she/ he adheres to the safety rules in the workplace. This, however, suggests that the more employees absolve themselves from the blames for falling victim to accidents in the workplace, the more they take risks in the workplace and become more prone to accidents.

In the same vein, stability and controllability attribution did not moderate safety practices-accident proneness linkage at different levels. It seems that when employees perceive accidents as being caused by diverse situations or when employees believe that they cannot control all the circumstances around them to ensure safety in the workplace environments, they employ the various safety measure they acquired from their master trainer during the in-service training period.

Limitations and Suggestions for Future Research

Although this study contributes to our understanding of how to reduce employees’ susceptibility to industrial accidents, several limitations should be considered. First, the cross-sectional sectional nature of the data does not permit causal relationships among the variables. Longitudinal data will be necessary to establish causality among these relationships. Another imitation is the modest size of the sample, which restricts generalizability of our results. Future research should include a larger sample to check the proposed moderating role of the four dimensions of attribution style. Finally, the researchers propose several suggestions for future reproach. First, there are many artisans that take more risks than the targeted population. A separate questionnaire should be drafted that taps information from the apprentices on the extent to which their trainers use safety gadgets in their workshops during the training sections. This will enable the researchers compare the veracity of the responses of the trainers. Second, further research should continue examining all the moderating role of the four dimensions of attribution style in order to achieve a better understanding of the relationship between safety practices and accident proneness linkage.

In conclusion, to date, none of the prior research on hazards had attempted to bridge safety practices and accident proneness by examining attribution strategies. The current study addresses this gap by linking these two aspects with attribution style.

References


Modeling of Customer Non-Financial Valuation: Empirical Study on Loyalty Reward Program

Enny Kristiani  
*Graduate School of Management and Business*  
*Bogor Agricultural University, Indonesia*  
E-mail: enny.kristiani@yahoo.com

Ujang Sumarwan  
*Department of Family and Consumer Science & Graduate School of Management and Business*  
*Bogor Agricultural University, Indonesia*  
E-mail: usumarwan@gmail.com

Lilik Noor Yulianti  
*Department of Family and Consumer Science & Graduate School of Management and Business*  
*Bogor Agricultural University, Indonesia*  
E-mail: lilik_noor@yahoo.co.id

Asep Saefuddin  
*Department of Statistics & Graduate School of Management and Business*  
*Bogor Agricultural University, Indonesia*  
E-mail: asaefuddin@gmail.com

**Abstract**

The goal of relational program is to retain customers who are profitable to the organization. Reward point is a form of customer loyalty widely used by many industries, including airline industry. Airline loyalty program, notorious as Frequent Flyer Program (FFP), is the most sophisticated marketing strategic used by airline industries nowadays to maximize their profit and to satisfy their loyal customers. However most airlines have very little understanding of their FFP members yet have a little knowledge about their most valuable customers. Most airlines have inaccurately determined their customer values by only considering business worth of nominal profit generated by FFP members. The value of customers beyond purchasing behavior has not been commonly captured yet. This non-financial value serves as a driver in retaining customers, hence becomes one of crucial factors in preserving the profitability of the organization. For this reason, this paper is the beginning of a study that aims to determine the customer’ non-financial valuations to the organization as well as develop a model of the non-financial values. The relationships between relational benefit, relationship quality, and relationship marketing outcomes will be analyzed in this study. The effect of loyalty reward on the non-financial worth of FFP members to the airline is explored. Scope of loyalty reward program to be studied is a non-paid and accumulated reward program in the context of FFP offered by airline in Indonesia.
Keywords: Frequent Flyer Program, Loyalty, Relationship Benefit, Non-Financial Valuation

1. Introduction
In the context of customer equity, consumers generate values to the organization by means of financial and non-financial contributions. Based on the Customer Lifetime Value (CLV) approach, financial value to the organization is typically defined by business worth of nominal profit generated by customer. However, traditional model of CLV only captures the financial value of the customer to the organization (Reinartz & Kumar, 2000). The value of customers beyond purchasing behavior has not been commonly captured yet. As a matter of a fact, customers also give value to the organization through non-monetary means, such as helping the firm to attract other customers, retain some current customers, and also provide guidance to the firms. This beyond purchasing behavior has not been considered in determining customer value yet could mislead organization in loosing valuable customers (Bolton et al., 2004).

Recognizing customer’ values are crucial for the organization to sustain its profitability in terms of economic benefits and intangible supports generated by the customers (Hogan et al., 2003). In order to retain customers who are profitable to organization, company develop a relational program. A relational program is tool for organization to retain customers who are profitable and to build customer loyalty. This concept has been implemented in many business areas including airline industry. Initiating by American Airlines with its frequent flyer program (FFP) known as “AAAdvantage” in 1981, FFPs become the largest membership of loyalty program with more than 120 million members enrolled in one or more of the 200 FFPs globally (McCaughey & Behrens, 2011). FFP awards generally reward loyal (and frequent) customers in the form of “loyalty currency” which can be used for free & upgrade flights, shop products, and other services. Having considered as a part of payment systems, frequent flyer miles represent one of the world’s most popular currencies (Dreze & Nunes, 2004).

The primary goal of the FFP is to retain a base of committed customers who are most likely to contribute to the profitability of an airline. However most airlines have very little understanding of their FFP members yet have a little knowledge about their most valuable customers (O’Connel, 2009). This program has even been associated with the difficulty and restriction of the redemption policies. There were almost 17 trillion unredeemed frequent-flyer miles making only around 28% of frequent flyer points being redeemed than earned (Greenberg, 2008 in Ho et al., 2009). This fact leads to the question whether FFP is indeed beneficial for the members as well as to the issuer considering high cost involved in managing this program. Airline requires better understanding in customer needs and preferences and taking them into consideration to develop customer loyalty in the long periods of time (Weber, 2005).

While FFPs have attracted a great deal of attention in the transportation and marketing literatures, there has been no study on the effect of frequent flyer program on the non-financial value given by the members to the airline. As far as the context of this non-financial customer behavior to organization, to our knowledge, the first and only research on the effect of loyalty reward on the non-financial value, called “relational worth”, of customer to organization (B-to-C exchanges) has been ever conducted is study by Melancon et al. (2011). Their study was carried out in a specific geographic area (USA) and on a specific type of relational programs, such as a professional sport team (paid and non-accumulated type of rewards) and experimental study (a fictional hotel reward). Consequently, the effect of loyalty reward toward the non-financial value of airline frequent flyers, in term of non-paid and accumulated type of rewards, has never been understood yet. For this reason, this paper is intended to analyze the effect of loyalty reward on the non-financial worth of the members to the airline. Scope of the study covers analyzing of a non-paid and accumulated reward program in the context of FFP offered by airline in Indonesia. Research is referred to FFP of an established airline in Indonesia. The analysis could not be examined to loyalty program on the other Indonesian carriers due to insignificant number of members (Globalflight, 2013). The study proposes a model of the relationship of FFP with the marketing outcomes, how FFP develops the expected relationship outcomes, and what is the
contribution of social benefits on FFP outcomes. This study becomes unique by analyzing the FFP program to determine the non-financial value of FFP members of an established airline by a direct access. Research with access to actual FFP data from an airline is still uncommon (McCaughey & Behrens, 2011).

This result contributes to the knowledge of aviation loyalty reward program by improving the effectiveness of the program from the aspect of enhancement the lifetime value of the members. It reveals a correlation of the non-monetary value of the members with reward benefits. The result contributes to the industry in increasing the lifetime value of its customer to sustain long-term relationship benefit of the firm as well as of the customers.

In the first part of the study, the review of literature on previous study or research is conducted. Based on the review, the conceptual framework is proposed. In the third part, work plans, research process and analysis are discussed.

2. Literature Review

Loyalty Reward Program (LRP)

A loyalty program is a marketing program to attract customer by offering rewards to encourage loyal behavior. The key-roles of this program are “loyalty” as the primary goal of loyalty program, and “reward” as the key instrument for attaining it (Yuheng, 2011). The basic concept of LRP is to enhance the profitability of customer relationship for long-term business relationship as a form of equity (Yuheng, 2011). Reward has proven strongly in affecting customers’ making decision and also their behavior changes as well (Gomez et al., 2006). A loyalty program weakens price competition by offering incentives for repeat purchase, leading to less price-sensitive brand switches (Kim et al., 2001) and also the partnership-like activities from the customers for the benefit of organization (Bowen & Shoemaker, 2003).

Dowling & Uncles (1997) classified a loyalty reward program onto a two-dimensional of loyalty programs: type of reward (direct versus indirect rewards) and timing of reward (immediate versus delayed rewards). Direct rewards, which directly support the value proposition of a given product or service, are intended to keep customer loyal on the product or service (Yuheng, 2011). Delayed rewards, which are provided at a later date from the point of sale, are more effective in shaping customer loyal behavior for retaining customer (Zhang et al., 2010).

Frequent Flyer Program (FFP)

As defined by Yi & Jeon (2003), FFP is classified as “a direct reward” with “delayed” time of reward. FFP is noted as a direct reward because it does directly support the value proposition of a given service. Airline awards FFP’ reward related to its core business (free ticket, upgrading, lounge, priority boarding, etc). As a loyalty program, FFP induced effect of loyalty from customers because FFP has the strongest influence on selecting an airline (Proussaloglou K & Koppelman F., 1995). Moreover, numerous studies on FFP have confirmed that FFP is positively significant in retaining loyal customer & attracting for new customer (Dowling & Uncles, 1997; Dowling et al.,2002; Long & Schiffman, 2000; Chin , 2002; Hsu & Wen, 2003; Suzuki, 2003; Weber, 2005).

It has been estimated that cost for retaining customer is only one fifth of cost for attracting new customer (Reichheld, 1996). Therefore, company would like to perform more business operations for customers in order to keep existing customers and build up long-term customer relationship. A successful loyalty program increases value-proposition of the product, retains loyalty and hence preserves the profitability from the customers (Kumar & Petersen, 2005). Loyalty reward program can be significantly costly for the organization despite the fact that loyal customers are not always generating profit to the firm in non-contractual settings (Reinartz & Kumar, 2000). Airline business is classified as a non-contractual setting as the time at which a customer ended the relationship with the
airline is unknown. FFP is costly to the airline, requiring about $3 to $20 per member per year for managing the program and involving about $2M-$12M to start up the program (O’Connel, 2009).

Relational Benefit

A relational benefit is perceived benefit - other than the core service itself - obtained by customers as a result of having a long-term relationship with the organization (Hennig-Thorou et al., 2002). Hence, these benefits are significant for both consumers and organization as well. Relational benefits include tangible and intangible outcomes such as: loyalty, positive word-of-mouth, relationship continuance, as well as customer satisfaction (Gwinner et al., 1998). Economic benefit includes price discounts, frequency discount, volume discount, price reduction, and special rates (Gwinner et al., 1998; Berry, 1995). The major benefits of FFP’s members are free tickets and upgrading (Ya-Han Hsieh, 2007). Social benefits have been considered to involve feelings of familiarity, personal recognition, friendship, personalized & customized services, bond, social treatments, and high status relative to the average consumer (Berry, 1995; Phillips, 2007) and special treatments to customers, such as participating on exclusive events, better service, and friendship-like relationship (Berry, 1995; Gwinner et al., 1998). Customers feel engagement to the organization through affective commitment and enhance the value of transactional behavior (Price & Arnould, 1999; Rust et al., 2000).

In the context of relational program in aviation industry, airlines award their frequent flyers with economic benefits in the form of monetary rewards such as award and upgrade tickets as well as non economic benefits. Based on previous researches, FFP’s members are indentified expecting intangible values and services, such as: booking priority and booking guarantee, lounge facility extra luggage, and also priority baggage handling (Weber, 2005).

The fact that only about 28% of mileage being redeemed has been associated with the the reward redemption issues. Based on the cognitive evaluation theory, the condition of reward policy influences the behavior of customers. Previous studies found that controlling policy is affected by the reward type or and timing (Rothschild & Gaidis, 1981). Flexible reward policy increases customer commitment whereas strict reward policy is believed will weaken the effect of customer affective commitment while increase continuance commitment to the organization. Based on the this concept, this study is proposed that controlling reward policy of FFP has negative relationship with affective commitment of the members but positive relationship with continuance commitment.

Relationship Quality

Relationship program with tangible reward, such as frequent flyer programs, created customer trust in which leading to increasing customer commitment and loyalty (De Wulf & Odekerken-Schroder, 2003). However, study on different context found inconsistent result when the same structure of relationship amongst reward-trust-commitment-loyalty of frequent flyer program was not observed for direct mail and preferential or special treatments.

Relationship quality consists of multivariate constructs that represent the overall strength of a relationship and the extent to which it meets the needs and expectations of organization and consumers (Smith, 1998). The expectation and interaction of organization with its customers has been identified as the main factors contributing to the development of relationship quality. In the context of service industry, relationship quality can be regarded as the nature of relationships between organization and consumers whom are rely on the organization because its employees’ integrity; consumers feel confidence because the past historical performance has been consistently satisfactory (Crosby et al., 1990). Existing literatures consider various conceptualizations on relationship quality but amongst the most common constructs encompass customer satisfaction, trust, and commitment to the relationship (Crosby et al., 1990; Morgan & Hunt, 1994; Hennig-Thorau, 2002). A three-component model of commitment (Allen & Meyer, 1990) illustrates that consumers are motivated to maintain a relationship with an organization through three approached of commitments, hereafter, as affective (desire-based),
normative (obligation-based) and continuance (cost-based) commitments. In this study, the relationships of customer commitments and satisfaction of FFP members in generating intangible outcomes are analyzed.

The benefits received from special treatments such as economic savings or customized services are expected to positively influence customer satisfaction with the service provider (Hennig-Thorau, 2002). According to Hennig-Thorau & Klee (1997), satisfaction is related to the realization of customer social needs which then leads to emotional bond of the customer to the service provider. Therefore, either social benefits or economic benefits are expected to influence customer satisfaction.

Customer Involvement

Involvement is defined as an engagement with the product (the relation program). Behavioral learning theory suggests that involvement varies depending on the relationship between the individual relevances and benefits or reward offered. Low-involvement consumers are likely to be motivated by reward related issues than are high-involvement consumers (Rothschild & Gaidis, 1981; Dowling & Uncles, 1997). Under low-involvement, the reward and not the product can become the primary reward, while for high-involvement the product not the reward is the primary reward. Low-involvement consumers focus on reward program types, while high-involvement customers more concerned with the congruency between reward and the product being consumed (Yi & Jeon, 2003). Therefore, lower involvement consumers will show more distinct interaction of relational benefit and policy on customer relationship commitment than that of higher involvement customer.

In this study, level of tier is used as a proxy for involvement to assess if there are interactions amongst reward type, reward policy and involvement.

Relational Worth

The true value of a customer to service industry is not only generated by economic benefits but also social interactions, such as word of mouth, imitation (adoption) and other social effects which can generate significant future profits for the firm (Hogan et al, 2003). Other previous study also indicated indirect effect of social behaviors in determining the profitability of an organization (Zeithaml, 2000). The other study in the context of aviation enterprises (Kalda, 2008) explained the relationship of financial and social outcomes of loyalty reward program and their impact to the business performance. She found that financial and social advantages of loyalty program significantly relates to airline profits.

Relational worth is defined as desirable social behavior of customer toward the organization (Melancon et al., 2011). This customer stewardship-like behavior is important to organization because customers voluntarily contribute in performing organization’s responsibilities (Phillips, 2007). These voluntary-partnership activities by customer to organization include spreading word-of-mouth (WOM), giving business referrals, providing positive references & publicity to parties outside the organization, and providing information and feedback to the organization as well (Bowen & Shoemaker, 2003). The outcomes include decreasing the propensity to leave the relationship with the organization, reducing customer uncertainty, increasing acquiescence, increasing cooperation to organization, and increasing the belief that conflict will be functional (Morgan & Hunt, 1994). Stewardship behavior in the context of employees-organization is measured by willingness to accept personal challenges if they serve the long-term interest of the organization, willingness to accept personal challenges if they serve the long-term interest of the teamwork, willingness to help others to see the balance their responsibilities to the organization and to those outside organizations, and willingness to use leadership role appropriately to raise important issues (Kuppelwieser, 2011). Melancon et al. (2011) developed the constructs of relational worth based on customer relational behaviors that have not yet captured by traditional customer value models. Those dimensions of relational worth for business-to-customer context comprise as five-constructs, including WOM, immunity, openness, acquiescence, and honesty.
Effect of Relationship Quality to Relational Worth

The following table summarizes the research roadmap of relationship between customer commitment and satisfaction to relational worth drawn from past academic works.

Table 1: Study Roadmap on the Effect of Relationship Quality to Relational Worth

<table>
<thead>
<tr>
<th>Relationship Quality</th>
<th>Relational Worth</th>
<th>Previous Studies</th>
<th>Result from previous study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Commitment</td>
<td>Word-of-Mouth</td>
<td>Hennig-Thurau et al. (2002), Bendapudi &amp; Berry (1997), Mowdays et al. (1982),</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bowen &amp; Shoemaker (2003), Finn (2005), Fullerton (2003), Harrison-Walker (2001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>et al. (2000), Bendapudi &amp; Berry (1997), Gruen et al. (2000)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Openness</td>
<td>Mowdays et al. (1982), Bowen &amp; Shoemaker (2003), Hirschman (1970)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Honesty</td>
<td>Vankehove et al. (2003), Gruen et al. (2000), Meyer et al. (2002)</td>
<td>-</td>
</tr>
<tr>
<td>Normative Commitment</td>
<td>Word-of-Mouth</td>
<td>Phillips (2007)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meyer &amp; Allen (1991)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gruen et al. (2000)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Immunity</td>
<td>Bansal et al. (2004), Phillips (2007), Gruen et al. (2000), Randall (1990),</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meyer et al. (2002)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Openness</td>
<td>Phillips (2007)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meyer &amp; Allen (1991)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gruen et al. (2000)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Acquiescence</td>
<td>Phillips (2007), Meyer &amp; Allen (1991), Gruen et al. (2000)</td>
<td>-</td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>Word-of-Mouth</td>
<td>Fullerton (2003), Bendapudi &amp; Berry (1997)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bansal et al. (2004), Bendapudi &amp; Berry (1997)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Acquiescence</td>
<td>Gruen et al. (2000)</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Honesty</td>
<td>Phillips (2007)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Acquiescence</td>
<td>Morgan &amp; Hunt (1994)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Honesty</td>
<td>Reza et al. (2011)</td>
<td>-</td>
</tr>
</tbody>
</table>

Based on the above review and referring to previous study by Melancon et al. (2011), the hypothesized relationships are proposed for this study as below.
Table 2: Hypothesized Relationship

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship To Be Tested</th>
<th>Hypothesized Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Social Rewards $\rightarrow$ Affective Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H2</td>
<td>Economic Rewards $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H3</td>
<td>Social Rewards $\rightarrow$ Continuance Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H4</td>
<td>Economic Rewards $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H5</td>
<td>Social Rewards $\rightarrow$ Satisfaction</td>
<td>+</td>
</tr>
<tr>
<td>H6</td>
<td>Economic Rewards $\rightarrow$ Satisfaction</td>
<td>+</td>
</tr>
<tr>
<td>H7</td>
<td>Controlling Reward Policy $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H8</td>
<td>Controlling Reward Policy $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H9</td>
<td>Social Reward $\times$ Controlling Policy $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H10</td>
<td>Social Reward $\times$ Controlling Policy $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H11</td>
<td>Economic Reward $\times$ Controlling Policy $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H12</td>
<td>Economic Reward $\times$ Controlling Policy $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H13a</td>
<td>Social Reward $\times$ Controlling Policy $\times$ Involvement $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H13b</td>
<td>Social Reward $\times$ Controlling Policy $\times$ Involvement $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H13c</td>
<td>Economic Reward $\times$ Controlling Policy $\times$ Involvement $\rightarrow$ Affective Commitment</td>
<td>-</td>
</tr>
<tr>
<td>H13d</td>
<td>Economic Reward $\times$ Controlling Policy $\times$ Involvement $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H14</td>
<td>Satisfaction $\rightarrow$ Affective Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H15</td>
<td>Satisfaction $\rightarrow$ Normative Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H16</td>
<td>Satisfaction $\rightarrow$ Continuance Commitment</td>
<td>+</td>
</tr>
<tr>
<td>H17</td>
<td>Affective Commitment $\rightarrow$ Relational Worth</td>
<td>+</td>
</tr>
<tr>
<td>H18</td>
<td>Normative Commitment $\rightarrow$ Relational Worth</td>
<td>+</td>
</tr>
<tr>
<td>H19</td>
<td>Continuance Commitment $\rightarrow$ Relational Worth</td>
<td>-</td>
</tr>
<tr>
<td>H20</td>
<td>Satisfaction $\rightarrow$ Relational Worth</td>
<td>+</td>
</tr>
</tbody>
</table>

Note (*): interaction between the constructs

Derived from on the above approaches, the model of relational values of FFP members to the airline is developed as below:

**Figure 1:** Conceptual model of Relational Worth

![Conceptual model of Relational Worth](image)

Note (*): interaction between the constructs
3. Methods
Location and Time
The study is conducted on a FFP membership of an Indonesian airline. The model of the relationship relational benefits and relational worth for FFP will be empirically tested with conducting a survey. The survey is conducted on July-September 2013.

Data Source
The research involves primary data as well as secondary data. Primary data on the relational benefit, relationship quality and relational outcomes are obtained from survey questioners, while data related to the customer profiles and financial transactions obtained from internal database of the airline.

Data Collection
For analyzing the financial value derived from current customers, the data will be collected through compiling from Garuda Indonesia’s internal GFF and Revenue Management database. The data are collected through cross-sectional survey on the FFP members by distributing questioner through online survey.

Sampling Technique
The sampling technique is a combination of stratified and systematic random sampling. Stratified sampling is determined based on the tier level then the individuals are chosen based on systematic random sampling.

The sampling element is loyalty member. Population is the FFP members of the airline. Sampling element: Registered FFP members in 2012 (594,320 members). Sampling Unit is individual registered FFP members. Sampling Frame is list of FFP members. Referring to Hair et al. (2010), the minimum SEM sample size suggested for the models with large number of constructs, some with lower communalities, and/or having fewer than three measured items, is minimum is 500. With assumed response rate 10%, the sample size is 5,000.

Variables
In term of modeling the relationship benefits and relational worth for FFP, the variables comprise of exogenous and endogenous latent variables.

Table 3: Exogenous Latent Variables of Model Relational Worth

<table>
<thead>
<tr>
<th>No</th>
<th>Exogenous Latent Variable</th>
<th>Operational Definition</th>
<th>Measurement</th>
<th>Item#</th>
<th>Scale</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social Reward Benefit</td>
<td>priority boarding, priority reservation, lounge access, baggage handling financial incentives by mileage redemption: free ticket &amp; upgrading ticket the condition (controlling or flexible) in which the reward is offered or redeemed</td>
<td>Modification of Hennig-Thurau et al. (2002)</td>
<td>4</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>2</td>
<td>Economic Reward benefit</td>
<td></td>
<td>Modification of Hennig-Thurau et al. (2002)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>3</td>
<td>Controlling</td>
<td></td>
<td>Melancon et al. (2011)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
</tbody>
</table>
The following are endogenous latent variables

Table 4: Endogen Latent Variables of Model Relational Worth

<table>
<thead>
<tr>
<th>No</th>
<th>Endogen Latent Variable</th>
<th>Operational Definition</th>
<th>Measurement</th>
<th>Item#</th>
<th>Scale</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Affective Commitment</td>
<td>Member’s commitment because of emotional bonds with the airline</td>
<td>Allen &amp; Meyer (1991)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>2</td>
<td>Normative Commitment</td>
<td>Member’s commitment because of obligation feeling with the airline</td>
<td>Allen &amp; Meyer (1991)</td>
<td>4</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>3</td>
<td>Continuance Commitment</td>
<td>Member’s commitment due to switching cost</td>
<td>Allen &amp; Meyer (1991)</td>
<td>2</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>4</td>
<td>Satisfaction</td>
<td>Consumer’s emotional to the perceived difference between performance appraisal &amp; expectations</td>
<td>Oliver (1980)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>6</td>
<td>Openness</td>
<td>A willingness to provide information to the airline</td>
<td></td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>7</td>
<td>Acquiescence</td>
<td>A willingness to adapt to necessary changes related to the airline</td>
<td></td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>8</td>
<td>Immunity</td>
<td>A tendency to remain loyal to the airline</td>
<td>Bolton (2000)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
<tr>
<td>9</td>
<td>Honesty</td>
<td>A willingness not taking advantage of the airline in any manner</td>
<td>Joshi &amp; Arnold (1997)</td>
<td>3</td>
<td>Ordinal</td>
<td>Likert 1-6</td>
</tr>
</tbody>
</table>

Structural Equation Modeling (SEM)

SEM analysis aims to test and statistical models in the form of causal models. SEM analysis is based on the analysis Confirmatory Factor Analysis (CFA), a method that combines the correlation analysis, regression analysis, traffic analysis and factor analysis. While the software used in the SEM analysis was LISREL 8.5.1.

References


Sustainability of Persian Gardens: Cognition of Sustainable Features and Elements of Persian Gardens

Shahab Alidoost  
PhD Candidate, Department of Architecture, Faculty of Art and Architecture  
Tarbiat Modares University (Jalal Ale Ahmad St, Tehran, Iran)

Mojtaba Ansari  
Associate Professor, Department of Architecture, Faculty of Art and Architecture  
Tarbiat Modares University (Jalal Ale Ahmad St, Tehran, Iran)

Mohammad Reza Bemanian  
Professor, Department of Architecture, Faculty of Art and Architecture  
Tarbiat Modares University (Jalal Ale Ahmad St, Tehran, Iran)

Abstract
The sustainable architecture that progress to a matter, for the purpose to be allowed to get to its objectives and goals, supposes essential the design off any building with the slightest undesirable effect on environment as well as design coherent with nature. By exploring the traditional Iranian architecture, it is discovered that Iranian architectural features adapt to the principles of sustainable architecture; and can attain sustainability in contemporary architecture by being celebrated by definite traits of traditional Iranian one. This paper focuses on the sustainable outcomes brought about by climatic constituents in Iranian traditional architecture in Hot-Arid areas. In an enormous country like Iran, with diverse climatic sector, traditional builders have displayed sequences of rational solutions human comfort. The goal of this research is to reveal traditional architecture in Hot-Arid climate of Iran as a model of sustainable architecture. Traditional architecture of Iran is recognized sustainable for having sustainable characteristics. It is able to answer to environmental problems from a long period. Its characteristics are derived from climatic features as well as local construction materials of Hot-Arid areas. Iranian’s Hot-Arid regions architecture holds frequent exceptional characteristics which understand visual requirements and ecological capacity.

With no doubt, this type of architecture not only utilizes the natural resources but also boost its spirit. Consequently its techniques realize many newest ideas in sustainable architecture. Consequence of this paper; demonstrate that bearing in mind the experience in traditional architecture of hot-aired areas, it is probable to generate an environmental and sustainable architecture.

Keywords: Sustainable architecture, Iranian traditional architecture, Hot-Arid region, Environmental architecture, Energy.

1. Introduction
Before scheduled to see the way the gardens were shaped, a short description of the appearance and configuration of Persian Garden is submitted. In Achaemenian era, the primary signals of the
configuration of Persian Garden were emerged. In Pasargadae Royal Gardens, which were built in sixth century B.C, a coherent arrangement of pavements was generated in the shape of a royal four-garden assembly. Then, in post-Islamic period, the assembly became the model of Islamic four-part gardens, namely quadripartite design [4]. In Sassanid era, (AD 224- AD 651), garden development became pervasive. The high position of nature to Zoroastrianism, particularly the veneration of water, was demonstrated in garden landscape and natural environment, extra to human’s harmony. Palace Garden of Pasargadae, Thakht-e Solayman, Firouzabad Palace and Bistoon, in an gorgeous natural context, were ornamented with natural lakes and spring. The diversity in the geometrics of the configurations is their mainly outstanding character. Many researchers believed Safavid era as the period in which the mainly attractive gardens were developed [5]. In this period, the gardens surrounded by the city were considered as the shaping art of city physical configuration and prominent feature of the entire city configuration as a green and harmonic group.

Creating garden in Sassanid age was begun from Qazvin town. Qazvin was selected as the Safavid capital and was prearranged as garden city, of which just a few parts are left today. During the reign of Shah Abbas, the capital was changed from Qazvin to Isfahan. In Isfahan, the arrangement of the city spaces, streets, and square with gardens shaped a garden city.

The idea of sustainability in the Persian garden is a many-sided idea. This subject is alive and has an influential existence in the Persian gardens. We can establish three major Orders each comprising diverse features of sustainability:

1. Cultural and social approval by concerning today and future generations.
2. Honor ecology and environment by protecting and enhancing them.
3. Enhancing human life features by producing food, pleasing climate and optimum energy consumption.

The first item stated above is rooted in cultural and social behaviors which shaped Persian gardens. Sustainability in the Persian Garden is concerned with myth, philosophical, educational, societal and spiritual backgrounds of this area. It will be declared but since it has many interactions with other Persian life features we will not go further in to it. The second one is in some way connected to the first one in Persian life, due to zarousterian beliefs rooted in Persian gardens and from another viewpoint, this type of behavior is expected because of inadequate sources[20].
The third one also called environmental sustainability is the foremost part of this article. One of the most significant sustainability features in gardens is way of providing pleasing micro climate by environmental deliberation. In Persian gardens, there is a basic distinction between the garden and nearby environment. The distinction between inside and outside of garden shaped the entire garden characteristics and ideas. Third categorization may have some sub categorization settled to study Persian gardens [5].

2. Elements of Persian Garden

Four elements involving land, water, plants, and space are the significant elements of a Persian garden. In company with each other, these elements in an intellectual structure of Iranian architecture shape the Persian garden. Additional elements, however, can be included in shaping gardens, though they are regarded as auxiliary elements or secondary constituents and demonstrations of a garden’s chief elements [9].

2.1. Soil

Up to now as land is honored, which is a main element of garden, aside from common shape and location, other features involving soil type, incline and distinctions in levels, possibility of irrigation, and productiveness are also of significance. For example, a chief reason to build gardens in steep grounds with ordinary slope is because of water’s normal flowing through the garden. Persian gardens might be built on a land with also a low or a steep slope. In the case where a garden is built on a steep land the type of garden is influenced by this and it is built in a diversity of levels; doing so makes it feasible to make cascades [11].

2.2. Water

Streaming water is the most significant element to have restored attention in and maintained the Persian garden. Water streams through waterways and ducts and going through the major stream, it streams through lateral waterways.

Water exists at least in three viewpoints, that is, conceptual, practical, and visual. These viewpoints can simply be followed in debates such as how the water exists in the garden and how it streams there, water supplies, and garden irrigation. In most cases, waterways and wells have been the
chief sources of supply to gardens, and in numerous, the amount of water and its organization and division, done precisely and cautiously, has settled the garden’s area. How to irrigate the gardens which is in a straight line linked to the type of the land is significant where a Persian garden is concerned. Certainly, in view of the lack of water in most areas of Iran, considering the honor and sainthood ascribed to water in Iran, and in Iranians attention in implementing water in the garden, Iranians have all the time made it stream in diverse ways through the garden and have constantly added to its attractiveness and gracefulness[10].

2.3. Plants

Aside from species and type, vegetation is also considerable due to the place, agriculture plan, attractiveness, and its efficacy. Plants even play a role in shielding gardens in opposition to ruinous natural events. Inside Iranian garden, plants are exploited for diverse reasons such as shadow, yield, and garden decoration, etc. Since efficacy is a significant aspect of Iranian garden building, fruit trees are more widespread in them and shading trees are less frequent, and least important are decorative trees. Because of the hot and dry climate of Iran, gardens enclose generally trees [15]. Employ of flowers and bushes to supply color and odor also has their place. Beside the flows in long streets are planted cedar, pine and box. Aspen, Tabrizi and rowan have typically been planted in soil lands. Wych-elm, bid, and purple trees, have frequently been planted in the region of pools. Plots at both sides of the ways into a garden, were enclosed by fruit seedlings, plots in the region of the gardens were enclosed by grapevines, and the pathways, corners, and shelters were enclosed by fig, senjed, and annab trees. In place of planting high trees and bushes in the middle of the plot to coat the garden’s building, spest (a kind of alfalfa) was used. Moreover, flowers have had significant role in gardens [7].

Seasonal flowers accustomed to be planted in front of buildings and small odoriferous flowers had been planted alongside trees.

2.4. Space

The last, but not the least element of an Iranian garden is architectural space. With a description of garden, the architectural space, arranges the garden with a sophisticated regulation and shapes the regions and sectors inside and outside the garden. In this regard, arrangements, landscapes, interiors, decorative elements, and the association between water, plant and land are taken into account [6]. In Iranian gardens, closed spaces are joint with exposed spaces and are not segregated from each other. We even notice that water streams through these regions [14].
The Iranian garden is constantly enclosed with a wall which is usually long and made of adobe, and lacking any decorations (apart from barriers of earliest governors and provincial rich people). Therefore, Iranian gardens have been both a place of loneliness to relax in, and a place that is safe. Presenting water to its best benefit has been done by choosing levels to graduate the water’s way, to make the sound of water gushing or tickling more audible and to manage the velocity of flow of the water. A water pool, whose chief dimension is alongside a building’s length and in forms that are typically proportional, have regularly been built in a outstanding spot facing the garden, though occasionally they have been built as a basin inside the configuration of ancient gardens[8].

2.5. Geometry

Geometry is the chief code of Iranian garden building. giving attention to geometric forms, and making square forms to simplify the appearance of the garden’s constituents, and precisely determining where to plant the trees so that they are seen from any viewpoint, has been of great significance. In Iranian gardens the meeting point is on the key axis, a passageway regularly encloses the garden and the key ways split the garden to parterres and parterres comprise of plots.

The pools in earliest gardens have frequently been deep and enclose numerous decorative sprays of water. An example is the pool in Hezar Jari Be No Garden, Isfahan (Safavian Era) which had incorporated five hundred decorative sprays of water.

Figure 7: Shazdeh Garden is one of the largest gardens of Kerman Province.

Figure 8: Qajar house

Earlier than Islam Era and at its commencement, rounded pools had been widespread, but afterward, pools have been made in four-sided figure or rectangular shapes.

Garden palace has been built in diverse points of the garden. A palace has been built in the center of the garden in a way that the major vision has been made alongside the garden’s linear axis with one third ratio, alongside the linear axis, are points where the palace was built.

Garden’s lateral elements frequently comprise elements which are demonstrations of the garden’s chief elements, and in any of the chief elements, these demonstrations and lateral elements such as decorative elements, pools, etc. can be followed[12].

3. Types of Iranian Garden

In a general categorization, considering the somatic attributes, the subsequent gardens can be indicated:

- Garden situated on even levels: Fin Garden, Kashan and Eram Garden, Shiraz
- Garden situated on steep levels: Bagh Takht, Shiraz and Shahzadeh garden, Mahan
• Water Garden: Ael Goly, Tabriz
• House Garden: Amir Garden, Tabas
• Garden situated in the side of a river: Ayine Palace, Isfahan (Safavi Era)

Considering the key purpose of the garden, the subsequent gardens can be indicated:
• Fruit Garden: The simplest from a design point of view, and profitably the most lucrative.
• Inhabited Garden: Garden where most of the wealthy people and government men have built their housing accommodations there.
• Inhabited-governmental garden: Gardens in towns lacking governmental and martial associations, at which the administrators lived, and included of inhabited accommodations besides buildings to deal with governmental issues.
• Grave Garden: A type of garden in which the majority parts are devoted to graves [13].

4. Persian Gardens Patterns and Arrangements
There are three main patterns in configuring gardens: planting tenets, constructions and positions tenet and water tenet.

4.1. Planting Patterns
The idea of planting in Iranian garden is rooted in agricultural fruit gardens. Therefore, it is regularly filled with fruit trees and is shaped in geometrical division. All part of the garden, even tree planting, has square arrangements. The plants are positioned in gardens in the way that they can adapt with their environment and requirements. Assortment of the trees is mentioned to supply medicine, food or any product that can be useful for them, not only esthetic features of them are concerned. The plants are harmonized with water supplies that they can employ with the purpose of make shadows and shades as much as they can [21].

4.2. Positioning Patterns
Positioning patterns are about human reproduction additions to his surroundings. By a principal categorization, the exterior and interior world of garden can be recognized. The exterior world is involved with the residency of a garden in its circumstance in accordance to its requirements and potentials. However, the interior world of garden is frequently concentrates on positioning of kiosk or gazebo and other structures of garden [16].

4.3. Watering Patterns
One of the chief characteristics of Iranian gardens is having great desire for displaying and performing water. In all parts of Iranian gardens, it is attempted to employ the optimum of site, surroundings and recourses. Since Iran is in arid area, one of the goals of Iranian gardens is to attain to an improved microclimate for habitants. Therefore, water flows seem to be essential in those gardens. By canalling; the water decays will be condensed separating the garden in geometrical forms. This geometrical design pattern has continued in all ages [17].
5. Biological Sustainability in Iranian Gardens
Supporting a living procedure, not harming and using an executive hierarchy of maintenance, conservation, and restoration are enclosed in this term. The gardens were regularly constructed as the outlet of kareez that been excavated for that, before then that part had low water sources. By this novel source of water and garden design, under the fields may attain plenty of advantages, by means of the further water of garden which will avoid them from storm and sandstorms and surroundings moisture will remove. So, the new circumstances will draw many animals particularly birds and insects. In those positions where water resources exist, by decreasing the evaporation, large amount of water source will be saved and by encasing streams with stone or ceramics it will not go under the ground so it can irrigate enormous areas[18].

6. Enhancing Human Life Sides by Generating Pleasing Climate and Optimum Energy Utilization in Order of Iranian Garden
For obtaining sustainability, regarding societies and environment having the advantageous for human life is essential. The enhancing of human life in sustainable approach does not indicate eliminating any life access but it indicates finding best replies for these days difficulty in a way that does not bring about additional difficulties. As it indicated above, the side of this expression is separated and they will be illustrated.

6.1. Choose a Place for Iranian Garden
The place of the Iranian depends on its surroundings. They work jointly while they have huge paradox to each other, but this is not with the intention of take-over the nature, it just alters an isolate part of it and makes surroundings long-lasting for human being.

6.2. Entry to Water Resources
Water sources typically are constructed in the dry area so it might bring life to novel places. These new ways are regularly sustainable legacy they not extra pressure to get to the restricted sub sources.

6.3. Patterns of Water Applied in Iranian Garden
In Iranian garden, it is tried to demonstrate water in dissimilar ways and as well amplify the volume of it virtually to enlarge the attractiveness of it feeling water. This will be possible by diverse accessories such as Partridge Chest Stone or wide falls and narrow fountains. Water pond and flows launched from pavilion to the gateway to raise dampness and lessen the hotness [3].
6.4. Choose the Geometry and form the Garden

The geometrical form of garden is founded on agriculture disorder of it which makes it optimized. So, irrigation and farming of it is easier and has more advantages [2].

6.5. How the Constituents of Garden Work Jointly

In these gardens, diverse constituents of gardening sustain each other. For instance, about the corner of the wall which is securer than other places from the wind, the vernacular trees were placed.

6.6. Choosing Plants and Planting

In choosing the vegetations and trees, the aesthetical approaches are not the cause for selecting a plant. In this situation, each one of them should have other advantages such as remedial, marketable and supplying food for human being or creatures.

The arrangement of planting influences the deepness of the plants root. Therefore, they can achieve the humid in all of the earth layers and hindering water depletion [19].

6.7. How to Generate Micro-Climates in a Way That Consist with the Requirements of the Persia

In the interior of walls of Iranian garden the new climate shaped to decrease the harm of surroundings. This demand is attained by growing shadows, air humid and hindering dry winds.

Figure 11: Safavid garden

Figure 12: Persian carpet

7. Conclusion

As indicated above, sustainability anxiety is in relation to the growth that meets the requirements of the present time. Arrangement of the prospered standards that operate sustainable in long terms, may guide us to the these days standards. Iranian garden is sustainable if utilized in its individual contexts.

Replication it to another area with diverse type of weather and behavior is not sustainable any longer as was practiced in India and South Europe. While Iranian garden has patterns and standards, its extraordinary pliability has given it a chance to be pursued in contemporary era. There are some troubles such as the client which is changed. Nevertheless, it doesn’t signify that it is ineffective.
References
[19] Lilian, T.Y.C.1, Ho C.S. & Ismail S., 2002, some planning consideration of garden city concept toward achieving sustainable development, Faculty of Built Environment University of Technology Malaysia, Malaysia
Perception of Educational Experts of Challenges Imposed by the Change in Knowledge

Mohammad Saleem Al-Zboon  
*Dean of the Faculty of Educational Science/Zarqa University*

Rabaa Abdullah  
*Ministry of Education*

Abdeslam Fahad Al Awamrah  
*Educational Administrations and Foundations/Jordan University*

Abstract

The study aimed to acknowledge the challenges imposed by the change in knowledge and how to face these challenges imposed by the change in knowledge, where as the descriptive analytical method developmental was used which is concerned in collecting data, analyzing and interpreting them. In addition to the statistical analysis of the variables and its connections, and analyzing the interviews by using the frequencies and percentages, explaining the results and their connection with the reality. Whereas the study society was formed of the teaching assemblies members in all the Jordanian Universities in addition to all the educational supervisors in the Kingdom. Thus the study sample was formed of (452) supervisors, researcher and experts from the educational assembly members at Jordan University. Where several of researchers and experts were chosen for the field interview newspaper whose number have reached (80) according to the stratifies cluster method. Thus the results have revealed that there is an agreement held between the experts revealing that the economical, globalization challenges on addition to the social, cultural, technological. Educational and political challenges which are the most important challenges imposed by the change in knowledge. According to the results of this study, the researcher had presented several recommendations he hope it will benefit the founders of educational policies and curricula at the Jordanian Universities in order to acknowledge these parties with the challenges facing the knowledge and how to face these challenges.

**Keywords:** Challenges, knowledge change in knowledge

Introduction

Determining a specific concept for knowledge is an issue that faces several hardships, which lacks having an agreement among the first in thought to offer a determined identification, considering that the knowledge in a complicated dialectical process that occurs with different forms, it has several aspects and degrees in development. That includes the human powers contribution and abilities through the experiment and practices related to the nature, the economical and social form from development (Al Sourani 2004). Thus knowledge can be considered as being an essential fulcrum base essential for the comprehensive human development as being a method of enlarging the human efficiencies, developing their abilities, development their situation, in other words it is a secure method towards building the developed societies in the twenty first century. Knowledge is considered the outcome of
the past efforts of and the recent scientific efforts. On the other hand, others see that knowledge is represented in thoughts, experiences, skills, and learned lessons that provide work with value and consideration. Also, work on developing the members' performance, where as the knowledge has accompanied the human being since his youth. By which it developed with him from the initial level in order to keep up with widening his knowledge till reaching his highest level. What's new today is its effect on the educational, cultural, social, and economical life. Thanks to the technological scientific revolution the world nowadays is witnessing. Thus the fourth quarter of the twentieth century had witnessed the greatest change in the human life which is the third transfer, or the third manufacturing revolution that occurred after the agricultural revolution, the manufacturing revolution. Thus the telecommunication and information revolution played a great role in this transfer, which enabled the person of imposing his control on nature, where the educational development aspect had more influence on life than the other natural and materialistic aspects. Whereas, knowledge had witnessed recently a quick and noticeable change, through knowledge that represents the substrates that the comprehensive human development was built on, its society shows the present and future which is based on the continuous development that is mixed with challenges (Al-Rabee 2008).

Add to mention that knowledge is considered as a group of meanings, religions, beliefs, rules, concepts, and thinking developments that were formed for the human being. As a result of the continuous trial in understanding the phenomena and related issues, which describes all phenomena surrounding the person and not only few phenomena, it is stored information, add to it the ability of using it, benefiting from it, not only knowledge for the sake of learning, thus knowledge is wider in its filed, more comprehensive than science. Human being is distinguished in his knowledge of the outside world between two types of knowledge which are: the comprehensive knowledge, scientific knowledge, what is known about the comprehensive knowledge a group of feelings, materialistic feelings for the human being by some parts of his body, some features are: simplicity, naïve, not having depth and accuracy, other than the scientific knowledge which is a group of thoughts and concepts that the scientists have reached as a result of the great efforts is explaining the universe phenomena. And explaining them by using the scientific methods and curricula (Al-Rashdan 2004).

Humanity is witnessing nowadays a great scientific development in all the different knowledge fields, where as some countries have witnessed this development more than the others, thus some countries are witnessing lots of activities and scientific production, Inventions. Which causes to put priorities in order to support the researches in the countries that suffer from weakness in scientific research, which is not connected with the society, The reality remains as the realistic and phenomena that the recent growth and knowledge had become distinguished in the societies that were technologically developed, that the science accumulation is the scientific characteristic for the human knowledge in general and the deep merging in the society and its needs (Mahmoud, 2006).

The concern in knowledge in public thought and special philosophic thought specialized in development through the successive ages, thus the education and knowledge related to it in the ancient and primitive societies was simple, which happened before writing invention and having the regular schools as the meant education for life was simpler, the primitive society was uncivilized characterized by isolation and lack of change. Where most of its members are joint in knowledge, concern, thoughts, trends. Whereas the knowledge transfer method for them was achieved through traditions, prevailing beliefs in the society (AlRashdan & Jaeni 2006). One of the main purposes in the educational knowledge in old civilizations is to preserve the youth education by providing them with dimple old knowledge concerned in the simplicity of life. The knowledge was related with the prevailing life. Where education concentrates usually on getting the knowledge for knowledge itself, not for its practical applications but in order to gain knowledge for the sake of knowledge and the continuity in life, with some simple exceptions. Where the human corresponding with his environment which was his first teacher is an important resource from the knowledge resources, where he used to take from it what he needs from knowledge resources, where he used to take from it what he needed from knowledge. Thus human being since the old days was trying to write his knowledge with all the
different available methods, that nature had offered to him, where he used the caves walls for writing his knowledge (Ali 2007).

With the accumulation of the educational and cultural heritage, and the human finding out the writing with the appearance of writing movement, the human had become unable to keep his science and knowledge to transfer to the next generations, which had caused the human mind to think in finding schools for knowledge production, by which had caused the appearance of the meant education (the school) (AlRashdan, Jaeni 2006). It was noticed that in the fourth century, the thought in general and the education in particular started to deteriorate which had affected the educational growth. During the twelfth and thirteenth centuries it is noticed that the European countries had grown rapidly according to the population and manufacturing spread, especially not the agricultural, where the European society had witnessed several transfers after the end of the era of feudalism, where as Europe had in the thirteenth century moved from the feudalism Culture to Unions culture, the cities governments, which is renaissance and enlightenment Culture (Ali, 2007). In the fifteenth century (Gotenberg) had invented “Typing”, which had opened path towards the private mental revolution after the religion revolution achieved by (Luther), that formed an entrance towards knowledge development, where one of its purposes was the emergence of information and knowledge in a scientific way, which had given the member the research ownership. Thus this movement had participated in launching universities and was concerned in regulating the knowledge in order to give it a scientific form (Rida, 2006).

Within the speed development and great flow of knowledge, education became concerned in taking requirements that suit the present time, establish the future and determines its purposes. Effective education, in fact in one of the significant manifestations for what is known as the knowledge–based society, thus accordingly, the societies were divided into developing and developed societies. Whereas, future holds great probabilities, each one of them forms a challenge-based on its own, most distinguished of these challenges imposed by the change in knowledge, is represented in the cultural challenges which is the most dangerous, the challenges imposed by universal change such as globalization and other challenges that were previously mentioned (Al-Asfar, 1007).

The challenges imposed by change in education:
One of the most important challenges:

1. The scientific revolution and technological breakthrough: the current era we are witnessing is the technological scientific revolution era and the speed changing era, the international cultural is considered one of the most distinguished features of this century, is a revolution that depends on the developed scientific knowledge and the perfect use of the flow information with great speed (AlLaqani, 1996).

2. The social changes: the world countries have witnessed changes in the cultures, social values, and the appearance of several cultures societies (as a result of the internal immigration among countries, and changing the concepts related to families and youth role, woman’s role, social relations, thus the continuous change within the globalization umbrella and what it caused of openness upon the different levels.

3. The cultural and value changes: the knowledge revolution, the economical and political changes in the world have caused to valuable cultural changes in forming thoughts and tastes, cultural fashion, arts, moral values and aesthetic.

4. The environmental changes which had caused to change in Information system; for the environment is dynamic and changeable, it is necessary to renew the system or amend it or change it, in order to correspond with the continuous environmental changes. Thus, the future holds lots of challenges and changes, add to mention that the future makes the present by changing itself. The future’s main subject is not to predict or supervisors, but also preparing and launching a future development project. Whereas future is filled with challenges, difficulties and complications. Part of it is recently present from environmental pollution, and the world exposing new diseases such as mad cow disease, aids, malaria and others. All these challenges need determination, insistence and will to
face it, which can never be achieved unless with the continuous advocacy education which is considered a bowl for developing knowledge and producing it with skills and efficiency (Fakhro, 2005).

5. The educational challenges: one of its most important in addition to what was mentioned, the following:
   - Knowledge explosion represented in the following:
   - The exponential growth for knowledge and increasing its volume.
   - The development of definitions and new categories for knowledge.
   - The appearance of new technological field such as computer, and internet network.
   - Duplicating the scientific research efforts and increasing the demand.

Add to mention that this challenge has dangerous educational reflections:

1. The educational material and its contents are changing rapidly, thus the educational curricula can’t remain stable, the speed of educational change make it difficult for the individuals to follow-up but should adapt with.
2. The individual’s adaptation with the exploded knowledge can be achieved with his perfection to reach the knowledge.
3. Methods of teaching: that the learner gains the knowledge with methods and ways that keep pace with scientific and technological progress, and encourage the education during lifetime. (Nasser and Ibn Tareef, 2009)
4. The unclassified activities: that concentrates on the individuals activity and trends, its equivalents to his needs, and taking into consideration that the society is changing continuously, therefore the change should occur within the social and cultural changes. That may be reflected by its turn on the individual’s need and interests (Al-Rashdan and Jaeini, 2006).
5. Evaluation: it is the judgment on the extent of student achievements, and his adaptation to the offered material. Thus, education aims at changing the individuals behavior to be commensurate with the surrounding group behavior and to cope with the changes of society. (Nasser and Ibn Tareef, 2009)

Therefore, the modern establishments seek continuously to fulfill their efficiencies, and achieve and maintain the significant performance. This urges them to work continuously on developing and updating their purposes and strategies, developing their products and using the effective tools, methods and ways. For the sake of achieving the aforementioned, they seek to gain the renewable knowledge from science and knowledge that is being modernized, and continuously developing them (Abu Fara, 2004)

The study problem: the study problem is determined in the identification of the challenges imposed by change in knowledge. The answer to the central question is related to the study problem. The following questions are branched form that central question:

Study Questions
What are the challenges imposed by the change in knowledge from the educational experts point of view?

Study Purposes
The study aimed at acknowledging: educational experts point of views towards challenges imposed by change in knowledge.

Study Importance
The importance of this study is emerged from the importance of its subject of revealing the challenges imposed by change in knowledge.

- The study represents a qualitative addition for the researches and studies in the field of knowledge.
The Beneficiaries from this Study are
Ministry of Education, researchers, students who are studying knowledge, technology and economy, the educational policy makers, decision makers and those who are responsible for future planning.

The Study Terms

The change: language: without saying: that person changed his camel, he landed on the trip and fixed his issues, it is said people came to make changes. The thing was changed into another. It is said I changed my mount, my camel and my clothes. Make it other than it was and say: I changed my home where I built another building. Things are different meaning changed (ALWaseet C2:S668) therefore change is the transfer from one case to another whether negative or positive (Nasser, 2001).

Knowledge: a set of meanings, religions, rules, concepts, and intellectual perceptions that were formed for the persons as a result of the continuous trials to understand the phenomena and the surrounding issues (Nasser, 2004).

Change in knowledge: is the change in facts, data and information, its change and the transfer in the interaction between the member and environment, its development through different periodical aspects, its development according to different cultural, economical, political, social and environmental aspects.

Previous Studies

(Lisa and Thad, 2003) study entitled: knowledge management in education: definition in general scope: aimed at discussing the opinions of a group of specialists from schools and colleges concerning the knowledge management in education. It was exhibited in the educational conference of knowledge management that was held on USA in (2002) in California, where the participants had discussed the chances and challenges facing the development of using the knowledge management in education. How the knowledge management in education may contribute in developing a working framework that depends on the effective management of information in order to achieve quality and quantity. Whereas a group of strategies and applications that contribute in participating the knowledge management reinforces that “the members not the information technology are what manages the knowledge”. The results have revealed that it is possible to apply the knowledge management practically at Kindergarten, high schools and higher educational corporations, that a professional working team shall adopt the knowledge management through participating the knowledge among them.

(Heaney, 2003) study entitled “facing the challenges- using the communication information technology to support learning and education. This study has aimed at acknowledging how to face the challenges by using the information and communication technology to support education and learning, clearing the relation between the educational technical strategy, and participating in similar strategies for teachers and students to face the challenges. The study was held at The Open University in United Kingdom, where the study used research methodology by presenting detailed educational project. The project concentrates on the subject of (Dinosaurs) that was developed with students of ages ten and eleven years old. The results have revealed that is necessary to reach to different subjects in order to develop the students who take responsibility of finding subjects, and using spares that consist of prepositions in order to develop and increase the quality of education and training inside the classroom, in addition to the necessity to cope with changes that is a result of the modern technology and enhancing the quality of education and learning, as well as to enhance the use of the different technologies, computers in particular, in order to support the classroom education and the great spread for the several publicity resources, the great speed for Internet and electronic services.

(Abu-Tineh, 2006) made a study entitled “resistance of change: the electronic educational program in the Hashemite University in Jordan”. The study aimed at determining the resistance degree of the teaching assembly members in the Hashemite University for the corporation changing program represented in the transfer from the traditional teaching methods into the electronic education In order
to reveal the potential differences among the teaching assembly members within their resistance degree for the changing program, then to select the several demographical variables and study their interferences. Thus, the study had determined the medium degree of resistance of the teaching assembly members for the electronic teaching program. Furthermore, there were no differences in the residence of the changing program related to the selected demographical variables except the differences in the scientific and humanity colleges concerning the personal location and expectation dimensions for change for the welfare of the educational assembly members in the humanitarian colleges.

As for (AlKhalili study 2006) entitled “knowledge management at Jordanian Ministry of Education, analytical study” it aimed at monitoring and analyzing the practices of knowledge management activities at Ministry of Education in The Hashemite Kingdom of Jordan in order to clarify the knowledge management importance as an administrative concept that helps the Ministry in developing the services level, and contributing to build the knowledge economical society. The researcher used the SPSS curricula, and revealed the following results most important are:

- Ministry of Education succeeded in establishing the concept of knowledge management through practicing their activities. This was of high degree despite the knowledge storage activity, knowledge spread activity and exchange.
- Despite the fact that the technological constituents were not neglected, but the degree of having these constituents did not reach the needed level. This had affected the degree of practicing the knowledge spread activity, exchange and storing it at Ministry of Education.

There is a positive statistical relation among the knowledge management strategic nature and the extent to which knowledge construction Activity, knowledge auditing, knowledge storage, spread knowledge and exchange, applying knowledge, filtering knowledge, developing knowledge and forming groups of the practical society.

(Chennamaheni, 2006) study entitled “Determinations of the knowledge participating behaviors: developing and examining the complete theoretical sample”. The research study that was held in Texas University aimed at examining the factors that enhance or ensure the behaviors that participate with the knowledge for workers at the institutional contest. This is based on the fact that sharing knowledge is one of the essential factors for knowledge management. According to the theoretical literature that have been gathered, the study had developed a complete theoretical model that depends on the technological, regulative and psychological aspects. The models authorities have been examined by using the field survey for the workers in the knowledge field, that revealed a support for applying the assumed models. The results have revealed the following:

- The association of concepts of reciprocity and workers’ positive cooperation in knowledge
- The regulative environment affected positively the knowledge participation.
- The results have revealed linking the enabling factors i using technology in a positive way with high levels from the behaviours perceived towards knowledge participation.

(Edge, 2005) performed a study entitled “managing knowledge as a tool for renewing education on the educational and regional level”. This study aimed at seeking on how to employee knowledge management by Toronto educational region on Canada, in order to enhance the educational project and improve literacy education at early ages on school-wide depending on the knowledge management framework that was added by (Nonakg & Tekeuchi). (34) Interviews were made with teachers, administrators and supervisors from the educational project management team at early ages, who classified the data he gained from the interviews that were analyzed and summarized, and distributed on the participants to show their notes, the results have revealed the following:

- Toronto educational region had used comprehensive strategy designed to build the leadership and educational ability through using the activists in knowledge filed inside the school.
- The study had revealed the impact of this strategy in education and the regulative culture for the teacher and the leader on the regional level.
Method and Procedures

Study Methodology

The developed analytical descriptive curricula was used. It is concerned in collecting, analysing and explaining data in addition to the statistical analysis of the variables and connection, and the analysis of the interviews by using repetitions and frequencies, as well as analysing the results and their connections to the facts.

Study Sample and Society

The study society was formed of the teaching assembly members at all the Jordanian Universities in addition to educational supervisors working in the kingdom, whereas the study sample was formed of (452) supervisors, researchers and experts from the study assemblies members in the Jordanian Universities. A number of researchers and experts were chosen for the newspaper for a feasibility study. They amounted to (80) according to the stratified cluster method.

Study Tool

The study tool represented in revealing the challenges imposed by change in knowledge. Its design was adopted through the theoretical literature related to the study and previous studies, where the practical degree was formed of (Yes, No).

Tool Validity

The tool content validity and the logical validity have been verified together with equalizing their paragraphs and including the challenges imposed by change in knowledge and the requirements to face the challenges imposed educationally. Furthermore, they were displayed, in their primary form, on a number of arbitrators. They included some of the educational assembly members at Jordan University, Hashemite University and Ministry of Education, who asked them to reveal their opinions about the
paragraphs concerning their wording and formulation, clarity, defect less language and the affiliation to the field and any other appropriate suggestions.

Concerning the notes revealed by the arbitrators, written or oral, the researchers made the appropriate amendments they have mentioned. The arbitrators agreement percentage depended on the paragraph as being suitable for the purpose it was set for measurement, which is (85%). After finishing the arbitration and making the amendments within the suggestions and the arbitrators corrections, the study tool became ready to be applied at its final form.

Tool Reliability

The reliability coefficients were verified for the study tool through extracting Chronbaches Alpha coefficients which had amounted to (0.80). it had proved that the tool is suitable to be applied.

Study Results

The results related to the first question: “what are the challenges imposed by change in knowledge?” to answer this question, the frequencies were used for each field and each paragraph from the mentioned paragraphs in the study tool that measure the challenges imposed by the change in knowledge, according to the point of view the researchers and experts, supervisors and educational leaders at Ministry of Education and Jordan University, which were arranged as the researchers and experts have revealed according to its importance in the following table:

Table 1: Economic challenge:

<table>
<thead>
<tr>
<th>Number</th>
<th>Economic challenge</th>
<th>Yes %</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Global economic blocs</td>
<td>94.8</td>
<td>5.2</td>
</tr>
<tr>
<td>2</td>
<td>Educational treatments</td>
<td>69.7</td>
<td>30.3</td>
</tr>
<tr>
<td>3</td>
<td>Intercontinental companies</td>
<td>85.5</td>
<td>14.5</td>
</tr>
<tr>
<td>4</td>
<td>Open global markets</td>
<td>85.5</td>
<td>14.5</td>
</tr>
<tr>
<td>5</td>
<td>Development problems: food security, health, and human rights</td>
<td>84.4</td>
<td>15.6</td>
</tr>
<tr>
<td>6</td>
<td>Market monopoly and economic domination.</td>
<td>85.5</td>
<td>14.5</td>
</tr>
<tr>
<td>7</td>
<td>Poverty and unemployment</td>
<td>79.2</td>
<td>20.8</td>
</tr>
<tr>
<td>8</td>
<td>Rigidity of production structures</td>
<td>60.5</td>
<td>39</td>
</tr>
<tr>
<td>9</td>
<td>Inconsistency of economic and social system.</td>
<td>64.5</td>
<td>35.5</td>
</tr>
<tr>
<td>10</td>
<td>Lack of water supplies which hinder local agricultural and industrial growth</td>
<td>68.8</td>
<td>31.2</td>
</tr>
<tr>
<td>11</td>
<td>Dominance of greed and materialistic values.</td>
<td>82.7</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Table 2: Globalization challenge:

<table>
<thead>
<tr>
<th>Number</th>
<th>Globalization challenge</th>
<th>Yes %</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control over country resources</td>
<td>78.9</td>
<td>21.1</td>
</tr>
<tr>
<td>2</td>
<td>Western culture dominance</td>
<td>84.2</td>
<td>15.8</td>
</tr>
<tr>
<td>3</td>
<td>Huge accumulation of knowledge</td>
<td>85.7</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>Uncontrolled absolute freedom</td>
<td>62.3</td>
<td>37.7</td>
</tr>
<tr>
<td>5</td>
<td>Participatory pluralism</td>
<td>66.2</td>
<td>33.8</td>
</tr>
<tr>
<td>6</td>
<td>Cultural globalization</td>
<td>85.5</td>
<td>14.5</td>
</tr>
<tr>
<td>7</td>
<td>Destructive wars and industries resulted from technological change</td>
<td>68.4</td>
<td>31.6</td>
</tr>
<tr>
<td>8</td>
<td>Knowledge monopoly</td>
<td>67.5</td>
<td>32.5</td>
</tr>
<tr>
<td>9</td>
<td>Brain drain</td>
<td>80.5</td>
<td>19.5</td>
</tr>
<tr>
<td>10</td>
<td>Globalization and resulted technological and knowledge development</td>
<td>84.4</td>
<td>15.6</td>
</tr>
</tbody>
</table>

Table 3: Social and cultural challenge:

<table>
<thead>
<tr>
<th>Number</th>
<th>Social and cultural challenge</th>
<th>Yes %</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quick cultural distribution</td>
<td>84.4</td>
<td>15.6</td>
</tr>
<tr>
<td>2</td>
<td>Terrorism and violence</td>
<td>57.1</td>
<td>42.3</td>
</tr>
</tbody>
</table>
### Table 3: Social and cultural challenge: - continued

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Witchcraft and superstitions</td>
<td>82.9</td>
<td>17.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Melting of cultural identity</td>
<td>54.5</td>
<td>45.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Cultural isolation and withdrawal into self</td>
<td>59.7</td>
<td>40.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Dominance of cultural heritage such as vengeance and tribes</td>
<td>61.0</td>
<td>39.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Conflict between modernization and originality</td>
<td>79.2</td>
<td>20.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Subordination and blind imitation</td>
<td>84.4</td>
<td>15.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Skipping useful traditions</td>
<td>76.3</td>
<td>23.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Weak interest of Arabic language</td>
<td>84.4</td>
<td>15.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Skipping writing and translation</td>
<td>71.1</td>
<td>28.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Accelerated population growth</td>
<td>71.4</td>
<td>28.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Religious and sectarian strife</td>
<td>71.4</td>
<td>28.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Weak social and familial relations</td>
<td>80.5</td>
<td>19.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Spread of various diseases and plagues</td>
<td>66.2</td>
<td>33.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Change in trends and value system</td>
<td>81.6</td>
<td>18.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>The issue of women and their competition with men</td>
<td>67.1</td>
<td>32.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Moral decadence and corruption</td>
<td>70.1</td>
<td>29.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Environment pollution</td>
<td>71.4</td>
<td>28.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Proliferation of porn</td>
<td>79.2</td>
<td>20.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: Technological challenge:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Information revolution</td>
<td>93.5</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>System analysis</td>
<td>81.3</td>
<td>18.7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Communication revolution</td>
<td>93.4</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Internet and its risks</td>
<td>85.5</td>
<td>14.5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Huge acceleration of information quantity in technology</td>
<td>88.3</td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Difficulty in facing the requirements of the current century locally in all fields</td>
<td>81.8</td>
<td>18.2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Destructive industries and wars resulted from technological change</td>
<td>66.7</td>
<td>32.0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Lack of resources and equipments to keep up with technological development</td>
<td>67.9</td>
<td>30.32</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Inability to employ knowledge</td>
<td>72.4</td>
<td>27.6</td>
<td></td>
</tr>
</tbody>
</table>

### Table 5: Educational challenge:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technological and scientific development</td>
<td>90.8</td>
<td>9.2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Commoditization of education</td>
<td>73.3</td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The added value of knowledge growth</td>
<td>75.3</td>
<td>24.7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The decreasing role of the family in directing their children toward education</td>
<td>73.7</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The contradiction between the role of school and the role of family in raising children</td>
<td>80.3</td>
<td>19.7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Internal educational and managerial challenge</td>
<td>75.0</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Keep up with the era of achievement, competency, and knowledge stations</td>
<td>78.7</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Low competency of inputs and outputs quality</td>
<td>76.3</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The challenge of knowledge production and investment</td>
<td>80.3</td>
<td>19.7</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Limited creativity and excellence</td>
<td>76.3</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Technological and knowledge ignorance</td>
<td>75.0</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Constant changes in the educational system</td>
<td>86.8</td>
<td>13.2</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>The gap between theory and application</td>
<td>78.9</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Lack of human and material resources of the educational process</td>
<td>68.4</td>
<td>31.6</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Draw a clear educational policy in the light of knowledge change</td>
<td>76.0</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Apply the economy based on knowledge</td>
<td>85.1</td>
<td>14.9</td>
<td></td>
</tr>
</tbody>
</table>
Table 6: Political challenge:

<table>
<thead>
<tr>
<th>Number</th>
<th>Political challenge</th>
<th>Yes %</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal and external wars and strife</td>
<td>73.3</td>
<td>26.7</td>
</tr>
<tr>
<td>2</td>
<td>Nepotism and cronyism</td>
<td>76.0</td>
<td>24.0</td>
</tr>
<tr>
<td>3</td>
<td>The lack of a policy that keeps up with the speed change</td>
<td>78.7</td>
<td>21.3</td>
</tr>
<tr>
<td>4</td>
<td>Democracy as a lifestyle</td>
<td>74.3</td>
<td>25.7</td>
</tr>
<tr>
<td>5</td>
<td>International pressure</td>
<td>81.3</td>
<td>18.7</td>
</tr>
<tr>
<td>6</td>
<td>The development of parties with popular base and focus on pluralism and participation.</td>
<td>71.6</td>
<td>28.4</td>
</tr>
<tr>
<td>7</td>
<td>The ignorance of the individual’s rights and duties</td>
<td>78.7</td>
<td>21.3</td>
</tr>
<tr>
<td>8</td>
<td>Forced migration due to disasters</td>
<td>76.0</td>
<td>24.0</td>
</tr>
<tr>
<td>9</td>
<td>Sectarianism</td>
<td>78.7</td>
<td>21.3</td>
</tr>
<tr>
<td>10</td>
<td>The lack of a civil society based on institutionalism and competency</td>
<td>86.7</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Results Discussion

First: discuss the results related to the central question:

Discussing the results of the first question which states that “what are the challenges imposed by change in knowledge?”

According to the statistical analysis, the percentages and frequencies were used for each paragraph from the mentioned paragraphs in the study tool that reveals the challenges imposed by change in knowledge reaching six fields: the first field is formed of eleventh paragraphs, the second field is formed ten paragraphs, the third field is formed of twenty paragraphs, the forth field is formed of nine paragraphs, the fifth field is formed of sixteenth paragraphs, the six challenge is formed of ten paragraphs.

The results have revealed that all the challenges from the experts and researchers point of view. They have revealed that the economical challenges are the greatest challenges imposed by change in knowledge according to the changes that occurred in the international and economical structure. These changes are represented in the international knowledge represented in the economic globalization prevailing the entire world through the intercontinental companies that monopolizes the knowledge economy and distributes them in order to achieve their purposes in all fields (Zahlan, 1999).

The study results have revealed that the globalization challenge had imposed a new reality formed by the globalization culture; that the cultural challenges imposed by change in knowledge, whereas these challenges affect children education and upbringing in the society. This may agree with the study results that revealed the cultural challenges imposed by change in knowledge and its impact in raising the children in the society. Thus, the results have also revealed that the fast cultural spread and change in the valuable system amounted to (84.4) and (81.6). This was due to constant cultural change which conquer the world after the struggle between foreign thoughts and the quick spread of culture which resulted from globalization which erased boundaries between countries in order for the world to be void of borders that set a value system for each country. Furthermore, globalization led to the erosion of the privacy of each country; foreign hegemony is the one that rules the world. The study agreed with the study of (Al-Khraisat, 2005)

The study results have revealed that the technological challenge was the most distinguished challenge imposed by change in knowledge, especially the challenge of the information revolution that got the highest estimation (93.5) in addition to the communication revolution that got the highest estimation (93.4). this proves that technology is one of the most distinguished challenges imposed by change in knowledge as a result of the fast change in knowledge that facilitates using and employing technology in education and economy by using the modern technologies. That corresponded with Najdat and Milkawi study (2007), that revealed that the information revolution form the challenges facing the nineteenth and twenty centuries. This era is characterized by a quick and huge technological development.
Educational challenge is considered one of the most significant challenges imposed by the change in knowledge as shown in the results of the study. Technological and scientific development paragraph received the higher degree (90.8); it is considered one of the most significant challenges. The study corresponds to the study of Malkawi and Njadat (2007). This study confirmed that one of the most significant challenges that direct Arab education during the twentieth century technological development and information revolution. The educational system is responsible for raising students to keep up with the twentieth century with its developments and changes.

It is worth mentioning that one of the educational challenges imposed by the change in knowledge is the application of economy based on knowledge. The results of the study showed this economy due to its importance in the educational systems; it represents the power of globalization and thus it forms a challenge to education. This agreed with Deil’s study (2005) which its results showed a concentration on knowledge economy and globalization whereas the interest in them are increasing. Moreover, it is noticed that they are the center of all dialogues and lectures in the world. (Calan, 2000) noted that the acceleration of the change of curricula as well as the constant changes in the educational system are part of the educational challenges and this agrees with this study whereas the paragraph of the continuous changes in the educational challenges received (86.8) of high estimates that consider these changes one of the challenges. Hamid (2002) noted that the manifestations of Islamic identity are integrated to face challenges and risks faced by the Muslim community.

Al- Bakr (2004) noted to know the extent of preparation for facing educational challenges that impose globalization. Al- Sultan (2004) indicated that globalization imposes many challenges, which are represented in cultural challenge; whereas globalization imposed a new reality formed by globalization culture. Furthermore, Al- Aani (2004) indicated that science is the way toward knowledge and its main gate especially to stand on scientific achievements and their effects on humans and their lives in present and future; science is the reason of people’s progression. Al- Harbi (2007) noted that there are plenty of contemporary challenges in economic, cultural, and social fields in the meantime while their existence in the political field was medium.

Saleh’s study (2008) indicated that globalization in its essence is a phenomena based on what capitalism implied of miseries and hegemony over poor countries. This corresponds to the results of this study with the first paragraph about globalization challenge, control over countries’ resources. It received (78.9) and this indicates that one of globalization goals is to control over the resources of poor countries and to steal their wealth.

It is worth mentioning that poverty and unemployment are part of economic challenge; this paragraph received (79.2) which indicates that one of the most challenges that the Arab world suffer from is unemployment especially in the light of globalization.

**Recommendations**

In the light of this study and its analysis as well as previous studies, the researchers presented a number of recommendations which are:

- The necessity to students against contemporary challenges in order to maintain the identity and the culture of the society I a world invaded by accelerated changes along with maintaining openness and dealing with others.
- The necessity to depend on production not consummation.
- The necessity to take advantage of resources on the local and national level.
- The necessity to be quick in keeping up with the huge accumulation of knowledge and to set active strategic plans.
- The necessity to integrate the role of school with the role of the family in raising children to face the challenges imposed by the change in knowledge.
The necessity to increase students’ awareness about the most important challenges they face in their present and future lives to work on an educational strategic formulation for the future. This formulation should be aware for more development during the twentieth first century.

The necessity to perform more studies that deal with contemporary challenges imposed by the change in knowledge.

References

First- Arabic References

[5] Al- Khatib, Muhammad (2007), the role of school in media education. The first international conference for media education. Riyadh, 4-7\32007.
[17] Al- Fairooz abadi, Majd Al- Din, Almuheet dictionary.


The Influence of Patriarchical Culture on Women Leadership in North Sulawesi Indonesia

Christiani Romaito Tarigan
Indonesian Ministry of Home Affairs
E-mail: nanitarigan@yahoo.com

Abstract
Indonesia has the specification of different culture with different ethnic cultures, especially in Sulawesi that becomes interesting aspect of the cultural treasures of the archipelago. So far, the various aspects of culture in Sulawesi contributed to the concept of leadership as well as women's leadership. The outstanding aspect is the community aspect of social support, cultural support, and the impact on political support. The third aspect is a dominant factor in the leadership of women. In that regard, this study aims to examine whether the factors that shape or determine the impact of women's leadership as a cultural patriarchy in North Sulawesi. From the analysis it shows that social support, cultural and political influence on women's leadership as head of the village. Social support is a major factor that make women leaders in North Sulawesi, followed by cultural support, and the last is political support.

Keywords: Women's leadership, social support, cultural support, and political support.

1. Preliminary
Indonesia has long been known in a patriarchal culture. Patriarchy is a social system that places men as the primary authority figure in social organization. Fathers have authority over women, children and property. The system implicitly institutionalize governance and male privilege and female subordination demanded. Most of the patriarchal system also is patrilineal. Patriarchy is a concept used in the social sciences, particularly in anthropology and the study of feministas Hace reference. Distribution of power between men and women where men have an advantage in one or more aspects, such as the determination of lineage (patrilineal descent carry exclusive and last name), the rights of the firstborn, personal autonomy in social relations, participation in state public and political or religious or attribution of various men and women's work is determined by the sexual division of labor.

From this culture, it was pretty amazing because so many women have involvement in North Sulawesi. The involvement of women in politics and decision-making processes of public policy in Indonesia has a fairly long historical roots (Prisma, 1996). History records the existence of two female figures, namely Sultanah Safiatudin of Aceh and Siti Aisyah We Tenriolle of South Sulawesi. Safiatudin queen had ascended the throne in 1641, replacing her husband, Sultan Iskandar Muda. She managed to combine the law of life, literature, and science, so there is a great writer and such as Hamzah Fansuri Nuruddin ar Raniry. We Tenriolle ascended the throne in 1856. Aside from being head of government, We Tenriolle also a proficient writer with his La - Galigo in Bugis thick 7000 pages (Baried, 1989). The two examples above are a reflection that our country has enough evidence on the history of women's leadership prowess.

Current facts indicate that the impression of involvement of women in the legislature, more motivated by her husband's position. Perhaps it is not too wrong impression due to the negative image
of the house, for example, hunting in the woods, while the woman in charge of preparing the family's needs in the home, such as cooking, child care, and the like. This is in accordance with Cozens and West (ed., 1993: 185) which states that: "The external world has historically been the business of men. Women took care of the" about political life: that politics is dirty, loud, full of intrigue, and the like. The impression as if justifying the reality that the number of women who take part in the political world is relatively small, including in countries whose level of democracy and equal rights have been pretty high.

Along with the dynamics of the times, modernization, and globalization of information, as well as the success of the emancipation movement and feminism, the attitude and role of women in the political world began to shift. Women are no longer just acting as a housewife who carry out the functions of reproduction and domestic work sectors, but has been actively involved in the public sector, whether social, economic, and political. The usual role of the role performed by the man many have started to be taken over by the women.

John Naisbitt and Patricia Aburdene (1990: 45) had predicted began in the 1990s as the decade of her leadership. This view is not far wrong if you see the reality of the many heads of state or heads of government held by women, such as Prime Minister Margaret Thatcher (UK), President Corazon Aquino (Philippines), Prime Minister Indira Gandhi (India), Prime Minister Benazir Butho (Pakistan), including the fifth president of Indonesia Megawati Sukarnoputri, and several other women leaders in the world today.

Society of North Sulawesi is a heterogeneous community that comes from a variety of ethnicities such as Manado, Bugis, Javanese, and so forth. Patterns of thinking and advanced education levels, making it more open to receive information. Obviously, such a state of society tend to be more rational in addressing social problems compared with homogeneous rural communities. People are starting to experience a shift in determining a village chief; basic consideration is no longer the norm to heredity and religion, but rational consideration of factors that cause a woman was elected. In other words, the people elect village head not because of heredity as the basis, but more because of skills, social skills, and the ability to implement a variety of programs. This suggests that women also have a base of strength and power, and it is manifested through behavior on society.

Indonesia has the specification of a different culture with other ethnic cultures, especially in Sulawesi is an interesting aspect of the cultural treasures of the archipelago. So far, the various aspects of culture in Sulawesi leadership contribute to the concept as well as the leadership of women. Aspect that stands out is the social support aspect community, cultural support, and the impact on political support. The third aspect is a dominant factor in women leadership. As to it, this study wanted to test whether the factors that shape or determine the impact of women's leadership as a cultural patriarchal in North Sulawesi?

2. Theoretical Overview

In the Constitution, Article 28 I (2) of the 1945 Constitution states that, "Everyone has the right to freedom from discriminatory treatment on any grounds and the right to protection against the discriminatory treatment. "This means that philosophically, Indonesia guarantees and protects every citizen of the country of discriminatory attitudes or actions without distinction of social status, race, ethnicity, culture, religion, or gender. Due to discriminatory actions that lead to mastery and domination of one group of citizens is an inhumane attitude and justice, as stated in the preamble of the 1945 Constitution, "Behold, independence is the right of all nations and therefore, the occupation in the world have abolished because it does not fit with humanity and justice".

In fact, there is still discrimination and discrimination against women both as citizens and as human beings. This is reflected in the recognition of Indonesia in the international sphere that is contained in the various forms of discrimination against women. Recognition is done with the ratification of the International Convention on the Elimination of All Forms of Discrimination Against
Women (Convention on Elimination of All Forms of Discrimination Against Women/CEDAW) in the form of Law. 7 of 1984. Indonesia is a country of about 182 countries in the world that have ratified it. The sense of recognition that there is still discrimination against women is the poor condition of women's backgrounds, in terms of health with a high rate of maternal mortality and high rates of violence against women both in the realm of family and community; has not acknowledged the participation of women in decision-making so that their interests are not represented, and other conditions that cause women in disadvantaged conditions or unequal compared with men. Though women have contributed greatly to the well-being of family and community development.

That is because the gender inequalities that are the result of the strong patriarchal culture in society and is perpetuated in many lives through practices of cultural values, social and other values of life, access has brought distinction, exclusion, stereotypes, load the excess, up to violence against women. The impact occurred in various areas of life because it already menginternal patriarchal culture in the minds of every individual member of society that is often manifested in their actions when they are in the public domain and domestically for its work.

When gender inequality is allowed to take place continuously, it will hinder the development of the prosperity of society and add to the difficulty of the full development of the potential of women in the service of the country and to mankind. And conditions will be more severe for women, when poverty whack, which ultimately puts women in a position at least have the opportunity to obtain food, health care, education, training, and opportunities for employment and other needs.

Therefore, the conditions that give rise to gender inequality on women's discrimination should be changed and abolished the action steps as mandated in Law. 7 of 1984 and attachments. Where in the law the Indonesian government has the duty to promote, fulfill and protect the rights of women in various fields of life as individuals and as members of society. Thus the State is obliged to make every effort to provide protection, assurance and fulfillment of the right to live safe, equitable and fair to the citizens, especially for female citizens who are still experiencing injustice and gender inequality in many spheres of life, especially in rural areas.

3. Hypothesis
There are several hypotheses in this study that will be tested are: (1) whether social support, cultural and political influence on women's leadership as head of the village? (2) what factors shape social support, cultural support, and support for women's political leadership as the head of the village?

4. Research Methods
Data analysis method used is exploratory factor analysis. This analysis tool is used to test a set of variables believed to be the factors that shape a woman to be a leader. At this early stage whether the third will allegedly support the social support, cultural support, as well as political support effect on the formation characteristics of women leaders as head of the village in North Sulawesi.

The population in this study is people in North Sulawesi. This community consists of many layers, starting employees, employers, traditional leaders, religious leaders, teachers, students, and ordinary citizens. Given the size of the study population, then the sample is taken in part from the population. In this study a sample of 100 respondents was taken to take his opinion on the three that make up the support of the leadership of women in North Sulawesi.

5. Results and Discussion
5.1. Results of Factor Analysis
Factor analysis is used to extract a few common factors (common factor) into a single unit by using the concept of Eigen Value. Table 1 presents the results of factor analysis involving 100 respondents who
support the three social support, cultural support, as well as political support to the former leader of the influential women in North Sulawesi.

**Tabel 1:** Results of Factor Analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.046</td>
<td>68.202</td>
</tr>
<tr>
<td>2</td>
<td>0.590</td>
<td>19.660</td>
</tr>
<tr>
<td>3</td>
<td>0.364</td>
<td>12.139</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

<table>
<thead>
<tr>
<th>Component</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.795</td>
</tr>
<tr>
<td>Politics</td>
<td>0.879</td>
</tr>
<tr>
<td>Social</td>
<td>0.800</td>
</tr>
<tr>
<td>Culture</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

From Table 1 above shows that there are three eigen values, namely 2.046, 0.590, and 0.364, and there is only one eigen value is worth more than one, the first eigen value of 2.046, while the other two eigen-value less than 1. This indicates that these three factors, namely social support, culture, and politics is a unity or a common factor as a shaper of women leaders in North Sulawesi. From the percentage of variance of 68.202% it indicates that the leadership of women is affected by social support, culture, and politics, while the remaining 22.898% influenced by other factors not examined in this study.

**Figure 1:** Loading Factor from Results of Factor Analysis

From the results of factor analysis, loading factor values obtained. Loading factor value determines the priority of each factor scale formed. In Figure 1 above shows that the main factor is the former leader of social support women with the highest loading factor of 0.879, with a contribution of
24.23% form the character of women leaders in North Sulawesi. This indicates the main factors forming the female leader is due to the presence of social support.

Second factor is social support cultural support. This culture of support contributed by 22.05% form the character of women leaders in North Sulawesi. On the other hand, the last factor is political support, with a contribution of 21.92% form the character of women leaders in North Sulawesi.

5.2. Social Support Base

The village head is not enough to just have the managerial skills, but need the power of social support base. Base of social support is one key to success in the nomination process of the village. Due to the advent of democracy in the recruitment process of a public figure in the rural areas will be very different culture with the emergence of leaders in urban areas. Figure in the emergence of the phenomenon of urban influenced or be offset by the strong financial support. In terms of recruitment patterns in urban areas the figure should be supported by the financial strength that could lead someone to figure in the government or the elite city.

While in rural areas the pattern of emergence of leaders must be balanced with the power base of community support (social) are very strong. Adhesion behavior or the behavior of a rural character will also usher someone into rural character or not. In a sense, though a character with the rural or village elite power base is very strong financially, but socially in front of the community has been "disabled", then it will be very difficult to gain mass support of the villagers.

Recruitment of rural character depends on the shape or community support base along with a person's behavior in rural areas. Thus the behavior of a character in the rural areas will greatly affect the appearance of the rural elite figures.

More concretely, that elite recruitment village leaders are closely linked to the issue of cultural values and moral ethics. When moral or ethical elite village showed signs of good it will easily support future in seeking legitimacy. But could the opposite, even though the financial side can sufficiently take effect. But when norms, ethics, and morals have many unwritten notwithstanding in the community, will be hard pressed to find legitimacy in the leadership of the village elite.

Leadership behavior of women village head who can always put yourself, socialize with people through some social or religious activities bring consequences on community relations with the leadership of coagulation woman village head. And finally if the village head woman is acceptable in the middle of its citizens due to the merging of the female head of the village community.

Residents support on the leadership of the head of the village women by rational considerations as well as other forms of socialization and the real work of the prospective head of the village women. Form of public legitimacy for their support not engineering issues, and the issue of financial strength, but chose a woman village head because of the ability to provide shelter to the people. In a sense, that the village leadership and the leadership of the people's will chose fellow women not to take into consideration women's groups, but more than considerations of the previous women's leadership involvement in social issues.

From exposure of respondents who met both RW and the farmers pointed out that women leaders do have social relationships with people very well and feel the difference this earthy. Perhaps elite recruitment patterns village with elite figure city leaders. In the urban community issue of money politics is commonplace and many have testified on the subject. Community leadership recruitment means the city will always be synonymous coupled with the nuances of the problem of money politics. This can be understood in the city to leadership recruitment will always be influenced by financial interests, regardless of the behavior of the elite.

5.3. Basis Support Culture

In addition to social support, cultural support factor is very important. Due to being a leader in his behavior should always be able to persuade, influence others to participate in their activities, it is
essential to understand the culture or the culture of the people who will lead. When there is a village election, first woman leader undergone many obstacles because of the culture or cultures. In a sense, the North Sulawesi view and understand that women have always led. In terms of the other northern Sulawesi culture that women are part of the number two. Developing stereotypes is that men are leaders and women are second class aka the people who are always under-emphasized that fact must be always in touch with the problems of the household. Affairs of the kitchen, in the back, and so is women's business. While the man is a living matter and stand at the vanguard.

In northern Sulawesi culture, history is something always attached to the villagers. When the government turns every woman wheels of government proved to have a progress. Additionally shades management leadership to implement more "feminine". In a sense, much more touching citizens with touches of a woman. Apparently, in the history of women's leadership and successful enough to be attached at once legendary people of North Sulawesi. Because of the historical narrative, many residents hope will be repeated era with the advent of women's leadership advancement village head.

It is not surprising when some people previously doubted the existence of the village head women's leadership could eventually melt because of the existence of women's history of leadership. So even if at the beginning of the village head women experience some disruption in the acquisition support culture, with little history of helping many women upliftment of the village head.

However, the culture in northern Sulawesi is still a lot of thought inherent ideal that leadership must be held by men. This group are colored from the preacher or church leader who always understands the leadership of the Islamic and Christian context. The understanding also can not be blamed, this was because the northern Sulawesi is always identical with the two religions, namely Islam and Christianity in the lead wheel of life. Although in the end also can tolerate the existence of enough women with the opportunity to compete to be the village head. However, culture remains the joints which determine the validity of leadership.

The coming view is not in the context of religion and theological perspective, but in a sociological context and perspective about the diversity that shapes the understanding related to leadership. Thus, the religious perspective is not a question of right and wrong or illegitimate woman as village head, but the woman being supported or not as the leader of the village chief. Thus, it appears that the ethical and moral women are also encouraged to become village chief. It thus made possible by the diversity of rural communities that provide opportunities for women to appear to be a leader.

As a woman, of course, very different from the behavior of male leadership in the approach to the public. Behavior that is not in the context of gender, that patterns itself to follow the character of men, but in the institutional framework, which coincidentally is the village head women. In institutional context, as the village head and village leaders, village head will surely be a place to complain, where all the issues resolved. Of course, by nature, women as village head have limitations, but social mores give tolerance.

5.4. Basis of Political Support

Support of community leaders needed to show a woman village head. However, village officials still give a chance to others who want to run. Women leaders openly expressed its readiness to be nominated, but still modestly above its flaws as a human being. Then the elected head of the village women by a majority of the public.

Judging from her leadership political support base village chiefs among others because it was politically in the government, both the village head woman of the village administration and other district support women's leadership. Political support as the head of the village is a boss level at both the district level of environmental Pademawu district and other districts. Then the district level was the emergence of female leadership can also be accepted.
Indications support the emergence of female leadership village head, can be seen as the process of filing nomination village head. Administratively at least, when there is no support in the early women's leadership course will always have problems.

From the beginning of the nomination process to the head of the village, the administration was actually the sub-district and district levels of government could reasonably accept the presence of female leadership. Politically it was a sign of government support over the emergence of female leadership will open regardless of gender or bureaucrats nature. For subdistrict and district levels would not necessarily question the woman or man in the lead, but more in the form of programs, as well as the ability to implement the program from the top and result of their own initiative. Although the organizational structure of the head of the village administration under the auspices of the sub-district and district, from the district itself fully devolved elections under the initiative. The subdistrict and district levels did not interfere, the other candidates have a sense of structure above.

Become a village head was not enough with just one form of support but need support from social, cultural, and political. As evidence that a woman village head through social support is with a mass base in the village elections is a proof to legalize the emergence of village head. Then the culture or cultures, with the advent of the first female leader in northern Sulawesi became a legend for the people to elect a woman as head of the village. With the hope of female leadership could give other shades for nets wheels of government. Furthermore, from the political side, that the presence of female leadership at the village level is still below the postscript of "power" over must have a good level of political support for the government for some sort of districts and counties. This is understandable because the village government programs are often an extension of the program level as well as the central government.

On that basis, with the capital social support, cultural, and political as well as, a few women dared to come forward and participate in village elections. In carrying out their daily activities to serve the community, women leaders occupying office and village hall are quite representative for the size of the village community. With a separate room with other staff, he feels more flexibility in dialogue, to communicate with people who need services. To that end, women leaders must be able to prove that the obsession itself as the leader of the village, he should be able to leave something good and useful for the community so that later people would remember his services. In addition, he wanted to remove any doubt as to the ability of women to be leaders (village head).

6. Conclusion
Social support, cultural and political influence on women's leadership as head of the village. Social support is a major factor that make women leaders in North Sulawesi, followed by cultural support, and the last is political support. Of some of the things that have been described above that the leadership of women in North Sulawesi is a unique, specific leadership. Unique and specific because when leadership was challenged woman village head hard on the pretext of legality of the religious context, but the presence of women in the culture of northern Sulawesi society that is identical to the two religions, namely Islam and Christianity would appear in the middle of the village head woman pressures both culture and social.

Leadership is a reality that there are women in North Sulawesi today, although in the context of religious presence is still being debated due to a group of people because of the interpretation of the religious values that differ, but in the context of the social, cultural and political leadership of women have the support so that the presence of women as one the figure of the leader is seen as a pioneer of phenomenal reality as a way of opening it up to the birth of the women leaders in the future.

Women are seen as a highly attractive because in addition to being able to fight the current private patriachal culture, but also someone who is able to show that women have equal capacity with men in terms of leading the community. In the national context, the women leadership is a figure that
can be used as a mirror to the other communities in Indonesia that women have advanced and have the ability to equal the capabilities of men.

References
The Challenge of Poverty in the Rural Areas in Nigeria: Implications for National Development

Anthony Abayomi Adebayo
Department of Sociology, Federal University Oye-Ekiti, Ekiti State, Nigeria
E-mail: adebayo_nthny@yahoo.com

Abstract

The greater population of any developing country like Nigeria resides in the rural areas. This population are predominantly agrarian and constitute the food basket of the nation. However, these farmers have largely remained poor and have little or no access to government programme of poverty alleviation. This paper examines the lives of the rural farmers and their neglect by successive governments in Nigeria and the implications for national development. The study revealed that development strategies for a country whose rural population are mainly farmers cannot be achieved without a sustained growth in rural income and improved standard of living primarily from agriculture; to stem rural-urban migration, unemployment, criminality as well as fostering food security and increased agricultural contribution to the Gross National Product (GDP) of the nation. The study also proffers solutions to the problem of acute poverty in the rural areas in order to engender sustainable national development.

Keywords: Farmers, Rural Areas, Sustainable National Development, Developing Country, Implications.

Introduction

Rural farmers account for the greater part of the population of any developing country such as Nigeria. While the 1963 census put Nigerian population as 88.8 percent rural (Ekong, 2005), the United Nations in 1974 estimated it to be 57 percent rural (Jibowo, 2000). However, up till now, the majority of the Nigerian population and many other developing nations still work and live in the rural areas. Also in the view of Umar and Abba (2012), majority of population in Nigeria are rural dwellers and agrarian by occupation (Umar and Abba, 2012). For Ashimolowo, (2011), over two-thirds of Nigeria’s population resides in the rural areas where poverty is highly concentrated. Consequently, development strategies for a country whose rural population are mainly farmers cannot be achieved without first sustaining growth in rural income and standard of living primarily from agriculture. Hence, agricultural development is a significant part of rural development (Adedokun et. al., 2011). Furthermore, over 70 percent of the food requirement for the population of the developing nations is produced from the rural areas by the rural farmers. However, as important and strategic as the rural areas are to any nation, food production still largely depends on the use of crude implement such as hoes and cutlasses and poor resources due to inability to access funds from financial institutions and other credit agencies (Alfred, 2011).

The average Nigerian farmers still produce crops and livestock at a subsistence level, and this low productivity stems partly from inadequate support from the government. Governments of developing countries have a major responsibility of ensuring that there is adequate rural development in their various communities and local governments which would lead to effective and efficient
agricultural systems that will not only supply food and animal protein but also foster the utilization of natural resources in a sustainable manner (CGIAR, 1995; Obidike, 2011). When the rural farmers lack access to knowledge and information that would help them achieve maximum agricultural yield, they not only grope in the dark but are driven to the urban centres in search of formal employment, as the only option for survival (Munyua, 2000; Obidike, 2011). Blait (1996) pointed out that the least expensive input for improved rural agricultural development is adequate access to knowledge and information in areas of new agricultural technologies, early warning systems (drought, pests, diseases etc), improved seedlings, fertilizer, credit, market prices etc. There have been short-comings of traditional print and library based methods of providing such agricultural information to rural farmers who are generally illiterate and relatively remote from formal sources of information e.g. extension stations, libraries (Van and Fortier, 2000). According to Obidike (2011), rural farmers are not noted to produce enough food, probably due to some constraints that lead to lack of access to timely and up-to-date information which would have enabled them to achieve optimal yield from their farmlands. Such information is highly desired by these farmers and can only be made available to them via extension workers, community libraries, state and local government agricultural agencies.

In this modern day, rural farmers need prompt and reliable information about what is happening in areas of improved seedlings, better methods of cultivation and fertilizer application, pest and weed control/eradication, new advances in livestock production and disease control etc. Where rural farmers are not faced with constraints in accessing agricultural information, traditional media such as rural radio, has been used in delivering agricultural messages to rural farmers (Munyua, 2000). Other ways of delivering these messages or information to the rural farmers include print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations. The lack of access to basic agricultural knowledge and information by rural farmers has made these farmers to stick to their old traditional methods of farming system and animal husbandry practice, hence resulting in poor crop and livestock productivity. Information and knowledge are very vital in agricultural development of any community and where they are poorly disseminated as a result of certain constraints, the community’s agricultural development becomes highly impeded.

It must however be pointed out that despite the importance of modern technological and advanced ways of farming for greater output, rural farmers who are the main producers of food crops in Nigeria have not benefitted immensely from the technological innovations in agriculture. Information technology revolution is an intervention with the potential to ensure that knowledge and information on important agricultural technologies, methods and practices are put into the right use by the farmers. Information and Communication Technology has become an increasingly powerful tool for improving the basic services and enhancing local development opportunities (Nwankwo, 2012). Today, a new paradigm of agricultural development is fast emerging in both developing and developed counties. The overall development of rural areas is expanding in new directions; old ways of delivering important information to citizens are being challenged; and traditional societies are being transformed into knowledge societies. Information and Communication Technology (ICT) is a vital tool for solving communication problems worldwide. Its applications are making drastic changes both in electronic and social development (Chaka, 2008; Nwankwo, 2012).

According to Ozowa (1995), no one can categorically claim to know all the information needs of rural farmers especially in an information dependent sector like agriculture where there are new and rather complex problems facing farmers everyday (Ozowa, 1995). It is however safe to assert that the information needs of Nigerian small scale farmers revolve round the resolution of problems such as pest hazards, weed control, moisture inefficiency, soil fertility, farm credit, labour shortage, soil erosion and so forth. Ozowa argues further that the information needs of farmers may be grouped into five headings: agricultural inputs; extension education; agricultural technology; agricultural credit; and marketing. Modern farm inputs are needed to raise small farm productivity. These inputs may include fertilizers, improved variety of seed and seedlings, feeds, plants protection chemicals, agricultural machinery, equipment and water. Adoption of information and communication technologies in rural
areas as a unique challenge has long been a specific public concern with regional, national and international strategic significance. However, it is a fact that if rural agriculture enterprise is provided with the right inputs, feasible technology and relevant information, traditional agriculture will be transformed and the fortune of rural farmers will change for the better (Nwankwo, 2012).

### Rural Poverty in Nigeria

Recent theoretical and empirical advances on poverty shows that there is no consensus on the definition of poverty (Ohikhueme, 1997). Balami and Naphtali (1999) opined that since poverty affects many aspect of the human condition, including physical, moral, and psychological, a concise and universally accepted definition of poverty is elusive. The Human Development Report (1997), defined poverty as deprivation in the valuable things that a person can do or be. In other words, poverty is a socio-economic condition of a person’s inability to adequately cater for his basic needs of survival. The World Bank Report (2001), classified poverty in terms of lack of access to resources by individuals which leads to a state of powerlessness, helplessness and despair, inability to subsist and protect oneself against economic shocks, social, cultural and political discrimination and marginalization among others. The National Policy on Poverty Eradication in Nigeria (2000), enumerates the attributes of poverty as follows: not having enough food to eat, poor nutrition, unfit housing, high rate of infant mortality, low life expectancy, inadequate health care, lack of productive assets, lack of economic infrastructure. Furthermore, the World Bank (2003) further defined poverty as a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or clinic to go to; not having the land on which to grow one’s food or a job to earn one’s living and not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implies living on marginal or fragile environments, without access to clean water or sanitation. Today, although Nigeria should be one of the richest countries in the world with vast oil reserves and a plentiful workforce, yet over 65% of the country's populations live under the poverty line and half of those live in abject poverty.

The magnitude and expansion of poverty in Nigeria and the threat it poses makes it one of the biggest challenges in the nation today. The rate of poverty in Nigeria has worsened since the late 1990s, to the extent that the country is now considered as one of the twenty poorest countries of the world. Poverty in Nigeria is especially severe in the rural areas, where social services and infrastructure are limited or non-existent. Majority of those who live in rural areas are poor and depend on agriculture for food and income. The causes of rural poverty in Nigeria include neglect of rural infrastructure, environmental problems, civil unrest, inequality in income distributions, economic orientation, rapid increase in population, over-dependence on oil exports and domestic policy mistakes. Part of this is because of rampant corruption in urban areas and the ongoing failure of repeated programs initiated by successive governments to address the poverty issue. Many of these programs have been dismissed as mere slogans. Few funds allocated to poverty campaigns have trickled down to the masses due to inefficiency, lack of knowledge and corruption, leaving the 90% of the rural community to rely on subsistence farming with almost half struggling to make a living on small holdings barely one hectare in size (Sodangi, 2011). The gross lack of productivity in the agricultural sector is the root cause of rural poverty in Nigeria, as the oil revenues largely bypass those living and working outside that industry. The failure of agriculture in Nigeria is often blamed on the federal system; with the central government planning ignored or by passed by regional governments. What is clear, however, that as the agriculture industry has declined decade after decade, the ability to provide food for the family and sell on the excess has diminished year by year, fuelling poverty in Nigeria and of course, malnutrition.

Rural poverty simply refers to poverty found in rural areas. Rural poverty is a global phenomena, but like poverty in general, there are higher rates of rural poverty in developing countries than in developed countries (Janvri, 2002). Eradicating rural poverty through effective policies and
economic growth remains a challenge for the international community. Poverty remains a predominantly rural problem, with a majority of the world’s poor located in rural areas. Rural poverty is often discussed in conjunction with spatial inequality, which in this context refers to the inequality between urban and rural areas (Kanbur, 2005). Both rural poverty and spatial inequality are global phenomena, but like poverty in general, there are higher rates of rural poverty in developing countries than in developed countries. Disparities between rural and urban areas is on the rise, particularly in many developing and transitional countries. Globally, rural people and rural places tend to be disadvantaged relative to their urban counterparts and poverty rates increase as rural areas become more remote. Individuals living in rural areas tend to have less access to social services, exacerbating the effects of rural poverty (Miller, 2002; Mosley, 2008).

In a summary, the rural poor in Nigeria is that average rural dweller that has little or often nothing to feed on, lives under very poor, unhygienic conditions, cannot afford the basic needs of life including clothing, shoes and medical care; whose children are always victims of incessant fees-drive from elementary to secondary schools levels. The poverty is further reflected on the children who often go to school in tattered dresses often without shoes with only exercise books but essentially without necessary reading books. Being a victim of environmental circumstances, he is not fatalistic but hopeful, always working up to providence to burst the vicious circle, struggling to train the children who are hoped to be the possible potent outlet from the grips of poverty.

Poverty can be divided into:

**Absolute poverty** or *destitution* which refers to the deprivation of basic human needs, which commonly includes food, water, sanitation, clothing, shelter, health care and education. The World Bank anchored absolute poverty line as $1 per day. This was revised in 1993, and through 2005, absolute poverty was $1.08 a day for all countries. In 2005, after extensive studies of cost of living across the world, The World Bank raised the measure for global poverty line to reflect the observed higher cost of living. Now, the World Bank defines extreme poverty as living on less than US$1.25 per day.

**Moderate poverty** as less than $2 or $5 a day (but note that a person or family with access to subsistence resources, e.g. subsistence farmers, may have a low cash income without a correspondingly low standard of living – they are not living "on" their cash income but using it as a top up).

**Relative poverty**, defined contextually as economic inequality in the location or society in which people live.

Poverty differences cut across gender, ethnicity, age, location (rural versus urban), and income source. In households, children and women often suffer more than men. In the community, minority ethnic or religious groups suffer more than majority groups, and the rural poor more than the urban poor; among the rural poor, landless wage workers suffer more than small landowners or tenants. In Sub-Saharan Africa, extreme poverty went up from 41 percent in 1981 to 46 percent in 2001, which combined with growing population increased the number of people living in extreme poverty from 231 million to 318 million. World Bank data shows that the percentage of the population living in households with consumption or income per person below the poverty line has decreased in each region of the world since 1990, however, the figures of Sub-Saharan Africa remain the highest.

**Statistics of Nigeria's Population in Poverty**

- 1980: 17.1 million
- 1985: 34.7 million
- 1992: 39.2 million
- 1996: 67.1 million
- 2004: 68.7 million
- 2010: 112.47 million

As shown above, in Nigeria, the population of Nigerians living in poverty is on a steady increase, majority of which are located in the rural areas. Poverty is especially severe in rural areas, where social services and infrastructure are limited or non-existent. The great majority of those who live in rural areas are poor and depend on agriculture for food and income. About 90 per cent of the country’s food is produced by small-scale farmers cultivating tiny plots of land who depend on rainfall rather than irrigation systems.

**Distribution of the Rural Poor in Nigeria**

Rural poverty tends to be evenly distributed across the country, rather than concentrated in specific geographic areas. However, in some zones the poverty situation threatens to worsen considerably, such as in the northern area bordering the Niger, which is arid, marginal to agriculture, environmentally damaged and densely populated. The fishing communities living in the mangrove swamps and along the Atlantic coast are among the poorest in Nigeria. It is estimated that Sokoto state's poverty rate the highest at 86.4%. In the north-west and north-east of the country poverty rates were recorded at 77.7% and 76.3% respectively, compared to the south-west at 59.1% (Fasoranti, 2003).

**Rural Poverty and its Implication for National Development**

The myriads of challenges facing mankind include the provision of an equitable standard of living, adequate food, clean water, safe shelter and energy, a healthy and secure environment, an educated public, and satisfying job for this and future generations. Of all these necessities, the first and most basic to human life and survival is enduring food security; which may be defined as a situation in which majority of the populace of a country have access to domestically produced food at affordable prices at all times (Akinboyo, 2008). Consequently, the growth and development of any nation depend to a large extent, on the development of agriculture. For Iganiga and Unemhilin (2011), every industrialized country today, passed through the agrarian era. In fact, the industrial sector takes its roots from the agricultural sector. In a developing nation, government fiscal responsibility is very central to all facets of development including agriculture.

The importance of agriculture to any nation cannot be over-emphasized. Until the exploration of oil reserves, Nigeria economy was largely dependent on agriculture. Nigeria’s wide range of climate variations allows it to produce a variety of food and cash crops. The staple food crops include cassava, yam, corn, cocoyam, cowpeas, beans, sweet potato, millet, plantain, bananas, rice, sorghum and a variety of fruits and vegetables. The leading cash crops include cocoa, citrus, groundnut, oil palm, rubber etc. They were Nigeria’s major exports in the 1960’s and 1970’s. Prior to the attainment of independence, agriculture was identified as a potential factor, capable of catapulting Nigeria’s economic development (Iganiga and Unemhilin, 2011). In the realization of this truism, the colonial administration set up marketing boards for the major cash crops. Heilleiner (1966) stressed that export production accounted for about 57% of Nigeria’s GDP in 1929. The contribution of the sector to the GDP continued to increase further. For example, in the 1950s and 1960s, agricultural output accounted for 63% of the GDP. However, with advent of oil in the 1970s, this dropped to 33.2%. It went further down to 30.2% for the period between 1975 and 1979. On annual average, in spite of government programmes, its contribution to the GDP from 1997-2006 is 41% (Aigbokhan, 2001), while it employs 65% of the labour force in Nigeria (Emeka, 2007; Iganiga and Unemhilin, 2011).

It is therefore evident that rural development is an integral part of national development. Rural poverty constitutes a grave danger to the nation. This is because when farmers no longer have the necessary encouragement to remain in the rural areas and continue with their farming enterprise, the resultant effect is the inevitable migration to the urban areas in search of greener pastures. The implication of this would be many young and unemployed people on the urban streets and this translates into an idle and willing army of criminals. The rate of crime will increase and the existing
security framework will be over-stretched. As a matter of fact, because unemployment readily creates a large army of potential criminals, effective policing has remained a mirage in Nigeria (Adebayo, 2013). Agriculture as a sector in the economy, that employs about 65% of the Nigerian population cannot be neglected without incurring grave consequences.

Furthermore, a further prolongation of poverty in the rural areas will affect the food security of the nation. It is already evident that Nigeria can no longer meet its food supplies as before. It is evident that the decline in the performance of this sector in both GDP and export earnings is reflected in the slower growth of the sector relative to other sectors of the economy (Central Bank of Nigeria, 2008) and as a result, the food security/sufficiency status of Nigerians continued to decline (Adeoti, 2002). The decades of misplaced policies, under-investment and technological stagnation have turned Nigeria into a net importer of food. Today, an average of N24 trillion ($150 billion) is spent importing food each year (Akinloye, 2013). This fund could have been channelled to other areas in the quest for national development.

Recommendations and Conclusion
From statistics already quoted above in this paper, the population of the rural poor in Nigeria is alarming and constitute a danger signal for the nation. There is an urgent need to address development in the rural areas. As a matter of fact, agricultural development, poverty reduction and environmental sustainability go hand in hand when agricultural development is broad-based, market-driven, participatory and decentralized and driven by appropriate technology change that enhanced productivity. This is so because agriculture plays basic role in kick-starting economic growth and reducing poverty and hunger in many developing countries. Consequently, any meaningful development programme of the nation must include strategies for rural development. Government programmes aimed at addressing poverty in Nigeria have largely failed because of the loopholes in the conception and design of the programmes, which ultimately affects their implementation. As a result, Government at all levels must carry along the rural dwellers as stakeholders in the design of its programmes in order to engender a successful implementation. There should awareness campaigns by government agencies and Non-Government Organization on the need for the rural dwellers to have a sizeable family that their resources can adequately provide for and discourage having many wives and too many children. The provision of storage facilities to avoid perennial wastage of farm produce after harvest. To arrest rural-urban migration, social infrastructures such as good access roads, functional and well-staffed schools, electricity, functional hospitals and health centres, accessible markets and portable water supply etc must be provided in the rural areas by the government. This intervention will go a long way to encourage the farmers and contribute significantly to the eradication or alleviation of rural poverty in Nigeria.

References


Abstract

Today more than ever education is playing a major role in the agenda of many countries. This study addresses two research questions: 1. Which American economies are suffering inequality in terms of education? 2. Does gender continues being part of the inequality in education? The Gini coefficient is employed in this paper in order to answer those questions. The measurement was performed in 24 countries in the Americas with statistical data for the population 25 years and older to tertiary education for both the general population and for each gender.

The results suggest a wide gap of inequality between the developed nations of North America and the nations of Latin America and the Caribbean, emphasizing the progress of countries such as Barbados, Cuba, Argentina and Uruguay.

Regarding the gender, the results suggest a decreasing influence of this aspect in educational inequality, except for the case of Haiti, a nation behind where the education gap between men and women increased during the study period.

Key words: Education, Gini coefficient, Inequality and Gender

Introduction

Inequality has been a topic widely discussed by different experts throughout history. Humans have repeatedly sought to explain why some human groups are living in privilege while others constantly faced with adversity. Among the different types of inequality, educational inequality has played a major role in this debate.

Numerous articles have been written about the transformative power of education and its influence on development, economic growth and overcoming poverty. However, in a world that views
education as a priority and where almost all countries have public education systems is of great interest to know whether such educational inequality gaps tend to disappear or not.

This study addresses the educational inequality from a descriptive, quantitative and comparative perspective. It is descriptive because it seeks to gauge the presence of educational inequality, is quantitative because the situation is dealt through statistical and comparative methods that help us to know which ones are those countries where there is more or less educational inequality and progress characteristics they have achieved over time.

The period chosen is 1990 - 2010, which is chosen for different factors, first because of the availability of data needed for the calculations proposed and secondly to observe the most recent changes in the observed indicators. The spot chosen for this study is the American continent, this is because in America you can see interesting contrasts between the developed nations like North America and those that are in disadvantage in Latin America and the Caribbean. These contrasts talk about how different societies are being successful or not by providing conditions that allow their members to access and stay in school services.

1. Literature Review

Over time, educational inequality has been studied from different approaches, sometimes controversial between them and from different disciplines such as sociology, economics, pedagogy, anthropology between others. In the mid-twentieth century, the dominant view among studies on this subject was the functionalist perspective. In it, "The work on social mobility tended to see education as a variable with significant influence in the direction of increasing social equality" (Martinez, 2002).

During the sixties and seventies, critical currents emerged that emphasized the subordinate role of education on social structures or even with an active role in maintaining inequality (Martinez, 2002).

Within this perspective, authors such as Collins 1989 (cited by Marquez, 2005) questions whether the educational system effectively is seeking educational equality or if certain powerful groups in society make use of inequality to perpetuate its position.

Other authors such as Bowles and Gintis (1976) point out that the education system would be aimed at the labor supply of skilled and disciplined employers which in turn contributes to social control and political stability. They also mention that education can explain only part of the economic success of the people and that the social origin can be very important in that sense.

Following that perspective Carnoy (1974) questions if the societies from the historic perspective have been concerned for the education of the youth or if this idea has been constantly used as a manipulation instrument.

Since the eighties, these studies have been complemented by ethnographic approaches which take into greater consideration situations that occur within and outside of the schools such as social background of students.

From the point of view of the economy, the educational component of development has been extensively studied. One of the most outstanding authors in this area is Gary Becker, through the human capital theory.

The concept of human capital includes features ranging from lessons learned in educational institutions to the skills obtained through work in general or in particular companies, all this combined with the innate ability or development that has the individual. Thus, the individuals better prepared, will have higher productivity, and they more effectively contribute to the development of the economy and get better wages from their work.

Leyva and Cardenas (2005) discussed the matter: "This idea, put forward by Becker (1964) led to the development of human capital theory in the field of education. An investment in education, is about a "machine" adapted to the human body to improve outcome in the workplace, the future performance of the "machine" is likely to exceed the expenditure of time and money of its purchase."

Consistent with this, we can mention Amatya Sen's ideas. For Sen, development is achieved when individuals have the freedom or ability to choose the life that they want to live. Freedom to not
suffer privations or easily curable diseases, to have decent housing, to participate in collective decision making, to enjoy the educational level required to profess freely express and disseminate their own ideas (Escribano, 2004).

In the same vein, Thomas, Wang and Fan (2000) argue that equality in access to education is one of the basic human rights and is a fundamental component of wellness. Therefore, the distribution of opportunities within a society is even more valuable than the distribution of assets or income.

Therefore, ensuring access to education is a win-win policy for any society. If the skills of human beings are normally distributed, the fact that some groups are left behind, represents a significant loss of welfare, and consequently not only individuals, are affected but also all the different areas of the production. As with the property; an equitable distribution of welfare is a necessary precondition to increase individual productivity and consequently to overcome poverty. (Thomas, Wang and Fan, 2000).

2. Education Inequality: The Gini Coefficient

For the present work we calculated the Gini coefficient based on the adaptation proposed by Thomas, Wang and Fang (2000). The equation proposed in his study is as follows:

\[ E_L = \left( \frac{1}{\mu} \right) \sum_{i=2}^{n} \sum_{j=1}^{i-1} p_i \left| y_i - y_j \right| p_j \]  

(1)

Where:

- \( E_L \): Represents the Gini coefficient of education, ie the degree of inequality between members of the population.
- \( \mu \): is the average years of schooling for the population studied.
- \( n \): is the proposed number of divisions to segment in schooling levels of society. In this case \( n \) is equal to 7, and as the school is being divided into seven categories available in the database used, which are: no schooling, incomplete primary, complete primary, incomplete secondary, complete secondary, tertiary incomplete and complete tertiary.
- \( p_i \) and \( p_j \): They represent the proportions of the population with a given educational level: in this case, some of the seven categories are mention in the definition \( n \).
- \( y_i \) and \( y_j \): They represent the number of years of schooling required to attain a certain level of education \( n \). For this case, they were assigned the followed: no schooling, zero years; incomplete primary, 3 years; complete primary, 6 years; incomplete secondary, 7.5 years; complete secondary, 9 years; tertiary education incomplete, 10.5 years and complete tertiary, 12 years.

The Gini coefficient can reach values between 0 and 1, where 0 represents perfect equality and 1 represents perfect inequality. Thus, values closer to zero are equal to more favorable educational conditions.

It is important to note the coefficient of variation over time, the value of the Gini coefficient tends to approach zero which means that education has become more egalitarian over the years.

The calculations in this sheet are built on the database published by Barro and Lee (2010). This database provides information on the maximum level of education attained by the population in 25 years and more than 146 countries.

For the calculation of \( \mu \) and \( Y \) variables in the formula (1) are assigned the following years of schooling at each level: No schooling, zero years; primary incomplete, 3 years; full primary, 6 years; secondary incomplete, 7.5 years; completed secondary, 9 years; incomplete tertiary education, tertiary 10.5 years and complete 12 years.
3. Analysis of the Results

Based on the formula (1), we proceeded to measure the Gini coefficient for education in 27 countries in the Americas. The countries chosen were those for which data were available in the database published by Barro and Lee (2010).

The results obtained are in the table (1). Countries in the table are ordered from most equal to the least equal. As can be seen, in 2010, the best positioned country in terms of this indicator is Barbados.

Barbados was even better positioned than world economic powers like the U.S. and Canada, countries that followed in order of importance. It is noteworthy that the Gini coefficient for education indicates that the population in these three countries is quite homogeneous in terms of schooling, but the average years of schooling are significantly higher in the U.S. and Canada than it is in Barbados. According to the database of Barro and Lee (2010), in 2010 the average education in Barbados was of 9.34 years while in the U.S. and in Canada was of 13.27 and 12.25.

Countries such as Trinidad and Tobago, Belice and Jamaica got well score. The schooling average years where pretty acceptable for the year 2010: Trinidad and Tobago got an average of 9.2 years, Belice got 9.1 and Jamaica 9.6 (Barro and Lee, 2010)

Table 1: Gini Coefficients for education in selected countries during the period 1990-2010

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>YEAR</th>
<th>VARIATION 1990-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>0.174</td>
<td>0.131</td>
</tr>
<tr>
<td>U.S</td>
<td>0.130</td>
<td>0.120</td>
</tr>
<tr>
<td>Canada</td>
<td>0.163</td>
<td>0.155</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>0.218</td>
<td>0.199</td>
</tr>
<tr>
<td>Cuba</td>
<td>0.220</td>
<td>0.197</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.265</td>
<td>0.268</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.267</td>
<td>0.242</td>
</tr>
<tr>
<td>Belize</td>
<td>0.259</td>
<td>0.238</td>
</tr>
<tr>
<td>Jamaica</td>
<td>0.257</td>
<td>0.255</td>
</tr>
<tr>
<td>Chile</td>
<td>0.265</td>
<td>0.263</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>0.276</td>
<td>0.257</td>
</tr>
<tr>
<td>Guyana</td>
<td>0.265</td>
<td>0.256</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0.336</td>
<td>0.311</td>
</tr>
<tr>
<td>Panama</td>
<td>0.323</td>
<td>0.291</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.371</td>
<td>0.353</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.417</td>
<td>0.372</td>
</tr>
<tr>
<td>Peru</td>
<td>0.398</td>
<td>0.383</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0.434</td>
<td>0.386</td>
</tr>
<tr>
<td>Honduras</td>
<td>0.468</td>
<td>0.433</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.453</td>
<td>0.413</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0.370</td>
<td>0.356</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.435</td>
<td>0.410</td>
</tr>
<tr>
<td>Dominican Rep.</td>
<td>0.445</td>
<td>0.421</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0.547</td>
<td>0.502</td>
</tr>
<tr>
<td>Haiti</td>
<td>0.653</td>
<td>0.609</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0.608</td>
<td>0.588</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0.614</td>
<td>0.589</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on data from Barro y Lee (2010)

Certainly worth pausing to reflect on what is happening with Latin American countries in terms of educational inequality. Latin America is a region widely diverse in every way. However, countries that share elements integrate historical, cultural and economic factors that create significant number of similarities between them; they seem to have permeated the education.
From Latin American countries, Cuba was the best positioned, followed by Uruguay and Argentina. On a review of the data provided by Barro and Lee (2010) was found that the average schooling for these countries in 2010 was 10.2 years for Cuba, Argentina and 9.2 to 8.4 for Uruguay. These data shows the importance that in these countries have had the subject of education, despite the economic difficulties that have been experienced in recent years, particularly in Cuba and Argentina.

We found a very similar group of countries including Chile, Costa Rica, Guyana, Paraguay, Panama, Colombia, Mexico, Peru, Bolivia, Honduras and Brazil, all with Gini coefficients above 0.2 and below 0.3. While these countries are not the most unequal on the continent in education matter, these countries are at a considerable disadvantage when compared with the economic powers of North America and the Caribbean (see Table 1).

After carrying the data of the table (1) into the map (1) we can observe their spatial distribution. Appears in white the most egalitarian countries, ie that the Gini coefficients were closer to zero. The light gray are the countries that had moderate conditions of inequality, with coefficients above 0.2. In dark gray are the countries with conditions of severe inequality with coefficients above 0.3 and in black are the countries with deep inequality conditions, with coefficients above 0.4. Countries that are crossed by two lines are Suriname and French Guyana, for which was not available the necessary data.

As shown, most of Latin America shows moderate conditions of inequality. Within this category were found 12 of the 27 countries for which the calculations were made. Mexico was in 2010 at number 16th of the proposed classification.

In 2010, countries in which severe educational inequality was observed were Ecuador, Venezuela, Dominican Republic and El Salvador, while countries that showed a profound inequality were Haiti, Nicaragua and Guatemala, this last one resulting in the most backward of the classification.

**Figure 1**: Inequality of Education in America in 2010

Source: Author’s calculations based on data from Barro y Lee (2010)
Another aspect that is interesting is to know the behavior of the Gini coefficients over time. In the case studied, all countries showed declines parameters during the observed period, which implies in turn decreases in inequality.

The largest declines occurred in El Salvador, Honduras, Brazil, Bolivia and Mexico. The less significant decreases were observed in Guyana, Canada, USA and Ecuador.

Also worth mentioning that although countries tend to reduce their Gini coefficients over time, countries are not exceeded each other, that is because, the distance of inequality between them is more or less constant through the years.

Asymmetries between the most egalitarian countries are more unequal and deep, so that between the country's Gini coefficient of top-ranked in 2010, Barbados, and the laggard, Guatemala, there is a difference of 0.418. It is easier to notice this difference through the Lorenz curve, a graphic representation of the Gini coefficient.

**Graph 1:** Lorenz curve for education in Barbados in 2010. Population 25 years and more to higher education

![Graph 1](image1.png)

**Source:** Author’s calculations based on data from Barro y Lee (2010)

**Graph 2:** Lorenz curve for education in Guatemala in 2010. Population 25 years and more to higher education

![Graph 2](image2.png)

**Source:** Author’s calculations based on data from Barro y Lee (2010)

In the previous graphs, the diagonal which arises at the origin, represents perfect equality, while further away are the points on the curve of the diagonal, is greater the educational inequality. The first point of the curve indicates the percentage of the population reporting no schooling in Barbados whyh is close to 0% while in Guatemala is about 33% (Barro and Lee, 2010).
3.1. Educational Inequality and Gender in America

Another issue that is interesting to know is the influence of gender on the number of years of schooling to which people have access. Based on Barro and Lee (2010), we calculated the Gini coefficients for education separately for each gender for the same period and the same countries as in the previous part.

We found that in most countries educational inequality conditions affects both men and women, differences of gender inequality are minimal in most cases observed. However there were cases in which differences in educational inequality between men and women were significant.

The following table shows the results obtained. Countries are sorted in alphabetical order. The Male-Female Difference column contains the difference between the Gini coefficient found for male and female in 1990 and 2010. When the columns values are negative it means, that the conditions were more favorable for men than for women.

Table 2: Gini coefficients of education for male and female population in selected countries during the period 1990-2010

<table>
<thead>
<tr>
<th>Number</th>
<th>COUNTRY</th>
<th>1990</th>
<th>Differences Male-Fem</th>
<th>2010</th>
<th>Differences Male-Fem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Argentina</td>
<td>0.259</td>
<td>-0.016</td>
<td>0.177</td>
<td>-0.011</td>
</tr>
<tr>
<td>2</td>
<td>Barbados</td>
<td>0.168</td>
<td>-0.010</td>
<td>0.082</td>
<td>-0.006</td>
</tr>
<tr>
<td>3</td>
<td>Belize</td>
<td>0.249</td>
<td>-0.019</td>
<td>0.181</td>
<td>-0.029</td>
</tr>
<tr>
<td>4</td>
<td>Bolivia</td>
<td><strong>0.352</strong></td>
<td><strong>-0.158</strong></td>
<td><strong>0.219</strong></td>
<td><strong>0.323</strong></td>
</tr>
<tr>
<td>5</td>
<td>Brazil</td>
<td>0.470</td>
<td>0.033</td>
<td>0.289</td>
<td>0.002</td>
</tr>
<tr>
<td>6</td>
<td>Canada</td>
<td>0.165</td>
<td>0.004</td>
<td>0.124</td>
<td>0.125</td>
</tr>
<tr>
<td>7</td>
<td>Chile</td>
<td>0.261</td>
<td>-0.008</td>
<td>0.213</td>
<td>-0.023</td>
</tr>
<tr>
<td>8</td>
<td>Colombia</td>
<td>0.375</td>
<td>0.009</td>
<td>0.258</td>
<td>0.007</td>
</tr>
<tr>
<td>9</td>
<td>Costa Rica</td>
<td>0.272</td>
<td>-0.007</td>
<td>0.224</td>
<td>-0.007</td>
</tr>
<tr>
<td>10</td>
<td>Cuba</td>
<td>0.206</td>
<td>-0.028</td>
<td>0.149</td>
<td>-0.022</td>
</tr>
<tr>
<td>11</td>
<td>Dominican Rep.</td>
<td>0.400</td>
<td>-0.092</td>
<td>0.304</td>
<td>0.079</td>
</tr>
<tr>
<td>12</td>
<td>Ecuador</td>
<td>0.344</td>
<td>-0.052</td>
<td>0.321</td>
<td>0.041</td>
</tr>
<tr>
<td>13</td>
<td>El Salvador</td>
<td>0.537</td>
<td>-0.017</td>
<td>0.333</td>
<td>-0.057</td>
</tr>
<tr>
<td>14</td>
<td>Guatemala</td>
<td><strong>0.561</strong></td>
<td><strong>-0.103</strong></td>
<td><strong>0.449</strong></td>
<td><strong>-0.101</strong></td>
</tr>
<tr>
<td>15</td>
<td>Guyana</td>
<td>0.250</td>
<td>-0.020</td>
<td>0.249</td>
<td>0.053</td>
</tr>
<tr>
<td>16</td>
<td>Haiti</td>
<td><strong>0.487</strong></td>
<td><strong>-0.308</strong></td>
<td><strong>0.289</strong></td>
<td><strong>0.674</strong></td>
</tr>
<tr>
<td>17</td>
<td>Honduras</td>
<td>0.467</td>
<td>-0.002</td>
<td>0.266</td>
<td>0.309</td>
</tr>
<tr>
<td>18</td>
<td>Jamaica</td>
<td>0.255</td>
<td>-0.004</td>
<td>0.195</td>
<td>0.205</td>
</tr>
<tr>
<td>19</td>
<td>México</td>
<td>0.399</td>
<td>-0.033</td>
<td>0.245</td>
<td>0.277</td>
</tr>
<tr>
<td>20</td>
<td>Nicaragua</td>
<td><strong>0.501</strong></td>
<td><strong>-0.203</strong></td>
<td><strong>0.427</strong></td>
<td><strong>0.569</strong></td>
</tr>
<tr>
<td>21</td>
<td>Panamá</td>
<td>0.317</td>
<td>-0.011</td>
<td>0.230</td>
<td>0.240</td>
</tr>
<tr>
<td>22</td>
<td>Paraguay</td>
<td>0.320</td>
<td>-0.033</td>
<td>0.220</td>
<td>0.249</td>
</tr>
<tr>
<td>23</td>
<td>Peru</td>
<td><strong>0.339</strong></td>
<td><strong>-0.118</strong></td>
<td><strong>0.213</strong></td>
<td><strong>0.328</strong></td>
</tr>
<tr>
<td>24</td>
<td>Trinidad and Tobago</td>
<td>0.211</td>
<td>-0.014</td>
<td>0.144</td>
<td>0.139</td>
</tr>
<tr>
<td>25</td>
<td>Uruguay</td>
<td>0.276</td>
<td>0.021</td>
<td>0.163</td>
<td>0.171</td>
</tr>
<tr>
<td>26</td>
<td>USA</td>
<td>0.158</td>
<td>0.056</td>
<td>0.074</td>
<td>0.092</td>
</tr>
<tr>
<td>27</td>
<td>Venezuela</td>
<td>0.424</td>
<td>-0.023</td>
<td>0.335</td>
<td>0.352</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on data from Barro y Lee (2010)

Countries with the most significant differences were Bolivia, Guatemala, Haiti, Nicaragua and Peru. Note that in all these cases the difference in educational equality between men and women declined during the study period, except for the case of Haiti.

In the case of Haiti in 1990 the difference between male and female ratio was of 0.308, while in 2010 this difference had increased to 0.385. This is explained by a significant reduction of inequality between men, and did not happen the same among women. Proof of this is that in Haiti in 2010 the average years of schooling for women was only of 2883 (Barro and Lee, 2010).
As a matter of Gentili (2010), this may be because education in Haiti is significantly privatized, with the result that sending a child to school represents an extraordinary financial burden for many families. Likewise, the earthquake of 2010 destroyed a big part of the school sites, a situation which to date has not been reversed.

4. Discussion

There are many studies on educational inequality and its measurement through the Gini coefficient. The findings in this work is consistent in many respects with those found by Thomas, Wang and Fan in 2000 for his study of 85 economies and the findings of Martinez in 2002 for the case of Mexico and its states.

Matching aspect is the fact that educational inequality tends almost invariably to decrease over time in both countries and in the states, although these declines occur at different speeds. It also draws attention to the gaps of inequality between different countries or regions are nearly uniform over time. According to Martinez (2002) this was due to decreases in educational inequality should be more normal growth of school systems that compensatory policies aimed at fighting inequality.

Comparing this study with Thomas, Wang and Fan (2000) work, we can observe a coincidence regarding to inequality gaps related to gender distinctions. These authors emphasize the importance of eradicating these distinctions as a key component of the fight against educational inequality. In the present study is confirmed the existence of such gaps and retention through the study period. The most notable ones found in the case of Bolivia, Guatemala, Haiti, Nicaragua and Peru.

Conclusions

The American continent offers a panorama of deep contrasts in terms of educational inequality. The results of this work show that nations that get progress in education are those in which the different actors involved see education as a priority. Increase access to educational opportunities is essential not only to improve skills and increase productivity in society, but also as an instrument of social justice and as a tool to help individuals overcome poverty.

In American education systems excel in the U.S. and Canada that have achieved significant success in making education accessible to most of its inhabitants at least with regard to tertiary education. Other nations have also made significant efforts to reduce educational inequality in their territories. Highlights what has been achieved in this respect in countries such as Barbados, Cuba, Argentina and Uruguay, which have made progress that bring them closer to the developed nations of North America and whose experiences should be studied more closely. Other Caribbean nations such as Trinidad and Tobago and Jamaica were also Gini coefficients for education and average years of schooling recognized.

There is a group of countries in America that can be classified as a "moderate inequality". These countries are Chile, Costa Rica, Guyana, Paraguay, Panama, Colombia, Mexico, Peru, Bolivia, Honduras and Brazil. Behind them were located countries like Ecuador, Venezuela, Dominican Republic and El Salvador. The terms of educational inequality were deep in Haiti, Nicaragua and Guatemala.

During the study period, the Gini coefficients for education decreased in all cases studied. This shows that in general, educational inequality on the continent declined during the period 1990-2010. Of note are the reductions obtained in El Salvador and Honduras, countries which, despite economic hardships, the reductions were more significant inequality in the period.

Another issue that was addressed during this work is related to gender and its impact on educational inequality. The influence of gender on the number of years that a person can reach is that often, because of poverty or tradition, parents must choose which of their children will be educated and
what not. The results suggest that during the period 1990-2010, educational inequality manifested in much the same way for men and women in virtually the entire continent.

The most significant differences between the rates of men and women were in Bolivia, Guatemala, Haiti, Nicaragua and Peru. In these countries the differences in educational inequality between men and women decreased during the study period, except for the case of Haiti. Education in Haiti shows one of the world's harshest scenarios. Being one of the world's poorest nations, the government has been unable to amass public education in the country. In the words of Gentili (2010) "Public school is almost nonexistent ... over 80% of school children attending a private school." These generally belong to private schools or are sponsored by NGOs or by the church. In this scenario it is natural that educational inequality in Haiti is of the highest in the continent and educational inequality gap between men and women tends to increase over time.

References
Investment Opportunities in Health: Feasibility of Building an American Private Hospital in Jordan

Ibrahim Alabbadi
Corresponding Author, MBA, PhD Associate Professor
Department of Biopharmaceutics and Clinical Pharmacy
Faculty of Pharmacy, The University of Jordan, Jordan
E-mail: i.abbadi@ju.edu.jo
Tel: 962-6-5355000-23356; Fax: 962-6-5300250

Azmi Mahafza
Professor, Dean, Faculty of Medicine
The University of Jordan, Jordan

Mousa A. Al-Abbadi
Professor, East Tennessee State University & James H. Quillen Veterans Affairs Medical Center, Mountain Home, TN 37684, USA

Amir Bakir
Associate Professor, Department of Economics
Faculty of Business, The University of Jordan, Jordan

Abstract
Jordan has one of the most modern health care infrastructures in the Middle East with an encouraging investment climate, thus a potential country to offer high quality health services at reasonable prices at a time in which medical care is becoming very costly in North America, Europe and the Middle East. The aim of this study was to investigate the value of health of establishing a high standard American private hospital as an investment opportunity in Jordan. This feasibility study cost estimates that are related to the project for 400 beds hospital consists of four components: market study, technical study, financial study and risk analysis. Investment, running and personnel costs in addition to estimated revenues and cash flows were calculated. The viability of the project was assessed by two indicators, net present value (NPV) at a chosen discount rate which equals the opportunity cost of capital, normally taken as 10%, and the internal rate of return (IRR). Results showed a positive NPV (and huge) indicating that the project is viable. However, the IRR shows the average annual profitability ratio of 172%. It was concluded that his opportunity will add value in health for Jordan as an investment priority country. Depending on the operation ratio, the project may pay back its capital in the first year or in three years maximum.

Keywords: Feasibility, private hospital, investment in health, Jordan
Introduction
Jordan has one of the most modern health care infrastructures in the Middle East. Jordan’s health system is a complex amalgam of three major sectors: Public, private, and Non-governmental organizations (NGOs). The general Health Policy in Jordan is set by the High Health Council that represents all health care providers. The national health strategy is aimed at creating a comprehensive health care system, utilizing both public and private service providers covering all levels of care and improving the quality of health services by implementing a national health services accreditation program.

In 2009, total health expenditures – both public and private was estimated at 1610 million JD (US$ 2274 million). The latter is equivalent to 9.52% of Gross Domestic Product (GDP). About 82% of the population in Jordan is covered by formal health insurance[1].

As the provision of medical care is becoming very costly in North America, Europe and the Middle East, many patients prefer to receive medical care in a foreign country provided they are offered services of high quality at reasonable prices. Jordan is a potential country where services can be offered due to[2-4]:

- Availability of highly skilled Jordanian and American-Jordanian medical and non medical personnel.
- Ability to acquire up to date high standard international medical equipments and any needed devices fairly easily
- Jordan’s favorable investment environment including safety.
- Moderate weather.
- Convenient central location.
- Numerous tourist attractions.
- Easy international accessibility.
- Jordan is the first in the Arabic region and one of the best five internationally in the medical tourism field [5].

The proposed project involves establishing an expandable 400-bed private hospital of high standards in Jordan targeting clients mainly from North America.

This feasibility study consists of four components: Market study, Technical study, financial study and risk analysis.

A. Market Study
The market study consists of determining demand on the services to be offered by the proposed project as well as the degree of competition in the market. Then, the study concludes with an estimate of revenues according to prices and volume of services delivered. The key elements of the market study include consumers, suppliers, prices and market share.

1. Consumers
The consumers are clients identified mainly in the USA market as a strategy point:

- The consumers are patients who are to be identified by type of service demanded as follows:
  - General surgery and its subspecialties
  - Special surgery and its branches including ophthalmology, Ear, Nose and Throat (ENT), urology, orthopedics, and neurosurgery
  - Internal medicine and its subspecialties
  - Pediatrics and its subspecialties
  - Obstetrics and Gynecology (Ob/Gyn) and its subspecialties
  - Laboratory and pathology services
  - Dental services
  - Rehabilitation services
  - Fertility clinic
Demand projections
Based on available data (Table 1)[6], it is assumed that the occupancy will always be between 90-95% of the total beds (90-95% of 400 = 360-380 beds) and the duration of each admission will range from 3-7 days for patients from the target pool.

Accordingly, this study assumes that patient-bed occupancy ratio is 70% and 7 days per week for 52 weeks per year. Thus, number of patient-bed weeks will be (70% X 400 X 52=14,560 patients per year).

Revenues
According to the above estimate, it is expected that annual revenues will reach (14560 x 7000 (see price analysis below) = 101,920,000 JDs equivalent to US$ 152,880,000)

Future potential expansion plans
It is hoped that such a high standard private hospital with up to date American standards, will be the nucleus for establishing a private medical school and allied health colleges.

Table 1: Hospitals Occupancy Rates in Jordan

<table>
<thead>
<tr>
<th>Patient/day</th>
<th>Occupancy Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Health (MOH)</td>
<td>3.2</td>
</tr>
<tr>
<td>Royal Medical Services (RMS)</td>
<td>4.1</td>
</tr>
<tr>
<td>University Hospitals (UH)</td>
<td>5.0</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>2.2</td>
</tr>
</tbody>
</table>

2. Suppliers
The project will have no threats from domestic suppliers, since it is the only one that has a high level of standards to meet expectation of USA patients. In addition, the reputation will be built day by day as soon as the Hospital is established.

3. Prices
The prices (charges) for each service delivered by the proposed project need to be determined in view of the existing prices in the domestic market as well as the price estimates of what clients are expected to pay i.e. value based pricing. The prices identified at this stage will be used to calculate the expected revenues of the project.

- Assuming the following:
  - Surgery: average bill per patient, though very variable, $10-15,000.00.
  - Medicine: also variable, but assuming an average bill of $10-12,000.00 / patient
  - Pediatrics: average bill of $8-10,000.00 / patient
  - Ob/Gyn: average bill of $5-9,000.00 / patient

- Average bill across the board is assumed to be $10,000 i.e. approximately = JDs 7,000 per patient.

4. Market Share
According to the Jordanian Private Hospitals Association[4]numbers for the year 2008; more than 200,000 patients (Sudanese, Syrians, Yemenis, Saudis and other countries) came and received medical treatment in Jordan including foreign residents in Jordan (embassies, companies, workers, Iraqis, Palestinians). These numbers were increased to 280,000 and to 306,000 in 2009 and 2010 respectively after attracting some patients from other Gulf countries, Russia, Uzbekistan, Chad, Nigeria and USA.

There are about 60 private health care institutions in Jordan, by 2010 –in addition to some institutional hospitals including MOH- eight of which have been accredited by a US-based Joint Commission International (JCI), which is considered the gold standard for international accreditation in the healthcare industry[7].
Most of the health cadres in Jordan (85%) are below 50 years of age. Young health workers (30 years of age or less) constitute about 40% of the total health workforce in Jordan. Jordan has a strong high education system for physicians, dentists, pharmacists, nurses and allied health sciences. Jordan has three main levels of health workforce formal education: community college/associate degree programs (2 years after secondary school), university/undergraduate (4-6 years after secondary school) and post-graduate (1-4 years after university degree). Formal post-service training programs are confined to physicians and dentists in public and private sectors. These programs are managed and supervised by the Jordan Medical Council[2]. They include programs for: medical residency, medical internship, and dentistry residency & dentistry internship.

Formal continuing training programs are not regularly provided by public or private health sector. It is performed on voluntary basis by professional associations, hospitals, teaching institutions and individual practitioners. Most of the training provided is on job training, seminars, workshops and conferences. The majority of hospitals do not have any budgetary allocations for formal training and research. Jordan Health Care Accreditation Council (HCAC), a private non profit organization, is mandated to accredit health training programs which are not under the jurisdiction of the High Education Council or the Jordan Medical Board[2, 7].

Most Jordanian doctors speak English fluently and many have been trained or are affiliated with top North American, Australian and European hospitals. Although Jordan's medical institutions are of high standards, its costs are relatively low compared to the western world. In general, healthcare costs in Jordan typically are just one-tenth of the price of treatments in the USA, and less than third of the cost of medical services in the UK [8].

From local point of view, the most common procedures requested by patients from the USA and UK at the hospital are plastic surgery, in-vitro fertilization, and orthopedic care. Regional patients traveling to Jordan usually seek cardiac surgery, vascular surgery, neurosurgery, and cancer-related procedures.

Competition with other nations: the proposed project may face competition from international destinations such as, Cuba, India, Singapore, Tunisia, Israel and Thailand.

Although unlikely, the following private hospitals might be able to offer some level of competition to the proposed project (Table 2).

<table>
<thead>
<tr>
<th>Private hospital name</th>
<th>Number of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>JordanHospital</td>
<td>252</td>
</tr>
<tr>
<td>KhalidiHospital</td>
<td>160</td>
</tr>
<tr>
<td>Specialized Hospital</td>
<td>140</td>
</tr>
<tr>
<td>ArabMedicalCenter</td>
<td>144</td>
</tr>
<tr>
<td>ConsultancyHospital</td>
<td>108</td>
</tr>
</tbody>
</table>

In terms of market share; MOH, RMS, UH have a higher market share than private hospitals[9]. Knowing that almost all patients receiving their health care in MOH, UJ, and RMS are local, thus occupancy rate in Amman area private hospitals is as low as 42% as many local patients refer to these hospitals rather than private hospitals i.e. local competition from existing suppliers will be minimal. On the other hand, size and composition of Jordan population-as well as the region- have changed dramatically in the past century and will continue to change in the coming decades. The number of people who will be demanding health services is expected to increase as a result of these changes.

Regional patients mostly demand sophisticated medical care such as for cancer, heart, neurology and others.

Due to its high standards targeting different customers, it is hoped and expected that this hospital will capture market clients.
5. Investment Climate and Health Sector in Jordan

In general, the investment climate in Jordan is very favorable to investors. This section provides a comprehensive review of registration procedures, regulations and investment encouragement laws related to this particular project[8, 10].

The project falls under the health sector and in this context the investment encouragement law in Jordan requires specific commitments and provides several investment encouragement policies to newly established projects according to location, size, foreign investment, and type of initiative. This section describes and clarifies the issues that are related to the project with respect to the investment climate in Jordan.

Jordan is a low-middle income country with limited natural resources, and thus human resources development has been made as one of the most valuable assets and strategic pillars of the country. Jordan population at the end year 2011 was estimated to be 6.2 Million[11]. The annual income per capita at current prices was US $ 4615 in 2011[11]. Proportion of budget spent on MOH was 6.1% for 2009 [1]. Jordan’s performance is among the better Arab states (ranking number 3) in terms of life expectancy, adult literacy, school enrolment, female literacy, and according to other basic indicators. Jordan's ranking improved substantially in the Global Competitiveness Index and was 49/131 in 2006[12].Jordan, like other middle income countries, is witnessing an epidemiological transition, which is characterized by an increase of non-communicable diseases, particularly cardiovascular diseases, cancer, diabetes and chronic respiratory conditions. Chronic health problems are now becoming the leading causes of mortality in Jordan with cardiovascular diseases and cancer alone responsible for more than half of all deaths[1].

Table 3 and 4 show some information about selected health indicators and human resources in the medical field in Jordan[6].

**Table 3:**  Health indicators in Jordan (2005-2009)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>98</td>
<td>101</td>
<td>103</td>
<td>103</td>
<td>104</td>
</tr>
<tr>
<td>Beds</td>
<td>10141</td>
<td>11009</td>
<td>11029</td>
<td>11200</td>
<td>11355</td>
</tr>
<tr>
<td>Population/Bed</td>
<td>539</td>
<td>507</td>
<td>519</td>
<td>533</td>
<td>552</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>1615</td>
<td>1657</td>
<td>1806</td>
<td>1883</td>
<td>1949</td>
</tr>
<tr>
<td>Population/Pharmacy</td>
<td>3389</td>
<td>3380</td>
<td>3169</td>
<td>3107</td>
<td>3068</td>
</tr>
</tbody>
</table>

**Table 4:**  Medical Employees (MOH Jordan 2005 – 2009, private sector 2009)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2009 (private)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>3454</td>
<td>3590</td>
<td>3702</td>
<td>3763</td>
<td>3965</td>
<td>8483</td>
</tr>
<tr>
<td>Dentists</td>
<td>550</td>
<td>549</td>
<td>533</td>
<td>595</td>
<td>653</td>
<td>3389</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>255</td>
<td>263</td>
<td>273</td>
<td>359</td>
<td>356</td>
<td>7528</td>
</tr>
<tr>
<td>Nurses</td>
<td>3568</td>
<td>3633</td>
<td>4139</td>
<td>4404</td>
<td>4617</td>
<td>5781</td>
</tr>
<tr>
<td>Midwives</td>
<td>1095</td>
<td>1074</td>
<td>1111</td>
<td>1168</td>
<td>1203</td>
<td>425</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8922</td>
<td>9109</td>
<td>9758</td>
<td>10289</td>
<td>10794</td>
<td><strong>25606</strong></td>
</tr>
</tbody>
</table>

The following is a list of the main hospitals in Jordan:
- Institutional hospitals[6]:
  - King Hussein Cancer Center-The First Hospital in Jordan achieved Healthcare (JCI) accreditation. The FirstHospital outside the United States of America achieved Healthcare (JCI) Disease-Specific Certification in the area of Cancer Treatment (DSCCC) Queen Rania Street -Amman-Jordan
  - Jordan University Hospital-JCI accredited hospital -Amman
  - King Hussein Military Hospital-Medical City-Amman
  - Bashir Government Hospital-Amman
Princess Basma Hospital-Irbid
Jordanian Red Crescent Hospital-Amman
KingAbdullahUniversityHospital (KAUH)-Irbid
Private hospitals[4]:
Jordan Hospital- JCI accredited hospital, Queen Noor Str. between Abdali and 4th Circle-Amman
Specialty Hospital - JCI accredited hospital, University Street near the Royal Cultural Center-Amman
Al-Israa Hospital- JCI accredited hospital, Sweileh-Amman
Istiklal Hospital- JCI accredited hospital, Dakhla Circle-Jabal Al-Hussein-Amman
EbnAl-HaithamHospital - Amman
Al-Khalidi Medical Center-Jabal Amman-Amman
Arab Medical Center-5th Circle-Amman
ConsultancyHospital - King Abdullah Gardens Street intersection - Shmeisani - Amman
Al - MowasahHospital - North Marka , Amman
Farah Maternity Hospital-3rd Circle-Jabal Amman-Amman
Islamic Hospital-Abdali-Amman
AbdulhadiEyeHospital
Amman Surgical Hospital
LuzmillaHospital
The SpecialtyCenter for Fertility & Genetics

In addition to primary, secondary and maternity and child care clinics, the MOH operates 29 hospitals, accounting for 37% of all hospital beds in the country; the Royal Medical Services runs 11 hospitals, comprising 24% of all beds; Jordan University Hospital and King Abdullah University Hospital account for 6% of total beds in the country[13].

The private sector provides 36% of all hospital beds, on the 1st of June 2007, JordanHospital (as the biggest private hospital) was the first general specialty hospital to receive the international accreditation (JCI). KingHusseinCancerCenter is the only specialized cancer treatment facility in the Middle East. The treatment cost in the Jordanian hospitals is less than in other countries, whether surrounding and regional hospitals or western.

In 2008, Jordan generated over $1 billion dollars only from Medical Tourism with an expected 7% annual growth due to increase in patients’ numbers and their companions [4].

Top Medical Tourism destinations in the Middle East and North Africa according to The World Bank include Jordan, UAE, and Israel[5].

Specific Characteristics of the Investment Climate in JORDAN
- Security & Political Stability
  Jordan has good relations with all its neighbors. It has maintained continuous stability, moderation and security in a region prone to potential volatility (Lebanon, Iraq, Palestine, Israel, Syria and Egypt). Jordan is a fourth generation monarchy with consistent and continuous foreign and internal policies, a democratically elected Parliament and a visionary leader dedicated to progressive reforms of political, economical, fiscal, legal and social significance.

- Unique & Strategic Location
  Jordan is well situated as a regional entry point, being well connected to neighboring countries and global markets through modern transportation and communication networks. Jordan’s location allows for diversification and expansion into increasingly affluent markets. Trade agreements give the country access to a market of more than one billion consumers.

- Sound Macro Economy
Jordan’s macro-economic fundamentals are sound. The leading indicators point to continuing growth in the next 5 years. Careful planning and policy reforms, a strong economy, and the creation of ideal conditions mature dramatically in the last decade and led to a substantial surge of foreign investment in Jordan[11].

- **Qualified and Talented Workforce**
  Jordan work-force and trained personnel are quite available and they are among the best qualified and trained in the region. Jordan export well-trained personnel and highly educated professionals all over the world with the lion-share to the neighboring oil-producing countries (Kingdom of Saudi Arabia, Kuwait, Qatar, Bahrain, United Arab Emirates, and Oman). However, the labor cost in Jordan is highly competitive in the region.

- **Modern Infrastructure and Globally Connected Country**
  Jordan’s infrastructure is set up for people, goods and ideas. Jordan’s modern infrastructure helps businesses navigate the world more quickly and comfortably, and move their products and services into markets easily.

- **Favorable Business Environment**
  Jordan is a free market oriented economy, with outward-oriented economic policies and a private sector led approach. Jordan experienced an ongoing privatization of major state-owned enterprises and implemented significant advances in structural and legal reforms.

- **Jordan Offers Good Social Environment**
  Investing and doing business in Jordan is simple and straightforward. Jordan offers a diverse, tolerant, and family friendly environment with all conveniences of the 21st century.

- **Health Care and Medical Services**
  The Jordanian government expenditure on healthcare increased recently to be around 6.1% of its budget with a commitment to reform regulations and provision requirements[1]. This fosters further privatization in the health-care delivery system, paving the way for additional modernization and development in the industry.

  Growing joint venture partnerships between the public and private sectors are a major stimulus to new investment in healthcare services and infrastructure.

- **Growing demand for medical services**
  Fueled by the young growing population of Jordan (82% of the Jordanian population is below the age of 40), Jordan’s population is growing at a rate of 3% annually due to the high fertility rate of 3.7, and the declining infant mortality rate of 22 per 1000. Ninety nine percent of Jordan's population has access to clean water and sanitation. Life expectancy is higher in Jordan than in most developing countries, averaging 73 years due to the rising standards of medical services coupled with higher standards of living[13].

  Additionally two important demand generators in the Jordanian medical industry are incoming immigrants seeking Jordan's comparatively higher standard of living and medical tourism. The national economy is receiving massive injections in developmental capacity and revenue due to the medical tourism sector. The growth in the sector is arguably due to the correct publicly held perception of Jordan as a supplier of high quality healthcare services in the current regional market at competitive or below market prices.

  In essence this implies that Jordan is increasingly becoming a more popular destination for the provision of medical outsourcing services. A position that - as prices for medical care continue to rise meteorically in the west - implies that Jordan's cost effectiveness in similar quality service provision strengthens the national position furthermore. Jordan’s entry into the international medical tourism market has been relatively recent with several medium to large hospitals breaking ground and starting formal programs with more to follow. Table 5 shows the number of non-Jordanian patients with the estimated income for their medical treatment for the period 2004-2006.
Table 5: Non Jordanians who sought Medical Treatment in Jordan 2004-2006

<table>
<thead>
<tr>
<th>Patients</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Jordanians</td>
<td>113,150</td>
<td>108,640</td>
<td>130,000</td>
</tr>
<tr>
<td>Estimated income from incoming</td>
<td>621.3</td>
<td>607.6</td>
<td>637</td>
</tr>
<tr>
<td>foreign patients (US$ million)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Cost Advantage**
  Although procedures such as cholecystectomy, nephrectomy, hysterectomy, gastric bypass surgery, gastric banding, open heart surgeries (valve replacement, cardiac catheterization procedures, repairs and others) will be more common to start with in this project; hospitals in Jordan are capable of claiming to conduct complicated and expensive surgeries at a lower cost compared to more developed countries with similar success rates and customer satisfaction ratings. An example of the comparative price list is shown in Table 6.

Table 6: Comparison of estimated cost of some surgeries between USA and Jordan (US$)

<table>
<thead>
<tr>
<th>Surgery</th>
<th>USA</th>
<th>Jordan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone Marrow Transplant</td>
<td>400,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Liver Transplant</td>
<td>500,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Open Heart Surgery</td>
<td>50,000</td>
<td>3,700</td>
</tr>
<tr>
<td>Neuro-Surgery</td>
<td>29,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Knee Surgery</td>
<td>16,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>

- **Highly Qualified Physicians**
  Jordanian specialized physicians performed over 120,000 major surgeries and over 250,000 other surgical procedures including cardio-thoracic, neurological and cancer surgeries, with success rates comparable to international standards, non-rejection rates in bone marrow transplant acceptance is 80%, as for renal transplants the rate is 95%[4].

- **Government committed to continuous reform and development of the Health care services**
  The Jordanian government is committed to reform the health care sector aiming to improve health care services and quality assurance of facility use, health delivery systems, and health information systems. Furthermore, the Government of Jordan completed the initial design and started the program of the E-Health Portal initiative (HAKEEM program), launched in 2010 with an aim to improve health service delivery to all Jordanians relying on real available data bank. Ultimately, the program will evolve as a public-private partnership with full fledged national e-health portal in order to enable web access to Electronic Patient Records (EPR) via a central document indices to data kept in the individual hospitals and general practitioners offices. Additionally, the e-portal should provide a channel for electronic communication between citizens and healthcare professionals, as well as allowing patients, their families, and healthcare professionals access up-to-date information.

- **Supportive structures**
  The healthcare sector revenues are estimated at $ 2 Billion per year and growing at some 6-7% per year[8]. Private hospitals and clinic revenues have more than tripled over the last five years (from $ 300 Million in 2000 to $1Billion in 2005). Given large external demand, forecasts for the next five years suggest similar growth rates will continue at the current rate. It is estimated that the employment in the health sector was around 18,880 people in 2006[4]. Table 7 shows hospitals and beds by sector for 2005-2009 [6].
Table 7: Hospitals and Beds in Jordan by sector for 2005-2009

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hospitals</td>
<td>98</td>
<td>101</td>
<td>103</td>
<td>103</td>
<td>104</td>
</tr>
<tr>
<td>Total beds</td>
<td>10079</td>
<td>11049</td>
<td>11043</td>
<td>11200</td>
<td>11355</td>
</tr>
<tr>
<td>MOH beds</td>
<td>3638</td>
<td>4235</td>
<td>4250</td>
<td>4333</td>
<td>4358</td>
</tr>
<tr>
<td>RMS beds</td>
<td>1917</td>
<td>2119</td>
<td>2131</td>
<td>2129</td>
<td>2131</td>
</tr>
<tr>
<td>JUH beds</td>
<td>556</td>
<td>531</td>
<td>531</td>
<td>522</td>
<td>519</td>
</tr>
<tr>
<td>KAUH</td>
<td>388</td>
<td>457</td>
<td>489</td>
<td>504</td>
<td>494</td>
</tr>
<tr>
<td>Private hospitals beds</td>
<td>3600</td>
<td>3707</td>
<td>3642</td>
<td>3712</td>
<td>3853</td>
</tr>
</tbody>
</table>

B. Technical Study

The technical study describes the project in detail and provides cost estimates with regard to the following aspects. These estimates were based on similar comparable estimates of 200 bed hospitals (data were obtained from the managing director of a private hospital who preferred to be anonymous). Some costs were doubled and/or increased by 50% to factor in the higher standards requirements.

i. Investment costs: The investment cost includes the cost of land, buildings, transportation, office and hospital furniture, medical equipments and instruments and tools, laundry, kitchen, working capital and pre-operating expenses.

- Land and buildings:
  - The cost of Land is estimated at US$ 7.5 million (The project is expected to be located between Amman and Jerash -40 kilometers to the north of Amman- and will acquire an area of approximately 100 dunums (100,000 m²) (equivalent to 25 Acres) taking into consideration future expansion plans, at 75,000 US$ per dunum).
  - Engineering estimates for the construction costs of the buildings and external works are around US$ 30 million (750 US$ per m²)

- Equipment and furniture:
  - Medical: US$ 15 million: this estimate is based upon the actual cost of medical equipment for an existing 200 bed hospital.
  - Office Furniture: US$ 375,000: this estimate is based upon the actual cost of medical equipment for an existing 200 bed hospital.
  - Hospital Furniture: US$ 1.8 million: Each hospital room will be furnished to include bed, chairs, table, TV and other accessories at cost of 4500 US$ per room.

- Laundry: The cost of the laundry facility is US$ 150,000
- Kitchen: The cost of the kitchen facility is US$ 150,000
- Transportation: This includes the 3 ambulances, 5 busses, and 10 small hospital cars as a courier service totaling US$ 900,000.
- Pre-operating expenses: This includes the cost of studies, consultations, licensing, and other related expenses at an estimated cost of US$ 300,000.
- Working capital: An estimate of US$ 3 million is required as working capital based upon actual figures obtained from the financial statements of existing 200 bed hospitals.

Table 8 shows the initial investment costs of the project.

Table 8: Initial investments costs for building a private 200 bed hospital in Amman (US$)

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Equipments</td>
<td>15,000,000</td>
</tr>
<tr>
<td>Land &amp; Buildings</td>
<td>37,500,000</td>
</tr>
<tr>
<td>Transportation (3 ambulances, 5 buses, 10 small cars)</td>
<td>900,000</td>
</tr>
<tr>
<td>Office Furniture And Equipment</td>
<td>375,000</td>
</tr>
<tr>
<td>Laundry</td>
<td>150,000</td>
</tr>
<tr>
<td>Hospital Furniture (beds, chairs, table, accessories ...etc)</td>
<td>1,800,000</td>
</tr>
</tbody>
</table>
Table 8: Initial investments costs for building a private 200 bed hospital in Amman (US$) - continued

<table>
<thead>
<tr>
<th>Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>150,000</td>
</tr>
<tr>
<td>Others</td>
<td>75,000</td>
</tr>
<tr>
<td>Pre-operative Expenses</td>
<td>300,000</td>
</tr>
<tr>
<td>Working Capital</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Total Investment Cost</td>
<td>59,250,000</td>
</tr>
</tbody>
</table>

Running cost
Those costs were calculated on the basis of a 200 bed-hospital as a guidance but not equivalent. All costs are annual.

- **Medical Supplies**: It is estimated that medical supplies (mainly medicine) will cost around (20% of sales) approximately US$ 30 million.
- **Kitchen**: US$ 6.6 million (US$ 22.5/person/800 meal a day- 15 x 365 x 800)
- **Laundry**: US$ 120,000
- **Transportation expenses**: includes the cost of fuel and maintenance at 225,000 US$
- **Maintenance cost**: covering building and external extensions at a cost of 225,000 US$
- **Overhead costs**: Heating, communications, water, electricity and others US$ 1,140,000
- **Personnel (skilled, semi skilled and unskilled)**: Details below
- **Waste treatment**: Each bed produces 750 grams of waste; hence annual waste accumulates to 109,500 kilos at a cost of each one: 3 US$ per kilo Totaling 328,500 US$
- **Office supplies**: Stationary and others at a cost of US$ 75,000
- **Social security contributions**: at an estimated cost of US$ 1,760,580
- **Medical insurance for the employees**: at a cost of US$ 150,000
- **Licenses**: US$ 75,000
- **Insurance**: US$ 75,000
- **Advertisement**: US$ 3,000,000
- **Cleaning supplies**: US$ 60,000
- **Others**: US$ 75,000

All Annual Working Costs are shown in Table 9.

Personnel
The required personnel for this project were calculated based on 200 bed hospital personnel. For nurses & cleaners the number was doubled, number of doctors and kitchen employees was multiplied by 1.5 to have a competitive edge and attract the best qualified staff. Details are shown in Table 10 and Annex 1.

Table 9: Annual Working Costs for building a private 200 bed hospital in Amman (US$)

<table>
<thead>
<tr>
<th>Type</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>750,000</td>
</tr>
<tr>
<td>Water</td>
<td>15,000</td>
</tr>
<tr>
<td>Communications</td>
<td>75,000</td>
</tr>
<tr>
<td>Heating</td>
<td>300,000</td>
</tr>
<tr>
<td>Laundry</td>
<td>120,000</td>
</tr>
<tr>
<td>Kitchen</td>
<td>6,570,000</td>
</tr>
<tr>
<td>Waste</td>
<td>328,500</td>
</tr>
<tr>
<td>Medical Supplies</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>75,000</td>
</tr>
<tr>
<td>Social Security</td>
<td>1,760,580</td>
</tr>
<tr>
<td>Medical Insurance</td>
<td>150,000</td>
</tr>
<tr>
<td>Insurance</td>
<td>75,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>225,000</td>
</tr>
<tr>
<td>Licenses</td>
<td>75,000</td>
</tr>
</tbody>
</table>
Table 9:  Annual Working Costs for building a private 200 bed hospital in Amman (US$) - continued

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Transportation Expenses</td>
<td>225,000</td>
</tr>
<tr>
<td>Cleaning Supplies</td>
<td>60,000</td>
</tr>
<tr>
<td>Others</td>
<td>75,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48,823,080</strong></td>
</tr>
</tbody>
</table>

C. Financial Study

The financial study incorporates revenues and costs resulting from the project’s operation over a period of ten years to determine its viability. It includes the formulation of revenue and cost tables, income statement, cash flow table and the calculation of the projects' net present value, internal rate of return and profit ratios[14-16].

The following summarizes the cost estimates that are related to the project for 400 beds hospital:

- Revenues: Assuming each patient/bed will generate revenues of US$ 10500 per week on average, and assuming 80% utilization ratio of 400 beds, the expected revenues adds up to US$ 174.72 million annually (10500*400*.8*52).
- Salvage value: It is assumed that a salvage value equivalent to the initial value of land plus other fixed assets equals US$ 30 million.
- Investment cost: Table 8 outlines investment costs

Table 10:  Personnel and Salaries for a private 200 bed hospital in Amman (US$)

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
<th>Monthly Salary</th>
<th>Annual Salary</th>
<th>notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doctors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Residents</td>
<td>100</td>
<td>1000</td>
<td>1200,000</td>
<td></td>
</tr>
<tr>
<td>- X-ray</td>
<td>15</td>
<td>4500</td>
<td>810,000</td>
<td></td>
</tr>
<tr>
<td>- Anesthetic</td>
<td>10</td>
<td>4500</td>
<td>540,000</td>
<td></td>
</tr>
<tr>
<td><strong>Pharmacists</strong></td>
<td>8</td>
<td>2250</td>
<td>216,000</td>
<td></td>
</tr>
<tr>
<td><strong>Ass. Pharm.</strong></td>
<td>10</td>
<td>1050</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td><strong>Nurses; B.Sc.</strong></td>
<td>400</td>
<td>1200</td>
<td>5,760,000</td>
<td>2 x 200</td>
</tr>
<tr>
<td>- Diploma</td>
<td>150</td>
<td>600</td>
<td>1,080,000</td>
<td></td>
</tr>
<tr>
<td>- Others</td>
<td>120</td>
<td>600</td>
<td>864,000</td>
<td></td>
</tr>
<tr>
<td><strong>Cleaners</strong></td>
<td>120</td>
<td>750</td>
<td>1,080,000</td>
<td>2 x</td>
</tr>
<tr>
<td>Security</td>
<td>20</td>
<td>600</td>
<td>144,000</td>
<td>1 x</td>
</tr>
<tr>
<td><strong>Kitchen: chef</strong></td>
<td>2</td>
<td>2250</td>
<td>54,000</td>
<td></td>
</tr>
<tr>
<td>- Nutrition</td>
<td>30</td>
<td>1200</td>
<td>432,000</td>
<td></td>
</tr>
<tr>
<td>- Employees</td>
<td>45</td>
<td>450</td>
<td>243,000</td>
<td>1.5 x</td>
</tr>
<tr>
<td><strong>Laundry</strong></td>
<td>15</td>
<td>600</td>
<td>108,000</td>
<td>1 x</td>
</tr>
<tr>
<td><strong>Top managers</strong></td>
<td>4</td>
<td>4500</td>
<td>216,000</td>
<td></td>
</tr>
<tr>
<td>Managers</td>
<td>6</td>
<td>3000</td>
<td>216,000</td>
<td></td>
</tr>
<tr>
<td><strong>Human Res.</strong></td>
<td>5</td>
<td>1200</td>
<td>72,000</td>
<td></td>
</tr>
<tr>
<td><strong>Stores</strong></td>
<td>6</td>
<td>750</td>
<td>54,000</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>10</td>
<td>600</td>
<td>72,000</td>
<td></td>
</tr>
<tr>
<td>Data Entry</td>
<td>20</td>
<td>900</td>
<td>144,000</td>
<td></td>
</tr>
<tr>
<td>Accountants</td>
<td>25</td>
<td>1500</td>
<td>450,000</td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td>23</td>
<td>600</td>
<td>165,600</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>18</td>
<td>4500</td>
<td>972,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>22,290,600</strong></td>
<td></td>
</tr>
</tbody>
</table>

- Running costs: Table 9 highlights running cost.
Salaries: Table 10 underlines the required personnel and their respective salaries.

Table 11 shows revenues, costs and net cash flows. It calculates both the Net Present Value (NPV) and the Internal Rate of Return (IRR).
Table 11: Project viability indicators: Net Cash Flow and Net Present Value (NPV) and Internal Rate of Return (Million US$)

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>174.75</td>
<td>204.75</td>
</tr>
<tr>
<td>Total Investment Cost</td>
<td>59.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Working Costs</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
<td>48.9</td>
</tr>
<tr>
<td>Annual Salaries</td>
<td>22.3</td>
<td>24.5</td>
<td>27.0</td>
<td>29.7</td>
<td>32.6</td>
<td>35.9</td>
<td>39.5</td>
<td>43.5</td>
<td>47.8</td>
<td>52.58223</td>
<td></td>
</tr>
<tr>
<td>Net Cash Flow</td>
<td>-59.25</td>
<td>103.6</td>
<td>101.3</td>
<td>98.9</td>
<td>96.2</td>
<td>93.2</td>
<td>89.9</td>
<td>86.3</td>
<td>82.4</td>
<td>78.0</td>
<td>103.2678</td>
</tr>
<tr>
<td>NPV</td>
<td>$523</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRR</td>
<td>172%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The viability of the project is assessed by two indicators, NPV at a chosen discount rate which equals the opportunity cost of capital, normally taken as 10%, and the IRR. Those indicators are calculated in Table 11. A positive NPV indicates that the project is viable. However, the IRR shows the average annual profitability ratio. The calculations below reveal that the NPV is positive and huge at US$ 523 million and the IRR is very high also at 172%.

**N.B. Financing:** It was assumed so far that the project is self financing. However, it is possible to take into consideration 50% financing or 80% financing of initial investment from external sources, say commercial banks at a rate of 15%. In this case it is normally necessary to construct a loan scheduling table as well as a cash flow table including depreciation allowances. But since the internal rate of return is very high (172%) it can be concluded that any scheme of financing will be extremely recommended since the project is substantially viable and liquidity ratios are abundantly acceptable.

**D. Risk Analysis**

Since the project's outcomes occur in the future it is imperative to take circumstances of uncertainty into consideration[17, 18]. Usually the two methods of simulation and sensitivity analysis are conducted to calculate the risk factor that is associated with the project viability. But, as shown in the previous section, the project's viability indicators were very high, i.e. NPV = US$ 523 million, IRR = 172%, hence, a simulation varying the occupancy will suffice to measure the project's risk.

**First Scenario**

In this scenario, the occupancy rate is reduced from 80% to 50%, i.e. 200 beds operating, and the associated running costs were reduced by 25%. Accordingly the relevant viability indicators were calculated as US$ 242 million for the NPV and 91% for the IRR as shown in Table 12.
Table 12: Project viability indicators (Net Cash Flow and NPV and IRR) Assuming 50% Operation Ratio (Million US$)

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Cash Flow</td>
<td>-59.25</td>
<td>55.81875</td>
<td>54.14625</td>
<td>52.3065</td>
<td>50.28278</td>
<td>48.05668</td>
<td>45.60797</td>
<td>42.91439</td>
<td>39.95146</td>
<td>36.69223</td>
<td>51.85707</td>
</tr>
<tr>
<td>NPV</td>
<td>$249</td>
<td>59.25</td>
<td>55.81875</td>
<td>54.14625</td>
<td>52.3065</td>
<td>50.28278</td>
<td>48.05668</td>
<td>45.60797</td>
<td>42.91439</td>
<td>39.95146</td>
<td>36.69223</td>
</tr>
<tr>
<td>IRR</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
</tr>
</tbody>
</table>

Second Scenario
In this scenario, the occupancy ratio is reduced from 80% to 30% and the associated running costs were reduced by 35%. The relevant viability indicators were calculated as US$ 21million and 20% for the NPV and the IRR respectively as shown in Table 13.

Table 13: Project viability indicators (Net Cash Flow Table and NPV and IRR) Assuming 30% Operation Ratio (Million US$)

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue Investment Cost</td>
<td>59.25</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
</tr>
<tr>
<td>Annual Working Costs</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
<td>31.8</td>
</tr>
<tr>
<td>Annual Salaries</td>
<td>14.5</td>
<td>15.9</td>
<td>17.5</td>
<td>19.3</td>
<td>21.2</td>
<td>23.3</td>
<td>25.7</td>
<td>28.2</td>
<td>31.1</td>
<td>34.2</td>
<td>34.2</td>
</tr>
<tr>
<td>Net Cash Flow</td>
<td>-59.25</td>
<td>19.3</td>
<td>17.8</td>
<td>16.2</td>
<td>14.5</td>
<td>12.5</td>
<td>10.4</td>
<td>8.1</td>
<td>5.5</td>
<td>2.7</td>
<td>10.8</td>
</tr>
<tr>
<td>NPV</td>
<td>$21</td>
<td>59.25</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
</tr>
<tr>
<td>IRR</td>
<td>20%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
</tr>
</tbody>
</table>
E. Conclusion

Although pathological lab procedures expected revenues were not included, the project is highly viable and the risks are very minimal. The project may pay back its capital in the first year or in three years maximum depending on the operation ratio.

It was concluded that his opportunity will add value in health for Jordan as an investment priority country.

References


Annex 1: Personnel Details

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Surgery</th>
<th>Special Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GI</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nephrology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hematology/ oncology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Neurology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

Cons. = consultants, Resid. = Residents

<table>
<thead>
<tr>
<th>Obs. &amp; Gyn.</th>
<th>Pediatrics</th>
<th>Others Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>IFV</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fetal Medicine</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oncology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Surgery</th>
<th>Special Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GI</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nephrology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hematology/ oncology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Neurology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Obs. &amp; Gyn.</th>
<th>Pediatrics</th>
<th>Others Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>IFV</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fetal Medicine</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- Oncology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>
- Salary Scale & Total (Consultants: Senior = 11,000, Associate = 9,000, Junior = 7,000)

<table>
<thead>
<tr>
<th>MDs</th>
<th>Number</th>
<th>Salary/month</th>
<th>Total Salaries/month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>1</td>
<td>16,000</td>
<td>16,000</td>
</tr>
<tr>
<td>Chief of Staff</td>
<td>1</td>
<td>14,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Chiefs of services</td>
<td>8</td>
<td>12,000</td>
<td>96,000</td>
</tr>
<tr>
<td>Consultants</td>
<td>48</td>
<td>10,000</td>
<td>480,000</td>
</tr>
<tr>
<td>Residents</td>
<td>100</td>
<td>1000</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>706,000 x 12 = 8,472,000 / year</strong></td>
</tr>
</tbody>
</table>